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2024 VOLUME 6 ISSUE 4

Human Resources Management and Services

<https://ojs.piscomed.com/index.php/HRMS>

ISSN: 2661-4308 (Online)



Pisco Med Publishing



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Article

Development of scale and model for evaluating the individual performance appraisals—Process in public management

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Bezerra LF, de Carvalho Oriol E, Brauer M. (2024). Development of scale and model for evaluating the individual performance appraisals—Process in public management. *Human Resources Management and Services*. 6(4): 3404.
<https://doi.org/10.18282/hrms.v6i4.3404>

ARTICLE INFO

Received: 5 August 2024

Accepted: 26 September 2024

Available online: 2 October 2024

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Abstract: The need for strategic alignment within HR management increased managers' concern about individual behavior and how this behavior was related to the achievement of goals. In public management, effectively managing employees' performance has been necessary since Weber's bureaucratic administration. The individual performance appraisal is the right tool to assess employees' competencies. Thus, we proposed the following research question: Which factors, as pointed out by theory, have the most significant influence on the individual performance appraisal process? The quantitative method was applied to answer this question, developing and testing a scale via EFA and a hypothetical model via SEM-CB. The results indicated a scale with 25 items able to access the main points of the IPA process and a hypothetical model with 7 constructs that indicate the influence on employee engagement. The main finding is the significant influence of feedback on the whole process. The main theoretical contribution was the construction of the MIPAS scale, and the practical contribution was to identify the points where managers should focus on improving the IPA process with their subordinates.

Keywords: human capital; performance appraisal/management; performance rating; feedback; structural equation modeling—SEM

1. Introduction

The need for strategic alignment in HR management increased managers' concern with individual behavior and how this behavior was related to achieving goals (Lengnick-Hall et al., 2009; Ulrich et al., 2011). This includes all activities associated with people within the institution, such as training, recruitment and selection, development, and performance evaluation (Allen & Wright, 2007).

The need to include strategy concepts within HR management increased managers' concern with individual behavior and how this behavior was related to achieving goals (Barney, 1991; Fisher, 2002; Huselid, 1995). In public management, effectively managing employee performance has been considered necessary since Weber's bureaucratic administration (Cunha et al., 2018). The individual performance appraisal (IPA) is the right tool to assess the skills of employees (Marras, 2012), which are linked to engagement and commitment within activities (da Silva Monteiro et al., 2021; da Silveira et al., 2021).

The individual performance appraisal (IPA) identifies employees' competencies as a mechanism capable of estimating the use of human potential (Bergamini and Beraldo, 2008; Pontes, 2010). The IPA makes it possible to assess the level of

professional quality of employees and the existence of the necessary skills for the development of tasks (Marras, 2012). Systematization and the periodicity of its application are necessary to explore the full potentiality of the IPA. However, what is evaluated, by whom, and how is the evaluation carried out? These are the most critical decisions, marked according to the organization's strategy (DeNisi and Smith, 2014).

Thus, we proposed the following research question: Which factors, indicated by the theory, have the most significant influence on the process of individual performance appraisal? The method applied to answer this question was quantitative (Cunliffe, 2010), with the development and testing of scale via EFA (Brown, 2006; Bido et al., 2018) and a hypothetical model via SEM-CB (Hair et al., 2010; Malhotra et al., 2010).

The result of the scale construction process indicated a scale with 25 items—the Measurement IPA Scale—capable of accessing the main points of the IPA process. The second result identified the hypothetical model—MIPA—with seven constructs, indicating the influence on employee engagement (Hair et al., 2010; Malhotra et al., 2010; Cohen et al., 2003). From this model, we identified that the construct with the most significant influence on the IPA process is feedback. Feedback proved to be a central point for the significance of proximal factors ($\beta = 0.533$), which are linked to the implementation and execution of the evaluation process. It is also essential to perceive the usefulness of the whole IPA process and the methodology applied for the evaluation.

Regarding engagement, proximal factors ($\beta = 0.433$) had the most influence. This factor accounts for the more significant variation in employee engagement. It must be closely monitored so that the perception of the items of this construct is considered well performed. Another essential point is feedback, which, if added to its direct and indirect effects on engagement ($\beta = 0.474$), will account for another large proportion of its variation.

The main theoretical contribution was the construction of the MIPAS scale and the hypothetical model to identify employee engagement, MIPA. The practical contribution was identifying the constructs managers should focus on to improve the IPA process with their subordinates, helping increase employee adherence to the process.

2. Theoretical framework

The individual performance appraisal (IPA) is crucial in modern people management (Ammons and Roenigk, 2015; Lacombe and Albuquerque, 2008; Lee, 2017). For people management to serve the organization as a true business partner, helping the organization achieve the goals outlined by strategic planning, it must focus on managing the competencies needed to achieve those strategic goals (Ammons and Roenigk, 2015). Competency management is a way to manage the organization based on the competencies needed for the organization's strategic planning to be implemented accurately and well (Ulrich et al., 2011; Barney, 1991). This process focuses on developing and acquiring the competencies that the company needs, not just those that employees have or want to acquire (Allen and Wright, 2007).

To identify the competencies the organization needs in employees and potential employees within a selection process, it is necessary to identify each person's competencies and which they can or need to develop (Draganidis and Mentzas, 2006; Špalková et al., 2015). The best way for us to access employee competencies is through IPA (Lee, 2017; Tate et al., 2014). This is a tool used by all organizations that wish to generate information for managing their employees by competency. We must understand what performance means for IPA to achieve its goal effectively. A more straightforward definition treats IPA as a planning and development tool for people management, which has, as its foundation, the improvement of organizational performance and its integration with the individual's goals (Lacombe and Albuquerque, 2008). There are also more instrumental definitions, such as:

Performance appraisal can be defined as a formally structured interaction between a subordinate and supervisor, which usually takes the form of a periodic (annual or semiannual) interview in which the subordinate's work performance is examined and discussed in order to identify strengths and weaknesses as well as opportunities for improvement and skill development (Sameera-Begum and Sumalatha, 2015).

An IPA process is developed with a specific purpose: to identify employees' competencies (Tate et al., 2014). This initial purpose joins other purposes such as streamlining the organization's planning, developing people, establishing the results expected by the organization, improving communication, creating a climate of trust, motivation, and cooperation, and identifying talents in the company (Allen and Wright, 2007; Pontes, 2010; Špalková et al., 2015). These objectives lead to an evaluation by those involved in the use process given to the data and information generated by IPA (Bergamini and Beraldo, 2008). If employees perceive that IPA leads nowhere, i.e., does not produce practical results, this will generate a flow of negative emotions, leading to decreased engagement with the process and, ultimately, abandonment (Judge et al., 2001; Weiss and Cropanzano, 1996).

The evaluative process itself can already be an influence on employee behavior (Bohlander and Snell, 2011). This behavior can take two different approaches. The first is the search to develop competencies already mastered or incorporate new competencies (Lengnick-Hall et al., 2009). This development focuses on planning for better growth opportunities within the job, identifying training needs, detecting potential problems, and setting goals (Iqbal et al. 2014). The second is conforming to the rules and other issues connected to the IPA administrative process. This approach aims to reference decisions and validate training and selection criteria (Lee, 2017; Kim, and Holzer, 2014).

The IPA process is not considered trivial and is easy to develop and apply (Chiang and Birtch, 2010; Ikramullah et al., 2016; Levy and Williams, 2004). It is even more complex to assess whether this process is efficient and effective in its development and application. Some works seek to study the IPA process. However, they end up observing only a few criteria. Of these criteria, we highlight four: (1) Usage Criteria, focusing on the purpose of the evaluative process; (2) Qualitative Criteria, which refers to the employee's perception of fairness concerning the process; (3) Quantitative Criteria, related to the evaluation methodology and criteria, i.e., how accurate and

unbiased the evaluation is; and (4) Outcome Criteria, which refers to individual and institutional reactions toward the results of an evaluation and the perceived usefulness of the evaluation (Iqbal et al., 2014; Ikramullah et al., 2016; Murphy and DeNisi, 2008).

Few models have been developed to evaluate the IPA process (Ikramullah et al., 2016). One of the most comprehensive models that seeks to evaluate the IPA process is based on five factors: distal, proximal, mediating, distorting, and judgmental (Murphy and DeNisi, 2008). The authors of this model argue that it can be applied across many different organizations and cultures, generating information and analysis about IPA processes that can be compared. Other models have also been developed, but with particular focuses, such as those that look at issues linked to autonomy in the employee IPA process (Kim and Holzer, 2014; Fernandez and Moldogaziev, 2012), the social and power propagation perspective involved in the IPA process (Granovetter, 1992; Pichler et al., 2008), or employee participation in goal setting (Roberts, 2003). Many other studies have pointed to critical issues related to the IPA process and should be considered in building a comprehensive and practical evaluation of this process (Côrtes and Meneses, 2019; Cropanzano et al., 2007; Feitosa and Lima, 2014; Fonseca and Menezes, 2016; Hartmann and Slapničar, 2012; Sánchez-Elvira, 2018).

3. Methodology

The methodology applied to this study is divided into distinct stages, and the epistemological positioning is objectivist (Cunliffe, 2010). In the first stage, we conducted broad and deep bibliographic research to identify the definitions and other factors that comprised the process of individual performance appraisal—IPA (Siddaway et al., 2019). From this process, the gap that we propose to fill emerged. The second stage was divided into two parts, the first being in-depth interviews with expert professionals involved with the IPA process within public management, which was the focus of our study (Bido et al., 2018; Hinkin, 1995). After conducting five interviews, we set out for a second part, identifying the elements contained in the interviews through the content analysis method (Almanasreh et al., 2019). In this analysis, we identified that the elements were repeated and did not bring novelty to the process, and the qualitative interview process was considered saturated and closed (Charmaz, 2006; Dixon-Woods, 2010).

To analyze the content of the interviews, we applied Bardin's method of discourse analysis by theme, which seeks to identify the critical points of the discourse and, from this, build indicators that summarize the discourse presented typically among the interviewees. To achieve this, in the analysis process, we first identified the main points that the literature presented as relevant for the evaluation of the IPA process and used them as a basis to begin the content analysis. We then checked what emerged from the interviewees' statements and whether the points identified in the literature converged with the interviews. Thus, we identified what was most relevant to the daily practice of federal public servants and how this could be evaluated. The first model and questionnaire emerged from this process.

In a third step, bringing together what was identified in the literature review and its confirmation by the expert interview process, in a cross-process of confirming results, we sought to identify the elements that form the basis of IPA and how this process could be evaluated, proposing a scale to be tested that emerged from the literature (Charmaz, 2006; Dixon-Woods, 2010). This step attempted to carry out a triangulation process of the results from the previous step, increasing the reliability of the identified results.

In a fourth step, this scale proposal was sent to a group of trained Ph. Ds working in people management in the public arena to evaluate the definitions and the proposed instrument as indicated in the literature on scale construction methods (Almanasreh et al., 2019; Charmaz, 2006). In this process, the Ph. Ds suggested a series of changes in the mediation questions of the model's constructs, more appropriately adapting the questions to the definitions brought to the literature and the results that emerged from the experts' interviews. After this fourth stage, and in possession of the results of the doctors' evaluation, we made the indicated adjustments, making the proposed scale increasingly closer to the needs and the theory that served as the basis for its construction.

From the scale items defined as final, we added a measurement scale based on the 5-point Likert scale, where one represents strongly disagree and five strongly agree (Fávero et al., 2009). This form of scale is widely used within the social sciences. It can capture respondents' perceptions with scale statements and is easily operationalized statistically through multivariate regression methods such as Structural Equation Modeling—SEM (Hair et al., 2010; Malhotra et al., 2010; Cohen et al., 2003; Onça et al., 2018). These items were transformed into an electronic form using Google Forms and sent via link to potential respondents within our target research audience.

Before sending the survey to the entire target audience, we conducted a pre-test of the scale developed in the previously described process to check the face validity and content validity intended for the target audience of the research (Hair et al., 2010; Malhotra et al., 2010; Almanasreh et al., 2019). We analyzed seven questionnaires in which respondents could give their opinions on the form of the statements in the questionnaire. From this analysis, we checked the points that should be adapted, which resulted in minor adjustments to the questions' semantics to better capture the purpose of the questionnaire (Hinkin, 1995; Fávero et al., 2009).

With all these adjustments, the links for answering the questionnaire were sent via email to potential respondents within the target audience of the research. The data collection method used was that of a survey selecting respondents by convenience and not statistical method (Fávero et al., 2009) because the research population comprises all Brazilian civil servants, representing a percentage of more than 7% of the country's active population (IBGE, 2014).

For the final analysis and construction of the IPA process rating scale, we used Exploration Factory Analysis (EFA) (Brown, 2006; Bido et al., 2018; Conway and Huffcutt, 2003; Costello and Osborne, 2005). This statistical component factoring technique seeks to identify the factors formed from statistical analyses of a data matrix, generating a group of empirically determined factors. With these results, we can turn

to the literature to identify the constructs and latent variables that arise from this analysis (Conway and Huffcutt, 2003; Costello and Osborne, 2005). This final scale is the basis for the subsequent analyses and is an essential research product.

We perform the EFA in two stages. The first was applied, including all items in the scale, without a prior classification of which construct each item should carry. This analysis indicated which scale items should be allocated to which construct. For statistical validation, we checked the convergent validity of the scale items for each construct, the discriminant validity of the cross-loading constructs, and the content validity of each constructed construct. In terms of content validity, as a second step, the results of the EFA were compared with the results of the literature review and the results of the content analysis of the interviews with experts (Brown, 2006; Costello and Osborne, 2005).

The last step of the study is the proposition of an evaluation model and its empirical test through the application of SEM based on the Covariance Matrix—SEM-CB—to verify the adherence of the theory to the collected data (Hair et al., 2010; Malhotra et al., 2010; Cohen et al., 2003; Conway and Huffcutt, 2003; Costello and Osborne, 2005). This multivariate regression technique can empirically test the proposed theory and verify its adherence to the data, pointing to its validity in the face of the collected data matrix (Hair et al., 2010; Fávero et al., 2009).

SEM-CB is also performed in two stages (Hair et al., 2010; Malhotra et al., 2010; Bido et al., 2018). In the first stage, we performed a Confirmatory Factor Analysis—CFA to determine the validity of the measurement model. Although the scale was developed by the authors and had already undergone a validation process, this process did not consider the scale as part of a model of antecedents and consequences but only as a scale that measures distinct phenomena, the constructs. Thus, the application of CFA analyzes the adjustment of the measurement model, starting from the relationship of the scale items with each of the model's constructs, evaluating more restricted issues such as cross-loading, convergent validity, and discriminant validity. After adjusting the measurement model, the SEM-CB is calculated using the multiple regression method. The results achieved will be valid as predictors of the influence of one construct on another only if the model adjustment has reached convergent and discriminant validity and if the model adjustment data are at levels higher than those recommended in the literature (Hair et al., 2010; Malhotra et al., 2010; Cohen et al., 2003).

We used the software “JAMOV” version 1.8.4 to obtain the EFA results, which works as a more user-friendly interface to the software “R” version 4.0.2. We used the software RStudio version 1.3.1093 to obtain the SEM-CB results, which also works as an interface to the software “R” version 4.0.2.

4. Results of the construction of the IPA process evaluation scale

The construction of the scale followed a sequence of phases until its final validation through the collection and analysis of the survey via EFA (Brown, 2006; Conway and Huffcutt, 2003; Costello and Osborne, 2005). We began building the scale to measure the main aspects linked to the individual performance appraisal process—IPA—by systematically reviewing the topic within the existing literature on

the subject (**Table 1**). In this review, we identified several critical articles that pointed to a range of issues that should be observed for this process to achieve its objective satisfactorily (Siddaway et al., 2019; Hinkin, 1995).

Table 1. Dimensions, factors, and variables identified as relevant.

Dimensions	Factors	Variable	References
Distal factors	Cultural aspects	Country culture	Murphy and Denisi (2008); Odelius and Santos (2007); Odelius (2000)
		Public service culture	
		Organ culture	
	Legislation and external regulations	Legislation and norms external to the institution	Murphy and Denisi (2008);
	Organizational structure	Top management support	Odelius and Santos (2007); Bergue (2010)
		Characteristics of the institution	
Proximal factors	Purpose of the evaluation	Political discontinuity	Murphy and Denisi (2008); Feitosa and Lima (2014); Fonseca and Menezes (2016); Sánchez-Elvira (2018); Iqbal; Akba and Budhwar (2015)
		Utility	
		Prior definition of evaluation criteria and standards	
	Institutional	Feedback from the evaluation process	Murphy and Denisi (2008); Odelius and Santos (2007); Sánchez-Elvira (2018); Ahenkan et al. (2018); Kim and Holzer (2014).
		Internal rules	
		Organizational resources	
		Participant engagement	
		Institutional communication	
	Acceptance of the evaluation	Strategic planning	Kim and Holzer (2014); Cropanzano, Bowenm and Gilliland (2007)
		Developmental approach	
		Server participation in the evaluation process	
		Relationship between manager and evaluator	
	Procedural justice	Server empowerment	Hartmann and Slapnicar (2012); Beuren, Kreuzberg and Franz (2016)
		Formality	
		Voice	
Judgment fact	Server perceptions	Result measures	Roberts (2003); Pontes (2010)
		The perception of the evaluation process	
		Reputation of the people Manag. unit	
		Reputation of the people	
		Manag. unit	
Factors related to the people management area	Methodology	Implementation methodology	Cortês and Menezes (2019)
	Committee/support team for clarification. Of doubts.	Committee/support team for clarification of doubts.	
	Training policy for Partic.	Training policy for appraisers and appraisees	
Methodology	Methodology	Performance bonus linked to remuneration	Odelius and Santos (2007)
		360-degree evaluation	
		Individual goals linked to Inst.	
		Performance appraisal committee	
		Evaluation cycle	
		Fixed evaluation factors	

The dimensions identified (**Table 2**) in the literature were also evaluated through semi-structured interviews applied to three HR managers who work in public management and have extensive experience in people appraisal processes. The analysis of these interviews pointed out that the dimensions identified in the literature were sufficient to investigate the individual performance appraisal process. In addition to this finding, no new relevant issues appeared in the interviews that indicated the need for new interviews, thus considering those already conducted as sufficient (Almanasreh et al., 2019; Charmaz, 2006; Dixon-Woods, 2010). After this validation through the analysis of the interviews, we sent a questionnaire proposal to doctoral specialists with knowledge in the area of people evaluation who suggested minor changes, such as the adequacy of questions and even fragmentation of some others. This process resulted in a final questionnaire with 42 questions (Bido et al., 2018; Almanasreh et al., 2019).

Table 2. Items proposed as a final pre-test scale that emerged from the literature review.

N °	Variables in full	Short name
1	The Brazilian culture	Country_Culture
2	The culture of public service	Culture_Service_Public
3	Your organ culture	Culture_Organ
4	The laws and decrees that created and regulated performance evaluation in the Brazilian Federal Public Administration	Laws_Decrees
5	The Unified Legal Regime of the federal public servant (Law no. 8.112/90)	Rule_System
6	Stability in public service, defined in the Federal Constitution of 1988	Stability_Service_Public
7	Level of top management support (process sponsors)	Sponsors
8	Number of servers in my organization	N_Servers
9	Degree of hierarchy, that is, the number of hierarchical levels in the organizational structure of my institution	N_Hierarchies
10	The political changes in my institution	Changes_Policies_Inst
11	The manager considers the evaluation to be a valuable tool to improve his team's performance.	Manager_Assessment_Util
12	The server considers the evaluation as a useful tool to improve its own performance.	Server_Assessment_Util
13	The manager defines, in advance, the evaluation criteria and standards	Manager_Criteria_previous
14	The amount of feedback received (in the case of the evaluated) and given (in the case of the evaluators)	N_Feedbacks
15	The quality of feedback received (in the case of the evaluated) and provided (in the case of the evaluators)	Quality_Feedbacks
16	The internal regulations of the Institution that guide the evaluation process in its body. (Ordinances and other regulations)	Normative_Institution
17	Availability of financial resources that enable a better management of the process, such as the purchase of software and the number of servers dedicated to the evaluation process	Availability_Resources_Management
18	Availability of financial resources to reach the work goals defined in the evaluation process	Availability_Resources_Goals
19	Level of engagement of managers in the evaluation process	Engagement_Managers
20	Level of engagement of employees in the evaluation process	Engagement_Servers
21	Institutional communication (e-mails, newsletters and other communications about the evaluation)	Communication_Institution

Table 2. (Continued).

N °	Variables in full	Short name
22	The institution should present a strategic plan that guides its employees in achieving their goals	Planning_Institution
23	Servers' perception that the performance evaluation is focused on professional growth	Perception_Aval_Growth
24	The institution has, or not, forums and commissions that have the objective of stimulating the debate between evaluators and employees	Debate_Assessers_Servers
25	The quality of the relationship between the appraiser and the appraisee	Relation_Evaluator_Evaluated
26	The employees have the perception, or not, that their opinion will reflect, in the evaluation process, being subsidy for the decision making of the managers	Opinion_Servers_Assessment
27	How well the process steps are documented during the evaluation cycle	Documented_Steps
28	The manager's objectivity when evaluating his employees' performance	Objectivity_Manager_Assessment
29	The extent to which the manager considers the opinion of the employee when agreeing on work goals	Opinion_Servers_Goals
30	The work goals have measurable indicators	Measurable_Goals
31	The server's positive perception of the evaluation process	Positive_Perception_Assessment
32	The server's negative perception of the evaluation process	Perception_Negative_Assessment
33	The reputation of the Personnel Management Unit with the public servants	Reputation_Unit_Management
34	The way in which the Personnel Management Unit implemented the new performance evaluation system (Quantity of training and dissemination actions)	New_System_Assessment
35	Availability of channels for employees to clarify doubts related to the evaluation process	Channels_Doubts_Servers
36	Training actions with the purpose of explaining the performance evaluation process	Qualification_Aval_Performance
37	Part of my remuneration to vary according to my performance	Remuneration_Variate_Performance
38	Use of 360° evaluation (being evaluated by boss, peers and yourself)	Rating_360
39	The mandatory alignment of individual, team and institutional goals	Alignment_Goals
40	My institution, to have, or not, a committee to follow the evaluation process, and, when necessary, to appeal the result of the evaluation	Commission_Monitoring
41	The twelve (12) month duration of the evaluation cycle	Duration_12months_Endorsement
42	Fixed performance factors, that is, that do not vary depending on the job or assignment	Fixed_Performance_Factor

For each sentence of the final questionnaire, we added a 5-point Likert scale, with 1 strongly disagreeing and 5 strongly agreeing (Bido et al., 2018; Hinkin, 1995; Dalmoro and Vieira, 2014). The final scale was prepared in a Google Forms form and initially applied through a pre-test with 7 servers who rigorously evaluated several aspects of adherence to the target audience, cohesion, and clarity of the aspects asked in the questions (Bido et al., 2018; Hinkin, 1995). After this pre-test, we made specific adjustments. We invited our target audience, public servants, to start answering their perceptions about each of the aspects considered essential to evaluating the process of individual performance appraisal through the online questionnaire posted on the Google Forms platform.

5. Sample characterization

The total sample taken for the study was 376 respondents. Of these respondents, 55.59% were male and 42.82% were female. Education showed a high degree of respondents with at least a college degree, with 24.20% having a Ph.D. and 22.87% having a master's degree. As for their position, 71.28% are in positions requiring at least a college degree. As for the time they have held the position, only 28.99% have held it for more than 10 years, and 26.6% have held it for between 10 and 20 years. Finally, 44.75% of the sample occupy commissioned positions or functions corresponding to management positions.

The sample is made up of Brazilian federal employees. All respondents belong to the stable staff of the union. The exhibition is distributed across several ministries and bodies, thus avoiding concentration in just one ministry. This sample construction decision seeks to reduce selection bias by only capturing the views of a restricted group of employees (Bido et al., 2018).

6. Exploratory factor analysis—EFA

Starting with the sample analysis, we performed an Exploratory Factor Analysis (EFA) to identify the factors. This technique seeks to group the factors by means of a statistical factoring technique (Conway and Huffcutt, 2003; Costello and Osborne, 2005). From this analysis, factors emerge that group the items of the questionnaires, forming statistically determined constructs (Almanasreh et al., 2019; Charmaz, 2006; Dixon-Woods, 2010).

The covariance matrix analysis of the constructs (**Table 3**) that emerged from the EFA indicates that they do not have correlations above 0.70, pointing to the non-existence of multicollinearity among the emerging constructs (Brown, 2006; Onça et al., 2018; Conway and Huffcutt, 2003). Cumulative analysis indicates that these eight constructs capture 55.46% of the covariance of the emergent scale items.

Table 3. The covariance matrix of the latent variables of the scale with 42 items.

Eigenvalues/inter-factor correlations											
	SS loadings	Percentage of variance	Cumulative %	1	2	3	4	5	6	7	8
1	4.130	9.840	9.840	1.000							
2	3.820	9.090	18.930	0.460	1.000						
3	3.470	8.270	27.210	0.635	0.488	1.000					
4	3.310	7.870	35.080	0.530	0.436	0.667	1.000				
5	2.680	6.370	41.450	0.330	0.406	0.392	0.372	1.000			
6	2.000	4.750	46.200	0.068	0.062	0.121	0.075	0.042	1.000		
7	2.160	5.140	51.340	0.228	0.216	0.190	0.180	0.167	0.081	1.000	
8	1.730	4.120	55.460	0.119	0.153	0.146	0.239	0.135	0.061	0.234	1.000

Note: $\chi^2 = 1.214$; $df = 553$; $\chi^2/df = 2.195$; p -value < 0.000; TLI = 0.985; RMSEA = 0.056.

The exploratory factor analysis resulted in 8 latent variables when the “maximum likelihood” extraction method combined with the “oblimin rotation method” was applied (**Table 4** and **Figure 1**) (Ahenkan et al., 2018). From these presented results,

after an analysis of the factor loadings of the items and the cross-loadings of loading the items on the constructs, we eliminated the items: availability resources goals, measurable goals, communication institution, positive perception assessment, fixed performance factor, reputation unit management, manager criteria previous, compensation varying performance, perception negative assessment, and sponsors.

Table 4. Results of the exploratory factor analysis—EFA.

Exploratory factor analysis								
	Factor							
	1	2	3	4	5	6	7	8
Engagement_Servers	0.779							
Engagement_Managers	0.715							
Objectivity_Manager_Assessment	0.391							
Perception_Aval_Growth	0.391							
Availability_Resources_Goals								
Relation_Evaluator_Evaluated	0.384							
Opinion_Servers_Goals	0.368							
Communication_Institution								
Measurable_Goals								
Channels_Doubts_Servers		0.736						
Qualification_Aval_Performance		0.718						
Planning_Institution	0.387	0.445						
Debate_Assessers_Servers					0.663			
New_System_Assessment								
Documented_Steps		0.316			0.528			
Opinion_Servers_Assessment		0.306			0.482			
Fixed_Performance_Factor								
Reputation_Unit_Management								
Quality_Feedbacks			0.920					
N_Feedbacks			0.920					
Manager_Criteria_Previos			0.405					
Server_Assessment_Util				0.876				
Manager_Assessment_Util				0.812				
Normative_Institution								
Positive_Perception_Assessment								
Rating_360					0.663			
Alignment_Goals					0.588			
Commission_Monitoring					0.528			
Remuneration_Variar_Performance								
Duration_12months_Endorsement					0.441			
Perception_Negative_Assessment								
Culture_Organ						0.838		
Culture_Service_Public						0.829		
Country_Culture						0.559		
N_Hierarchies							0.635	
Changes_Policies_Inst							0.613	
N_Servers							0.577	
Availability_Resources_Management								
Sponsors								
Rule_System								0.859
Stability_Service_Public								0.581
Laws_Decrees								0.521

Note: ‘Maximum likelihood’ extraction method was used in combination with a ‘oblimin’ rotation.

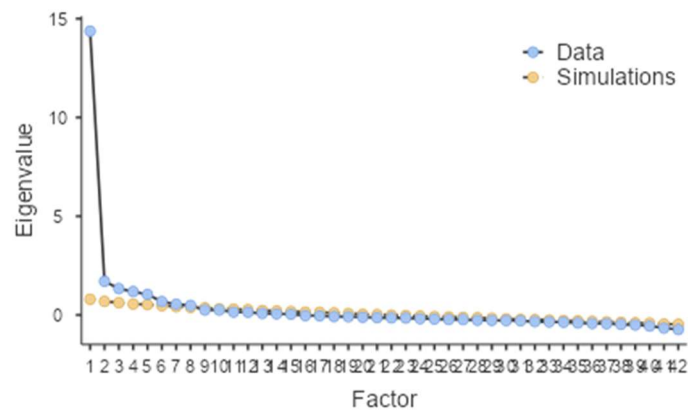


Figure 1. The plot of the eigenvalues of the 42-item from the scale.

After deleting these items from the scale, a new EFA was performed, and the results indicated the need to delete a few more items. These items were channels doubts servers, new system assessment, normative institution, availability resources management, rule system, stability service public, and law decrees. We eliminated 17 items from the scale, leaving 25 items validated as the final scale and with seven latent variables/constructs, as shown in **Table 5**.

Table 5. EFA results after eliminating items from the scale—Final scale with 25 items.

Exploratory factor analysis							
Variável	Proximal factors	Feedback	Culture	Methodology	Engagement	Strucutural	Utility
Debate_Assessers_Servers	0.724						
Planning_Institution	0.709						
Perception_Aval_Growth	0.669						
Opinion_Servers_Assessment	0.659						
Opinion_Servers_Goals	0.612						
Qualification_Aval_Performance	0.603						
Objectivity_Manager_Assessment	0.518						
Relation_Evaluator_Evaluated	0.467						
Documented_Steps	0.438						
Quality_Feedbacks		0.994					
N_Feedbacks		0.803					
Culture_Service_Public			0.885				
Culture_Organ			0.798				
Country_Culture			0.540				
Commission_Monitoring				0.673			
Alignment_Goals				0.653			
Duration_12months_Endorsement				0.628			
Rating_360				0.562			
Engagement_Servers					0.965		
Engagement_Managers					0.679		
N_Hierarchies						0.795	
N_Servers						0.630	
Changes_Policies_Inst						0.589	
Server_Assessment_Util							0.981
Manager_Assessment_Util							0.617

Note: 'Maximum likelihood' extraction method was used in combination with a 'oblimin' rotation.

The final result presents a structure with seven constructs: proximal factors, feedback, culture, methodology, engagement, structural, and utility. The theoretical basis that underlies this organization and the names of the constructs that emerged from the EFA will be discussed in the next section of this article.

7. Discussion of results EFA for determining the rating scale of the individual performance appraisal process

The results of the EFA with 25 items left over after eliminating the items with factor loadings below 0.400 point to the existence of seven factors. By analyzing the literature that served as the basis for our study, we identified that these factors were related to specific aspects within the individual performance appraisal theory (IPA). Thus, each factor was given a name that matched how the items were grouped when related to the literature (Almanasreh et al., 2019; Charmaz, 2006; Fávero et al., 2009; Conway and Huffcutt, 2003; Costello and Osborne, 2005).

Based on the analysis of factor F1, which includes nine items from the questionnaire, we identified the proximal factor label. We defined this factor this way because it brings together the items of the scale that deal with issues related to employees' daily lives within their work in public management (da Silva Monteiro et al., 2021; da Silveira et al., 2021; Bergamini and Beraldo, 2008; Ammons and Roenigk, 2015). This factor brings together two different aspects of evaluating this process: employees' perceptions of it and their views on issues related to the organization's HR tasks (Murphy and DeNisi, 2008). For the factor that arises from the questions aggregated by EFA as F2, we labeled it as evaluation methodology. This factor points to an analysis of the methodology used to evaluate employees within public agencies. Since this process is always regulated by a legal device or a standardized evaluation practice, the methodology employed plays a significant role in the evaluation process. It can significantly influence how employees view this process (DeNisi and Smith, 2014; Beuren et al., 2020; Van Dijk and Schodl, 2015; Peiperl, 2001).

Continuing the analysis, we move on to the factor identified by EFA as F3, which was labeled feedback. This factor is directly linked to the quality of feedback managers perform within the evaluation process and the frequency with which this feedback is performed. Feedback is one of the most sensitive points in any evaluation because, without it, it is impossible for the evaluated to understand the points in which they are failing and how to improve them (Ikramullah et al., 2016). Feedback gives meaning to the process and ensures feedback for the IPA process (Beuren et al., 2020; Van Dijk and Schodl, 2015; Peiperl, 2001; Alves et al., 2017).

For the factor identified as F4, the label given was cultural aspects. These aspects are linked to how employees view the individual performance appraisal process through the lenses of their personal, local, and national cultures. At this point, it is worth noting that it is considered culture—the rites, myths, habits, and beliefs common to an institution's members—seeking behavioral norms accepted by all that can shape how we face the IPA process (Hofstede et al., 2010; Pires and Macêdo, 2006).

For the factor identified by EFA as F5, the label given was engagement. Engagement emerges as a consequence of the IPA evaluation process, and it is

essential because it only happens if employees understand that the process is relevant and that the other aspects make some sense (Iqbal et al., 2014; Ikramullah et al., 2016; Murphy and DeNisi, 2008). At this point, it is essential to understand that for engagement to exist, the flow of emotions connected to the process must be positive (Judge et al., 2001; Weiss and Cropanzano, 1996; Kim and Holzer, 2014; Fernandez and Moldogaziev, 2012).

For the factor identified by EFA as F6, the label given was institutional structure. This construct aggregates questions related to the agency's structure, the sector where the employees to be evaluated are allocated, and the degree of importance they give to this structure. Issues such as the number of servers coworkers within the same department or the same unit, issues such as the hierarchical structure within these departments, units, and bodies, and issues such as political changes that occur during the year, linked to the structure and the evaluation process itself, are essential and guarantee more or less stability for the servers that will undergo the evaluation process (Iqbal et al., 2014; Murphy and DeNisi, 2008; Feitosa and Lima, 2014; Fonseca and Menezes, 2016; Sánchez-Elvira, 2018).

Finally, the factor that EFA identified as F7 was labeled the utility of the evaluation process, or just utility. This factor identifies how valid the evaluation process is in the view of the employees who go through it (Iqbal et al., 2014; Murphy and DeNisi, 2008). In contrast to this construct, we have a lack of utility that can be considered the reverse of this coin, pointing to a perception that the process does not bring any gain for those who participate (Iqbal et al. 2014).

The stability in public service that some civil servants have in their jobs is also linked to the perceived usefulness of the IPA process. This issue is linked to the stability of rules perceived by employees and generates feelings toward less significance in the evaluation (Beuren et al., 2020; Hartmann and Slapničar, 2012).

8. Proposition of hypothetical model and construction of hypotheses

When conjecturing a new theory, the researcher seeks to solve a problem by pointing to several possibilities. In this search, there may be mistakes that new studies with tests not initially imagined and that generate new theories can correct. Thus, based on the perception of the civil servants regarding how each factor influences the IPA process, we propose 10 hypotheses, which will be presented and justified, generating the hypothetical model for empirical testing through the data polished by the survey (Dixon-Woods, 2010).

We started our hypothesis construction by constructing proximal factors. This construct has the most significant number of items, nine. One point to be carefully observed concerning this construct is that it significantly influences the individual performance appraisal process (Murphy and DeNisi, 2008). This construct encompasses two aspects: the perception of the process and the factors in the people management area. In the first aspect, we point out and analyze issues related to professional growth facilitated by the IPA process and how a positive perception of these aspects influences the engagement of employees with the whole process (Bakker and Leiter, 2010). The second aspect is more related to how the people management team responsible for applying IPA behaves and is prepared to apply the process. In

this case, when employees perceive that both appraisers and appraisees are well prepared for the process and that the support given by HR is perceived as positive, there is greater engagement in applying the IPA process (Allen and Wright, 2007; Barney, 1991; Fisher, 2002; Huselid, 1995; Ammons and Roenigk, 2015; Lee, 2017; Bergue, 2010).

Hypothesis 1a: Proximal factors positively influence employees' engagement with the individual performance appraisal process.

The proximal factor construct is also considered essential for the aspect connected to the perceived usefulness of IPA (Iqbal et al., 2014; Ikramullah et al., 2016; Murphy and DeNisi, 2008). For a process to be considered helpful by an employee subjected to that process, a flow of positive emotions must be generated in that individual (Weiss and Cropanzano, 1996). These emotions will lead the appraisee to consider the gains made as positive for his or her career and other aspects (Iqbal et al., 2014; Ikramullah et al., 2016). Only with this positive look will the engagement of employees be possible, generating gains for the process and for the evaluation itself, which is the expected result from the perception of satisfaction with the practical result of the evaluation (Judge et al., 2001).

Hypothesis 1b: Proximal factors positively influence the perceived usefulness of the individual development assessment process.

When we address the issue of the evaluation methodology applied to the IPA process within public management, we observe that the way this process is scaled and the aspects that may be unstable, undergoing small or large changes, have a significant influence on how employees perceive all the elements within IPA (Iqbal et al., 2014; Murphy and DeNisi, 2008; Feitosa and Lima, 2014; Fonseca and Menezes, 2016; Sánchez-Elvira, 2018; Guimarães et al., 1998). The evaluation methodology is usually anchored in legislation or pre-established practices by third parties not directly involved in the evaluation process, bringing a standardization that does not always match the reality of the evaluation, especially within public management (Bezerra et al., 2019). Thus, the choice of methodology that will be applied is fundamental to the success of an IPA process (DeNisi and Smith, 2014; Beuren et al., 2020; Van Dijk and Schodl, 2015).

Hypothesis 2: Appraisal methodology positively influences the perception of proximal factors within individual performance appraisals.

Feedback is another essential construct; its influence on proximal factors and the engagement of appraisees and appraisers represent much of the impetus for a positive perception of IPA. Its implementation within an evaluation process provides several behavioral changes, even if the evaluation is seen as a pro forma task and has no influence on civil servants' careers (Alves et al., 2017). Its influence is direct in the evaluative process, especially in the form and methodology applied for IPA (Beuren et al., 2020; Van Dijk and Schodl, 2015; Peiperl, 2001). This influence is possible due to the flow of emotions that the feedback brings to the evaluator and the evaluated, modifying how they face the evaluation process (da Silveira et al., 2021; Judge et al., 2001; Weiss and Cropanzano, 1996). Besides this issue of the immediate flow of emotions that arises with the feedback, its long-term influence on the proximal factors, the methodology applied, and the engagement of those involved are very closely

linked to the perception of the utility of the whole process, generating a significant practical result for the management of people based on competencies within public management (da Silva Monteiro et al., 2021; Gomes and Lisboa, 2020).

Hypothesis 3a: Process feedback positively influences perceptions about the proximal factors of individual performance appraisal.

Hypothesis 3b: Process feedback positively influences the perception of the applied methodology of the individual performance appraisal.

Hypothesis 3c: Process feedback positively influences the perception of the utility of the process in individual performance appraisal.

Hypothesis 3d: Process feedback positively influences employee engagement with the individual performance appraisal process.

The cultural aspects have a significant influence on the IPA process because they are at the basis of the behavior of individuals of a particular culture, which can be either a workplace, a larger group such as an organization, or even the culture of a country (Hofstede et al., 2010; Odelius and Santos, 2007). This is considered an exogenous factor because its origin is not linked to the evaluative process but to other factors external to the IPA process (Levy and Williams, 2004; Murphy and DeNisi, 2008). Perceived culture influences how employees view proximal factors, generating a more condescending or aggressive view of the evaluation process itself (Murphy and DeNisi, 2008; Odelius and Santos, 2007; Odelius, 2000).

Hypothesis 4: Culture aspects positively influence the perception of proximal factors of individual performance appraisal.

The institutional structure is another factor influencing how we see the IPA process. Although this process is very similar to what happens in companies in general, within the public sector, this process has some peculiarities (Pires and Macêdo, 2006). Part of these peculiarities is that hierarchies are overvalued, and the size of the public sector, which in some agencies exceeds 100,000 employees, The factors related to the institutional structure influence how the evaluated people see the factors closer to the evaluation process, generating different expectations from those generated in a private organization (Ikramullah et al., 2016; Trevor et al., 2012).

Specifically in public management, this is an essential point because most decisions are made by public agents who have no direct relationship with the process itself. Thus, the whole process is regulated by legal norms that plaster the managers' actions, making the structure much more rigid and distant from the immediate needs of the more structural factors of the IPA process (Chiang and Birtch, 2010; Bergue, 2010; Odelius and Santos, 2007).

Hypothesis 5: Organizational structure positively influences the perception of proximal factors of individual performance appraisal.

Perceived utility of the entire IPA process is one of the most important constructs for employee engagement (Iqbal et al., 2014; Murphy and DeNisi, 2008; Van Dijk and Schodl, 2015; Odelius and Santos, 2007). Several aspects are essential for the perceived utility of the IPA process to generate a flow of positive emotions sufficient to generate engagement in the process (Weiss and Cropanzano, 1996). This construct encompasses the perception that the evaluation presents a practical aspect that brings economic gain to the evaluation (Chiang and Birtch, 2010); the public sector, various

promotion regulations are tied to evaluation processes (Bezerra et al., 2019). Bezerra et al., 2019; Trevor et al., 2012). This gain comes through promotions, awards, and bonuses (Trevor et al., 2012). In the public sector, various promotion regulations are tied to evaluation processes (Bezerra et al., 2019). Thus, utility is an essential factor in determining the engagement of public servants with IPA.

Hypothesis 6: Perceived utility positively influences employee engagement with the individual performance appraisal process.

Based on these hypotheses determined through the literature review, we propose the following hypothetical model (**Figure 2**) to test and verify that each exogenous construct influences the engagement of those involved in the individual performance appraisal process.

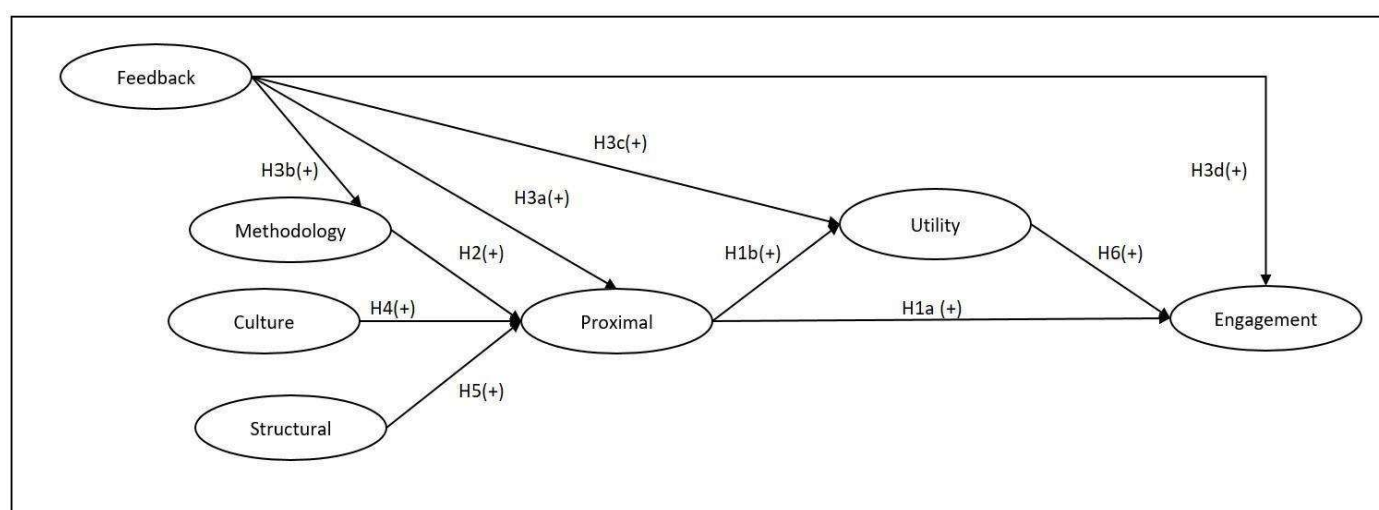


Figure 2. Hypothetical model of the individual performance appraisal process.

9. Results evaluation of the proposed hypothetical model

For the evaluation of a hypothesized model, several indicators are needed to analyze specific validities (Hair et al., 2010; Malhotra et al., 2010; Cohen et al., 2003; Costello and Osborne, 2005). These validities are content validity, convergent validity, discriminant validity, and overall model fit. Only after having all these model criteria evaluated can the regression result be considered to analyze the influence of one construct over the other, bringing significant results for science and people managers and other managers who apply IPA.

The analysis of **Table 6** indicates that all items were statistically significant at 5% and that all factor loadings have satisfactory results (Hair et al., 2010; Malhotra et al., 2010; Cohen et al., 2003). Some items draw attention to having factor loadings below 0.6, which is recommended as a minimum value for the item to remain in the model (Hair et al., 2010). However, since the results of the other analyses indicate a good model fit, even with these items with factor loadings below 0.60, we chose to keep them in the models to preserve the richness of the model's content validity (Bido et al., 2018; Almanasreh et al., 2019). The scale item with a very low standardized factor loading that should be highlighted was Relation_Evaluator_Evaluated, with a loading of 0.305.

Table 6. Test for convergent validity.

Convergent validity			Estimate	Standard error	z-value	p-value	Standad estimate
Proximal	≈	Debate_Assessers_Servers	0.580	0.042	13.651	0.000	0.714
Proximal	≈	Planning_Institution	0.626	0.041	15.132	0.000	0.788
Proximal	≈	Perception_Aval_Growth	0.668	0.044	15.295	0.000	
Proximal	≈	Opinion_Servers_Assessment	0.558	0.039	14.308	0.000	0.747
Proximal	≈	Opinion_Servers_Goals	0.550	0.040	13.831	0.000	0.723
Proximal	≈	Qualification_Aval_Performance	0.520	0.041	12.820	0.000	0.672
Proximal	≈	Objectivity_Manager_Assessment	0.600	0.038	15.795	0.000	0.821
Proximal	≈	Relation_Evaluator_Evaluated	0.305	0.037	8.274	0.000	0.439
Proximal	≈	Documented_Steps	0.423	0.037	11.596	0.000	0.610
Methodoly	≈	Commission_Monitoring	0.822	0.057	14.414	0.000	0.756
Methodoly	≈	Alignment_Goals	0.836	0.060	13.931	0.000	0.731
Methodoly	≈	Duration_12 months_Endorsement	0.627	0.061	10.202	0.000	0.553
Methodoly	≈	Rating_360	0.596	0.062	9.666	0.000	0.527
Feedback	≈	Quality_Feedbacks	1.027	0.022	46.546	0.000	0.935
Feedback	≈	N_Feedbacks	0.973	0.022	44.099	0.000	0.892
Culture	≈	Culture_Service_Public	0.751	0.044	16.908	0.000	0.864
Culture	≈	Culture_Organ	0.690	0.044	15.822	0.000	0.810
Culture	≈	Country_Culture	0.646	0.059	10.926	0.000	0.564
Engagement	≈	Engagement_Managers	1.033	0.020	52.057	0.000	0.969
Engagement	≈	Engagement_Servers	0.967	0.020	48.710	0.000	0.918
Structural	≈	N_Hierarchies	1.020	0.075	13.649	0.000	0.829
Structural	≈	N_Servers	0.822	0.077	10.639	0.000	0.606
Structural	≈	Changes_Policies_Inst	0.779	0.074	10.541	0.000	0.599
Utility	≈	Server_Assessment_Util	0.984	0.028	35.510	0.000	0.877
Utility	≈	Manager_Assessment_Util	1.016	0.028	36.663	0.000	0.939

Constructs' discriminant validity was tested using the Fornell and Larcker (1981) criterion. This test compares the square root of the Average Variance Extracted—AVE (values presented on the diagonal of **Table 7**) with the correlations between the constructs, requiring all column and row correlations to be lower than the value posted on the diagonal. Our model presented discriminant validity for all constructs except for the correlation between “proximal” and “engagement.”

Table 7. Test for discriminant validity according to Fornell and Larcker (1981) criteria.

Correlation and discriminant validity							
	Proximal	Methodology	Feedback	Culture	Engagement	Estructural	Utility
Proximal	0.722						
Methodology	0.599	0.714					
Feedback	0.686	0.391	0.914				

Table 7. (Continued).

Correlation and discriminant validity								
	Proximal	Methodology	Feedback	Culture	Engagement	Estructural	Utility	
Culture	0.121	−0.019	0.087	0.723				
Engagement	0.765	0.376	0.650	0.036	0.944			
Structural	0.171	0.160	0.097	0.167	0.153	0.707		
Utility	0.575	0.420	0.652	0.067	0.573	0.033	0.908	
Cronbach's alpha	0.919	0.721	0.948	0.763	0.933	0.711	0.903	>0.70
Composite reliability	0.904	0.751	0.910	0.765	0.943	0.749	0.903	>0.70
AVE	0.521	0.510	0.835	0.522	0.892	0.500	0.824	>0.50

Note: The diagonal values are composed of the square root of the AVE and must be observed as a discriminant validity criterion according to Fornell and Larcker (1981).

To test whether these constructs did not have discriminant validity, we performed the test indicated by Jöreskog (Brown, 2006; Onça et al., 2018). This test consists of restricting the correlation of the constructs you want to test discriminant validity and checking whether the change in the model fit indices is statistically significant (Brown, 2006; Onça et al., 2018). For our model, when we tested the difference between the indices of the free model and the indices of the model with the restriction in the correlation, the results were statistically significant, pointing to discriminant validity between the constructs tested.

The overall fit indices of the model were excellent (**Table 8**), all being above the minimum limits indicated by the literature (Hair et al., 2010; Malhotra et al., 2010). With this result, we can conclude that the model is valid for measuring the relationships between the constructs and that its result has validity in all indicators tested.

Table 8. Hypothesis testing and global model fit indices.

Regression hypotetical test										
				Standard estimate	Estimate	Standard error	z-value	p-value	R ²	Hypothesis
H2 (+)	Proximal	<--	Methodology	0.383	0.570	0.085	6.705	0.000	0.6	Supported
H4 (+)	Proximal	<--	Culture	0.060	0.098	0.069	1.426	0.154		Not supported
H5 (+)	Proximal	<--	Structural	0.065	0.106	0.072	1.467	0.142		Not supported
H3a (+)	Proximal	<--	Feedback	0.533	0.874	0.089	9.832	0.000		Supported
H1a (+)	Engagement	<--	Proximal	0.466	0.381	0.057	6.699	0.000	0.4	Supported
H3d (+)	Engagement	<--	Feedback	0.165	0.222	0.094	2.354	0.019		Supported
H6 (+)	Engagement	<--	Utility	0.114	0.120	0.060	2.015	0.044		Supported
H1b (+)	Utility	<--	Proximal	0.246	0.191	0.056	3.423	0.001	0.4	Supported
H3c (+)	Utility	<--	Feedback	0.420	0.535	0.090	5.924	0.000		Supported
H3b (+)	Methodology	<--	Feedback	0.423	0.467	0.069	6.762	0.000	0.179	Supported

Note: $\chi^2 = 695.332$; $df = 265.00$; $p\text{-value} = 0.000$; $\chi^2/df = 2.624$; CFI = 0.927; TLI = 0.918; GFI = 0.869; RMSEA = 0.060.

The regression test of the relationship between the constructs indicated that all relationships were statistically significant at 5%, except those between the constructs

Culture→Proximal (H4) and Structural→Proximal (H5). Another critical point is that the explanation power of the constructs was considered good, with R^2 of 0.629 for “proximal factors”, 0.446 for “engagement,” 0.383 for “utility,” and 0.179 for “methodology.” The betas of the regressions showed median to high ratios for all hypotheses tested, ranging from 0.533 to 0.114 (Cohen et al., 2003).

10. Discussion of results

The SEM-CB results indicate that the tested hypothetical model adhered well to the empirical data from the sample matrix. This indicates the validation of the tested model, being able to generate knowledge from its application (Brown, 2006; Hair et al., 2010; Malhotra et al., 2010; Cohen et al., 2003). Thus, we set out to analyze the correlation results, pointing out that all the hypotheses tested were supported by the model analysis, except hypotheses H4 and H5, which had p -value results greater than 0.05 or 5%.

Hypothesis H4 tested the influence of culture on proximal factors in the perception of civil servants. As the data did not support it, we can conclude that this is a minor factor in determining how IPA is applied in its proximal elements for these public servants. The result contrasts with the theory that advocates culture’s moderate to strong influence on the IPA process (Hofstede et al., 2010; Odelius and Santos, 2007). Something that may explain this result is that culture is external to the evaluation process, causing a non-recognition of its influence on decisions made within the IPA process (Levy and Williams, 2004; Murphy and DeNisi, 2008).

Hypothesis H5 tested the influence of structural factors over proximal factors in the perception of civil servants. This hypothesis was also not supported statistically, indicating that, in the perception of the civil servants, the organizational structure in which they are inserted has little influence on how the process is applied. This finding contrasts with the theory that provided the basis for the study, which points to a strong influence of the structure of the civil service in how IPA is applied to the various organs and sectors (Chiang and Birtch, 2010; Bergue, 2010; Odelius and Santos, 2007). Another critical point is the stability many civil servants have in their positions and careers, even when this stability is not formal. This may have generated less interest in the influence of aspects related to the structure of applying IPA (Feitosa and Lima, 2014; Fonseca and Menezes, 2016; Sánchez-Elvira, 2018).

Within the hypotheses that were supported statistically, the one with the highest beta is H3a, which seeks to identify the influence of feedback on proximal factors. The result, with a beta of 0.533, considered to be of solid influence for a study in the social science field (Cohen et al., 2003), is in line with the IPA theory of analysis. Feedback is one of the most essential elements in an IPA process (Alves et al., 2017), especially for the factors most closely linked to the employee himself. Well-performed feedback can significantly increase the perception of satisfaction with the entire process. This happens because a flow of positive emotions and a perception that the whole process is well conducted generate a positive perception of the proximal factors (Beuren et al., 2020; Van Dijk and Schodl, 2015; Peiperl, 2001).

A second important point connected to feedback is hypothesis H3c, which deals with the influence of feedback on the perceived utility of the IPA process, with a beta

of 0.420. This finding also confirms the importance of feedback for the whole process and especially for giving meaning to IPA (Beuren et al., 2020; Van Dijk and Schodl, 2015; Peiperl, 2001). The influence of feedback on perceived utility is very much linked to a long-term outcome, generating a significant practical result for competency-based people management in organizations. This can lead the evaluated to modify their behavior and identify the need to develop new competencies (Gomes and Lisboa, 2020).

Still, on the feedback, we have hypothesis H3b that deals with the influence of feedback on the methodology chosen and applied to the IPA process, which obtained a beta of 0.423. With this result, we identify that feedback is the factor with the most significant influence on the positive perception of the servers about the IPA process. This positive influence is directly linked to an approval of the entire methodology applied to the process and a high perception of the usefulness of the process (Van Dijk and Schodl, 2015). Feedback shows employees how the whole process happens and justifies why a specific methodology is being applied over an existing one (Beuren et al., 2020; Van Dijk and Schodl, 2015; Peiperl, 2001).

The methodology applied to the process also strongly influenced the proximal factors (H2), with a beta of 0.383 (Cohen et al., 2003). This influence is usually anchored in legislation or practices pre-established by third parties not directly involved in the evaluation process, bringing a standardization that does not always match the reality of the evaluation, especially within public management (Bezerra et al., 2019). This fact is essential to the methodology chosen to assess the factors closest to the servers. Thus, how the process is scaled and the aspects that may be unstable, suffering small or large changes, significantly influence how employees perceive all the elements within the IPA (Guimarães et al., 1998).

The hypotheses that are related to engagement, H1a, the influence of proximal factors on engagement, with a beta of 0.466; H3d, the influence of feedback on engagement, with a beta of 0.165; and H6, the influence of perceived utility on engagement, showed statistical significance at 5%, being considered as supported by the empirical data (Hair et al., 2010; Malhotra et al., 2010). This result indicates that these factors are essential for engaging servers in the IPA process. The hypothesis with the most significant influence on engagement in the IPA process was H1a, which shows that proximal factors strongly influence servant engagement (Cohen et al., 2003). This construct is the most important as it has the highest content validity (Almanasreh et al., 2019) with nine scale items and the most significant influence on the engagement of those involved in the IPA process. This finding aligns with the theory, indicating that this construct is the most important in eliciting employee engagement (Murphy and DeNisi, 2008).

We should highlight that this construct encompasses two fundamental aspects of IPA: the perception of the process and factors related to people management. In the first aspect, we point out and analyze issues related to professional growth facilitated and even driven by the IPA process (Bakker and Leiter, 2010). This perception creates a flow of positive emotions that align with other aspects, such as the perception of utility (H6 with a beta of 0.114) and the perception that feedback is returning something positive (H3d with a beta of 0.165), making the engagement of servers

stronger with the tasks and more likely to lead them to a long-term engagement (Gomes and Lisboa, 2020). The second aspect is more linked to how the people management team responsible for applying the IPA behaves and is prepared for this process (Murphy and DeNisi, 2008; Bergue, 2010). In this aspect, the proximal factors are much more practical and linked to the relationship of the appraisee with all those involved in applying IPA in the organization to which he belongs. This perception generates greater or lesser proximity when the team presents the domain of the process and takes care in the search for the best way to apply the IPA (da Silva Monteiro et al., 2021; da Silveira et al., 2021; Bergamini and Beraldo, 2008).

Finally, it is worth drawing attention to the item on the “Relation_Evaluator_Evaluated” scale that belongs to the proximal factors construct. This item relates more to the second aspect that this construct seeks to capture. It shows that the relationship between the evaluated and their evaluators is a process considered less critical to provoking engagement. The result points to one of the most challenging problems to address within public management: political influence in choosing leadership positions (Vandenabeele et al., 2017). This form of management choice causes a delegitimization of the exercise of power, which diminishes the admiration of subordinates for their bosses, negatively influencing engagement in any activity that depends on a judgment by that boss (Jackson, 2019). This is an important finding, as it places us in front of a problem that is difficult to solve and would require further study for better clarity.

11. Discussion of practical implications

The practical implications of these findings show in a more general way that the evaluation of people within public management is multifaceted and depends on a broader, more complex, and dynamic perspective than just completing a traditional evaluation. Issues such as feedback and monitoring the process are essential for the result to be positive. In practice, the manager must consider evaluation a constant process, not just a momentary one. This issue is reinforced by the realization that much of the value of evaluation lies in feedback. This has a significant practical implication, as the manager needs to design an evaluation process based on constant feedback on the progress of established goals. Generating adequate and accurate feedback is a central issue in the people management process because people do not know which direction to follow without feedback.

The low importance given to culture and structural factors indicates that, in practice, managers can generate greater standardization in evaluation processes. This happens because a lower perception of the influence of organizational culture on the process generates less need to adapt the assessment to the cultural specificities of each department or unit. The low perception of the influence of the structure on the evaluation reinforces this finding.

Finally, managers must develop a transparent evaluation process with a well-developed methodology that is organized and previously presented to employees. This issue has a substantial practical impact, as a process that changes during its validity tends to cause discomfort and is not transparent.

12. Conclusions

Modern HR management emerges due to a more unstable and challenging external environment, prompting a more strategic positioning of HR within organizations (Ulrich et al., 2011). Strategic Human Resource Management (HRM) assumes the alignment between enabling understanding and generating strategies for solving problems, HR practices, and the strategic objectives of the organization (Lengnick-Hall et al., 2009). This includes all activities associated with people within the institution, such as training, recruitment and selection, development, and performance evaluation. This alignment encourages HR managers to include strategy concepts daily (Allen and Wright, 2007).

The need to include strategy concepts within HR management increased managers' concern about individual behavior and how this behavior was related to the achievement of goals (Fisher, 2002). Promoting the development and application of this new look in HR increased the resources needed for people management. This aroused a keener look from top management at their organization. This look produced the obligation to justify the investments made, raising the importance of the IPA of employees and the metrics of goal achievement (Lacombe and Albuquerque, 2008).

In public management, effectively managing the performance of public servants has been necessary since Weber's bureaucratic administration (Cunha et al., 2018). Within modern public administration management, IPA is one of the essential tools for all managers to identify the competencies and potential of their employees (Špalková et al., 2015). Seeking to fill this gap, we formulated the following research question: Which factors, as pointed out by theory, have the most significant influence on the individual performance appraisal process?

Based on this question, we proposed the objective of identifying the factors by proposing a measurement scale and a model to identify which factors managers should focus on within the IPA process to have greater chances of success in this task. This objective makes the study unprecedented in Brazil and with few similar studies worldwide, mainly when applied with a quantitative and public management-oriented view.

The research question was fully answered with the validation of the measurement scale of the IPA process—MIPAs, which captured, through 25 items, the main aspects related to the IPA application process in the perception of the civil servants themselves and the formulation and testing of the MIPA hypothetical model by SEM-CB. The identified scale has seven dimensions or specific constructs: factory proximal, feedback, culture, methodology, engagement, structural, and utility. Each of these constructs addresses particular questions and comprises items from the scale that relate to what they are reflecting. The methodology was well structured, following the best practices suggested by the theory of scale construction, validation, and theory testing (Hinkin, 1995; Almanasreh et al., 2019; Charmaz, 2006; Dixon-Woods, 2010).

With the scale validated and the constructs identified, we turned to theory to structure a hypothetical model that identified six main hypotheses, with H1 divided into two parts, "a" and "b", and H3 divided into four parts, "a", "b", "c", and "d" totaling 10 hypotheses. Of these hypotheses, only H4 and H5 were not supported by the data. H4 dealt with the influence of culture on proximal factors, and H5 dealt with

the influence of structural factors on proximal factors. These two findings indicate that the servers are not considered crucial for the proximal factors, the general culture that generates influence on the process, or the structure as a whole, such as the number of servers or hierarchies in which they are inserted in the public management. As for the finding of the perception of the non-relevance of culture to the IPA process, considering both the agency, the public service, and the country, it may be linked to the fact that culture is something external to the IPA process (Levy and Williams, 2004; Murphy and DeNisi, 2008). As for Hypothesis H5, which deals with the structure in which the servant is inserted, its lack of support indicates that agencies and other structures are not essential to shaping the process of building IPA. This perception happens because, first, the whole process is determined by political agents who are distant from the IPA process (Chiang and Birtch, 2010; Bergue, 2010; Odelius and Santos, 2007), and second, its form and application are standardized, suffering little influence from the specific structure of each ministry, body, or department (Chiang and Birtch, 2010; Trevor et al., 2012). The greater rigidity of management processes differentiates this particular characteristic of public management from private initiative (Pires and Macêdo, 2006).

As for the other hypotheses supported by the analysis of the SEM-CB results, we highlight two specific groups: the hypotheses linked to feedback and the hypotheses linked to engagement. The hypotheses linked to feedback (H3a, H3b, H3c, and H3d) indicate that feedback is among the most essential elements in making the IPA process meaningful. Its influence is strongly felt on the proximal factors, utility, and methodology constructs. Feedback also influences engagement, but to a lesser extent than the proximal factors, but still, in a proportion considered medium influence (Cohen et al., 2003). These findings indicate that the manager should pay special attention to feedback because the better and more frequent the feedback, the better the IPA results. Acting on the amount and manner of applying feedback within the IPA process will bring the public manager short- and long-term gains (Gomes and Lisboa, 2020), in addition to providing a gain for the process itself, by acting on the general perception of the server and not only in their engagement, acting to improve the perception of meaning for all involved.

Finally, it is worth highlighting the hypotheses related to engagement since this is the consequent construct of the tested model and is the answer to the research question. The data supported hypotheses H1a, H3d, and H6 and indicated that proximal factors, feedback, and utility influence the engagement of those involved in the IPA process. This finding is in line with the theory. It shows managers that of these aspects, they should focus on the proximal factors because this is the one that generates the most influence on the engagement of employees in the IPA process. The greater the servers' importance to the proximal factors, the greater their engagement with the whole process (Allen and Wright, 2007; Barney, 1991; Fisher, 2002; Huselid, 1995; Ammons and Roenigk, 2015; Lee, 2017; Bergue, 2010).

The proposed objectives for the study were all met, as we measured the scale and determined the factors that influence the engagement of those involved in the IPA process using EFA (Bido et al., 2018; Hinkin, 1995; Almanasreh et al., 2019; Charmaz, 2006; Dixon-Woods, 2010). The objective of proposing and testing the

hypothetical model, on the other hand, was achieved through the literature review after identifying the critical constructs of the process and applying SEM-CB to the empirical data to test whether the proposed model had validity (Hair et al., 2010; Malhotra et al., 2010; Cohen et al., 2003; Onça et al., 2018).

The main theoretical contribution was the construction of the MIPAS scale and the hypothetical model to identify employee engagement, MIPA. The practical contribution was identifying the constructs managers should focus on to improve the IPA process with their subordinates, helping increase employee adherence to the process.

The restrictions presented in the study are linked to how the sample was collected, as it was conducted by convenience, which may have embedded some selection bias. Another point is the non-response bias of people who are dissatisfied or even not engaged with the evaluation process. As proposals for further research, we indicate the possibility of applying the questionnaire and testing the model in other cultural realities within the country itself, such as the application in municipalities and states of the federation and even in other countries, to verify the validity of the findings of this study. We also indicate using a probabilistic sample to rule out the possibility of sample selection bias in the testing process.

Author contributions: Conceptualization, LFB; methodology, LFB and EdCO; software, EdCO; validation, LFB and MB; formal analysis, EdCO; investigation, LFB; data curation, LFB and EdCO; writing—original draft preparation, EdCO; writing—review and editing, LFB, and EdCO; visualization, LFB and EdCO; supervision, MB; project administration, LFB. All authors have read and agreed to the published version of the manuscript.

Conflict of interest: No interest conflicts were identified.

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Article

Paradigms of people management: Human resource strategies during an economic downturn

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CITATION

Manimala MJ, Kurian C. (2024).
Paradigms of people management:
Human resource strategies during an
economic downturn. Human
Resources Management and Services.
6(4): 3400.
<https://doi.org/10.18282/hrms.v6i4.3400>

ARTICLE INFO

Received: 17 August 2024
Accepted: 27 September 2024
Available online: 10 October 2024

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Abstract: Since the Industrial Revolution, there has been an evolution in the paradigms under which the industrial worker is perceived and dealt with. These paradigms can be briefly listed in the order of their evolutionary stage as: the food-gatherer, the economic man, the social man, the resourceful man, and the enterprising man. Each of them is a combination of two basic paradigms in different proportions, namely, the outsider paradigm and the partnership paradigm. Obviously, the paradigmatic perspectives of management about their workers will have a significant influence on how they treat their workers, which may become especially conspicuous during recessions and other kinds of hard times. It was in this context that we designed a study to understand the human resource strategies of companies during a period of recession. Data for this study was collected through the content analysis of 46 published cases, wherein we developed the ratings of two sets of variables, namely: the external and internal environments of the company and the strategic actions taken by the respective managements. A surprising finding of the study is that the correlations between the environmental factors and the strategy factors were small and non-significant; moreover, the correlations involving the external environment were smaller than those involving the internal environment. Hence, it may be inferred that strategic actions are influenced primarily by the paradigmatic perspectives of management rather than environmental factors. In order to identify the different types of paradigmatic perspectives, we have further carried out a cluster analysis to develop a taxonomy of paradigms. The results showed that there are five sub-paradigms, which are: (1) Pacifiers, constituting 35% of the sample; (2) Modifiers, constituting 22%; (3) Molders, constituting 17%; (4) Enhancers, constituting 15%; and (5) Exploiters, constituting 11%. The limitations of the study and the implications of the findings are discussed in the concluding part.

Keywords: economic downturn; people-management paradigms; outsider paradigms; partnership paradigms; environmental factors; HR strategies; taxonomy of HR paradigms

1. Paradigms of people management: An evolutionary perspective

It is common knowledge that people-management practices in the organized sector of work have undergone substantial changes since the Industrial Revolution, when mass production and consequently large-scale employment of people in the organized sector became a common practice. People-management practices in organizations are largely a reflection of the beliefs and assumptions that entrepreneurs and managers hold about work and the worker. Taking a historical perspective of the developments in the people-management practices of the organized sector, one can recognize five different patterns (call them ‘paradigms’ for the time being), each one reflecting a different set of assumptions about work and the worker. A brief outline of

the major tenets of these five paradigms and the assumptions underlying them is given below:

Paradigm 1: Managing the ‘food gatherer’:

A major assumption about the workers during the Industrial Revolution was that they held a ‘food-gatherer’ mindset (Nicholson, 1998; Mohajan, 2019), that is, they would work only if they needed the money to buy food. Hence, managers believed that workers should be paid only a subsistence wage, which would keep them alive and motivate them to go to work every day! Increasing the wages even as a reward for higher productivity was unthinkable, as it was believed that the new-found ‘affluence’ might prevent them from going to work the next day. Workers also had their beliefs that restrained them from increasing productivity—they had a very ‘physical’ concept of work, so they feared that faster work would exhaust the ‘pile’ and make them out of employment sooner, and so they adopted a ‘soldiering’ attitude against any attempt at increasing productivity!

Paradigm 2: Managing the ‘economic man’:

The vicious cycle described above, militating against increasing productivity, was broken by the Scientific Management movement initiated by Frederick Taylor (Taylor, 1911; Cadbury, 1914), who believed that work would produce more work and consequently more employment, and therefore any increase in productivity is beneficial to the enterprise, its managers, and the workers. The assumptions of the ‘economic man’—the belief that man is motivated primarily by money—gave rise to the piece-rate wage system that rewarded the worker strictly in proportion to his output. In order to ensure fairness in the system, Taylor also introduced a scheme for identifying the ‘best practices’ (to borrow a more recent terminology) and training the worker in such methods. This was admirably supplemented by the ‘Time and Motion Studies of Frank and Lillian Gilbreth, with a view to developing the scientific method of work so as to eliminate wasteful efforts (Gilbreth, 1912; Gilbreth, 1921). The people-management paradigm born out of these experiments is focused on the ‘management of the human individual’ by giving him training on the specific task to be performed and by providing monetary incentives in proportion to his output.

Paradigm 3: Managing the ‘social man’:

As the monetary incentives failed to be effective in all situations, researchers and practitioners started looking for other explanations. The search for alternative models was prompted and guided by the serendipitous findings of Elton Mayo’s Hawthorne studies that human individuals seek to fulfill their social needs at work. The concept of the ‘social man’ gave birth to the ‘human relations’ paradigm, where the major motivators are the attitudes and orientations of the group, opportunities to relate and interact with co-workers, and the benign and considerate treatment by the supervisors (Mayo, 1933; Mayo, 1945; Roethlisberger and Dickson, 1939).

Paradigm 4: Managing the ‘resourceful man’:

In the previous three paradigms, employees were viewed as external participants who were unwilling to contribute to the organization’s objectives and so had to be motivated using money, job training, and relationships. The focus was primarily on what the organization needs rather than on what the employees can contribute. In other words, employees were not treated as ‘in-house resources’ owned by the organization

but as ‘hired hands’. Findings from behavioural science research showed that employees would willingly take initiatives for the organization, provided the latter was willing to recognize their competencies and empower them. Among the studies/theories that have contributed to the development of the human resources perspective, as well as the ‘enterprising-employee’ model discussed as the next paradigm, the most influential ones are the following: Maslow’s need-hierarchy theory (Maslow, 1954); Herzberg’s two-factor theory based on job content and job context (motivators/hygiene-factors theory) (Herzberg et al., 1959); McGregor’s Theory-X/Theory-Y model (McGregor, 1960); Drucker’s performance-model of ‘Management by Objectives’ (MBO) (Drucker, 1954); and Weber’s theory of ideal bureaucracy (Weber, 1947). This has led to the adoption of what may be called the ‘human resource paradigm’ by organizations. This paradigm recognizes people as versatile resources of the organization who have the potential to contribute much more than what they are currently hired for. The responsibility of the management therefore is to develop and empower these resources in their specified areas of discretion so that they could proactively contribute to the emerging needs of the organization that operates in dynamic internal as well as external environments.

Paradigm 5: Managing the ‘enterprising man’:

While the 4th paradigm raised the status of the employee from an ‘outsider’ to an ‘insider’, it did not fully address the issue of the dichotomy between the owners and the employees. The latter were still treated as a ‘resource’ in the hands of the former and not as ‘doers’ together with the owners. In other words, the model was to provide ‘limited autonomy’ to the employees within strictly defined functional boundaries and performance norms. What is proposed in the 5th paradigm is to provide full autonomy to the employees within the broadly defined vision, mission, and values of the organization so that they can act as ‘doers’ together with the owners. Such a system will promote and enhance employee commitment (Spreitzer, 1995) and performance (Huselid, 2005), organizational innovation and intrapreneurship (Gomez and Rosen, 2001), and organizational effectiveness (Conger and Kanungo, 1988), especially in large organizations (Spreitzer, 1996). While this model is in operation in certain types of organizations (such as religion, politics, social/philanthropic organizations, etc.), there are very few among the industrial and commercial organizations that are able to operate under this paradigm. However, the few who have experimented with this paradigm have found enormous success not only in terms of profits and growth but also in terms of innovation and entrepreneurship.

2. Paradigms of people management: Two broad categories

Based on the philosophical perspectives implied in the five paradigms discussed above, we can classify them into two broad paradigms: one that treats the employees as ‘outsiders’ to the organization, and the other that treats them as ‘partners’. The latter paradigm, as opposed to the ‘outsider’ paradigm generally being adopted in commercial organizations, was identified in one of our earlier studies on social enterprises (Bhati and Manimala, 2011). As explained above, the underlying assumption of managers in Paradigms 1, 2, and 3 is that employees are unwilling to work and are engaged as external participants who would perform only the minimum

work needed to keep their jobs. The managers' task therefore is to motivate them by manipulating the wages, providing training as well as incentives, and/or keeping good relations with them. The second category (the 'Partnership Paradigm') may be seen in evolutionary paradigms 4 and 5, where the managers believe that the employees are an integral part of the organization and would work for it, provided they are sufficiently empowered. The managers' task in this case would be to develop the potential of the employees and create a facilitating environment for them to operate. It should be noted that, as in the case of biological evolution, the 'higher' paradigms may occasionally exhibit behaviors associated with the 'lower' paradigms. Such 'regressions' into lower-level paradigms may often be associated with crisis situations, which is the rationale for our study of the HR strategies followed by corporations during the economic downturn, as discussed in the next section.

3. People management during the recent economic downturn

While the two contrasting perspectives on the nature of employees' roles in organizations are conceptually distinct, there are no real-life organizations that operate exclusively within the tenets of a single paradigm. The behavioural styles characteristic of several paradigms intermingle in the actual behaviour of corporate executives. The practices may be at variance with the professed ideologies, as implied in the notions of 'espoused theory' and 'theory-in-use', discussed in the organizational behaviour literature (Argyris and Schon, 1974; Argyris and Schon, 1978; Argyris et al., 1985). The contrast is likely to be particularly sharp during an economic downturn because of the need to perform well under adverse conditions. In view of this, we decided to conduct a preliminary examination of the HR practices of Indian organizations during such a period of adversity so as to identify the people-management philosophies underlying such practices. Basically, it involved the collection of data on the perceived environment and practiced HR strategies through a content analysis of the actions taken by these organizations during the recent economic downturn. The technique of content analysis of actions was preferred to self-reports by executives, with a view to identifying the 'theory-in-use' (as practiced) rather than the 'espoused theory' (as professed). It is natural that self-reports will be dominated by the 'espoused theories' because of the self-serving biases of the respondents, as proposed by the attribution theorists (Heider, 1958; Kelley, 1971; Kelley, 1973; Shepherd et al., 2008). With a view to minimizing the impact of the self-serving bias possible in the use of self-report surveys, the first author developed and used a different method for data collection called the 'Case-Survey Method' in an earlier study on entrepreneurial heuristics, where quantitative data were generated using the content analysis of cases published in business magazines. The present study has employed a similar method, although there are some differences in the types of 'cases' used.

4. Sample for the study

The sample for this study was composed of 56 Indian cases, of which 46 were based on interviews with CEOs published in a reputed Indian business magazine, *Business Today*. To these, we added 10 cases developed from presentations made at

an HR conference by heads of HRM in the respective organizations. All the cases contained reports on the actions taken on the HR front by corporations during the economic downturn. While there is indeed a self-report bias in these interviews and presentations, the process of generating quantitative data from the ‘actions’ could help in mitigating such bias to a large extent. The cases covered diverse industries such as software services, textiles, automobiles, banking and financial services, hospitality, and so on.

5. Data generation and analysis

The cases were content-analyzed to identify and rate (on a 5-point scale) the perceived environment and the preferred human resource strategies. Environmental perception variables (12 in number) were rated as ‘1’ when not perceived at all and ‘5’ when perceived to be most important. There were twelve variables in this category that related to both the internal and external environments of organizations (see **Table 1** for details). In a similar manner, we identified 11 human resource strategy variables (see **Table 2** for details) and rated them on a 5-point scale. The strategies were rated as ‘1’ when they were definitely not used and ‘5’ when they were definitely used. Of the 56 cases originally identified, 10 cases were discarded for lack of appropriate data on all variables. The data were then subjected to descriptive statistical analyses to ascertain their relative importance. Additionally, the environmental perception variables and HR strategies were separately factor-analyzed to identify the principal orientations involved. Inter-factor correlations were computed to check for the association between environmental perception and the HR strategies followed. Cluster analysis was performed on the data to develop an organizational taxonomy based on the similarities in the HR strategies followed by the respondent organizations during this period.

Table 1. Means and standard deviation of environmental perception variables.

Environmental perception variables	Mean	Standard deviation
E-3: Downward pressure on prices	4.61	1.16
E-1: Reduction in demand and customer spending	3.76	1.29
E-2: Change in customer segments or needs	3.61	1.04
E-11: Perceived strength of brand image and power	3.50	0.96
E-8: Prior experience with downturn	3.43	0.83
E-12: Perception of debt-related vulnerability	3.43	0.75
E-4: Exchange rate fluctuations	3.28	0.69
E-6: Unexpected external events and developments	3.26	0.80
E-5: Inelastic demand of the products	3.04	0.51
E-7: Stimulation by government programmes	3.00	0.42
E-10: Inability to understand environment and identify the real competitors	3.00	0.92
E-9: Lack of awareness about potential markets	2.65	1.06

Table 2. Means and standard deviations of human resource (HR) strategy variables.

HR strategies	Mean	Standard deviation
S-4: Leadership initiatives by CEO	4.61	0.80
S-5: Managing employee needs and expectations and motivating them	4.11	0.99
S-7: Philosophy of openness: Be genuine, trusting and transparent in dealing with people	4.04	1.01
S-9: Training and re-skilling of employees	3.87	0.96
S-3: Developing employees' loyalty and commitment through ownership and empowerment	3.83	1.00
S-6: Timely and open communication with employees	3.80	0.98
S-11: Re-visit the vision, emphasizing values	3.63	0.93
S-8: Enlarging the talent pool	3.54	1.35
S-2: Enforcement of performance management systems independent of downsizing	3.43	0.83
S-10: Freeze salary and promotions	3.35	0.97
S-1: Downsizing employees, franchisees or agents	2.96	1.48

6. Findings

(a) Relative importance of environment and HR strategy variables

The means and standard deviations of the environmental perception variables were as shown below in **Table 1**. Those variables with means greater than 3.5 were: downward pressure on prices (E-3); reduction in demand and customer spending (E-1); change in customer segments or needs (E-2); and perceived strength of brand image (E-11), implying that these are the environmental issues perceived as important by most organizations.

The means and standard deviations of the HR strategies identified are shown in **Table 2**. Based on the norm of an average score above 3.5, it is evident from this table that the most frequently used HR strategies are: Leadership initiatives by the CEO (S-4); motivating employees by managing their needs and expectations (S-5); having a philosophy of openness and being genuine, trusting, and transparent in dealing with all stakeholders (S-7); training and re-skilling of employees (S-9); developing loyalty and commitment through ownership and empowerment (S-3); and timely and open communication with employees (S-6).

(b) Principal factors of the environment and HR strategy variables

In order to understand the major dimensions underlying the variables, exploratory factor analysis was conducted on them. This analysis of the environmental variables revealed a five-factor solution explaining 64.8% of the total variance. The five environmental factors were named as: (E-I) reduction in demand and prices; (E-II) macro-level changes and interventions; (E-III) perceived brand power; (E-IV) lack of sensitivity to the internal and external environment; and (E-V) perceived competence to deal with unexpected events. These factors, along with their factor loadings and the variance explained by each, are shown in **Table 3**.

Table 3. Exploratory factor analysis of environmental perception variables.

Factor No. and name	Variable No. and description	Loading	% of variance explained
Factor-1 (E-I): Reduction in demand and prices	E-1: Reduction in demand and customer spending	0.546	20.29
	E-2: Change in customer segments or needs	0.721	
	E-3: Downward pressure on prices	0.615	
Factor-2 (E-II): Macro-level changes and interventions	E-5: Inelastic demand of the products	−0.651	14.14
	E-4: Exchange rate fluctuations	0.712	
	E-7: Stimulation by government programmes	−0.763	
Factor-3 (E-III): Perceived brand power	E-5: Inelastic demand of the products	0.538	11.36
	E-11: Perceived strength of brand image and power	0.936	
	E-9: Lack of awareness about potential markets	0.709	
Factor-4 (E-IV): Lack of sensitivity to internal and external environment	E-10: Inability to understand environment and identify the real competitors	0.574	10.08
	E-12: Perception of debt-related vulnerability	0.684	
	E-6: Unexpected external events and developments	0.732	
Factor-5 (E-V): Perceived competence to deal with unexpected events	E-8: Prior experience with downturn	0.712	9.00
Total variance explained by five factors			64.878

For the HR strategies, a similar analysis revealed a five-factor solution explaining 73.3% of the total variance. The factors identified were: (S-I) managing employee expectations; (S-II) employee development; (S-III) expanding the talent pool; (S-IV) leadership; and (S-V) freezing salary and promotions. The HR strategy variables that coalesced to form the factors, their resultant factor loadings, and the percentage of variance explained by the factors are shown in **Table 4** below.

Table 4. Exploratory factor analysis of HR strategy variables.

Factor No. and name	Variable No. and description	Loading	% of variance explained
Factor-1 (S-I): Managing employee expectations	S-5: Managing employee needs and expectations and motivating them	0.883	28.108
	S-3: Developing employees' loyalty and commitment through ownership and empowerment	0.804	
	S-7: Philosophy of openness: Be Genuine, trusting and transparent in dealing	0.789	
	S-1: Downsizing employees, franchisees or agents	−0.513	
Factor-2 (S-II): Employee development	S-2: Enforcement of performance management systems, independent of downsizing	0.798	14.487
	S-6: Timely and open communication with employees	0.709	
	S-9: Training and re-skilling of employees	0.504	
Factor-3 (S-III): Enlarging the talent pool	S-8: Enlarging the talent pool	0.913	13.797
Factor-4 (S-IV): Leadership	S-11: Re-visit the vision, emphasizing values	0.747	8.529
	S-4: Leadership initiatives by CEO	0.610	
Factor-5 (S-V): Freezing salary and promotions	S-10: Freeze salary and promotions	0.962	8.403
Total variance explained by five factors			73.324

(c) Inter-factor correlations

The inter-factor correlations were computed for the environmental perception and the HR strategy factors, which were found to be small and non-significant (see **Table 5**). The largest correlation (0.24) is between E-V (“Perceived competence to

deal with unexpected events”) and S-I (“Managing employee expectations”). It may be noted that E-V is an internal environmental factor. Apparently, the strategies are more related to internal capabilities than to the external environment. One other possible hypothesis is that organizations have their strategies based on their people-management philosophies, which would remain largely unaffected by the happenings in the external environment (implying that such philosophies are hard to change).

Table 5. Inter-factor correlations between environmental factors and HR strategy factors.

	E-I	E-II	E-III	E-IV	E-V	S-I	S-II	S-III	S-IV	S-V
E-I	1.00	0.00	0.00	0.00	0.00	0.03	0.03	−0.28	0.11	0.04
E-II		1.00	0.00	0.00	0.00	−0.12	0.06	−0.04	0.25	−0.06
E-III			1.00	0.00	0.00	0.07	0.04	−0.04	−0.02	−0.04
E-IV				1.00	0.00	−0.08	−0.14	−0.06	−0.05	0.06
E-V					1.00	0.24	0.02	−0.14	−0.07	−0.18
S-I						1.00	0.00	0.00	0.00	0.00
S-II							1.00	0.00	0.00	0.00
S-III								1.00	0.00	0.00
S-IV									1.00	0.00
S-V										1.00

(d) A taxonomy of respondent organizations

As the inter-factor correlations showed an almost complete absence of any association between environmental perception and strategy choices, it was logical for us to conclude that the source of strategies is primarily the philosophical orientations of the organizations. Hence, it was decided to get a clearer understanding of the specific orientations of different sub-groups within the sample, for which we conducted a ‘cluster analysis’ of the respondents based on the HR strategy factors. The procedure helped us to identify five sub-groups, which were named as: (1) Pacifiers, constituting 35% of the sample; (2) Modifiers, constituting 22%; (3) Molders, constituting 17%; (4) Enhancers, constituting 15%; and (5) Exploiters, constituting 11%. (See **Table 6** for the strategic orientations associated with each group.).

Table 6. Cluster analysis of the organizations based on the HR strategies identified.

	Cluster-1: Pacifiers (35%)	Cluster-2: Modifiers (22%)	Cluster-3: Molders (17%)	Cluster-4: Enhancers (15%)	Cluster-5: Exploiters (11%)
Dominant strategy of the group	Managing employee needs and expectations and motivating them (S-5)	Re-visiting the vision, mission and values (S-11)	Training and re-skilling of employees (S-9)	Enlarging the talent pool (S-8)	Enforcement of performance management systems independent of downsizing (S-2)
Supporting strategy of the group	Philosophy of openness: Being genuine, trusting and transparent in dealings (S-7)				Timely and open communication with employees (S-6)

Since the basis for classifying the respondents was their strategic orientations, we shall briefly outline the most commonly employed HR strategies of the group, which characterized their management of the economic downturn. Pacifiers (35%) adopt a strategy of allaying the fears of employees through open and genuine communication with them and through the management of their apprehensions, aspirations, and

expectations. Modifiers (22%) adopt a strategy of introspection by revisiting their own vision, mission, and values, wherein they also involve their employees. Molders (17%) attempt to change (in some cases, develop) their employees by training and re-skilling them so that they could be redeployed and thereby avoid both retrenchments as well as fresh recruitments. Enhancers (15%) are the ‘opportunistic’ organizations that look at the glut in the talent market as an opportunity for them to acquire good talent at low cost, with a view to keeping them and/or further developing them for their long-term plans. Exploiters (11%) are also opportunistic in the sense that they tighten the norms and metrics of performance, which helps them to get more work out of fewer people and provide a rationale for retrenchment, where timely communication with employees is seen as a means to enforcing the new norms without much heartbreak.

7. Conclusion: Paradigms and Practices of HRM in India

Since the present study is based on the published interviews and presentations of a small sample of Indian organizations, it is unlikely to be free of the self-serving biases of the presenters. Hence, the findings of the study should be treated as indications rather than inferences. The major findings of the study, along with brief comments on their implications, are listed below:

- It seems that organizations are more sensitive to their external environment than their internal environment (see **Table 1**). However, as we shall see later when discussing the ‘environment-strategy’ correlations, the internal environment of organizations (philosophies, values, competencies, etc.) is likely to have a greater influence on the strategic choices made by them. Hence, a focus on the latter may be more beneficial to organizations in the long run.
- With reference to the HR strategies adopted during an economic downturn, it may be noted that Indian organizations prefer employee-friendly strategies to those that are hostile. As may be seen from **Table 2**, the more commonly adopted strategies are leadership initiatives, open and authentic communication, training and re-skilling of employees, and ownership and empowerment; the least preferred ones are downsizing, freezing salary and promotions, and tightening performance norms.
- It was rather surprising (and contrary to the prevailing notions of the ‘environment-strategy’ relationship) that the inter-factor correlations were extremely small and non-significant, where the largest value of correlation was between an internal environmental factor and employee expectation management (see **Table 5**). As explained above, this finding may suggest a greater influence of organizational philosophies, values, and competencies on strategy-making. What, then, would be the influence of the external environment on strategy-making? Taking an analogy from the theory of biological evolution, one could say that it is not ‘environmental causation’ (as proposed by Lamarck) but ‘environmental selection’ (as proposed by Darwin). In other words, the primary reason for a change in an organism (or organization, in the present context) is the internal dynamism of the organism. But the survival of the change (or the success of the strategy, in the present context) is because of the selection by the

environment based on its compatibility with the environment. So, the environment does not cause, but only selects or rejects.

- Based on the observation made above regarding the possibility of a greater influence of the organizations' people-management philosophies on their HR strategies, the patterns of underlying orientations were explored using cluster analysis. Among the five types of orientations identified (pacifiers (35%), modifiers (22%), molders (17%), enhancers (15%), and exploiters (11%), none of them is about utilizing employee initiatives. In fact, all of them are owner/manager-initiated strategies for survival, many of them involving employees, but a few of them not. In terms of the two broad categories of paradigms we have identified in the introductory part, it may be legitimate for us to infer that Indian organizations are operating mostly in the 'outsider' paradigm. However, to be fair to them, it should be admitted that they are mostly at the benign end of this paradigm.

Author contributions: Conceptualization: MJM; methodology: MJM; investigation/data-collection: MJM and CK; data analysis: MJM and CK; writing-original draft preparation: MJM and CK; writing-review and editing: MJM; project administration/supervision: MJM. Both the authors have read and agreed to the published version of the manuscript.

Conflict of interest: The authors declare no conflict of interest.

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Article

Responsible leadership in a military organization (in the light of opinion surveys of professional soldiers)

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CITATION

Nagody-Mrozowicz K, Pietrakowski P. (2024). Responsible leadership in a military organization (in the light of opinion surveys of professional soldiers). *Human Resources Management and Services*. 6(4): 3394.
<https://doi.org/10.18282/hrms.v6i4.3394>

ARTICLE INFO

Received: 22 July 2024

Accepted: 3 October 2024

Available online: 11 October 2024

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Abstract: Military leadership is currently an extremely popular and important aspect of managing human resources in difficult, changeable, and unpredictable conditions. The solutions used in modernly managed, well-organized, subsidized, and ethically militarized systems become a point of reference and a model for organizations that encounter perturbations in the management of the organization's human resources. The most important of them are certainly the sense of trust of subordinates in their superiors and the leaders' responsibility for the level of staff development. The aim of the research undertaken was to verify the thesis that can be formulated in this affirmative sentence: "A modern commander should be honorable, self-confident, and have the ability to influence his subordinates and shape friendly interpersonal contacts in the group he reports." The literature search in the field of leadership and questionnaire research were aimed at answering the main research question: "What mental properties and behavioural features should characterize a responsible leader in military organizations?". The work uses the diagnostic survey method, and the interview was conducted using a multi-factor survey questionnaire on a 30-person study group consisting of professional soldiers aged 25–40. The adopted age range of the study group corresponds to the period of active military service, from the age of graduation to the year of termination of active military service. The Multifactor Leadership Questionnaire is composed of two scales, creating a total of 37 randomly ordered statements in the form of single-choice questions. To analyze the distribution of answers, ranks were used to assess the degree of their compliance with the respondents' beliefs. Based on the conclusions from the conducted research, we have grounds to believe that professional soldiers expect their leader to be helpful to their subordinates and to ensure that the soldiers are motivated to act and perform their tasks. An important behavior that is expected from the commander is the desire to have a common mission in achieving the goal. Based on the research results, it was found that an undesirable feature is the inconsistency of commanders when pointing out the mistakes of their subordinates, who do not devote interest and time to learning how to avoid mistakes and to improve the competence of their subordinates.

Keywords: leadership; trust; responsibility; psychophysical properties of a leader; military leadership

1. Introduction

The goals of the presented work include three threads. The theoretical goal is to present leadership issues. The research goal was to show the beliefs of professional soldiers about the properties and features of the leadership behaviors of their superiors. The practical goal is to verify the developed research tool, the Multifactor Leadership Questionnaire, in terms of its possible use in research relevant to the general population of professional soldiers in Poland.

The research is of a post-treatment nature, and the conclusions drawn from the research should be considered preliminary.

The rapidly growing uncertainty of the environment makes it necessary to radically change the approach to enterprise management as well as its “philosophy” defining the basic goals and principles of action of managers. People are the main entity of every organization and create its intellectual capital. Organizations managed by management staff can achieve the intended goals through the skillful use of this capital through proper management of people, consistent with modern management theories.

The challenges that the environment poses to the organization’s members include the need to learn and acquire knowledge and competences. The direction of these changes is determined by the assumption that the condition for individual development is a continuous learning process. Thanks to learning, we transform ourselves and develop our creative abilities, and the effect of these processes is an increase in self-awareness and a change in our perception of reality.

To function effectively, every organization needs both management and leadership (Goleman, 2002). Leadership is an essential condition for enabling change, and management is an essential means of achieving systematic results. Management in connection with leadership can create systematic changes, and leadership in connection with management allows for maintaining the appropriate level of compliance between the individual and its environment. The signs of excellent leadership manifest themselves mainly among the crowds of a given leader’s followers, and the very essence of leadership comes down to a deep understanding of the idea of obligations to the institution and the way of thinking about its heirs (Kenney, 2000). Leadership, exemplified in some form of behaviour, such as facial expression, body position, tone of voice, body posture, semantic content, phonetic form, hierarchical relationship, etc., is a social role within which a specific attitude is presented (Nagody-Mrozowicz, 2022).

Organizational units (among others: companies, enterprises, corporations, institutions, associations, etc.), just like the people who create them, are always at the stage of becoming, i.e., creating some relationships and structures. Covenants and agreements hold people together and enable them to meet organizational needs. These values should be universally understood and accepted, and as such, they should shape individual attitudes as well as organizational behavior. Leaders are obliged to provide organizations with maturity expressed in a sense of self-worth, belonging, hope, responsibility for themselves and for others, as well as a sense of equality and justice.

The true meaning of leadership comes down to leading others by your example, even if you do not exercise formal organizational authority. We can talk about true leadership when people are free and equal and not influenced by influence or persuasion. Natural leaders do not have to use formalized power towards their subordinates but rather treat them as partners involved in the implementation of a common project (Bartkowiak and Januszek, 2009).

Ethical leadership of people enjoys a high degree of permanence and is viable management, independent of potential conditions and processes, giving satisfaction from the relationship with superiors and satisfying the need for respect and

recognition. Employee attitudes formed under the influence of forbearance and goodness do not easily degenerate, and the motivation to act is characterized by incredible durability and strength. Work is done honestly, reliably, and with commitment, even in situations of financial underinvestment. This is because the dominant factors of motivation are activated social needs, including belonging to a group, interpersonal relations, perceived recognition, and respect. Realistically, then the costs of labor and business decrease, absenteeism decreases, productivity increases, and human capital develops, stimulating the growth of the organization's income (Nagody-Mrozowicz, 2022).

2. Materials and methods

The work uses the diagnostic survey method, and the interview was conducted using a multi-factor survey questionnaire on a 30-person study group consisting of professional soldiers aged 25–40. The soldiers included in the study had various levels of education; the largest group were soldiers with secondary education—45%, then soldiers with vocational education—33%, and finally soldiers with higher education—22%.

The Multifactor Leadership Questionnaire is composed of two scales, creating a total of 37 randomly ordered statements in the form of single-choice questions. To analyze the distribution of answers, ranks were used to assess the degree of their compliance with the respondents' beliefs. 0—never, 1—rarely, 2—sometimes, 3—often, 4—very often, corresponding to the weights: 0, 1, 2, 3, 4. The number of responses is multiplied by a given weight to obtain the final weighted value. A diagnostic scale focused on the analysis of leadership (11 questions: 5, 6, 15, 17, 18, 19, 20, 21, 22, 23, 24) was incorporated into a control scale (26 questions), the aim of which was to direct the respondents' attention to real and general issues of power and management in organizations. The adopted research tactic was intended to redirect the respondents' attention from leadership to general management issues so that they would not be influenced by social assessments of leadership in their answers. Due to limited space, only the questions of the diagnostic scale will be quoted, especially since they were intended to show the respondents' beliefs about leadership (the digits correspond to the order of the theorems: 5, 6, 15, 17, 18, 19, 20, 21, 22, 23, 24):

- “He can solve problems that arise between people.
- He finds joy in being among others.
- Others believe he is controlling his ego.
- Has a high enough level of motivation.
- He is always looking for ways to resolve a conflict in which both sides win.
- He is the last person I would describe as desperate.
- Even though he is impatient in waiting for positive results, he does not allow it to have a negative impact on his surroundings.
- Others trust him.
- He is appropriately confident, but not arrogant.
- He is sensitive to the feelings of others.

- He can listen well”¹.

Confirming answers are diagnostic answers and are given weights from 0 to 4 (see **Table 1**).

Table 1. Preferred and expected leadership behaviours.

No	No in the survey	Claims about the properties of leadership	0: Never Weight 0	1: Rarely Weight 1	2: Sometimes Weight 2	3: Often Weight 3	4: Very often Weight 4	Rank
1.	22	He is appropriately confident, but not arrogant	3/0	3/3	9/18	9/27	6/24	I
2.	15	Others believe he is controlling his ego	2/0	3/3	9/18	13/39	3/12	II
3.	17	Has a high enough level of motivation	2/0	5/5	6/12	14/42	3/12	III
4.	6	He finds joy in being among others	4/0	4/4	7/14	10/30	5/20	IV
5.	19	He is the last person I would describe as desperate	3/0	6/6	10/20	5/15	6/24	V
6.	21	Others trust him	5/0	6/6	4/8	11/33	4/16	VI
7.	23	He is sensitive to the feelings of others	3/0	8/8	7/14	7/21	5/20	VI
8.	24	He can listen well	5/0	4/4	9/18	7/21	5/20	VI
9.	5	He can solve problems that arise between people	3/0	4/4	14/28	7/21	2/8	VII
10.	20	Even though he is impatient in waiting for positive results, he does not allow it to have a negative impact on his surroundings	4/0	4/4	13/26	6/18	3/12	VIII
11.	18	He is always looking for ways to resolve a conflict in which both sides win	3/0	11/11	8/16	5/15	3/12	IX

3. Results

As a result of the research conducted, several interesting conclusions can be drawn (**Table 1**). Each sentence describes an important aspect of leadership. The level of significance of the proposed terms was expressed in the opinions of the study group on a scale from 0 to 4, which means that the more important feature in the opinion of the respondents will achieve a higher final value. It is created as a quotient of the rank and the number of indications of a given statement. The method used to calculate the results of the Multifactor Leadership Questionnaire allows for quick and simple interpretation of the data.

The table columns provide the number of diagnostic responses and their weighted value, along with the rank. The table columns provide the number of diagnostic responses and their weighted value, along with the rank. The five most important ranks are marked with Roman numerals.

The obtained research results are as follows (compare **Table 1**).

¹ Multifactor Leadership Questionnaire.

According to professional soldiers from the study group, the most important, preferred, and expected leadership behaviours are:

- Rank 1: “Others believe he is controlling his ego”—the leader is perceived as a self-confident person with high self-control, self-efficacy, and a sense of trust in one’s own competences;
- Rank 2: “He is appropriately confident, but not arrogant”—the leader’s self-confidence is not aggressive, not overwhelming and degrading towards subordinates, but full of kindness, empathy, and understanding;
- Rank 3: “Has a high enough level of motivation”—his level of motivation is adequate to the degree of difficulty of work tasks; commitment has an activating effect on subordinates but does not depress them or dim their energy;
- Rank 4: “He finds joy in being among others”—subordinates feel happy that he derives pleasure and satisfaction from being among them; the leader, through his presence among his subordinates, strengthens interpersonal bonds and the sense of community;
- Rank 5: “He is the last person I would describe as desperate”—subordinates want to see him as a rock, self-controlled, resistant to overload stress, and not prone to panic.

Other properties and features of leadership behaviors do not seem particularly important to respondents. However, it should be remembered that the research undertaken was of a pilot nature, and the conclusions drawn from it should be treated as preliminary. They are, in a sense, secondary to the primary characteristics, which are considered to be those with ranks from one. to five. Of course, such a classification is arbitrary and conventional, but it allows a clearer observation of potential trends in group social opinions on the leadership role.

4. Discussion

The main approach to the concept of leadership in the 1940s and 1950s focused mainly on identifying the characteristics that provide exceptional managerial abilities. In this approach, leadership is an innate trait, not a result of socialization or learning. This approach re-emerged in the 1980s in the form of top management theory, leading to a series of studies that attempted, with varying degrees of success, to examine the relationship of top management characteristics to variables such as consensus as well as effectiveness. Another point of reference in leadership research is the organization’s environment expressed in the strategic approach, or so-called strategic leadership (Griffin, 2000).

Another trend in leadership research in the 1950s and 1960s was the focus on behaviors, the so-called collective setting (Leavitt, 1965). These studies attempt to link general leadership behaviors or styles to the level of teamwork effectiveness and job satisfaction. These studies suggested that leaders with high levels of prudence, calm, and self-control achieve the greatest effectiveness. In order to better understand and explain the differences in the impact of various leadership behaviors, some researchers have tried to take into account the impact of various situational as well as contextual factors, which over time has led to the development of a complex set of leadership

effectiveness models, such as path-goal theory, cognitive theories, and leader exchange theory.

In the 1980s, a new approach to leadership emerged in which the leader is someone who defines organizational reality by articulating a vision that reflects the organization's mission as well as the values that will support it (Koontz et al., 1989; Nagody-Mrozowicz, 2021). Therefore, this new view of leadership distinguishes a leader with charisma (French and Raven, 1959).

In the last decade of the 20th century, alternative leadership concepts emerged, e.g., distributed leadership. This leadership is characterized by its emphasis on how leadership emerges in a specific social or organizational environment based on interactions between multiple stakeholder groups and the capabilities of leaders (Alvesson, 2012). Leadership in this concept is not an attribute of an individual but of a collective in which individuals negotiate their position in relation to others in a less predictable way than a rational approach in the organization would suggest (John, 2002).

A modern leader mainly inspires and animates the necessary actions of subordinates. This is not a person who tries to replace subordinates in their duties or even personally perform the most important work. On the contrary, the leader prefers and appreciates the competence, commitment, independence, and responsibility of colleagues. The leader leads the group to success, but success comes from the group (Oleksyn, 2007).

“No social unit can be restricted by its regulations so strictly that it functions like an automatic machine at the touch of a button. This would be far from the ideal of human society, composed of rational and free individuals who, through their spontaneous activity, should contribute to the common good. It is this spontaneous activity of subordinates that the superior is supposed to direct by means of orders and admonitions, and it is now necessary to consider how he should carry it out” (Woroniecki, 2016).

5. Conclusion

Based on the conclusions from the conducted research, we have grounds to believe that professional soldiers expect their leader to be helpful to their subordinates and to ensure that the soldiers are motivated to act and perform their tasks. An important behavior that is expected from the commander is the desire to have a common mission in achieving the goal. Based on the research results, it was found that an undesirable feature is the inconsistency of commanders when pointing out the mistakes of their subordinates, who do not devote interest and time to learning how to avoid mistakes and to improve the competence of their subordinates. Superiors often demonstrate their power and self-confidence, but this is merely an application of formal authority. According to the respondents, a commander with leadership qualities takes care of the good of his group in such a way that a common group goal is achieved.

In light of the obtained research results, several implications and recommendations can be formulated for the process of developing the properties and features of responsible leadership:

- looking for new solutions while performing tasks,
- proper distribution of tasks and functions among subordinates,
- taking action before the situation turns bad,
- motivating action and giving praise to subordinates as a result of the correct performance of the task,
- frequent presentation of a vision of the future in an optimistic way,
- instilling a sense of pride in subordinates and increasing self-esteem,
- before setting a task, informing them about its purposefulness.

Leadership should be aimed at reducing stress factors and fear (Bugdol et al., 2021), as well as at creating conditions conducive to developing attitudes of courage in both superiors and subordinates. Responsible leadership is a relationship of mutual trust between group members in which they play complementary roles of leader and follower.

Author contributions: Conceptualization, KNM and PP; methodology, KNM; software, KNM; validation, KNM and PP; formal analysis, KNM; investigation, KNM, and PP; resources, KNM; data curation, PP; writing—original draft preparation, KNM; writing—review and editing, PP; visualization, KNM; supervision, KNM and PP; project administration, KNM; funding acquisition, PP. All authors have read and agreed to the published version of the manuscript.

Conflict of interest: The authors declare no conflict of interest.

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Article

Workplace antecedents of quiet quitting behavior: Insights from graduate workers in India

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CITATION

Nimmi MP, Jayakumar D, Muthuraman N, et al. (2024). Workplace antecedents of quiet quitting behavior: Insights from graduate workers in India. *Human Resources Management and Services*. 6(4): 3450.
<https://doi.org/10.18282/hrms.v6i4.3450>

ARTICLE INFO

Received: 24 August 2024

Accepted: 15 October 2024

Available online: 23 October 2024

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Abstract: Drawing on the theoretical framework of Job Demands-Resources (JD-R), our study aims to consider how workplace antecedents of perceived quiet firing (also known as involuntary attrition), perceived co-worker support, and experience (tenure at an organization) may influence quiet quitting behavior. Data were collected via questionnaire responses from 209 workers in India who had graduated from university within the last 7 years. The findings show that (1) perceived quiet firing is positively associated with quiet quitting; (2) perceived co-worker support is negatively associated with quiet quitting; (3) experience moderates the positive association between perceived quiet firing and quiet quitting in such a way that the relationship is weaker as one's tenure at an organization increases; and (4) experience does not moderate the negative association between perceived co-worker support and quiet quitting. The study's contributions come from understanding how the interplay of demands (i.e., perceived quiet firing) and resources (i.e., perceived co-worker support and experience) determine quiet quitting behaviors in the workplace. Additionally, the temporal dimension of experience facilitates the acquisition of organizational-specific knowledge and resources. In contrast, perceptions of co-worker support appear specific to a given point in time. Policy implications come from providing guidance to organizations on how to reduce quiet quitting behaviors by ensuring that the resources available to employees exceed the demands placed on them.

Keywords: quiet quitting; quiet firing; involuntary attrition; co-worker support; experience; India; quantitative; job-demands resources

1. Introduction

The COVID-19 pandemic represented a global chance event that caused significant disruption to our daily lives and careers (Onyeaka et al., 2021; Donald, 2020). Social distancing restrictions gave individuals a significant period of time to reflect upon their relationship between non-work and work demands, as well as what constitutes a meaningful life (Baños et al., 2022; Da et al., 2022). The restrictions also exacerbated pre-existing mental health and wellbeing challenges, particularly in university students and graduates (Dodd et al., 2021; Donald and Jackson, 2022). As restrictions began to be lifted, two dominant trends were observed. The first was the 'great resignation' whereby individuals either pivoted to a new career or decided to retire from the workforce (Sull et al., 2022). The second was 'quiet quitting', which forms the focus of the study reported in this manuscript.

The term 'quiet quitting' (hereafter QQ) emerged in 2022 across mainstream media and social media, defined as "a phenomenon resulting from employees in many

industries realizing that the goals they are regularly asked to exceed are not sustainable or worth it, and that additional productivity or efficiency efforts are not rewarding to them” (Atalay and Dağistan, 2023, p. 2). The same authors observe how, since the start of 2022, QQ behavior has increased worldwide, including in developing countries such as India (the focus of our study). Therefore, understanding the antecedents of QQ is of significant interest to employees and their employers.

Drawing on a theoretical framework of Job Demands-Resources (JD-R), our study aims to consider how workplace antecedents of perceived quiet firing (also known as involuntary attrition; hereafter QF), perceived co-worker support (hereafter CS), and experience (tenure at an organization) may influence QQ behavior.

QF is when an employee believes that an employer is making their working conditions untenable with the aim of getting them to resign (Wigert, 2022). A survey of more than 20,000 employees found that 48% had witnessed QF, while 35% had experienced it during their careers (Lockie, 2022). Such an approach usually takes the form of unreasonable job demands. The JD-R model proposes that the interplay of job demands and job resources impacts employee wellbeing and performance (Demerouti et al., 2001). Consequently, QQ can reflect a behavior taken by an employee to cope with high levels of stress in the workplace (Hamouche et al., 2023). As QF likely leads to job demands exceeding one’s available resources, employees may seek to offset these increased demands via QQ. The positive association between QF and QQ has also been proposed during the scale development and validation of these constructs (Anand et al., 2023). Therefore, we propose:

H1: Perceived quiet firing (QF) is positively associated with quiet quitting (QQ).

An employee’s subjective assessment of the availability of support and encouragement from their co-workers is termed CS (Cohen and Wills, 1985). CS is critical since it develops a sense of community, alleviates loneliness, and boosts overall job satisfaction (Eisenberger et al., 2020). It has also been shown to reduce stress, increase psychological wellbeing, and help safeguard against undesirable outcomes, making it particularly valuable during trying times such as increased workloads (Halbesleben et al., 2014; Cavanaugh et al., 2000). JD-R theory acknowledges how social support from colleagues can act as a resource (Demerouti et al., 2001). The acquisition of additional resources can enable an individual to cope with high job demands (Bakker and Demerouti, 2017), for example, those imposed via QF. Therefore, we propose:

H2: Perceived co-worker support (CS) is negatively associated with quiet quitting (QQ).

We are also interested in exploring the role of experience (i.e., tenure at an organization) as a moderator on H1 and H2. The longer an individual spends at an organization, the more familiar they are likely to be with its operations. In other words, they have had a greater opportunity to develop tacit knowledge (Polanyi, 1958), referring to skills, knowledge, and abilities gained through experience. Therefore, experience at an organization may represent an additional resource to manage the increased demands associated with QF and reduce the impacts of QF on QQ. Additionally, given the positioning of experience as a resource (Demerouti et al., 2001), tenure at an organization may complement the proposed benefit of CS in reducing QQ. Therefore, we propose:

H3: Experience at the organization moderates the positive association between perceived quiet (QF) and quiet quitting (QQ) in such a way that the association is weaker as one's tenure at the organization increases.

H4: Experience at the organization moderates the negative association between perceived co-worker support (CS) and quiet quitting (QQ) in such a way that the association is stronger as one's tenure at the organization increases.

The theoretical contribution of our study comes from advancing the JD-R theory through empirical validation to understand how the interplay of demands (i.e., QF) and resources (i.e., CS and experience) determine QQ behaviors in the workplace. The practical contribution comes from providing insights into the phenomenon of QQ for employees and employers.

2. Materials and methods

2.1. Sampling and data collection

The research was conducted as a cross-sectional study, whereby sampling criteria were purposeful, as participants had to be employees in India who had graduated from university within the last 7 years. The data were collected using an online questionnaire between August and November 2023. Ethics approval was obtained from the Institutional Review Board, and all participants provided informed consent before participating in the study. We invited 300 workers to participate and received 209 completed questionnaires, representing a response rate of 69.67%. Of the participants, 120 identified as female and 89 as male, offering a gender split of (57.4%/42.6%) representative of the population under study. The average experience of participants in terms of tenure at their current organization was 4.56 years, and the average age of participants was 30.3 years.

2.2. Instrument

Perceived quiet quitting (QQ) was assessed using a 7-item scale (Anand et al., 2023). A sample item is "I am doing the bare minimum work to avoid getting fired". The scale employs a five-point Likert scale (1 = never/completely disagree, 5 = very often/completely agree). Cronbach's α was 0.84.

Perceived quit firing (QF) was assessed using a 7-item scale (Anand et al., 2023). A sample item is "My manager/supervisor has shown less interest in my career trajectory/development". The scale employs a five-point Likert scale (1 = never/completely disagree, 5 = very often/completely agree). Cronbach's α was 0.85.

Perceived co-worker support (CS) was assessed using a 4-item scale developed by Haynes et al. (1999) and also used by Norling and Chopik (2020). A sample item is "My co-workers listen to me when I need to talk about work-related problems". The scale employs a four-point Likert scale (1 = strongly disagree, 4 = strongly agree). Cronbach's α was 0.91.

Experience was measured in years as the length of tenure an individual had with their current employer.

Demographic information on age and gender was also collected.

2.3. Data analysis procedure

IBM SPSS 23.0 and Warp Partial Least Square (WarpPLS) were used for data analysis. Structural Equation Modelling (SEM) was conducted to explore the path coefficients of direct hypotheses (H1 and H2) using WarpPLS 8.0. The PLS-SEM approach is suitable for exploratory, confirmatory, and predictive analyses [22]. Moderation tests (H3 and H4) were carried out with the PROCESS macro developed by Preacher et al. (2007).

3. Results

3.1. Descriptive statistics

Table 1 shows the means, standard deviations, and correlations, indicating a significant correlation between the variables.

Table 1. Descriptive statistics and correlations.

	Variable	1	2	3	4	Mean	SD
1	Quiet Quitting (QQ)	1				2.80	0.86
2	Quite Firing (QF)	0.74**	1			2.70	0.84
3	Co-Worker Support (CS)	−0.29**	−0.25**	1		3.98	0.70
4	Organizational Tenure	0.08(ns)	0.02(ns)	−0.06(ns)	1	4.56	1.13

** $p < 0.001$; ns = non-significant.

Before evaluating the reliability and validity of the measurement items, the indicators were tested via Variance Impact Factors (VIFs) for the assumption of constant variance, outliers, and normality. All VIFs were less than 2.17 and, therefore, considerably lower than the recommended threshold of 10.0, suggesting that multicollinearity was not a problem (Hair et al., 2017).

The study data were generated from a single source of self-reported survey data. Thus, we needed to check for common method bias (Podsakoff et al., 2003). We used Harman's single-factor test as an exploratory assessment. The factor extraction results revealed an extracted total variance of 34%, showing the absence of common method bias.

The fit of the data with the proposed conceptual model was tested using variance-based SEM-PLS with WarpPLS 8.0 (Kock, 2012). Here, the CR values ranged from 0.88 to 0.93 and met or exceeded the recommended level of 0.70 (Gefen et al., 2000). The Average Variance Extracted (AVE) ranged from 0.53 to 0.79, within the recommended level of above 0.50 (Hair et al., 2017). The Variance Inflation Factor (VIF) results ranged from 1.25 to 2.16, below the recommended cut-off level of 5.00 (Hair et al., 2017). The tests supported the reliability and validity of the study variables (per **Table 2**).

We also checked the normalized factor loadings (per **Table 3**), which also validated the three scales.

Table 2. Reliability and validity.

Scale	Items	CR	CA	AVE	VIF
1 Quiet Quitting (QQ)	7	0.88	0.84	0.53	2.16
2 Quite Firing (QF)	7	0.88	0.85	0.54	1.76
3 Co-Worker Support (CS)	4	0.93	0.91	0.79	1.25

CR = Composite Reliability; CA = Cronbach Alpha; AVE = Average Variance Extracted; VIF = Variance Inflation Factor.

Table 3. Normalized factor loading.

Scale	Item	QQ	QF	CS
Quiet Quitting (QQ)	QQ1	0.747		
	QQ2	0.632		
	QQ3	0.747		
	QQ4	0.771		
	QQ5	0.808		
	QQ6	0.745		
	QQ7	0.664		
Quite Firing (QF)	QF1		0.766	
	QF2		0.674	
	QF3		0.812	
	QF4		0.865	
	QF5		0.787	
	QF6		0.887	
	QF7		0.736	
Co-Worker Support (CS)	CS1			0.878
	CS2			0.909
	CS3			0.847
	CS4			0.849

3.2. Assessment of measurement model

Table 4 shows the checks conducted that showed a strong goodness of fit for the model.

Table 4. Fit indices.

Fit Index	Value	Threshold Limit
Average Path Coefficient	0.23 ($p < 0.001$)	$p < 0.001$
Average R2	0.21 ($p < 0.008$)	$p < 0.001$
Average Block Collinearity VIF	1.24	acceptable if ≤ 5 , ideally ≤ 3.3
Average Full Collinearity VIF	1.44	acceptable if ≤ 5 , ideally ≤ 3.3
Tenenhaus GoF	0.35	$0.1 \leq \text{small} \leq 0.25 \leq \text{medium} \leq 0.36 \leq \text{large}$
Sympson's Paradox Ratio	1	acceptable if ≥ 0.7 , ideally = 1
R2 Contribution Ratio	1	acceptable if ≥ 0.9 , ideally = 1

3.3. Direct effect hypothesis testing

The proposed model was tested with the dataset using WarpPLS 8.0. H1 QF-QQ was positive and significant ($\beta = 0.54, p < 0.001$), while H2 CS-QQ was negative and significant ($\beta = -0.27, p < 0.001$). Therefore, both direct effect hypotheses were supported (per Table 5).

Table 5. Direct effect hypothesis testing.

Hypothesis	Direct Effects	Outcome Variable Quiet Quitting (QQ)
H1	Quiet Firing (QF)	0.54**
H2	Co-Worker Support (CS)	-0.27**

** $p < 0.001$.

3.4. Moderation analysis

H3 proposed that experience at the organization moderates the positive association between QF and QQ in such a way that the association is weaker as one's tenure at the organization increases. The interaction effect was significant ($\beta = -0.24, p < 0.001$). Therefore, H3 was supported.

H4 proposed that experience at the organization moderates the negative association between CS and QQ in such a way that the association is stronger as one's tenure at the organization increases. The interaction effect was non-significant ($\beta = 0.21, ns$). Therefore, H4 was rejected.

Table 6 shows the moderation analysis for H3 and H4.

Table 6. Moderation analysis.

Hypothesis	Moderating Effect	Outcome Variable (Quiet Quitting)
H3	Organizational Tenure*Quiet Firing (QF)	-0.24**
H4	Organizational Tenure*Co-Worker Support (CS)	0.21 ns

** $p < 0.001$.

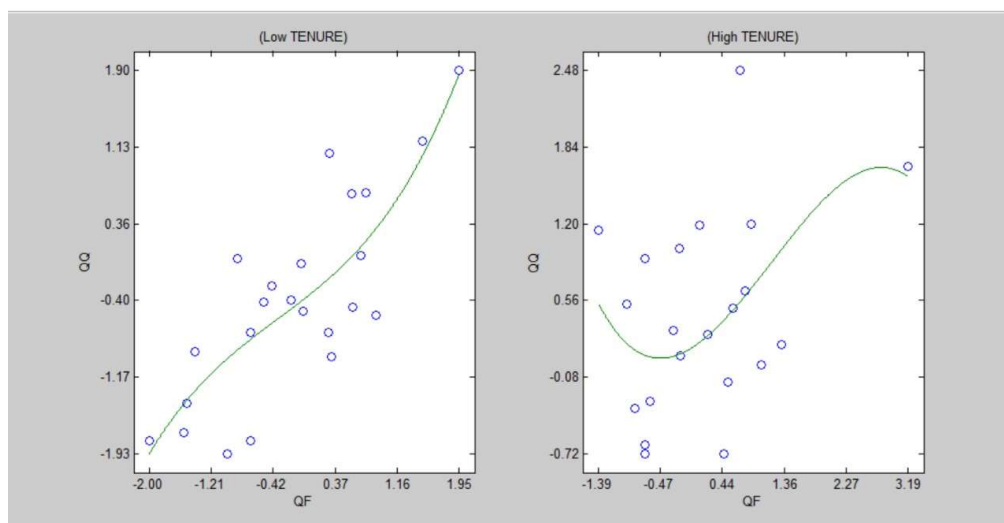


Figure 1. Moderation impact of organizational tenure on the relationship between Perceived Quiet Firing (QF) and Quiet Quitting (QQ).

Additionally, Figure 1 provides a visual representation of the moderation effect

for H3, whereby experience at the organization moderates the positive association between QF and QQ in such a way that the association is weaker as one's tenure at the organization increases.

3.5. Validation of the model

Figure 2 shows the empirically validated model with the three supported hypotheses (H1, H2, and H3).

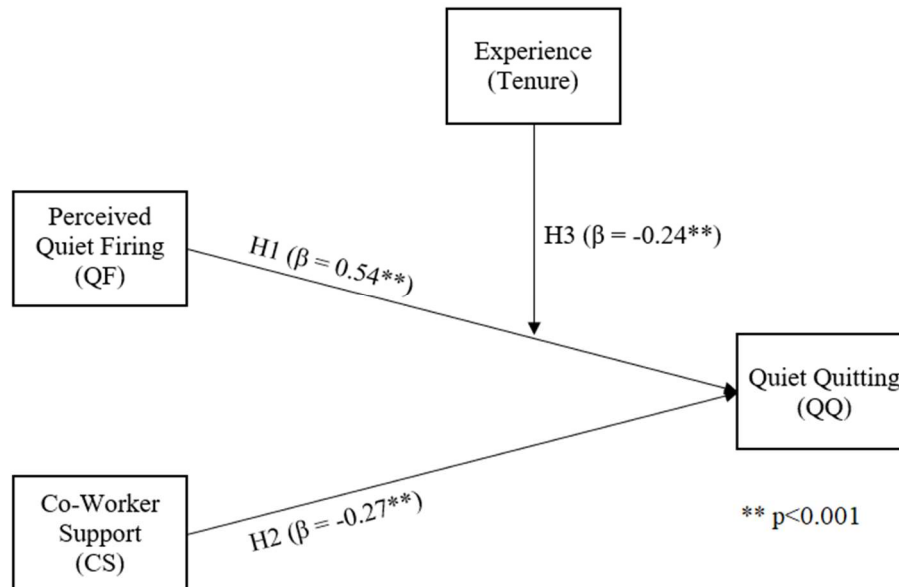


Figure 2. Empirically validated model.

4. Discussion

The positive relationship between QF and QQ supports previous findings from the initial validation of these two scales in India (Anand et al., 2023). The factor loadings of seven items on each scale also replicate the findings during the scale development and validation of QF and QQ (Anand et al., 2023). This seems logical since the JD-R model proposes that the interplay of job demands and job resources impacts wellbeing and performance (Demerouti et al., 2001), whereby QQ can reflect actions by an employee to cope with increased stress levels due to QF (Hamouche et al., 2023).

The negative relationship between CS and QQ responds to calls to consider antecedents that decrease QQ behavior (Anand et al., 2023). Again, our findings align with the JD-R theory since CS represents a resource (Demerouti et al., 2001) that can help reduce stress, increase job satisfaction, and increase performance (Eisenberger et al., 2020; Halbesleben et al., 2014; Cavanaugh et al., 2000). These aspects would suggest a reduced likelihood of QQ behavior (Anand et al., 2023).

The moderating role of experience (representing tenure at the organization) reduces the strength of the QF-QQ relationship. Perhaps this suggests an accumulation of resources over time as employees have greater opportunities to develop tacit knowledge (Polanyi, 1958). JD-R theory is again supported here since adding

resources helps the employee manage job demands (Demerouti et al., 2001), leading to reduced QQ behaviors.

An unexpected finding in the context of JD-R theory was that, contrary to our expectations, experience has no moderation role in the negative relationship between CS and QQ. A possible reason is that two distinct temporal factors are at play. Unlike tenure at an organization that facilitates the accumulation of resources over time, CS is perhaps more indicative of a resource at a specific snapshot in time. That is to say, while CS can reduce QQ behavior, the resources at that point in time lead to this outcome. In contrast, resources acquired over time from experience do not significantly impact the CS-QQ relationship.

4.1. Theoretical contribution

The theoretical contribution comes from three distinct, albeit interrelated, aspects. First, we offer one of the earliest studies using the newly developed QF and QQ scales (Anand et al., 2023). Our support for the strong positive association between QF and QQ and the validity of the two distinct 7-item scales contributes to the robustness of these scales for use in India. Second, we respond to calls to consider antecedents that can reduce QQ behaviors (Anand et al., 2023). Third, we observe an interesting interaction between two temporal dimensions: (a) the accumulation of resources over time versus (b) the resources an individual perceives to have at a given time. The perspective acknowledges the interplay of person, context, and time in determining career sustainability (De Vos et al., 2020; Van der Heijden and De Vos, 2015). From the JD-R theory perspective, it is interesting that tenure at an organization (representing the opportunity to accumulate resources over time within one's resource caravan) (Nimmi et al., 2021; Hobfoll et al., 2018; Hobfoll, 2012) does not moderate how CS (as a resource at a specific point in time) can reduce QQ intentions. Put differently, accumulating resources over time lessens the impact of the increased job demands from QF on QQ behavior but does not enhance the CS resource's impact on QQ behavior.

4.2. Practical and policy contribution

The practical and policy contributions of the study focus on the employee and employer perspectives, recognizing their interconnected and interdependent nature and the new psychological contract between such actors operating within a career ecosystem (Donald, 2023a; Baruch and Rousseau, 2019; Baruch, 2013). However, the implications for employees and employers transcend national and global economies since the global cost of disengaged workers accounted for \$8.8 trillion in lost productivity, according to the latest figures as of September 2023 (Pendell, 2023).

The adaptive work behavior of QQ has negative implications for the employee and the employer (Mahand and Caldwell, 2023). These include a decline in productivity, morale, and quality of work, coupled with increased absenteeism (Yildiz, 2023). Our findings provide empirical support for the view that QF likely does more harm than good for an organization since it erodes trust and commitment (Mahand and Caldwell, 2023). Instead, showing respect to employees and encouraging them to respect their co-workers appears to be a better strategy. This supports the view that

employees who feel respected in the workplace have higher levels of morale, motivation, and productivity (Jamal Ali and Anwar, 2021). Therefore, we recommend that employers foster an environment of trust and inclusivity, set clear expectations, provide frequent feedback, and encourage social interaction between employees in the workplace to build interpersonal connections. Additionally, policies that provide support could be beneficial, such as mentorship and peer support schemes, as well as opportunities for training and development. Managers and supervisors may also benefit from being informed of the potential harm of QF behaviors, suggesting policies around mandatory training should be considered. Finally, wellbeing support and career counseling opportunities can help employees balance job demands and resources. Career counseling can also help individuals identify growth opportunities within their current role or recognize the need to change employers. This aligns with empirical findings in the UK that turnover is not always a bad thing for either the employee or the employer (Donald, 2023b).

4.3. Limitations and future research directions

Our study shares several limitations with published studies: (i) Data were collected via a single method of questionnaires (Donald et al., 2023); the self-reported nature of the participant perceptions may introduce social desirability or recall error bias (Nimmi et al., 2021); and participants only came from a single country of India (Nimmi et al., 2022).

Future research could consider exploring different antecedents of QQ or conducting a study using the same variables but in other geographical regions. It may also be interesting to compare participants' views from different sectors or consider the intersectionality of various demographic aspects. Comparing employees' perspectives with those of other actors may also offer greater insights, as could adopting a qualitative approach. Research could also look more closely at the role that time plays, acknowledging that career sustainability has three dimensions: person, context, and time (De Vos et al., 2020; Van der Heijden and De Vos, 2015). For example, longitudinal studies that adopt a career span approach (Baruch and Sullivan, 2022) or bridge educational and workplace contexts respond to calls to consider the integration of graduate employability and worker employability literature (Akkermans et al., 2024).

5. Conclusion

Our study aimed to consider how workplace antecedents of QF, CS, and experience may influence QQ behavior. The findings show that (1) QF is positively associated with QQ; (2) CS is negatively associated with QQ; (3) experience moderates the positive association between QF and QQ in such a way that the relationship is weaker as one's tenure at an organization increases; and (4) experience does not moderate the negative association between CS and QQ. The study's contributions come from understanding how the interplay of demands (i.e., QF) and resources (i.e., CS and experience) determine QQ behaviors in the workplace. Additionally, the temporal dimension of experience facilitates the acquisition of

organizational-specific knowledge and resources. In contrast, perceptions of CS appear specific to a given point in time.

Author contributions: Conceptualization, NPM, DJ, NM and GPN; methodology, NPM, DJ, NM and GPN; software, NPM; validation, WED; formal analysis, NPM; investigation, NPM, DJ, NM and GPN; resources, NPM and WED; data curation, DJ, NM and GPN; writing—original draft preparation, WED, NPM, DJ, NM and GPN; writing—review and editing, WED and NPM; visualization, NPM and WED; supervision, NPM and WED; project administration, NPM and WED. All authors have read and agreed to the published version of the manuscript.

Conflict of interest: The authors declare no conflict of interest.

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Article

Navigating academic excellence: Understanding how university vision impacts staff effectiveness

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Ogbari ME. (2024). Navigating academic excellence: Understanding how university vision impacts staff effectiveness. *Human Resources Management and Services*. 6(4): 3430.
<https://doi.org/10.18282/hrms.v6i4.3430>

ARTICLE INFO

Received: 18 August 2024
Accepted: 20 October 2024
Available online: 26 October 2024

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Abstract: Vision statements are seen as important factors that come before the development of strategies. They excel at encapsulating the strategic direction of a company, clearly defining its scope, boundaries, and the process of creating value. Vision statements function as comprehensive frameworks that guide the development of several strategic elements, including mission, strategic capabilities, strategic intent, objectives, goals, core values, standards of behavior, and business models. However, research on this subject remains scanty, particularly within academia. Therefore, this study examined the impact of university vision on staff effectiveness, building on transformational leadership theory and strategic leadership theory. The study adopted a positivist research philosophy. The research employed a cross-sectional study design. This study employed a descriptive research design. Questionnaires were devised by the researcher to collect data from a randomly selected group of 186 academic personnel from the four colleges in a private university using stratified sampling. The data obtained was subject to validity checks using composite reliability, the average variance extracted (AVE) estimate, and the Cronbach Alpha coefficient. The findings reveal that the vision of the university had a significant but weak impact on the effectiveness of staff. Based on the findings and conclusions, the study suggests that the university's organizational vision should be consistently improved and effectively conveyed to staff members to direct their efforts toward achieving the university's vision.

Keywords: academic; vision; staff; strategy; effectiveness; university

1. Introduction

Globalization has resulted in significant changes in higher education, including the expansion of services and products, a wider range of services being offered, improved financing structures, a greater focus on accountability and effectiveness, international relationships, greater accessibility, partnerships, and strategic leadership considerations (Kantabutra, 2020). To address these changes, the management of institutions must prioritize the task of revising and providing clear definitions for organizational vision statements (Jonyo et al., 2018). Vision is an essential tool for leaders to motivate individuals within an organization by outlining the organization's future goals and objectives (Ogbari et al., 2018; Onyango, 2015).

The organization's vision is the first stage of the strategic planning process, clearly stating the reason for its existence and the desired state it aims to achieve while outlining significant goals and objectives. The development of a company's vision is closely connected to its philosophy, serving as a structure for the creation and assessment of both planned and unexpected initiatives (Vega et al., 2015). Vision statements are universally recognized as essential components of the strategic management process for all sorts of organizations, including for-profit companies, global multinationals, and businesses of all sizes. There is a widely held idea that

vision statements have a substantial influence on strategy, staff commitment, and the overall effectiveness of a firm.

In an earlier study, Greyser (2019) asserted that mission and vision statements have a tangible impact on everyday responsibilities. Kimani (2022) highlights the significance of vision statements in creating a collective understanding of purpose among employees, influencing their concentration, and promoting a shared dedication. Vision statements are regarded as potent catalysts that shape behavior and have a beneficial effect on employee performance. According to scholars such as Ogbari et al. (2018) and Sebidi (2022), vision statements are seen as important factors that come before the development of strategies. They excel at encapsulating the strategic direction of a company, clearly defining its scope, boundaries, and the process of creating value.

Vision statements function as comprehensive frameworks that provide guidance for the development of several strategic elements, including mission, strategic capabilities, strategic intent, objectives, goals, core values, standards of behavior, and business models (Hag, 2021). Vision statements play a crucial role in guiding the design of missions and associated goals by providing strategic direction. Regardless of differing viewpoints, there is a general consensus regarding the future-oriented nature of vision statements. According to Knikker (2021), visions play a crucial role in guiding enterprises by outlining their history, motivating employees, and providing a sense of control.

Kantabutra and Avery (2010) emphasize the significance of a mutual business vision in order to guarantee dedication and lucidity regarding the expected future. A clearly articulated vision is seen as a remedy for the existing obstacles encountered by the company, offering a captivating conceptual representation of the anticipated future conditions. Entrepreneurial firms and those applying entrepreneurial approaches in their development procedures consider having a vision and ambitions for the future to be crucial (Sarbin, 2021). According to Greyser and Urde (2019), it is contended that vision statements ought to be ambitious.

Nevertheless, the crucial inquiry revolves around the extent to which the corporate vision influences the capacity of employees to achieve effectiveness. Yearly, several Nigerian universities continue to suffer poor rankings in the world webometrics of universities due to a lack of visionary engagement and ineffectiveness within their organizational architecture, resulting in poor employee and organizational performance. Nevertheless, few private universities, such as Covenant University, have consistently risen in rank in the world webometrics of universities through the pursuit of a strategic vision such as “Vision One of Ten in Ten”, a strategic objective to be one of the top ten universities in the world. In spite of these feats, there is a lack of empirical evidence elucidating how the university’s vision manifests in the professional lives of its staff. Hence, it is crucial to gather real-life experiences to understand how university employees interpret and embrace the institution’s vision and how this vision influences their day-to-day tasks.

Research rationale

While there have been studies exploring the impact of vision on behavior and organizational performance in different contexts, little research has focused on universities (Jonyo et al. 2018). Previous studies, mostly conducted outside Nigeria, have shown that visionary leadership is closely linked to organizational success (Etzkowitz, 2016; Gregory, 2023; Haque et al., 2020; Jonyo et al., 2018; Kantabutra and Avery, 2010). However, it is important to note that these findings may not directly apply to the Nigerian university landscape. Therefore, a comprehensive investigation into aspects of a university's vision and its role in enhancing staff effectiveness within the context of Nigerian universities is necessary. Additionally, considering the nature of attracting and retaining talent in universities, it becomes imperative to examine how vision contributes to staff effectiveness and the overall organizational culture.

Hence, the objective of this paper is to investigate the ever-changing connection between strategic vision and the operational effectiveness of staff in institutions of higher learning, with a particular focus on analyzing how the harmonization of university vision and staff effectiveness serves as a catalyst for establishing a scholarly achievement-oriented environment. This study aims to provide significant insights into the continuing conversation within academic institutions as they work towards achieving their strategic vision. The study offers management of higher institutions valuable insights into the nexus between visionary practices and effective staff performance and can assist particularly Nigerian universities in implementing visionary strategies to improve the operational effectiveness of staff, thus creating a competitive advantage. Furthermore, the study also contributes to the academic community by delving into the relationship between university vision and staff effectiveness; consequently, this study serves as a basis for future researchers to study in depth the relationship between university vision and staff effectiveness.

2. Literature review

2.1. Theoretical framework

The Transformational Leadership Theory is a strong theoretical framework for investigating the relationship between staff effectiveness and university vision. According to Siangchokyoo et al. (2020), transformational leadership is characterized by the influence that leaders exert on their followers, who hold them in high regard, esteem them, and have admiration for them. Kwan (2020) argues that, in addition to charisma, a transformative leader necessitates supplementary traits to exert influence on individuals. According to Nuel et al. (2021), genuine transformational leadership is based on moral principles that include Idealized Influence, Inspirational Motivation, Intellectual Stimulation, and Individualized Consideration. The moral dimensions encompass the leader's moral integrity, the ethical principles ingrained in the leader's vision, communication, and agenda, and the morality of the procedures of societal ethical decision-making and behavior (Musa et al., 2020).

Mbindyo et al. (2021) suggest that individuals are motivated by an understanding and recognition of the corporate goal, since it offers a broader framework for achieving high-quality work. When implemented in university environments, where

administrators frequently occupy leadership positions, this theory proposes that adopting a visionary and transformational leadership approach can have a beneficial influence on the effectiveness of staff members. Leaders who effectively communicate a distinct and captivating vision for the university possess the ability to motivate staff members, developing a collective understanding of purpose and dedication. This collective vision acts as a guiding principle, harmonizing the endeavors of the personnel with the institution's broader objectives.

The Strategic Leadership Theory, put forth by Samimi et al. (2022), serves as another theoretical foundation for this study. According to this theoretical reasoning, companies mirror the traits of their top leaders. The unique visions, expertise, standards, and choices of these individuals not only impact their decision-making but also shape their understanding of the circumstances in which decisions are made. Ali and Anwar (2021) assert that strategic leadership is essential for guiding the vision and inspiring employees to adopt the company's goals and values. This shared vision is a vital asset for organizational success.

Luciano et al. (2020) provide a distinct definition of strategic leadership, characterizing it as the capacity to clearly express a vision and gather a group of individuals to transform that vision into concrete results. Strategic communication entails employing deliberate strategies to convey the organization's vision and effectively cooperate with others in order to accomplish predetermined objectives (Kurzahls et al., 2020). Golensky and Hager (2020) contend that strategic leadership at the corporate level affords followers the chance to actively participate with leaders in the pursuit of the organization's objectives. Leadership at the managerial level is responsible for formulating strategies and identifying key moments of strategic change. They ensure that specific strategies are put into action in order to bring about the change they want (Avolio and Drummey, 2023). Hence, strategic leadership plays a crucial role in effectively utilizing and implementing the required organizational capacities that facilitate entities in attaining excellent results within educational settings (Tao et al., 2021).

2.2. Conceptual review and hypothesis development

Vision is perceived as a strategic influence on organizations, augmenting their probability of achieving success. It functions as a strategic plan, delineating the anticipated trajectory for a company's advancement and expansion. A vision encompasses the future goals and objectives of the firm, serving as a logical justification for the next endeavors. Different interpretations of vision can be found in the literature, encompassing its function in discerning the significance of work and enabling individuals to acknowledge their contributions towards attaining an ideal (Haque et al., 2020). Vision, as described, serves as a source of energy and direction that individuals utilize to navigate through periods of transition (Kimani, 2022). It is a comprehensive concept that clarifies the organization's beliefs, guiding principles, and tangible appearance (Reid and Crawford, 2022). Individually internalized, vision functions as a concept that supports an individual's personal and professional circumstances (Gregory, 2023).

Visioning enables businesses to establish a distinct and powerful path forward, serving as a catalyst for empowerment and instilling personnel with a feeling of importance (Fadli et al., 2022; Mayfield et al., 2015). A robust company vision is a succinct declaration that outlines the purpose, direction, and values of an organization. The roadmap provided by the document has a significant impact on various aspects, including decision-making and staff behavior (Reid and Crawford, 2022). An effective firm vision should captivate and energize both employees and stakeholders while also being easily understandable and memorable (Nichols, 2007; Reid and Crawford, 2022). An influential corporate vision significantly impacts employee motivation by offering a clear sense of purpose and guidance. Enhanced employee engagement and motivation are more likely to occur when individuals possess a clear comprehension of their organization's mission and objectives. The feeling of contributing to a larger purpose cultivates a strong sense of belonging (Vallerand and Verner-Filion, 2013).

Kantabutra (2023) defines a vision as a lofty and ambitious outlook for the future that inspires belief and commitment from all members of an organization, presenting a desirable future that is challenging to attain. An inspiring vision stimulates the development of an organization, resonating with its members and broadening their outlook on potential opportunities while still being grounded in reality. According to Roache (2023), a clear vision plays a vital role in various aspects. It improves decision-making, assists individuals in distinguishing between important and trivial matters, appeals to the fundamental needs of followers, connects and rationalizes approaches, gives meaning to work, and sets a standard of excellence.

According to Kara (2022), a firm's vision statement is a reflection of its beliefs and objectives to inspire and engage employees and stakeholders. According to Kantabutra and Ketprapakorn (2020), strategic leaders are persons at various levels of the business who utilize the strategic management process to select activities that are in line with the company's vision and accomplish its goal. This vision fosters unity among members of the organization, facilitating the attainment of established goals. After the vision is set, the people of the organization assume responsibility by devising and executing methods to achieve that vision. Top-level executives receive input, enabling them to reevaluate the organization's goal in terms of its credibility and genuineness. Private higher education institutions prioritize the optimization of human and financial resources to achieve exceptional academic results and thrive in extracurricular activities, ultimately leading to the prosperity of the educational institution (Kantabutra and Avery, 2010).

Developing a strategic direction entails creating a long-term vision for the company's goals, usually forecasting a period of five to 10 years ahead. Ogbari et al. (2018) stress the importance of ensuring that the goals and aspirations of an organization are in harmony with the behaviors and conduct of all personnel inside the organization. An authentic vision is characterized by its dynamism, ensuring that all members of the company possess a comprehensive understanding of it and align their actions accordingly. The infusion of passion and energy within personnel fosters a sense of pride in discussing their organization's purpose and goal, eventually leading to great results. Lannes (2021) asserts that the efficacy of an organization is measured by its ability to successfully achieve its declared objectives. Individual effectiveness

in an organizational context pertains to the degree to which an individual contributes to the accomplishment of the organization's goals (Amah and Ahiauzu, 2014).

The efficacy of an organizational vision can be evaluated based on seven attributes: brevity, clarity, abstractness, challenge, future orientation, stability, and desirability. Brevity pertains to the concise nature of the vision statement, ideally consisting of 11–22 words. Clarity evaluates the extent to which a vision highlights a main objective within a specified period of time. The level of abstractness represents the conceptual nature of the organization's goals, while the level of difficulty gauges the degree to which the vision inspires people to attain exceptional performance. Future orientation measures the degree to which a vision looks ahead; stability evaluates the vision's ability to withstand market and technological changes; and desirability assesses how well a vision defines a goal and its benefits for members (Daly, 2023; Haque et al., 2020; Kantabutra, 2023).

On the other hand, job effectiveness refers to an employee's capacity to carry out assigned tasks and responsibilities to the highest level of quality and performance (Amoda et al., 2021). Job effectiveness is defined as the successful performance of tasks that result in desired consequences (Alabi and Durojaiye, 2023). Employees play a crucial role in achieving a competitive advantage. Proficient corporations and staff exhibit resourcefulness, delivering exceptional goods and services that fulfill the requirements of clients (Opara and Onyeri, 2023). Staff effectiveness, as defined by Heggstad et al. (2023), refers to the evaluation process employed by different organizations to measure an employee's productivity and skills. In addition, there is a positive correlation between higher customer satisfaction ratings and improved worker effectiveness. Conversely, lower worker effectiveness is linked to consumer complaints and the tendency to transfer brands (Baughn, 2023).

According to Agbanu et al. (2023), staff effectiveness is the degree to which a worker completes the necessary tasks and the skill with which they complete them. To assist staff in identifying areas for growth, human resource managers usually conduct annual or periodic staff effectiveness evaluations (Ogbu and Blessing, 2019). A more favorable work environment can be fostered by putting in place a number of initiatives that increase employee effectiveness. The actions included in this list include retraining and certification, improved communication, incentives and pay, employee recognition, improved teamwork and administration, modernization of tools and equipment, and the development of a more positive work environment (Felix, 2023). Studies indicate that the substance of a vision has an impact on the degree of inspiration and dedication among the spectators (Preller et al., 2020; Meslec et al., 2020). Vision statements often consist of three components: goal direction, the business strategy, and the working environment for members of the organization (Palos Sánchez et al., 2020). Moreover, it is imperative for members of an organization to regard the change as suitable (Hofmann and Jaeger-Erben, 2020). Appropriateness pertains to the potential for individuals to embrace a goal while holding differing opinions on the appropriateness of a particular adjustment to uphold that ideal (Shika et al., 2021).

Kantabutra (2023) has noted a lack of research in fully comprehending the elements of a successful vision and how these components might simultaneously influence organizational development. Prior research (e.g., Haque et al., 2020;

Kantabutra, 2010) suggests that analyzing visual content alongside the seven qualities of vision is crucial for improving vision efficacy. Taamneh et al. (2022) highlight the crucial roles of a distinct vision, such as improving decision-making, meeting followers' basic requirements, rationalizing operational methods, giving significance to work, and setting a benchmark for excellence. Jonyo et al. (2018) emphasize the significance of acknowledging that a company's vision statement reflects its beliefs and objectives, which are meant to involve employees and stakeholders. This highlights the importance of strategic leadership in effectively conveying and guaranteeing the adoption of the organization's vision and mission by all personnel. A well-defined corporate vision allows employees to understand how their particular responsibilities contribute to the overall success of the corporation, promoting a sense of ownership, accountability, and motivation (Kimani, 2022).

Moreover, a robust corporate vision ensures that employee objectives are in harmony with the organization's aims, allowing employees to actively pursue shared objectives in their day-to-day tasks. This shared purpose encourages teamwork, collaboration, and the formation of a cohesive corporate culture (Mayfield et al., 2015). Strategic leaders, positioned at various levels within the organization, employ the strategic management process to choose actions that are in line with the firm's vision and mission. This promotes unity among organizational members and facilitates the attainment of predetermined objectives (Castellanos and George, 2020). Private universities prioritize the utilization of human and financial resources to achieve outstanding academic results and excellence in extracurricular activities. This emphasizes the need to have a clear vision for the institution (Etzkowitz, 2016). Hence, this study posits that:

- H₁: There is a significant influence between university vision and staff effectiveness.

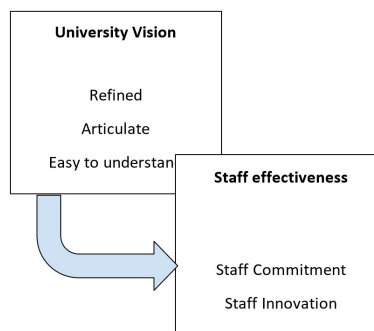


Figure 1. Conceptual framework.

3. Methodology

The study adopted a positivist research philosophy, which is based on the idea of measurable observations that can be analysed statistically (Hürlimann and Hürlimann, 2019). Implementing an appropriate research philosophy allows investigators to eliminate irrelevant variables from the investigation (Saunders et al., 2007). The research employed a cross-sectional study design for its ability to provide a snapshot of the relationship between university vision and staff effectiveness at a specific point in time (Kesmodel, 2018; Pandis, 2014). This study employed a descriptive research

design (Omair, 2015; Siedlecki, 2020) selected for its appropriateness to comprehensively portray and analyze the relationship between university vision and staff effectiveness in a detailed manner. The selected design was deemed suitable as the study focused on examining the influence of university vision on staff effectiveness. The researcher created questionnaires to enable the customization of questions according to the specific context of the study. Additionally, no existing instruments were identified that directly measured the variables of interest, specifically those related to university vision. Hence, using a self-designed questionnaire, data was collected from a randomly selected group of academic personnel at Covenant University in Ota, Ogun State, Nigeria. The target population comprises 346 academic employees. Recognizing that no survey is completely free of errors or guarantees total certainty, the goal is to achieve acceptable error margins of less than 5% and confidence levels that are above 95% (Holden and Lynch, 2004). Given this factor, the margin of error at a confidence level of 95% would be 0.5%.

The study utilizes stratified sampling widely adopted in studies of similar nature (Parsons, 2014), employing Yamane's formula to calculate a sample size of 186 employees from the four colleges. The selection of survey questionnaires as the principal tool for data gathering is based on their efficacy. Validity checks encompass the use of Confirmatory Factor Analysis, preceded by an initial Exploratory Factor Analysis (EFA) to examine the correlations between factors, followed by Structural Equation Modeling (SEM). Validity and reliability are evaluated using composite reliability, the average variance extracted (AVE) estimate, and the Cronbach Alpha coefficient. These measures ensure internal consistency and stability.

The suggested model was subjected to testing using measurement model analysis and Partial Least Squares Structural Equation Modeling (PLS-SEM), which is a popular multidimensional analytical approach employed by social scientists. This method allows for simultaneous analysis of measurement data and structural models. The methodology is used to assess the measurement model, establish both convergent and discriminant validity, and ensure the adequacy of the model fit. The link between independent and dependent concept collections is tested using PLS-SEM through a rigorous investigation of the given assumptions. The measurement model is subjected to rigorous examination, including analyzing the loading of items and identifying the components that are indicated. The exhaustive process culminates with the scrutiny of assumptions and the validation of the constructed structural model.

Table 1 displays the factor loadings of all measuring items pertaining to University Vision and staff effectiveness, as specified in the research instrument. In addition, the study instrument's validity and reliability were evaluated by utilizing composite reliability, average variance extracted (AVE) estimation, and Cronbach Alpha. The statistical results for factor loading, composite reliability, average variance extracted (AVE), and Cronbach Alpha all exceeded the required levels. Construct validity was established by utilizing convergent and discriminant validity.

Convergent validity demonstrates the presence of a connection between the university vision and measurements of staff effectiveness. All factor loadings for each measurement item exceed the specified criteria, indicating a strong convergence of variance. Concurrently, in order to assess discriminant validity, the Average Variance Extracted (AVE) was compared with the squared correlation for each construct. The

average variance extracted (AVE) for the latent variable surpasses the squared correlations between the dependent and independent variables in the model.

Table 1. Confirmatory factor analysis for the tested hypothesis.

	Loading	AVE	Composite reliability	Cronbach's alpha	Rho. A
Constructs	≥ 0.7	≥ 0.5	≥ 0.8	> 0.7	-
University Vision	-	0.687	0.868	0.773	0.773
I understand Covenant University's Vision 10:2022	0.865	-	-	-	-
I align with the vision and inculcate it in teaching methods.	0.810	-	-	-	-
Covenant University's increased global ranking have encouraged me to spend longer duration in the institution.	0.810	-	-	-	-
Staff effectiveness	-	0.649	0.847	0.730	0.739
I have been rewarded by the school management for students' exceptional performance.	0.816	-	-	-	-
A special bonus is given to me whenever I publish an academic material in global reputable journals.	0.757	-	-	-	-
Staff appraisals have helped me analyse my strength and weakness over time in relation with set out standards.	0.841	-	-	-	-

The data collection approach was conducted with meticulous adherence to ethical considerations. Initially, the participants were notified that their involvement was optional, and only those who granted permission were included in the survey. Prior to initiating fieldwork, a thorough introduction was provided to every participant, elucidating the goal of the survey. In addition, all survey questionnaires contained an introductory section that emphasized the importance of maintaining the secrecy of participants' names in order to protect them from any potential harm.

4. Result and discussion

The study model, which demonstrates the relationship between the vision of a university and the effectiveness of its faculty, was tested for its ability to accurately predict outcomes using Smart Partial Least Square analysis. The investigation sought to investigate the influence of university vision on staff efficacy, substantiating the formulated premise. The study's interpretation was based on the values of path coefficients, t-statistics, *r*-square, and *p*-values. The measurements were utilized to assess the magnitude of the impact and the correlation between the staff's effectiveness at Covenant University and the university's vision.

The route coefficient value, depicted in **Figure 2**, played a crucial role in quantifying the extent of the correlation between the vision of the university and the effectiveness of the staff members at Covenant University. Furthermore, the *r*-square values shown in **Figure 3** were used to determine the amount of variation in staff effectiveness that may be attributed to university vision. In contrast, **Figure 3** also displays the *p*-value, which quantifies the statistical significance of the hypothesis being tested. In addition, **Figure 4** presents the t-statistics, which help to quantify the estimated differences in terms of standard error units.

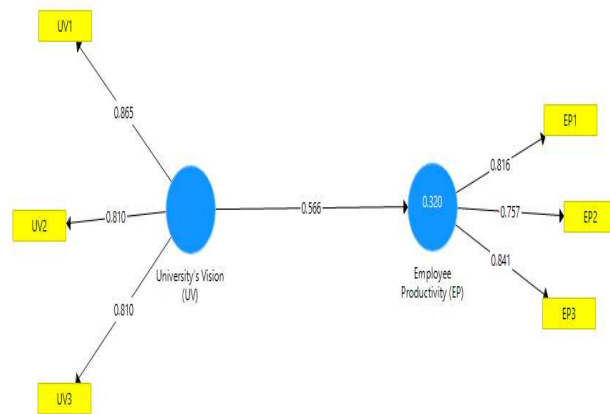


Figure 2. PLS algorithm model of university vision and staff effectiveness.

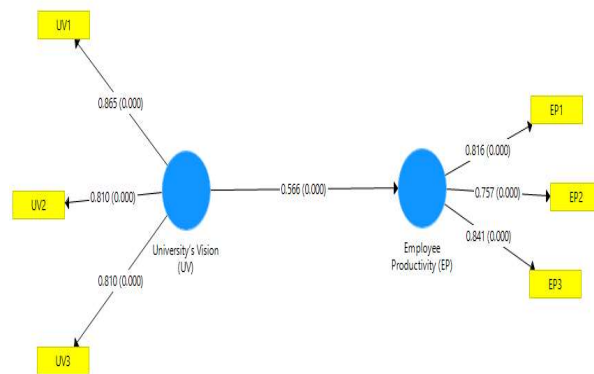


Figure 3. PLS bootstrapping model with P university vision and staff effectiveness.

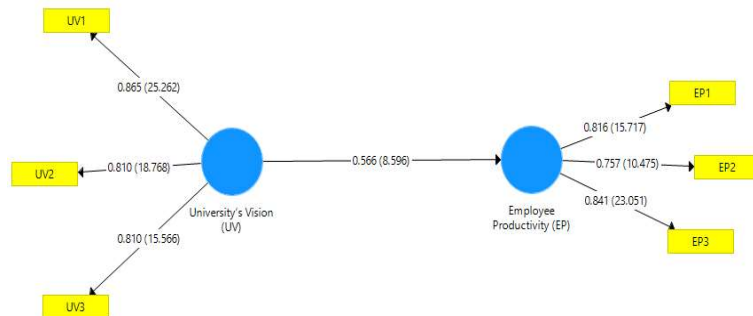


Figure 4. PLS Bootstrapping model with β university vision and staff effectiveness.

Figures 2–4 illustrate the application of the PLS algorithm to analyze the relationship between university vision and staff effectiveness among Covenant University staff members. The path coefficient value of 0.566 indicates the extent of the relationship between university vision and staff effectiveness. The R-square (R^2) value, categorized as high (>0.75), moderate (>0.50), and weak (<0.25), stands at 0.320 (see **Figure 2**). This implies that 32.0% of the variation in staff effectiveness can be explained by university vision. Consequently, the relationship between university vision and staff effectiveness is deemed weak. Hence, the hypothesis has been accepted based on the results.

The standard coefficient was employed to assess the significance of the presented hypothesis. It represents the anticipated variance in the dependent variable (university

vision) for a unit variation in the independent variable. It is noteworthy that a higher value indicates a greater influence on innovation. The T-statistical test affirmed that university vision has a substantially low impact on staff effectiveness.

Table 2. Path co-efficient for the tested hypothesis.

Variables	T Statistics	P Values	Path Co-efficient	R ²
Structural Path	-	-	-	-
University Vision → Staff Effectiveness	8.596	0.000	0.566	0.320
I understand Covenant University's Vision 10:2022	25.262	0.000	-	-
I align with the vision and inculcate it in teaching methods.	18.768	0.000	-	-
Covenant University's increased global ranking have encouraged me to spend longer duration in the institution.	15.566	0.000	-	-
I have been rewarded by the school management for students' exceptional performance.	15.717	0.000	-	-
A special bonus is given to me whenever I publish an academic material in global reputable journals.	10.479	0.000	-	-
Staff appraisals have helped me analyse my strength and weakness over time in relation with set out standards.	23.051	0.000	-	-

Table 2 displays the findings of the statistical analysis using Smart Partial Least Squares for the tested hypothesis, which investigates the relationship between staff effectiveness and university vision. The results suggest that University Vision has a notably limited influence on the effectiveness of university workers. The results indicate that the University Vision has a moderate impact on staff effectiveness ($\beta = 0.566$, t -statistics = 8.596 > 1.96, P -value = 0.000 < 0.05). The path coefficient of 0.566 indicates a moderate and positive association between University Vision and staff effectiveness. Hence, the hypothesis has been accepted based on the results.

The results indicate that the university's vision does have an impact on staff productivity; although weak, the influence is significant. This outcome is consistent with comparable research, such as the study conducted by Taamneh et al. (2022), which determined that having a distinct vision improves decision-making and sets a benchmark for achieving excellence. Jonyo et al. (2018) highlight the significant importance of a company's vision statement in facilitating employees' comprehension of how their responsibilities contribute to the achievement of corporate objectives. According to Kimani's (2022) research, having a well-defined organizational vision results in increased motivation and higher productivity among employees. In a similar vein, Mayfield et al. (2015) found that having a clear corporate vision promotes a collective sense of purpose, teamwork, and collaboration, and helps establish a unified workplace culture. A well-defined vision is essential for fostering unity among members of an organization, allowing them to effectively achieve their established goals (Castellanos and George, 2020).

5. Implications for practice and policy

The results of this research emphasize the importance of having a defined and clearly communicated vision for enhancing the effectiveness of staff members, and the study's implications extend across diverse academic institutions. It is beneficial

for all institutions, regardless of their size or status, to invest in developing and sharing a vision with their employees. For example, public universities that often struggle with leadership orientation can use the insights from this study to prioritize strategic leadership training and development for their administrators and managerial members. The implication of this is that leaders who can effectively articulate and implement the institution's vision within Nigerian public universities can boost staff motivation and overall effectiveness. Similarly, private universities can also benefit from these findings by placing emphasis on strategic leadership development. Therefore, both public and private higher education institutions can differentiate themselves by promoting leadership, which will attract both students and faculty who value forward-thinking approaches.

Based on the findings of this study, it is recommended that Nigerian universities give consideration to incorporating a well communicated vision into their future strategic plans. It is crucial to prioritize the development and effective communication of a vision that fosters a shared understanding among staff members. Furthermore, efforts should be made to assess the impact of this vision on staff effectiveness. To ensure the successful articulation and implementation of visionary agendas, governments and accreditation bodies can mandate leadership training programs for university administrators. This will equip them with the skills to effectively communicate and integrate the vision.

5.1. Conclusion and recommendation

The conclusion of this study is based on the results obtained from testing the formulated hypothesis. The study confirmed a theoretical model that explained the impact and connection between university vision and staff effectiveness. Therefore, this study determined that the efficiency of the staff is a direct outcome of a well-defined and expressed organizational vision established by the university's leadership. Hence, the capacity to consistently enhance the efficiency of the staff by continuously refining and communicating the organizational vision will significantly aid the institution in achieving its vision and organizational objectives. Based on the findings and conclusions, the study suggests that the university's organizational vision should be consistently improved and effectively conveyed to staff members to direct their efforts toward achieving the university's vision.

5.2. Contributions to knowledge

Undoubtedly, this work has made significant contributions to the current body of knowledge in numerous aspects. The study specifically demonstrated the practical dynamics of university vision and the effectiveness of staff. Therefore, this study specifically discovered that a well-defined and eloquent vision enhances the morale of employees, leading to increased effectiveness. The study presented a model that explained the relationship between the organizational vision of the university and staff effectiveness in the Nigerian higher education sector. The study offered a valuable understanding of the different aspects of the observed variables that can be utilized for the development and execution of policies.

The study utilized multiple theories as a foundation to make a significant contribution to understanding how university vision might impact staff effectiveness. First, transformational leadership theory emphasizes the influence that leaders exert on their followers through idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Nuel et al., 2021; Siangchokyoo et al., 2020); hence, we understand from the findings of this study that through a refined, articulate, and easy-to-understand vision, the management of a university can inspire and motivate staff effectiveness. Another dimension of the transformational leadership theory highlighted by Musa et al. (2020) is ingrained in the leadership vision and the ability of leadership to convey managerial objectives in a way that inspires and motivates employee effectiveness. Employees are motivated by an understanding and recognition of the corporate goal, since it offers a broader framework for achieving high-quality work (Mbindyo et al., 2021).

Furthermore, the findings of the study contribute to strategic leadership theory. According to this theory, employees mirror the traits of their top leaders, meaning that visionary leadership will influence the level of motivation and inspiration of employees, which in turn will influence their effectiveness, as shared vision is a vital asset for organizational success. Strategic leadership guides the vision and inspires employees to adopt the company's goals and values (Ali and Anwar, 2021). The unique visions of these individuals not only impact their decision-making but also shape their understanding of the circumstances in which decisions are made.

5.3. Limitations of the study and suggestions for further study

This study focuses exclusively on one specific private university in Nigeria, among the other universities in the country, indicating a restricted scope. Furthermore, the study just examined the direct relationship between institutional vision and staff effectiveness. Hence, further research endeavors could broaden the study's range. In addition, future research endeavors may conduct a comparison examination between the university and other sectors in Nigeria. The study examined linear associations, thus suggesting that future research may investigate multivariate analysis by incorporating moderating and mediating variables.

Conflict of interest: The author declares no conflict of interest.

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Article

Exploring the potential of internal communication and employee relations for effective staff performance in Nigeria customs service

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CITATION

Maiwada AA, Oshionebo B. (2024). Exploring the potential of internal communication and employee relations for effective staff performance in Nigeria customs service. *Human Resources Management and Services*. 6(4): 3447.
<https://doi.org/10.18282/hrms.v6i4.3447>

ARTICLE INFO

Received: 23 July 2024
Accepted: 16 October 2024
Available online: 27 October 2024

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Abstract: Organizations in the modern, global environment have moved away from traditional methods of communication and toward creating all-encompassing plans that revolve around the engagement and motivation of their workforce. This change highlights the critical function of strategic internal communication, a still-emerging but increasingly important field of study and practice in the business sector. The modern workplace sees a change in the roles that employees play, with workers taking on more and more duties that were previously related to public relations. Understanding this shift in PR practice requires an understanding of role expectations, as norms and expectations have a significant impact on communication behavior and, in turn, organizational performance. To interpret the data in this context, a content analysis of secondary data was conducted. This made it possible to assess the body of knowledge in order to determine its applicability, consistency, replication, and rebuttal. The study makes the case that paramilitary organizations, like the Nigeria Customs Service, have internal communication procedures that are different from those of traditional corporate organizational structures. Given the agency's diverse responsibilities in income generation, trade facilitation, and the abolition of smuggling, this discrepancy is especially noticeable. The study shows that the relationship between internal communication and employees' job performance was mediated by employee participation and job satisfaction.

Keywords: communication; effective staff performance; employee relations; Nigeria customs service and potential

1. Introduction

Organizations in the modern, global environment have moved away from traditional methods of communication and toward creating all-encompassing plans that revolve around the engagement and motivation of their workforce. This change highlights the critical function of strategic internal communication, a still-emerging but increasingly important field of study and practice in the business sector. The purposeful and targeted use of communication by management to motivate staff to support company objectives and shared values is known as strategic internal communication. Additionally, it acts as a crucial link within a company, giving staff members the freedom to take charge, decide for themselves, and carry those decisions out successfully. This ultimately results in the accomplishment of the goals the organization has set for itself during a specific time frame (Mojaye and Aondover, 2022).

Internal communication, often known as communication within a company, is the deliberate sharing of job-related information by employees with one another (Adetipe, 2020). In the world of business, companies always try to meet their goals while working with the limited resources that they have. Goal-chasing in the face of

resource constraints can occasionally lead to local and global conflicts and catastrophes (Madsen, 2018). Conflicts and wars between people and nations can be sparked by such crises, which can result in terrible losses of life and property, population displacement, interruption of trade, and the fostering of long-lasting animosities.

Surprisingly, conflicts over resource allocation, crises, and frequent public disagreements affect organizations as well, reflecting social issues. Conflicts can seriously hinder an organization's ability to carry out its mission, particularly when they involve the stakeholders it serves. The field of public relations (PR), which aims to promote favorable interactions between organizations and diverse publics, has evolved as a result of this recognition. According to Yue et al. (2021), public relations is a discipline that creates two-way communication in order to resolve conflicts of interest, find common ground, and foster understanding between parties that is based on facts, knowledge, and complete information (Khalid and Aondover, 2022).

Organizations started to see public relations (PR) as a crucial component of their corporate identity in the United States during the early 1920s, thanks to the efforts of Ivy Lee and Edward Bernays (Yue et al., 2021). Whether PR is used intentionally or is included in marketing plans, it is now a crucial component of any organization's efforts to meet its goals. However, it is noteworthy that the combination of employee relations and internal communication for efficient staff performance remains a comparatively uncharted area in the field of public relations (Wang, 2022). But as Yue et al. (2021) point out, PR is a tool for resolving conflicts as well as for building mutual trust. The management of image, perception, and impression has become increasingly important in today's world, possibly even more important than the inherent qualities of goods, concepts, and people.

As a subset of public relations, internal communication is a strategic management function that aims to promote mutual understanding among members of an organization by facilitating information flow. It serves as a channel for the exchange of information, fosters a feeling of belonging among staff members, synchronizes workers with the goals of the company, and eventually builds strong bonds. The link that connects a company to its workers is internal communication, which can foster employee engagement and trust (Heide and Simonsson, 2016). Internal communication plays a dynamic function that impacts organizational performance, raises employee commitment, and improves job awareness.

Organizational internal communication tools can be roughly classified into two categories: classic and current approaches (Falkheimer et al., 2017). Conventional methods include notice boards, phones, and different types of meetings, like workshops and seminars. On the other hand, contemporary technologies consist of chat programs, digital signage, wikis, email, intranet platforms, wikis, and social media. Employees can now easily share information and communicate in their work settings because of the widespread adoption of digital communication techniques within enterprises brought about by the rapid growth of information and communication technologies (ICT) globally.

Bekmeier-Feuerhahn et al. (2017) pointed out that people's preferences for how they obtain information from organizations vary. As a result, there are numerous internal employee communication choices accessible on a global scale. The shift in

internal communication techniques can be partly attributed to the increased acknowledgement of employees as significant communication assets in an increasingly digitalized, transparent, and networked environment, rather than just as members of the workforce. Employees are seen as reliable sources of information for external audiences since they are internal stakeholders.

Since protecting an organization's goodwill and reputation is the primary goal of public relations, it is clear that efficient internal communication creates a welcoming atmosphere where friendliness and constructive interactions are the norm. According to Falkheimer et al. (2017), internal communication consists of six main activities that are all in line with an organization's goals regarding its workforce. These include meeting legal requirements for communicating with staff members, endorsing major organizational changes, fostering teamwork and a sense of community at work, motivating staff members to act as the organization's advocates, keeping valuable staff members, and making sure staff members are aware of their responsibilities and know how to carry them out. This article intends to evaluate the Nigeria Customs Service's employee relations management and internal communication methods in light of these changes and insights. The purpose of this evaluation is to improve employee performance and, consequently, the organization's overall efficacy.

2. Methodology

The potential of internal communication and employee relations for effective staff performance in the Nigeria Customs Service is fundamental. However, the context of internal communication practices within paramilitary agencies, such as the Nigeria Customs Service, diverges from conventional corporate organizational models. This divergence is particularly pronounced given the agency's multifaceted role in revenue generation, the suppression of smuggling, trade facilitation, and other functions. Consequently, there exists a substantial gap in the literature regarding internal communication and employee relations management within the Nigeria Customs Service. Prior studies have inadequately addressed this fundamental issue, leading to a significant knowledge gap that necessitates the initiation of this study. To bridge this gap, this paper examines media strategies for internal communication; it interrogates internal communication and organizational culture and explores internal communication and employee performance.

This paper is conceptual and exploratory in nature because it makes use of the descriptive research method, which involves consulting and analyzing pertinent literature, documents, and records in light of the body of knowledge on employee relations management and internal communication for efficient staff performance in the Nigeria Customs Service. The majority of the information in the article was obtained from secondary sources that were used to supplement the qualitative data. These sources included official publications, pertinent texts, journals, historical documents, and the Internet. These sources provided concrete context for the thematic area analysis. To analyze the data, a content analysis of secondary data was conducted. This made it possible to assess the body of knowledge in order to determine its applicability, consistency, replication, and rebuttal.

3. Theoretical framework

This study accepts the theoretical presumptions of the Two-Way Symmetrical Theory of Public Relations, which was put forth by James Grunig and Todd Hunt in 1984 and is based on actual two-way communication (Newstron, 2009). It's not a one-sided pastime; it involves mutual participation. To achieve the predetermined goals of generating favorable media hype, the approach focuses on respect and understanding between parties. Two-way symmetrical public relations necessitate negotiation and a readiness to adapt. Public relations are necessary for organizations to make significant changes in order to meet the needs of the public.

James Grunig proposed that all businesses with effective communication systems have adopted a two-way symmetric approach to public relations in the preliminary reports of the IABC Excellence Study, which were published in 1992 as "Excellence in Public Relations and Communication Management". "Communication management" is a standard two-word definition, to put it briefly. The term "public-organization communication" describes it. The grasp and meaning of the topic are really apparent. There are, nevertheless, some problems connected to it. Public relations are not the only component of communication. The relationship between corporate communication and public relations, as well as marketing and public relations, must be explained (Adetipe, 2020).

The link between public relations and social emerging media serves as an anchor for communication and information distribution, according to the relationship between the theory and the study. The scholarly literature has predominantly focused on utilizing the two-way symmetrical communication model to investigate the capacity of social media to foster positive interactions between businesses and their audiences. Public relations researchers and practitioners have strongly supported the use of organizational social media or new media platforms as a tool for facilitating two-way communication between organizations and their publics, citing the nature of interest or websites as a special opportunity for PR practitioners to engage in dialogue with their publics.

Critics assert that the idea is nonetheless audience-oriented. In that sense, it presents a case for public relations by suggesting two-way communication as opposed to one-way flow. Nevertheless, the theory did not take into account the diversity of audiences, since different audiences have different needs and ways of responding to them. While two-way communication is beneficial, internal social media platforms and other communication channels that enable feedback mechanisms can also serve as useful tools for internal communication. The theory's assertions did not take these exceptions into consideration. The theory is still applicable to this study in spite of this criticism.

Beyond one-sided interactions, the Two-Way Symmetrical Theory highlights the significance of mutual interaction in communication. The work is in line with the theory's principles since it uses a two-way communication perspective to investigate internal communication channels and strategies within the NCS. This allows for a deeper understanding of how communication flows between the organization and its employees, fostering mutual understanding and respect. According to the Two-Way Symmetrical Theory, in order to conform to public expectations, organizations should

be prepared to negotiate and make adjustments. Research can examine how the internal communication methods of the NCS organization are tailored to fulfill the needs of its workforce. To improve worker happiness and engagement, this may entail negotiating and making modifications.

The two-way communication ideas of the theory are still relevant in the current environment of digital media platforms. The study will look into how the NCS uses digital media to facilitate two-way communication with its staff and examine how successful it is at fostering positive connections. Even though the Two-Way Symmetrical Theory encourages two-way communication, audience differences must be taken into consideration. The study will examine how the NCS adjusts its internal communication strategies to accommodate different staff demographics and tastes. The study will also evaluate how internal social media and other feedback mechanisms may be used to alleviate these disparities and improve communication.

In light of this investigation, the hypothesis is still applicable, notwithstanding certain criticisms. It offers a theoretical framework for comprehending the value of internal communication and how it supports productive employee performance. Through the use of this theory, the investigation of internal communication inside the NCS will further the fields of employee relations and organizational communication. In this context, the Two-Way Symmetrical Theory provides insightful information and a theoretical framework that supports the aims and objectives of the study. It offers a prism through which the research may examine NCS internal communication procedures and their effects on staff performance and employee relations, deepening our understanding of these dynamics in modern organizational contexts.

4. Media and strategies of internal communication

Internal communication is a norm that fosters contacts within the organization (Newstrom, 2009). These interactions can be created by two types of events. Task events are the typical production process activities that are typically assumed to be occurrences. This conversation can be described as formal in nature. The other event is human interaction; as members of society, businesses host people who have different attitudes, convictions, ideas, and values (Aondover et al., 2022a). This leads to the appearance of unclear or difficult-to-understand information and this kind of informal communication.

According to Adetipe (2020), internal communication refers to the exchange of ideas and information between collaborators and internal groups within an organization. This can happen either orally or in writing. Internal communication is the process by which information is shared across any group or individual whose actions directly impact the company's goal. In order for a corporation to make the right strategic decisions, it is not simply necessary to provide information. It represents the connections and points of convergence among the company's several business units, and the central organization of individuals inside each of these units is responsible for disseminating information and expertise to all partners. Because the various departments are interdependent and rely on one another to provide or receive data and information necessary for the business to run, it is a vital tool for day-to-day operations (Aondover et al., 2022b). Understanding the two forms of communication that exist

within a business is essential to preventing high levels of inefficiency and employee demotivation.

Downward Communication: Information is communicated from upper levels to lower levels of the workplace through downward communication flows, which have dominated organizational communication processes. Information that moves between various organizational levels or systems is referred to as “downward communication.” By the time the communications reach the employees who need them the most, their accuracy will have decreased (Stevanović and Gmitrović, 2015). Consequently, citing the obstacles that downward communication is linked to, it is not thought to be the ideal method for strategic internal communication within the company. The primary obstacles influencing downward communication include:

- When managers don’t know what kind of communication to give staff members,
- When they don’t know how much information to offer, and
- When they send unnecessary information.

Upward Communication: According to Neck et al. (2019), upward communication is the process of communication that moves from the lower level to the upper level of an organizational hierarchy. Some companies use this kind of communication to get employee input, which gives workers a voice and allows them to offer suggestions for improvements to decisions that managers make.

According to Walden and Westerman (2018), managers can foster a positive working relationship with their staff by asking for and receiving feedback from workers on initiatives or decisions made by management, as well as by reporting progress on work-related information. The academics outline five categories of information sharing that are seen as advantageous for any kind of organization.

- **Issues and exceptions:** Senior managers are informed of workplace developments by being made aware of the issues that employees are facing with the organization, which may pose challenges to achieving goals. For instance, the system’s software needs to be fixed because it isn’t working properly.
- **Improvement suggestions:** In this case, staff members have the freedom to make recommendations for ways to boost productivity by improving task-related processes. One instance is a brief poll that managers distributed to every employee regarding a new project.
- **Performance reports:** The supervisors receive these communications along with reports detailing the teams’ advancement on assigned tasks within the company. As an illustration, “The compliance team has finished the Jackson & Smith, Inc. audit report”.
- **Disputations and grievances:** These are private grievances that staff members have that may impede the completion of their job. Managers get complaints and problems so they may resolve them. One example of how working long hours might impact work-life balance is.
- **Financial and accounting data:** This data includes the expenses, revenues, and budgets associated with a specific project for the company. For instance, the media budget allocated to a customer of an advertising agency for their advertising campaigns.

In 2004, the concept of internal social media was initially introduced during a conference. According to Chong (2007), business social media are simple, cost-free

venues for engagement and communication. According to Wang et al. (2009), it's critical to recognize the distinction between the two kinds of online social networks that may be utilized in the workplace. The first category consists of popular social networking sites like Facebook and LinkedIn that anybody may register for. The second category consists of business social networking sites, such as IBM, which are exclusive to a specific company's employees and are therefore internal to the business. In order to enhance an organization's business processes, enterprise 2.0, also known as internal social networking, combines three key components: technology, social interaction, and content development/management. Enterprise 2.0 comprises five competency areas: communication, collaboration, community, construction, and search.

According to Chong (2007), internal social media is a networking site run by an organization to which only members of the organization have access. It provides members of the organization with the opportunity to create personal profiles and establish connections with other members of the organization. These websites could have the following features: user profiles, blogs, microblogs, activity feeds, wikis, forums, social networks, tagging, tag clouds, photo and file repositories, discussion threads, and more (Aondover and Pate, 2021).

Innovation management can be aided by internal social media. For instance, according to Duthler and Dhanesh (2018), a business using internal social media technology was able to improve a process by giving staff members a single, easily accessible template. This solved the issue of staff members having to search for various, elusive templates for various business units or technology innovation areas. For instance, Bosch Connect, an internal social media toolbox, is employed at Robert Bosch Company. Forums, wikis, blogs, files, ideation blogs, bookmarks, and activities are all part of this toolbox. Users have the ability to follow content that has been posted, follow other users' profiles, like and share content, network with other workers, and tag other users.

The benefits of internal social media networking for organizations were emphasized by Duthler and Dhanesh (2018). Employees may readily and efficiently share resources and information, for instance, and they stay focused on the goals of the company. Effective communication of problems, ideas, and solutions empowers employees and encourages creativity. Internal social media networking facilitates decision-making by providing senior management with direct access to posted suggestions (Aondover, 2019). To find and combine staff skill sets that meet a particular project requirement, management can do so with ease. Research conducted by IBM scientists on Beehive has shown that social networking tools improve employees' social capital through the creation of new social networks, the fortification of current relationships, and the improvement of employees' sense of belonging to the company.

However, there are potential risks connected to using internal social media, such as publishing unfavorable remarks about other employees or the firm, losing productivity due to staff updating their profiles, spam and malware attacks, data and identity theft, and more. Notwithstanding these dangers, social media technologies, according to Elving (2005), allow businesses to enhance organizational performance by fostering not only internal collaboration but also teamwork in response to

opportunities for sales and marketing, customer service, and innovation. It is crucial to keep researching the effects internal social media platforms have on the companies where they are used, given the growing adoption of these platforms and the potential benefits they offer.

Although the military is where the idea of strategic communication first emerged, non-military companies have embraced it over the past 20 years. There are a lot of publications on the market now that mention “strategic communication”. According to Botan (2018, p. 3), strategic communication is becoming more and more important. One of the first nations to convert some of its university-level courses in marketing and public relations into strategic communication courses was Sweden. According to Kalla (2005), targeted communication procedures used by organizations in public relations, marketing, and organizational communication are examples of strategic communication in modern society. They see a direct connection between corporate communication and strategic communication.

4.1. Internal communication and organizational culture

“All formal and informal communication taking place internally at all levels of an organization” is a broad definition of internal communication as an organizational activity (Kalla, 2005). Internal communication, by its very nature multidisciplinary, can be placed in between public relations, HR, and (internal) marketing. But in reality, those who work in public relations and strategic communication are the ones who understand internal stakeholders the best.

Welch and Jackson (2007) define internal communication as “the strategic management of interactions and relationships between stakeholders within organizations” and list several interconnected dimensions, such as “internal line manager communication, internal team peer communication, internal project peer communication, and internal corporate communication,” after taking a stakeholder approach to communication. From the standpoint of public relations, this concept of internal communication is among the earliest. Additionally, in line with the contemporary definition of public relations, this concept places internal communication as a strategic management function that goes beyond information exchange and recognizes the critical role that managing “relationships” plays in the process.

Similarly, based on the theory of public relations excellence, Men and Bowen (2017) define internal relations as “the strategic management of internal communication in managing interdependence and building mutually beneficial relationships between the organization and its employees”. They view internal communication as a process that is co-created by the organization and internal stakeholders”. This definition, which is based on the relationship management paradigm and systems theory, acknowledges the interdependent state that exists between the organization and its workers at different levels and aims to create a win-win scenario where excellent, long-lasting relationships between the employer and employees can be developed. Internal stakeholders and interacting companies’ perceived needs and desires are what drive internal communication, which can be seen as a means to an end in this sense. Instead of just being passive message recipients,

internal stakeholders—mostly employees—play an active role in the internal communication process by co-creating relationships and meaning with the organization.

Internal communication is essentially a public relations specialty as well as a management role. It is strategic in nature and seeks to accomplish particular internal communication objectives that support the efficacy of the organization. Therefore, it would be more acceptable to rename internal communication “strategic internal communication,” as opposed to organizational communication, which is a similar but more confusing term. Organizational communication is a well-established field of study that focuses on how organizations function, their context, and communication processes. It studies all communication phenomena inside organizations, including people and their motivations or characteristics, organizations, structures, teams, networks, discursive resources, discourse, interpretation, representation, and meaning construction (Deetz, 2001).

In reality, there are several components to internal communication: corporate internal communication, which is communication started by the communication department; hierarchical communication, which is communication between leaders at different levels; and horizontal/peer communication, which is communication among employees as communicators, opinion leaders, or message recipients. Effective internal communication necessitates a deep comprehension of communication processes. This means being aware of the parties involved in communication, such as communicators and message senders, the communication process (e.g., communication strategies, tactics, channels, how meanings are encoded/decoded, how messages are transmitted, and the feedback loop), and internal audiences and message receivers, as well as the organization, the leader, or employees; and the context of internal communication (e.g., culture, climate, structure, leadership, etc.) (Keyton, 2011). Effective internal communication, as a strategic public relations function, necessitates not only an understanding of how management and organizations operate but also the ability to see how internal communication fits into organizational strategy and contributes to the achievement of organizational goals and effectiveness.

Employee commitment is the willingness of employees to accept the goals and values of the organization and work towards achieving them. Similarly, organizational culture refers to the set of values, beliefs, and behavior patterns that shape employees’ behavior and form the core identity of the organization. Mullins (2005) asserts that one of the elements that strategically interact to form an organization is its culture. In order to maximize the value of human capital for organizational performance, he emphasized that an organization’s culture, much like the culture of its people, may be a motivating element.

Harrison and Stokes (1992) distinguished four elements of organizational culture, namely the power, role, achievement, and support dimensions. The organizational culture that is predicated on unequal access to redemption is characterized by the power dimension. The primary focus of the role dimension is on specialization and job description. The task culture that entails concentrating on achieving organizational goals is referred to as the achievement dimension. The support dimension characterizes an environment within the organization that is built on impartial trust between people and the organization. Other scholarly works, like Meyer and Allen’s

(1991), have identified various aspects of organizational culture, including communication, training and development, rewards and recognition, effective decision-making, taking risks for creativity and innovation, proactive learning, teamwork, and fairness and consistency in most practices. Nonetheless, according to Lau and Idris (2001), the four factors that have the biggest impact on employees' behavior or commitment are teamwork, communication, training, and rewards or recognitions. This research has chosen to hold this perspective since it supports the importance of the work.

4.2. Internal communication and employee performance

The processes of interactions and relationships between organizational members are the main emphasis of internal communication. Internal communication, when functioning as a system, helps employees within a business communicate and create meaning. According to McPhee and Zuug (2001), internal communication serves as the foundation for organizational processes. A system of internal communication is used by successful organizations to inform all members of the organization about its goals and foster collaboration. Because it is consistent with the research goal of comprehending how manager-subordinate communication influences the subordinates developing strategic cognition, affect, and behaviors within an organizational context, this thesis emphasizes manager-subordinate communication as the primary component of internal communication. Workers anticipate information from their employers to help them do their jobs effectively.

Internal manager-subordinate communication, according to Mcphee and Zaug (2001), aids staff members in comprehending organizational strategy and how their job fits into the larger objectives of the company. Internal manager-subordinate communication is essential for empowering staff members to actively seek out, analyze, and disseminate knowledge on resources that are critical to the operation of the company. According to Mazzei (2014), internal manager-subordinate communication has a purpose beyond only directing messages; it also fosters employee knowledge and proactive communication practices that are essential to the success of the company.

According to Welch and Jackson (2007), effective internal manager-subordinate communication is that which helps staff members comprehend the strategic direction of the company. Employees that are unable to understand the organization's direction are unlikely to be devoted to it, and worse, they may even start to doubt it since they are unable to relate to and understand the organization's mission. Effective internal communication is defined by Mishra et al. (2014) as regular, sincere, and transparent communication that fosters a sense of community and shared purpose between the employer and employees. Employee trust and dedication to their jobs are increased through internal manager-subordinate communication, which raises employee engagement levels inside the organization. The employees will comprehend how their work links to the organization's vision if manager-subordinate communication is offered in a way that meets their needs and is clear in its substance.

Communication can be defined as the sharing, transmission, or exchange of information with the intention of persuading and influencing (Aondover et al., 2022a).

In communication, the development and transmission of a message reach the receiver; the process seems extremely linear and foreseeable. Communication may seem straightforward, but as most people are aware, perceptions might differ from those that are spoken. Additionally, for a business to succeed, efficient communication is essential to achieving the targeted result for the sender (Aondover et al., 2022b).

The efficiency of the business and the need for each person to comprehend, feel safe in, and be driven to complete their duty are the two most essential social phenomena that occur between employees and supervisors within the organization. Furthermore, technological advancements have created a more intricate business environment where a greater amount of information is accessible through a variety of communication platforms (Ruben and Gigliotti, 2017). There are various ways for staff members to exchange information when it comes to internal communication.

Bishop (2010) states that meeting, if not exceeding, goals and standards, as well as empowering individuals to do their jobs to the best of their abilities, constitute employee performance. Establishing a culture of shared and individual accountability for the ongoing enhancement of company procedures and fostering the development of individual talents and contributions are essential for achieving successful employee performance. Employee performance is typically viewed by corporations as company performance, and it is tracked via the business appraisal. Employee performance, as defined by Bishop (2010), is a planned and integrated approach to enhancing the success of companies through the enhancement of individual contributors' performance as well as the development of teams' and individuals' own capacities.

It is the growth of capable and dedicated individuals working in an organization that supports and fosters their accomplishments to accomplish common, worthwhile goals. Duthler and Dhanesh (2018) consider employee performance to be an important aspect of human resource management. Production, storage, manufacturing, transportation, marketing, purchasing, distribution, business promotion, finance and accounting, human resources, research, and public relations are among the primary responsibilities of employees. All of these tasks are necessary to meet goals and, when carried out well, have a significant impact on the organization's overall output, sales, profit, advancement, and competitive position.

The management needs to be aware of how important employee performance is and make a real effort to address it. According to Duthler and Dhanesh (2018), a company can dominate its industry by using its skilled and committed workforce to provide it with an advantage over rivals. Because employees must perform several job responsibilities in close collaboration for the unit to succeed, their contribution on the job is the most significant aspect of business development and excellence.

An employee's conduct while carrying out a duty or assignment can be defined as their performance. It is the result or product that the organization's personnel produce. Employee performance is defined as an individual's accomplishments in accordance with the policies, standards, and directives of the company. The performance of employees can be determined by their skill set, level of effort, and perspective on the work. Employee performance, in the context of an organization, is the extent to which a member of the organization contributes to the achievement of the organization's goals.

5. Conclusion

The direction of the literature makes it evident that internal communication, as a subset of public relations, is a strategic management role intended to promote mutual understanding among members of an organization by facilitating information sharing (Maiwada and Oshionebo, 2024). It serves as a channel for the exchange of information, fosters a feeling of belonging among staff members, synchronizes workers with the goals of the company, and eventually builds strong bonds. The link that connects a firm and its workers, internal communication fosters employee engagement and trust. The ability of strategic managers to involve staff in accomplishing organizational goals is greatly impacted by internal communication.

Author contributions: Conceptualization, methodology, writing process, AAM; validation, formal analysis, editing process, BO. All authors have read and agreed to the published version of the manuscript.

Conflict of interest: The authors declare no conflict of interest.

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Article

Team commitment and performance of construction project in Nigerian construction industry

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CITATION

Olasunkanmi FO, Femi-favour AA, Okon UJ. (2024). Team commitment and performance of construction project in Nigerian construction industry. *Human Resources Management and Services*. 6(4): 3402.
<https://doi.org/10.18282/hrms3402>

ARTICLE INFO

Received: 13 September 2024

Accepted: 2 November 2024

Available online: 7 November 2024

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Abstract: Project success requires team commitment, which is a product of an encouraging culture of cooperation and teamwork among project team members. The research work aims to ascertain which components of team commitment affect the performance of construction projects in Nigeria. The research adopted a quantitative design where questionnaires were used for data collection. Out of 1233 questionnaires distributed, 975 were received with valid responses and used for data analysis. Data were analysed descriptively using percentage, mean score, and relative agreement index. The study showed the factors of team commitment having an effect on project performance, as rated by the respondents, to be: Normative component: “Project team members owe a great deal to this organisation”; “Members of the project team do not feel it is right to quit the project before completion”; “This organisation has a great deal of personal meaning for project team members”. Affective component: “This organisation deserves the loyalty of project team members”; “The project team considers the team’s problems as their own. Then, “One of the few negative consequences of leaving this organisation will be the scarcity of available alternatives” is for continuance. In conclusion, the emotional attachment of the team members and sense of obligation to the project team and construction organisation are the driving forces behind pushing for the successful outcome of projects within the Nigerian construction industry.

Keywords: team member; project organisation; project manager; Nigeria; project delivery; success

1. Introduction

The final output of all construction activities is a product of the amalgamation of inputs and efforts of individuals (professionals, skilled and unskilled artisans) working together as a team under the ambit of construction organisation. Therefore, construction workers are essential to the successful outcome of a construction project (Aghimien et al., 2019). Olasunkanmi et al. (2023) submitted that durable infrastructure and habitable structures as end products of construction activities are achieved via teamwork and effective team commitment championed by a project manager with an appropriate leadership style. The on-site team coordinator, or project manager (PM), is saddled with the onerous task of achieving the organisational goal of project success as specified in the contractual performance specification. A study has shown that team commitment and overtime greatly improve project performance (Keeman and Rostami, 2021). Team commitment is a product of an encouraging culture of cooperation and teamwork among employees. Either a short-term or long-term project team, Bishop and Scott (2000) modified the earlier definition of Mowday

et al. (1982) that team commitment is the experience of a team member in terms of acceptance, support, and the intention to remain part of the team. Occasioned by the level of organisational commitment to the well-being of the team members, especially the reassurance of employees' job security, just as the team members are expected to show some sort of loyalty, support, and attachment to the organisation. This is an indication of the expectation of commitment from the organisation to the employee and vice versa. Commitment is an attachment or loyalty within an organisation (Nehmeh, 2009). A team member's commitment is measured by his/her identification with the goals and values of the organisation while attempting to retain his/her loyalty to them as well (Miller, 2003). The commitment of project team members is enhanced by the behaviour and leadership style of the project manager. According to Mathieu and Zajac (1990), lack of withdrawal tendencies (absence, lateness), constant display of supportive tendencies, and additional behaviours (acceptance of emergency tasks, prompt assistance to others, and creative and innovative ideas) are all indicators of a positive relationship between team commitment and project team performance. The enactment of creative and supportive behaviours by committed team members is a function of the display of an appropriate leadership style within the project organisation.

Among others, team commitment and effective leadership with an appropriate style are two fundamental requirements for project success. Turner (2008) encouraged project managers to adopt a downward approach as one of the three-directional approaches to leadership to ensure team member commitment to the project is won in the process. Though the task of driving project performance seems daunting, with sound leadership skills, styles, and team commitment, hitting the target becomes easy. The interest and commitment of individual team members within a project organisation are motivated or otherwise by the prevailing leadership style. It is crucial for sensitising the attitude of subordinate team members. There are many different construction professionals/non-professionals from various disciplines and backgrounds within the construction organisation, hence, the importance of leadership with an appropriate style. As canvassed by Swenson et al. (2016), through a social process of leadership, subordinates could be brought to work in alliance with the organisation in order to realise the aim of achieving the common objective. The PM, who is the group leader, has the onerous task of getting the best from seemingly ordinary team members by not only knowing and showing the right way but also leading and going that way.

Construction projects are conceived to accomplish definite outcomes, mostly with the creation of new facilities, upgrading or refurbishing existing ones, or maintenance for facelifts. They are of different sizes, but either small or mega, involve utilisation of resources. Each construction project has a definite purpose for which it is conceived and functions to perform upon completion. Thereafter are the other objectives of timely completion, within a certain stipulated budget, and to a desired quality standard. Achieving these desired objectives is possible only within the ambit of a construction organisation that encourages teamwork and commitment via a project manager with sound skills and an appropriate leadership style. The yardsticks with which project completion is often measured are referred to as performance. Project

performance is an ongoing review of the efficiency and importance of a given project. Project success or performance is defined as realising the cardinal aim of the organisation by completing the project on time while also meeting the expectations of major stakeholders regarding safety, quality, environment, and legislation (Johan and Piet, 2014). In the opinion of Ujene et al. (2013), the extent to which the desired goal or objective of an organisation is accomplished is termed performance. The concept of project success is embedded in performance. A construction project is said to be successful when the expectations and requirements of all stakeholders are met, which means fulfilling the objectives of cost, quality, time, safety, environmental, and legislation. This is also called project performance.

Additionally, due to the many participants in construction who play a vital role in achieving the objective of the project, Soetanto (2002) therefore defines performances as the contribution of participants (clients, architects, or contractors) in carrying out the necessary work required to accomplish the project.

Many researchers within the Nigerian construction industry have worked on organisation/team commitment. Akintayo (2010) examined what induced workers commitment to their jobs and recommended the introduction and provision of organisational support programs for all levels of workers. In the earlier work by Oyewobi et al. (2012), which observed the existence of a correlation between job satisfaction and organisational commitment among some industry professionals (the quantity surveyors), it was concluded that organisation commitment drives a sense of accomplishment, especially when adequate recognition opportunities are shown. Abiola-Falemu (2013) investigated the relationship among organisational culture, job satisfaction, and commitment among construction participants in Lagos. According to the findings, there was a positive correlation between job satisfaction and employees' commitment. Oyewobi et al. (2019), in their recent work, concluded that organisational commitment mediates the impact of work-life balance on organisational performance of professionals within the construction industry in Nigeria, though only female counterparts. However, as much as had been investigated about team commitment within the industry in Nigeria, not one single mention was made of which of these factors of team commitment influence the performance of construction projects, which created the gap for this research effort to explore.

Given the aforementioned background, the purpose of this work is to determine how team commitment impacts construction project outcomes in Nigeria. While primarily the objective identifies which of the constructs of team commitment affect the performance of project output, the findings shall help the construction organisations maximize the beneficial ones and improve upon others for the overall improvement of project delivery.

2. Literature review

2.1. Team commitment

Commitment to organisational goals is the bedrock of teamwork, especially in projects. This thrives as individual members of a project team strive toward realising the purpose of the team instead of individual goals. It is an effort by a team member

to get involved and identify with the organisation or project. Hussein and Hafsiel (2016) emphasised the significance of commitment (to/of the organisation or project team member) to the project outcome, which is generally regarded as a key measure of project success. There are three components of commitment: belief in and agreement with the ethos of the organisation; readiness to sacrifice more effort for the organisation; and expression of interest in remaining with the organisation. The concept of commitment is strong and vital; it is relevant to both employees and organisations. Mowday (1998) argued that there is a positive relationship when an employee is committed to working in an organisation.

2.1.1 Types of commitment

There are three classifications of commitment by Meyer et al. (1993): affective, continuance, and normative. Individuals' emotional bonding with the establishment is affective; association on the basis of the cost of living or other rewards for staying is continuance commitment (Meyer et al. 1993). Meyer and Allen (1991), on the other hand, regarded normative as having a sense of obligation towards the goals of the establishment. Mahdi et al. (2014) posited normative to be when an employee is obsessed with or duty-bound to remain with the establishment. Various researchers have concluded that showing more acceptance, being supportive, and being cooperative as qualities desired of project team members are positively related to both the affective and normative components of team commitment (Akhtar and Hassan, 2021; Becker and Billings, 1993; Paolucci et al., 2018). Basu et al. (2002) believed organisational commitment is the support from project organisation that has a positive influence on realizing project goals. Additionally, organisational commitment is proportional to a team member's degree of attachment and sense of belonging. Therefore, as a team member's degree of attachment and sense of being carried along increases, organisational commitment also increases (Zehir et al., 2012). In terms of performance, according to Gulzar et al. (2012), commitment is pivotal to reducing schedule and cost overruns in construction projects.

2.2. Teamwork

The major attribute of the construction industry is teamwork, whereby the delivery of projects is done by a team of many professionals, such as architects, builders, subcontractors, material suppliers, specialists, planners, and engineers (Chow et al., 2005; Winch, 2009; Spatz, 2000). Luca and Tarricone (2001) suggested that the flexibility of team members and easy adaptation to a cooperative working environment will enable the achievement of goals through collaborative efforts instead of individualised, competitive goals. The importance of a team, according to Jarad (2012), to project performance cannot be overlooked. Among the critical factors to project success/performance is team collaboration, each team member's performance, and also that of the entire team as a unit. Project success or performance is impossible to secure without a performing team. A leader can only have a performing team after he might have spurred them up for such an expected performance and created an environment for the team to function. Additionally, it is only a leader with clarity of vision, sound reasoning, a proactive schedule, the capacity to allure gifted people, and a thoroughbred team that can lead a project toward success. With these qualities, it

becomes easy for the leader/manager to ensure the team members execute the job successfully. The required attributes for effective teamwork are summarised in **Table 1**.

Table 1. Attributes for effective teamwork.

Commitment to team success and shared goals	Team members are committed to the success of the team and their shared goals for the project. Successful teams are motivated, engaged and aim to achieve at the highest level
Interdependence	Team members need to create an environment where together they can contribute far more than as individual. A positive interdependent team environment brings out the best in each person enabling the team to achieve their goals at a far superior level (Johnson and Johnson, 1995; Johnson and Johnson, 1999). Individuals promote and encourage their fellow team members to achieve, contribute, and learn;
Interpersonal skills	Includes the ability to discuss issues openly with team members, be honest, trustworthy, supportive and show respect and commitment to the team and to its individuals. Fostering a caring work environment is important including the ability to work effectively with other team members;
Open communication and positive feedback	actively listening to the concerns and needs of team members and valuing their contribution and expressing this helps to create an effective work environment. Team members should be willing to give and receive constructive criticism and provide authentic feedback;
Appropriate team composition	is essential in the creation of a successful team. Team members need to be fully aware of their specific team role and understand what is expected of them in terms of their contribution to the team and the project; and
Commitment to team processes, leadership and Accountability	team members need to be accountable for their contribution to the team and the project. They need to be aware of team processes, best practice and new ideas. Effective leadership is essential for team success including shared decision-making and problem solving.

Source: Researcher's literature review (Johnson and Johnson, 1995; Johnson and Johnson, 1999).

2.3. Team commitment and project performance

Project performance is the ultimate target of every construction project. Oyaya (2017) said team commitment is cardinal to a project realising its objective. The definition of roles, tasks, and responsibilities by project managers at inception is key to the successful implementation of construction projects. These are then clearly communicated to members of the project team through the establishment of team rules and values. With this in mind, each team member, having understood their roles and responsibilities, proceeds towards realising project objectives with the minimum or fewer conflicts (Widener, 2004). Appreciation of the project objectives and a show of willingness to continue working with the team are attributes of a committed member (Meyer and Allen, 1991). The manifestation of commitment takes place in three ways: behavioural intentions, motivating forces, and attitudinal characteristics, and they all influence behavioural and attitudinal outcomes. Common values and beliefs solicited by the project team are shared by every committed team member. They demonstrate a willingness to abide by the team and a strong desire to exert effort in all teams's engagement. Various authors showed that committed team members believe that their

expectations have been met by their organisation. These in turn give them the feeling that they are obliged to reciprocate by fervently showing more commitment to the team (Witt et al., 2001; Gallagher et al., 2015).

People and attitude are essential for the performance of construction projects (Turner, 1999).

The components of people's factors are leadership, management, teamwork, influence, and inspirational motivation. While attitudinal factors consist of commitment to team objectives, motivation, support from all stakeholders right at the first attempt, and a common vision (Turner, 1999), The success of projects under leadership is attributed to this model. Attendance is another indicator of commitment in a project team, as pointed out by Turner (2014); it comprises punctuality, sound health, free flow of work, labor turnover, and clarity of goals. Clarity of goals implies that each team member has a clear understanding of their assigned role in the team. Other authors added high output as an indicator of commitment. Its main attributes are: achievement of a common goal; searching for real solutions; solving problems through knowledge and skills; and the ability to search out broadly tested knowledge and established solutions by the team. Also, manifesting strong team unity by maintaining honesty and trust among staff, concepts and knowledge sharing, purpose-driven meetings, and shared goals are all commitment indicators (Settoon et al., 1996; Way, 2002; Senior and Swailes, 2004).

The effectiveness of the project team must be determined by the project manager. This is done by assessing the attainment of assigned targets for the employees in conjunction with whether the individual's team objectives and motivational desires have been met. The responsibility of ensuring the achievement of both corporate and individual objectives is that of project managers.

While attempting to meet corporate goals, effort must be made to sustain the team's morale and effectiveness and avoid staff attrition (Turner, 2014; Gwavuya, 2011; Gardner et al., 2004; Bass and Avolio, 1997).

Ghazinejad et al. (2018) considered the three important shared values of trust, openness, and commitment and examined their impacts on project performance and outcome. Though it focused on science and innovation research projects, the findings and outcomes were found relevant to construction projects as part of human endeavour. The findings revealed the practice of these core values (trust, openness, and commitment) in research establishments, which are valuable ingredients of teamwork. The study concluded that trust and openness enhance cooperation, understanding, and commitment.

Allen and Meyer (1990) developed organisational commitment questions based on the three divisions of commitment (normative, affective, and continuance); these were earlier measured by Mowday et al. (1979) and used by many researchers, such as Oyaya (2017), Fasola et al. (2013), and others. The indices are shown in **Table 2**.

Table 2. Organisational commitment measurement indices.

1	The project team considered the team's problems as their own.
2	Members of the project team did not feel it was right to quit the project before.
3	Project team members were obligated to complete their contracts at the project.
4	I would be very happy to spend the rest of my career with this organisation.
5	I really feel as if this organisation's problems are my own.
6	I do not feel a strong sense of "belonging" to my organisation.
7	I do not feel "emotionally attached" to this organisation.
8	I do not feel like "part of the family" at my organisation.
9	This organization has a great deal of personal meaning for me.
10	I do not feel any obligation to remain with my current employer.
11	Even if it were to my advantage, I do not feel it would be right to leave my organisation now.
12	I would feel guilty if I left my organisation now.
13	This organisation deserves my loyalty.
14	I would not leave my organisation right now because I have a sense of obligation to the people in it.
15	I owe a great deal to my organisation.
16	Right now, staying with my organisation is a matter of necessity as much as desire.
17	It would be very hard for me to leave my organization right now, even if I wanted to.
18	Too much of my life would be disrupted if I decided I wanted to leave my organisation now.
19	I feel that I have too few options to consider leaving this organisation.
20	If I had not already put so much of myself into this organisation, I might consider working elsewhere.
21	One of the few negative consequences of leaving this organisation would be the scarcity of available alternatives.

Source: Allen and Meyer, 1990.

Organisational commitment questions are thus modified to team commitment measurement indices to suit the study and then used as variables in the study questionnaire.

2.4. Project performance

Project performance is an ongoing review of the efficiency and importance of a given project. Performance is regarded as an assessment of how satisfactorily individuals or groups of people have done in pursuing certain organisational goal (Ankrah and Proverbs, 2005). Ujene et al. (2013) said it is the degree of achievement of an objective. According to Armstrong and Baron (1998), performance management is a coordinated technique for ensuring continuous delivery of success by the organisation through developing the capacity of the employees, teams, and other contributors. Many individuals play different roles in ensuring the construction project goal is realised, therefore, Soetanto (2002) defines performances as inputs of participants (clients, architects, or contractors) towards the process of accomplishing the project. Ankrah and Proverbs (2005) suggested two perspectives on approaching performance: the first is viewed from the business consciousness of the contractor, while the second is associated with the performance of the project itself. The business aspect seldomly enjoys good consideration in construction management research but is often evaluated by financial outputs, ratios, levels of productivity, and other personal appraisal indices.

However, in some cases, in references to performance (either contractor on a business basis or construction project output) and research, the emphasis had been on project performance (Soetanto, 2002; Xiao and Proverbs, 2003). This is so because a

construction project is a real business endeavour that represents a major investment by the client. The owner, as a major investor and key stakeholder in the construction industry, will always look at performance from the angles of prompt delivery of projects, an accurate budget, and, as specified, providing good service, satisfaction of workers, health, and safety within optimum life-cycle costs. Added to these features is meeting customers' expectations, due to the importance attached to the satisfaction and welfare of the client and customer. The level of satisfaction derived by team members in working together is one key criterion to determine success upon the accomplishment of a project. Project performance is the act of measuring project progress in order to monitor operations and ensure the detection of early signals of obstacles that may hinder the smooth realisation of project delivery. Data that can help in improving the planning and performance of future projects is garnered; this is an additional benefit. According to Luu et al. (2008), the art of gauging performance is a continuous and endless improvement. Primarily, the purpose of performance assessment is to assist managers and team members in the development of direction, traction, and an action plan for the organisation (Cokins, 2006). As a rule of thumb, improving the success rate of delivery of products and processes by contractors is achieved through benchmarking.

3. Research methods

The research design, population frame and sample, data collection, and instrument are highlighted.

3.1. Research design

A quantitative and survey approach based on the nature of the questions to be answered was employed by the study (Otokiti, 2015; Dainty, 2008). Specific research questions were conclusively answered by quantitative techniques, by this quantitative technique, necessary data on the extent of influence of team commitment on project performance was extracted from the respondents. using descriptive analysis (Malhotra and Birks, 2006). Therefore, by this quantitative technique, necessary data on the extent of influence of team commitment on project performance was extracted from the respondents.

3.2. Population and sample

Creswell (2009) said the collection of well-defined individuals or objects who have similar features or characteristics is known as the research population. Therefore, employees of construction firms (both indigenous and foreign) operating in the study area (FCT (Abuja), Lagos, and Rivers) constitute the research population. The study areas are thus chosen based on the availability of local, multinational construction firms with enormous construction activities, hence confirmation of their status as centre of economic investment and macro-capital cities in Nigeria. A small portion of the population that represents the whole is sampled, while the process of deciding this portion is sampling. Reducing the number of members of a population to a manageable size is also called sampling (Teddlie and Yu, 2007). The essence of sampling is to help draw inferences about the whole population (Corbeta, 2003). The respondents were

project managers (PMs), professionals (referred to as project team members (PTM), who are architects, builders, quantity surveyors, and engineers), and the firm's project supervisors (SUP). The source of the population frame was the Federal Inland Revenue Service (FIRS). All the construction firms that have registered with FIRS with evidence of tax payment through a tax identification number (TIN) over the last five years were deemed to still be in operation and not yet gone extinct.

The sample size was determined using the Taro Yamane (1967) equation as shown in Equation (1):

$$n = N/(1+N \times (e)^2) \quad (1)$$

where n = the sample size; N = the population under consideration; e = the margin error, usually (0.05). Adoption of Yamane (1967) equation for determining the sample size is because of its simplicity, reliability and validity. It has been used by many researchers over the years. Sample frame and size are as displayed in **Table 3**.

Table 3. Sample frame and size.

State	Number of firms	Sample
Lagos	235	148
Rivers	142	105
FCT (Abuja)	260	158
Total	627	411

3.3. Sampling techniques

Stratified random sampling was used to identify the construction firms, while the purposive technique was employed to identify the actual respondents within each firm identified. This sampling method was employed because of the heterogeneous nature of the population. The major projects executed by the construction firms were taken into consideration for assessment without regard to the clients, nature, or types. The projects are primarily buildings, roads, hospitals, or anything else worthy of evaluation.

As shown in **Table 3**, a sample size of 411 firms was extracted by employing Taro Yamane's equation from the sample frame of 627 firms. With 3 respondents representing each firm, a total of 1233 respondents were used for the study. The distribution per location takes the following order: FCT (Abuja)—158 firms; Lagos—148 firms; and Rivers—105 firms.

3.4. Data collection and analysis

Data collection was done by means of a structured questionnaire. This was deemed appropriate because of its numerous benefits, including ease of analysis and zero tolerance for bias. A total of 1233 questionnaires, of which 975 were returned with valid responses, were used for the analysis. Descriptive analysis involving percentage, mean score, and relative agreement index (RAI) was done. The questionnaires contained two parts. The first part captured the demographic features of the respondents, which include sex, educational qualification, stake in the projects, professional affiliations, construction experience, project size, type of construction,

and others. Part two sought the perceptions of respondents on the extent of the influence of team member commitment on project performance.

Different measurement scales—nominal, ordinal, and interval—were employed in the study. While nominal and interval scales were used to capture the demographic features of respondents, ordinal scales were used for the second part. The ordinal was on a five-point Likert scale of 5-strongly agree, 4-agree, 3-moderate, 2-disagree, and 1-strongly disagree. The respondents were asked to rate the extent of the influence of team member commitment on project performance.

The inner consistency of the collected data was measured by the Cronbach Alpha coefficient. This was to ensure the reliability of the test instrument. The reliability test was carried out among the representatives of the population in two states included as part of the study area. It was done on two occasions at an interval of fourteen days, based on the definition of Kalyviotis (2013) and already used by Ayopo (2011). The fourteen-day time frame was fair enough to ensure the stability of the results to be ascertained. Hinton et al. (2004) gave a four-cut-off point for reliability as: 0.90 and above (excellent reliability); 0.70–0.90 (high reliability); 0.50–0.70 (moderate reliability); and 0.50 and below (low reliability). The test instrument had a Cronbach's Alpha value within the range of 0.85–0.95, hence highly reliable and internally consistent.

The basic descriptive data analysis was done using Statistical Package for Social Science (SPSS) version 1.

4. Results and discussion of findings

4.1. Sample characteristics

The respondents, who are major participants in the study, were found to be domiciled in construction firms by a pilot study conducted. Therefore, the research instrument for gathering data was distributed to the respondents identified by the firms within the study area for their opinions. Shown in **Table 4** are the locations of the firm used for the research and the quantity of questionnaires administered, returned, used, and discarded (both numerical and percentages) from each location.

Table 4. Descriptive result of the return rate of questionnaire administered.

Firm	Administered		Returned		Used		%	Discarded	
Location	No	%	No	%	No	%	Per location	No	%
Lagos	444	36.1	355	36.1	353	36.2	79.5	2	22.2
Rivers	315	25.5	275	27.9	271	27.8	86	4	44.4
FCT(Abuja)	474	38.4	354	36.0	351	36.0	74.1	3	33.3
Total	1233	100	984	100	975	100		9	100

A return rate of 79.8% (N = 1233) was accomplished by the administered instrument, basically because of the little motivation enjoyed by the research assistants in the study areas. As displayed in Table 4, 36% of the total distributed went to Lagos, Rivers 25.5%, and FCT (Abuja) 38.4% of the share. The quantity cast away in each location was due to some irregularities discovered. Some were left unattended to; a few were mutilated, while others had multiple answers to the same option. In all, less

than 1% (N = 9) were unused from a total of 984 returned. About 79.1% of the entire research instrument (N = 975) was distributed, and 99.5% of the valid ones were employed for the work.

Presented in **Table 5** are the demographic features of the respondents whose opinions were sought (sex, experience, academic and professional qualifications, and many others). Worth mentioning is the fact that fewer or scanty women are found in the construction industry in Nigeria, as observed by Verwey (2008), Haupt (2012), and Fester (2012). From Table 5, female and male participants are 12.5% and 87.5%, respectively.

Table 5. Descriptive results of respondents' characteristics.

Features	Sub features	%	N
Sex	Male	87.5	836
	Female	12.5	139
	Total	100.0	975
Educational qualification	OND	7.4	62
	HND	32.2	381
	BSc/BTech	24.2	226
	PGD	6.6	66
	MSc/MTech	21.9	186
	Others	7.7	54
	Total	100.0	975
Stake in the project	Project manager	33.0	325
	Project team member (PTM)	33.6	326
	Supervisor (SUP)	33.3	324
	Total	100.0	975
Professional affiliation	NIA	15.4	148
	NIOB	21.1	175
	NSE	36.5	343
	NIQS	15.7	160
	None	11.4	149
	Total	100.0	975
Membership status	Technician	0.7	7
	Licenciate	0.7	7
	Associate	3.4	33
	Graduate	26.5	259
	Corporate	51.9	506
	Fellow	1.44	14
	None	15.3	149
	Total	100.0	975
Years of experience	1–5 years	1.1	8
	6–10 years	10.3	93
	11–15 years	17.1	224
	16–20 years	37.0	346
	Above 20 years	34.5	304
	Total	100.0	975
Nationality	Nigerian	89.7	879
	Non-Nigerian	10.3	96
	Total	100	975
Farm size	Small firm (0–49)	131	37.3
	Medium firm (50–100)	92	26.2
	Large firm (100 and above)	128	36.5
	Total	351	100.0
Project size	Below 10 million	-	-
	10–20 million	-	-
	21–50 million	4	1.1
	51–100 million	32	9.1
	100–900 million	122	34.8
	above 1 billion	193	55.0
	Total	351	100.0
Construction type	Building	45.43	443
	Road	26.05	254
	Hospitals	6.05	59
	Sport complex	1.85	18
	Others	20.62	201
	Total	100.0	975

4.2. Team member commitment and performance of construction projects

The perceptions of the respondents were sought on the influence of team member commitment on the performance of construction projects, which is the purpose of the study. They were asked to show their level of agreement with the extent to which factors of team commitment influence the outcome of construction projects. Some selected organisational commitment questions, as developed by Mowdays (1982) and already used by Fasola et al. (2013) and Oyaya (2017) as team member commitment measurement indices, were modified and presented to the respondents. The ranking of the variables was done by the respondents to reveal their level of agreement with the extent to which these factors (variables) influence projects' outcomes. Analysis was done based on a 5-point Likert scale of very small extent, small extent, medium extent, large extent, and very large extent and assigned the weights of 1, 2, 3, 4, and 5, respectively. The ranking of the results obtained from data analysis was done by calculating the Relative Agreement Index (RAI) from the mean score. This portrays the frequency of the influence of team commitment on project performance.

4.3. General level of agreement by the whole project team on the extent at which team member commitment influence project performance

The general perception of the whole project team is shown in **Table 6**. A comparative analysis of the RAIs and rankings by each group of respondents was done, and the result is as displayed in **Table 6**. Extracted from **Table 6** is another table, **Table 7**, that shows the five topmost variables of team commitment that affect project performance by the respondents' ranking. Each component of team commitment is enclosed in a bracket: AFF for affective, CON for continuity, and NOR for normative. On an overall basis, the entire construction team opined that "one of the few negative consequences of leaving this organisation will be the scarcity of available alternatives"; "project team members owe a great deal to this organisation"; "this organisation deserves the loyalty of project team members"; "this organisation has a great deal of personal meaning for project team members"; "the project team considers the team's problems as their own" with RAIs 0.8055, 0.7924, 0.7854, 0.7707, and 0.7621 are ranked first, second, third, fourth, and fifth in that order. Expectedly, there is no divergent opinion on the unique and distinctive ranking given to "One of the few negative consequences of leaving this organisation will be the scarcity of available alternatives". The sum total of the perceptions of each group of respondents forms the aggregate opinion expressed by the entire construction team. This view, as expressed, confirms de facto the scarcity of alternatives as being instrumental to the commitment level of construction employees.

Table 6. Perception of the entire construction project team on the extent of influence of team member commitment of project performance.

Team member commitment measurement	Overall			PM			PTM			SUP		
	N	RAI	Rank	N	RAI	Rank	N	RAI	Rank	N	RAI	Rank
One of the few negative consequences of leaving this organisation will be the scarcity of available alternatives.	975	0.8055	1st	325	0.7809	6th	326	0.8092	1st	324	0.8265	1st
Project team members owe a great deal to this organisation.	975	0.7924	2nd	325	0.8562	1st	326	0.7761	2nd	324	0.7438	2nd
This organisation deserves the loyalty of Project team members.	975	0.7854	3rd	325	0.8529	2nd	326	0.7730	3rd	324	0.7302	3rd
This organisation has a great deal of personal meaning for project team members.	975	0.7707	4th	325	0.8511	3rd	326	0.7595	5th	324	0.7012	6th
The project team consider the team's problems as their own	975	0.7621	5th	325	0.8129	4th	326	0.7644	4th	324	0.7086	4th
Members of the project team do not feel it is right to quit the project before completion	975	0.7520	6th	325	0.7994	5th	326	0.7528	6th	324	0.7037	5th
Project team members really feel as if this organisation's problems are their own.	975	0.7056	7th	325	0.7483	7th	326	0.7061	7th	324	0.6623	8th
Project team members are obliged to complete their contracts at the project.	975	0.6939	8th	325	0.7225	9th	326	0.6798	8th	324	0.6796	7th
Project team members will not leave this organisation right now because they have a sense of obligation to the people in it.	975	0.6550	9th	325	0.7231	8th	326	0.6423	9th	324	0.5994	13th
If project team members have not already put so much of themselves into this organisation, they may consider working elsewhere.	975	0.6113	10th	325	0.5815	11th	326	0.6202	10th	324	0.6321	10th
Even if it is to their advantage, project team members do not feel it will be right to leave this organisation now.	975	0.5877	11th	325	0.6585	10th	326	0.5675	13th	324	0.5370	16th
Project team members do not feel a strong sense of "belonging" to this organisation.	975	0.5826	12th	325	0.5249	13th	326	0.5945	12th	324	0.6284	11th
Right now, staying with this organisation is a matter of necessity as much as desire.	975	0.5781	13th	325	0.4695	19th	326	0.6037	11th	324	0.6611	9th
Project team members feel that they have too few options to consider leaving this organisation.	975	0.5596	14th	325	0.5243	14th	326	0.5595	14th	324	0.5951	15th

Table 6. (Continued).

Team member commitment measurement	Overall			PM			PTM			SUP		
	N	RAI	Rank	N	RAI	Rank	N	RAI	Rank	N	RAI	Rank
Project team members do not feel “emotionally attached” to this organisation.	975	0.5471	15th	325	0.4782	17th	326	0.5558	15th	324	0.6074	12th
Project team members do not feel like “part of the family” at this organisation.	975	0.5432	16th	325	0.4818	16th	326	0.5497	16th	324	0.5981	14th
Project team members will be very happy to spend the rest of their career with this organisation.	975	0.5077	17th	325	0.5667	12th	326	0.4945	17th	324	0.4617	18th
Project team members do not feel any obligation to remain with the current employer.	975	0.4607	18th	325	0.4098	21st	326	0.4626	18th	324	0.5099	17th
Project team members will feel guilty if they leave this organisation now.	975	0.4574	19th	325	0.5157	15th	326	0.4460	19th	324	0.4105	20th
It will be very hard for project team members to leave this organisation right now, even if they want to.	975	0.4459	20th	325	0.4757	18th	326	0.4368	20th	324	0.4253	19th
Too much of the life of project team members will be disrupted if they decide to leave this organisation now.	975	0.3797	21st	325	0.4142	20th	326	0.3669	21st	324	0.3580	21st

N = Number of respondents; RAI = Relative Agreement Index; PM = Project Managers; PTM = Project Team Members and SUP = Supervisors.

Table 7. Top five influences of team member commitment on project performance based on perception of each group of respondents.

Rank	Project manager	Project team member	Supervisor
1st	Project team members owe a great deal to this organisation. (NOR)	One of the few negative consequences of leaving this organisation will be the scarcity of available alternatives. (CON)	One of the few negative consequences of leaving this organisation will be the scarcity of available alternatives. (CON)
2nd	This organisation deserves the loyalty of Project team members. (AFF)	Project team members owe a great deal to this organisation. (NOR)	Project team members owe a great deal to this organisation. (NOR)
3rd	This organisation has a great deal of personal meaning for project team members. (NOR)	This organisation deserves the loyalty of project team members. (AFF)	This organisation deserves the loyalty of project team members. (AFF)
4th	The project team consider the team’s problems as their own. (AFF)	The project team consider the team’s problems as their own. (AFF)	The project team consider the team’s problems as their own. (AFF)
5th	Members of the project team do not feel it is right to quit the project before completion. (NOR)	This organisation has a great deal of personal meaning for project team members. (NOR)	Members of the project team do not feel it is right to quit the project before completion. (NOR)

Affective (AFF); Continuance (CON); Normative (NOR).

Just like each group of respondents, the entire construction team rated seventeen factors (81%) as having RAIs > 0.5, hence greatly influencing the team member commitment level. Those rated as having RAIs < 0.5 are: project team members do not feel any obligation to remain with the current employer, RAI = 0.4607; project team members will feel guilty if they leave this organisation now, RAI = 0.4574; it will be very hard for project team members to leave this organisation right now, even if they want to, RAI = 0.4459; Too much of the lives of project team members will be disrupted if they decide to leave this organisation now; RAI = 0.3797; which were ranked eighteenth, nineteenth, twentieth, and twenty-first, respectively. Though these

four variables are least ranked, they cannot be said to exert little or no bearing on influencing commitment level as their values are very close to average.

Summarily, most of the variables listed and considered have a direct bearing on influencing the commitment level of construction team members based on the allotted rating using RAI.

5. Conclusion

The submission of the respondent, as shown in **Table 7**, shows the variables of team commitment that have a dominant effect on the performance of construction output. The breakdown of these variables is primarily normative (47%), affective (40%), and continuance (13%). The emotional attachment of the team member and their sense of obligation to the project team and construction organisation in general are the driving forces behind pushing for successful delivery of construction projects within the industry in Nigeria.

The expectation of some sort of commitment from project team members is premised upon the provision of good working conditions and an environment that gives adequate attention to their yearnings and aspirations. Royal (2012) concluded that the expectation of high-level commitment is a function of working conditions that provide support for the employee. Having continuous commitment from project team members will depend on the direct relationship that transformational leadership provides or on rewards in the form of various incentives (the contingency component of transactional leadership) from the team leader, the PM. Either way, organisation support through the PM for optimal functionality and a supportive environment is a necessity. Beyond the emotional attachment, loyalty, and obligation of the project team member to the entity, the outcome of the study is in tandem with the submission of Balci (2003). A highly committed team member tends to show more interest and pursue the targets of the organisation and the project team in particular with strength and vigour. This he/she does by intentionally affecting organisational output through higher productivity, attending to tasks more responsibly, and displaying a higher sense of satisfaction and loyalty.

Author contributions: Conceptualization, FOO; methodology, FOO; software, AAFf; validation, AAFf; data curation, AAFf; writing—original draft preparation, FOO; writing—review and editing, UJO; supervision, AAFf. All authors have read and agreed to the published version of the manuscript.

Conflict of interest: The authors declare no conflict of interest.

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Article

Structural relationships between workation attachment, workationer power, workation relationship quality, and workation intention

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CITATION

Wu HC, Xu H. (2024). Structural relationships between workation attachment, workationer power, workation relationship quality, and workation intention. *Human Resources Management and Services*. 6(4): 3469.
<https://doi.org/10.18282/hrms3469>

ARTICLE INFO

Received: 20 September 2024

Accepted: 2 November 2024

Available online: 11 November 2024

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Abstract: This research aims to examine the structural relationships between the dimensions of workation attachment, workationer power, the dimensions of workation relationship quality, and workation intention. It demonstrates that the proposed model aligns well with the collected data based on a convenience sample comprising 494 workationers in Bangkok using structural equation modeling. The analysis outcomes contribute to the tourism marketing theory by providing additional insights into the dimensions of workation attachment, workationer power, the dimensions of workation relationship quality, and workation intention. The findings from this study can aid workation managers in formulating and executing market-oriented service strategies to enhance the dimensions of workation attachment, workationer power, and workation relationship quality and foster workation intention.

Keywords: workation attachment; workationer power; workation relationship quality; workation intention

1. Introduction

Since the outbreak of COVID-19, “workation” has been becoming increasingly a new type of remote work, which plays an important role in increasing digitalization and flexibilization of work (Voll et al., 2023). Vogl and Micek (2023) define workation as an amalgamation of work and vacation. This concept is characterized as a hybrid form of vacation (Werther, 2021) emerging at the crossroads of work and leisure (Voll et al., 2023), typically occurring in tourist destinations with well-developed infrastructure (Werther, 2021). Workation is also considered to work not only at a typical vacation destination but also from a hotel, apartment, Airbnb, or cottage (Voll et al., 2023). Likewise, workation is seen as a work style that involves staying in a resort area and working at a local coworking space on a weekly or monthly basis (Matsushita, 2021). It is an increasing trend that is increasingly focused after a lockdown is lifted (Gowtham and Vinitha, 2022). Behavioral intention is dependent on subjective norms, perceived behavioral control, and attitude (Ajzen, 1985). It is related to a workationer’s willingness to go on workation. It is also related to workationers’ actual behavior, displaying a high correlation between workationers’ intentions and their actual behavior. Accordingly, investigation drivers of workationers’ workation intention may play an important role in predicting their actual behaviors in terms of the notion that workation intention is a variable that can be used to predict their future behaviors (Quelette and Wood, 1998; Voll et al., 2023).

Place attachment is considered a multi-dimensional construct consisting of place expectation, place social bonding, place memory, place identity, place dependence,

and place affect (Chen et al., 2014b; Huang et al., 2022). In addition, it can bring benefits for workationers and contribute to their activities while working on holiday. Therefore, the processes of place attachment are impacted and experienced not only by workationers, but also by their wider communities (Bassyouny and Wilkesmann, 2023; Florek, 2011). Recently, several researchers (Matsushita, 2021; Shin et al., 2023; Zhang et al., 2022) have considered the concept of workation attachment as a way to extend the scope of place attachment. Workation attachment is an emotional bond or an affective relationship between workationers and their workation (Bassyouny and Wilkesmann, 2023; Han et al., 2019; Shin et al., 2023). However, there has been little research on identifying or developing the dimensions of workation attachment, including workation expectation, workation social bonding, workation memory, workation identity, workation dependence, and workation affect.

Perceptions of consumer power influence the workationer's value-creation behaviors in which he or she engages in the workation job (Lee and Kim, 2019). Although consumer power boosts in the hands of the individual workationer based on the types of workation jobs provided and the places where they go to workation, few empirical studies focus on workationers from competing perspectives of power (Denegri-Knott et al., 2006; Perkins and Grace, 2009; Voll et al., 2023). In this study, workationer power focuses on the psychological experience of power—a sense of power workationers have possessed while going on workation (Bassyouny and Wilkesmann, 2023; Fan and Jia, 2023). The dimensions of place attachment represent an important emotional, cognitive, and functional role in influencing consumer power (Fan and Jia, 2023; Reitsamer and Brunner-Sperdin, 2021). To the best of our knowledge, there is little research to justify the effects of the dimensions of workation attachment on workationer power in the context of workation.

Relationship quality consists of satisfaction, trust, and commitment (Tsao and Hsieh, 2012). Equity plays an important role in forming one of the dimensions of relationship quality (Waldron and Kelley, 2008; Williams, 2017). Relationship quality is a dynamic construct that tends to focus on the interaction between workationers and their work (Bassyouny and Wilkesmann, 2023; Roberts et al., 2003; Shin et al., 2023). Workation influences relationship satisfaction, trust, commitment, and equity (Aboruman et al., 2011; Tsao and Hsieh, 2012; Voll et al., 2023; Williams, 2017). Satisfaction, trust, equity, and commitment are the main bases for perceived workation relationship quality (Bassyouny and Wilkesmann, 2023; Moliner et al., 2007; Williams, 2017). However, little research focuses on the dimensions of relationship quality from the perspective of workation. Namely, workation relationship quality, including workation satisfaction, workation trust, workation equity, and workation commitment, has received very little attention in the context of workation.

According to Hunter and Garnefeld (2008), consumer power plays a role in increasing satisfaction. Equity is considered an antecedent variable for both satisfaction and trust (Olsen and Johnson, 2003). Tourists who have more trust in tour guide services will be inclined to feel satisfied to shop during the tour activities (Chang, 2014). Satisfaction, trust, and equity are considered drivers of commitment (Erciş et al., 2012; Šerić et al., 2018). However, there is little work investigating the relationships among workation satisfaction, workation trust, workation equity, and workation commitment in terms of the existing research.

Yoshida (2021) proposes that workation is heavily influenced by people's behavioral intentions. Matsushita (2022) shows that workation plays a critical role in influencing tourists' behavioral intentions to change their work style. Paul and Roy (2023) present that workation may always result in tourists' behavioral intentions. Although investigators have found workation which is related to tourists' behavioral intentions, few studies have examined workation intention from workationers' perspectives. Rather et al. (2019) describe that commitment has been found to influence the development of people's behavioral intentions. However, the effect of workation commitment on workation intention remains sparse based on the existing literature.

While previous research has focused on examining the relevant dimensions of place attachment (place expectation, place social bonding, place memory, place identity, place dependence, and place affect), consumer power, the dimensions of relationship quality (satisfaction, trust, equity, and commitment), and behavioral intention, very few studies concentrate on them from the workationer's perspective while working on holiday. Bassiouny and Wilkesmann (2023) believe that using the workationer term is helpful to cover up people who determine to work away from home for dual (leisure and business) purposes but do not behave or identify themselves as digital nomads. In general, workationers are considered well-paid and highly skilled professionals who perform the same job in different environments; therefore, they remain in labor markets like migrant tourism workers (Bassiouny and Wilkesmann, 2023). As a consequence, this paper attempts to fill the research gap and proposes 12 new and novel constructs, namely, the dimensions of workation attachment (workation expectation, workation social bonding, workation memory, workation identity, workation dependence, and workation affect), workationer power, the dimensions of workation relationship quality (workation satisfaction, workation trust, workation equity, and workation commitment), and workation intention, in addition to examining their relationships. A better understanding of these relationships can provide travel managers with insights into knowing how workationers become attached to their workation and their intention to go on workation in order to strengthen their workation power and relationship quality from their perspectives.

This research contributes to both academic and managerial perspectives in the fields of workation management and marketing. It offers fresh insights into the factors that workationers deem significant when evaluating workation attachment dimensions. Moreover, it explores the influence of workationer power on the dimensions of workation relationship quality, ultimately shaping workation intentions. Notably, this study introduces a novel conceptual research model that synthesizes the dimensions of workation attachment, workationer power, the dimensions of workation relationship quality, and workation intention within a cohesive path model. Unlike previous studies, this approach provides a comprehensive understanding of workationer experiences. The findings can empower tourism marketers and administrators by offering valuable information for the development and implementation of service marketing strategies, ensuring a high-quality workation experience for workationers.

2. Literature review and hypothesis development

2.1. Place attachment

Place attachment is referred to as individuals' feelings of comfort, from which they can benefit from their living places (Brown et al., 2023). It is related to community members's participation and their sustainable behavior (Pol and Castrechini, 2002). According to several researchers (Bowlby, 1980; Brown and Raymond, 2007; Jorgenson and Stedman, 2001), place attachment is defined as an emotional relationship between people and their environments, which is a basic human demand for security. Chen et al. (2014b) and Huang et al. (2022) consider place attachment as a multi-dimensional construct comprising place expectation, place social bonding, place memory, place identity, place dependence, and place affect. Place expectation is defined as how much the future experiences perceived by people are likely to take place in a place (Chen et al., 2014a). It is about people's experiences rather than the evaluation of the place (Chen and Dwyer, 2018). Place social bonding is referred to as the strength of social relations between people and their emotional connections in terms of shared experiences, interests, and concerns (Raymond et al., 2010; Scannell and Gifford, 2010; Wahyudie et al., 2021). It is a symbol representing a social group of people within a place (Ramkissoon et al., 2012). Place memory is referred to as how strongly the memories of stories perceived by people are related to a place (Milligan, 1998). It focuses on the retrieved memory reflecting people's attachment to a place based on their experiences (Dwyer et al., 2019). Place identity is referred to as a system of references about the definition of a particular place over time (Woods, 2006). It is considered one important aspect that is able to assist people in defining their social identity (Chen et al., 2014b). Place dependence is referred to as functional attachment to a place (Stokols and Shumaker, 1981). It is the perceived strength of the bond between people and places (Lu et al., 2022). Place affect is defined as the emotional bond people share with environmental settings (Ramkissoon, 2016), the fosterage of psychological restorativeness (Ramkissoon, 2020), and a good feeling factor (Ramkissoon, 2021). It is considered a positive emotion and feeling that people develop with particular places (Brocato, 2006).

2.2. Workation attachment

Workation is considered one of the great opportunities of remote work (Hagen, 2016). It is a vacation stay combined with additional work phases (Werther, 2021). Place attachment arises and transforms a place into someone's home or place as a function of experience. In this sense, these movements of mobile work are transforming places into workplaces (Matsushita, 2022). New workplaces have the potential to improve tourists' place attachment (Lange et al., 2022). In general, tourists develop place attachment by savoring their workation experiences supported by the 'broaden-and-build' processes (Yan and Halpenny, 2022). Lee and Jeong (2021) suggest that workation is a direct determinant of place attachment. The concept of place attachment also seeks to explain differences in behavior among workationers doing work-related activities and enjoying exotic or foreign tourist destinations substantially depending on the acceptance of the employer's decision to loosen control

and physical presence at the office (Bassiyouny and Wilkesmann, 2023; Nouza et al., 2018).

This study proposes the concept of workation attachment as a way to extend the scope of place attachment. Adapted from several researchers (Bassiyouny and Wilkesmann, 2023; Chen et al., 2014b; Huang et al., 2022), this study focuses on six dimensions of workation attachment: workation expectation, workation social bonding, workation memory, workation identity, workation dependence, and workation affect. Referring to several studies (Hidalgo and Hernandez, 2001; Moore and Graefe, 1994; Voll et al., 2023), the workation attachment in this paper is defined as the development of an affective relationship between workationers and workations. Workation expectation is defined as workationers' future cognitive experiences that are assumed to take place somewhere in the future based on long-term expectancies between workationers and the location, which are influenced by a few characteristics of working on holiday (Chen et al., 2014a; Zakaria and Yuserrie, 2021; Voll et al., 2023). It is about a workationer's experiences as opposed to the evaluation of the workation (Bassiyouny and Wilkesmann, 2023; Chen and Dwyer, 2018). Workation social bonding refers to the emotional reflection or affective relationship between workationers and workations (Almuzaini, 2017; Voll et al., 2023). It plays a key role in focusing on workationers' experiences originating from social interactions through workations (Scannell and Gifford, 2010; Voll et al., 2023). Workation memory is referred to as memories of workationers' interactions with workations (Chen et al., 2015; Voll et al., 2023). It is kept in and related to work as a trace and memory (Bassiyouny and Wilkesmann, 2023; Park and Sung, 2012). Workation identity refers to the workation attributes contributing to a workationer's self-concept (Voll et al., 2023; Wahyudie et al., 2021). It is related to the meanings and perceptions held in workationers' minds in relation to their workations (Bassiyouny and Wilkesmann, 2023; Ujang, 2012). Workation dependence is referred to as workationers' strong perceptions of the relationship between themselves and their workations (Stokols and Shumacker, 1981; Voll et al., 2023). It is conceptualized by a workationer's positive evaluations of workations to offer necessary amenities to satisfy his or her demands (Stokols and Shumacker, 1981; Voll et al., 2023; Williams et al., 1992). Workation affect is referred to as the emotional relationship workationers develop with environmental settings (Bassiyouny and Wilkesmann, 2023; Halpenny, 2010) by establishing their sentiments about the workation (Tuan, 1977; Voll et al., 2023). The emotional relationship plays a crucial role in workationers and their workations (Altman and Low, 1992; Voll et al., 2023) and it has been found that workation affect can stand independently in the dimensional structure of workation attachment in work-related activities combining with vacation (Bassiyouny and Wilkesmann, 2023; Ramkissoon et al., 2013; Yuksel et al., 2010). Based on the aforementioned review, the dimensions of workation attachment (workation expectation, workation social bonding, workation memory, workation identity, workation dependence, and workation affect) remain sparse in the tourism industry.

2.3. Workationer power

Consumer power is referred to as the effect of a customer's perceived ability on an organization and, in the recovery process, in a way that he or she will find advantageous (Grégoire et al., 2010). Such power may come from various sources (e.g., French Jr. and Raven, 1959), such as information access, threats generated by one's ability, and the creation of interdependencies through the provision of business (Grégoire et al., 2010). Power can be an important attribute in vacationer relationships (Mitchell et al., 1997). The power of consumers' attitudes, including value, concern, and knowledge, may play a critical role in predicting workationers' workation intentions. (Li and Wu, 2020; Voll et al., 2023). Understanding the power relationships between workationers helps to improve their workation and its characteristics, and how it is managed now and in the future (Bassiyouny and Wilkesmann, 2023; Hazra et al., 2017). Bassiyouny and Wilkesmann (2023) and Grbac and Milohanovic (2008) show that the great consumer power in the workationers' world quality is the priority that is required to fulfill. To better understand power structure and distribution, this paper extends and redefines customer power by exploring the concept of workationer power in workations. This paper attempts to apply the concept of consumer power to vacation power. Referring to several studies (Portuese, 2006; Lv et al., 2008; Voll et al., 2023), the workation power in this paper is defined as the relationship between workationers and workation and the workationer's ability to understand, control, and potentially change his or her workation. The workationer power in this study focuses on a workationer's psychological experience of power, namely, a sense of power he or she has while going on workation (Fan and Jia, 2023; Voll et al., 2023).

The dimensions of people's perceived place attachment positively influence consumer power (Horakova et al., 2022). Consumers' emotional attachment dimensions play an important role in increasing the power that bonds consumers with the organization (Qadri et al., 2020). The dimensions of place attachment are intrinsic to human conditions and determinants of consumer power (Diener and Hagen, 2022). The dimensions of place attachment can change the nature of consumer power, which plays a key role in ensuring the success of relationship building (Fletcher, 2003; Zhe et al., 2023). Therefore, it is expected that the dimensions of workation attachment contribute to workationer power as follows:

H1: Workation expectation (H1a), workation social bonding (H1b), workation memory (H1c), workation identity (H1d), workation dependence (H1e), and workation affect (H1f) positively influence workationer power.

2.4. Relationship quality

Relationship quality is defined as the excellence of the interaction between a customer and a supplier (Gummesson, 1987). Broadly speaking, relationship quality is a multi-dimensional construct encompassing dimensions such as satisfaction, trust, and commitment, as acknowledged by various scholars (Beatson et al., 2008; Chung and Shin, 2010; Tsao and Hsieh, 2012; Ulaga and Eggert, 2006). Waldron and Kelley (2008) and Williams (2017) propose that equity is an important dimension of relationship quality because it is a critical variable considered as a commitment to ensure that every person receives what he or she needs to succeed. Equity is becoming

increasingly important and attracting increasing interest to focus on its effective measurement in the tourism field (Frias et al., 2020). Therefore, based on the review above, this paper proposes that relationship quality is made up of satisfaction, trust, equity, and commitment. First, satisfaction is defined as satisfaction with products or services provided by organizations and is related to particular purchased products or services (Öztürk, 2015). In general, satisfaction is an overall assessment of the consumption experience (Johnson et al., 1995; Oliver, 1997). Second, trust refers to an expectation that is associated with the agent's decision to act (Dumouchel, 2005). It is a conception deeply combined with satisfaction; therefore, trustful people attempt to display their high levels of attainment regardless of the concept (Jebbouri et al., 2022). Third, equity is defined as the overall assessment of whether an individual is receiving equal and relative gains from the relationship (Walster et al., 1978). Swan and Mercer (1982) indicate that equity focuses on the bond between the marketer's and the customer's net gains, which strike a balance. Fourth, commitment is referred to as a lasting desire or intention to develop and keep a stable relationship (Sargeant and Woodliffe, 2007). It is considered a necessary component to form a successful long-term relationship (Walter et al., 2000). In general, people prefer to improve and maintain an emotional relationship with the product and/or service that makes people feel warm and enjoyable. Meanwhile, people with high product and/or service commitment would have a stronger affective attachment to the product and/or service (Sarkar et al., 2012).

2.5. Workation relationship quality

Workation is related to increased levels of relationship quality (Leutwiler-Lee et al., 2023; Shin et al., 2023). Relationship quality plays a crucial role in enhancing workationers' perceptions of workations (Bassiyouny and Wilkesmann, 2023; Lai, 2014). Workation with relationship quality may be impacted by the quality of the workation that workationers experience (Bassiyouny and Wilkesmann, 2023; Lai, 2014). Higher relationship quality is related to positive workationer-work relationship quality (Bassiyouny and Wilkesmann, 2023; Loureiro et al., 2021). Based on the aforementioned review, therefore, we consider relationship quality to be a major factor influencing workation. Referring to several researchers (Bassiyouny and Wilkesmann, 2023; Shin et al., 2023; Skarmeas and Robson, 2008), the workation relationship quality in this paper is defined as a workationer's perception of lower levels of conflict in the workationer-work relationship and greater levels of satisfaction with, trust in, commitment to, and equity in the workation. In this paper, workation relationship quality is conceptualized and operationalized as a rich and multi-dimensional construct consisting of workation satisfaction, workation trust, workation commitment, and workation equity (Bassiyouny and Wilkesmann, 2023; Beatson et al., 2008; Frias et al., 2020; Tsao and Hsieh, 2012). First, workation satisfaction is referred to as a workationer's perception of the performance of the workation related to his or her expectations (Dobrota et al., 2012; Shin et al., 2023). Satisfaction levels and willingness to go on workation will increase if workationers make positive evaluations of their workation experiences (Bassiyouny and Wilkesmann, 2023; Jani and Han, 2013). Second, workation trust is defined as a workationer expectation that

the workation can be trusted or relied on in fulfilling his or her promises (Shin et al., 2023; Siagian and Cahyono, 2014). It is considered to play an important role in maintaining a long-term relationship between employers and workationers (Bassyiouny and Wilkesmann, 2023; Chiu et al., 2012; Han and Hyun, 2013). Third, workation equity is referred to as the value that workationers associate with a workation (Aaker, 1991; Bassyiouny and Wilkesmann, 2023). It primarily involves a workationer's psychological reaction to the value of workation that an organization provides (Bassyiouny and Wilkesmann, 2023; Olsen and Johnson, 2003). Fourth, worktion commitment is defined as an enduring attitude or desire for workations (Bassyiouny and Wilkesmann, 2023; Moorman et al., 1992). Committed workationers are encouraged to maintain the relationship between workatoners and their work owing to a feeling of attachment and sincerity in their own attitudes (Lacey, 2007; Shin et al., 2023).

Power-driven relationships can positively influence supplier satisfaction (Benton et al., 2005). Referent power has a direct and positive effect on satisfaction with supervision (Rahim and Buntzman, 1989). Expert power coming from digital influencers is a predictor of most people's economic satisfaction (Wang et al., 2021). Reward power plays a key role in influencing job satisfaction (Richmond et al., 1986). Based on the theoretical background above, this study proposes the following hypothesis:

H2: Workationer power has a direct and positive influence on workation satisfaction.

Loureiro and González (2008) present that satisfaction has a direct positive influence on trust, displaying that a tourist's trust in rural tourism lodging increases when he or she feels satisfied with it. Kostynets et al. (2021) and Shim et al. (2008) indicate that satisfaction positively and significantly affects tourists' trust in workation. Olsen and Johnson (2003) present that equity plays a very different role in influencing satisfaction. Hutchinson and Wang (2009) show that equity has a direct influence on satisfaction. Hao and Chon (2022) propose that equity is an antecedent of trust, implying that higher perceived equity leads to higher perceived trust. Ha (2022) describes that green equity has a direct and positive effect on green brand trust. Ha (2022) presents that brand equity changes based on perceptions of levels of satisfaction and trust. Bassyiouny and Wilkesmann (2023) and Caceres and Paparoidamis (2007) argue that satisfaction and trust are key variables in influencing workationer commitment in successful relational exchanges. Sanchez-Franco (2009) and Voll et al. (2023) show that satisfaction and trust are significant preconditions for workation commitment. Chai et al. (2020) propose that equity can influence organizational commitment directly. N'Goala (2007) and Shin et al. (2023) suggest that perceived equity has a positive effect on commitment to workation. However, the relationships between the dimensions of relationship quality (satisfaction, trust, equity, and commitment) remain sparse in the context of workation. Therefore, we put forward the following hypotheses:

H3: Workation satisfaction has a direct and positive influence on workation trust.

H4: Workation equity has a direct and positive influence on workation satisfaction.

H5: Workation equity has a positive direct and indirect influence on workation trust.

H6: Workation satisfaction has a direct and positive influence on workation commitment.

H7: Workation trust has a direct and positive influence on workation commitment.

H8: Workation equity has a direct and positive influence on workation commitment.

2.6. Workation intention

Behavioral intention is referred to as a certain likelihood of performing a given behavior (Cham et al., 2016; Douglass, 1977; Hwang et al., 2023). It is considered an antecedent to a workationer's actual behavior (Leonard et al., 2004; Shin et al., 2023). It is also related to workationers' efforts in reaching goals, which predict their behavior (Anfossi, 2023; Battour et al., 2022). Likewise, it may be related to the tendency of a workationer to travel or vacation with the likelihood of exploring and enjoying different people, places, and cultures (Ra, 2022; Shin et al., 2023). Workationers' behavioral intention is a proportion that relates to actions to go on workation (Karsana and Murhadi, 2021; Voll et al., 2023). Referring to Bassyiouny and Wilkesmann (2023) and Cham et al. (2016), this study creates a new construct, workation intention, and defines it as workationers' tendency to adopt or engage in a certain behavior, namely, their intention to go on workation. Workation intention is considered the whole behavior that displays whether a workationer will go on workation in the future (Shin et al., 2023; Yang et al., 2011). Workation intention has been seen as a preliminary indicator of actual workation behavior even though it varies from time to time (Bassyiouny and Wilkesmann, 2023; Yu et al., 2014).

Workationers' commitment has a direct and positive influence on behavioral intention (Hsu et al., 2010; Shin et al., 2023). Commitment can be considered a key attitudinal factor that explains workation intention (Agyeiwaah et al., 2022; Voll et al., 2023). It can significantly increase the level of workation intention (Bassyiouny and Wilkesmann, 2023; Lai, 2015). Based on the aforementioned review, it is meaningful to examine the effect of workation commitment on workation intention. Accordingly, the following hypothesis is suggested:

H9: Workation commitment has a direct and positive influence on workation intention.

3. Methodology

3.1. Measurement

The key variables, including the dimensions of workation attachment, workationer power, the dimensions of workation relationship quality, and workation intention were measured on a well-established five-point Likert scale; 1 to 7 presented the options from "strongly disagree" to "strongly agree". The research team applied two-way translation to convert the original English scale to Thai and translate the Thai scale to English in order to ensure the understanding and readability of the items. To

confirm the comprehensibility and translation equivalence of the questionnaire, a pilot study was conducted with the participation of 40 respondents who worked on holiday. The pilot test showed that all items were easily understood by the participants. Accordingly, the researchers believed that the questionnaire was suitable to be used in its current status.

The measures for workation expectation (four items), workation social bonding (three items), workation memory (four items), workation identity (four items), and workation dependence (three items) were adopted from Chen et al. (2014b, 2015) and Huang et al. (2022). Four items used to measure workation effects were drawn from Zhan et al. (2020). Workationer power was measured based on five items from several researchers (Kucuk, 2012; Lee and Kim, 2019; Wang and Head, 2007). Workation satisfaction was measured employing four items from Ranaweera and Prabhu (2003) and Rather et al. (2019). Workation trust included three items drawn from Martínez and Del Bosque (2013) and Ranaweera and Prabhu (2003). Workation equity was measured with four items used by Omar et al. (2011). Workation commitment was measured with eight items adapted from Dagger et al. (2010). Four items were designed to assess workation intention (Rather et al., 2019).

3.2. Research site

Bangkok, the dynamic capital of Thailand, claimed the top spot on the global workation cities list for 2021 (Expats in Bangkok, 2023; Holidu, 2024). With a harmonious blend of contemporary infrastructure, affordable living expenses, and a rich cultural heritage, Bangkok presents an ideal fusion of work and leisure for digital nomads, freelancers, and remote workers. Engaging in remote work in Bangkok provides workationers with a distinctive work-life balance that sets it apart from other cities. The city's lively pace seamlessly integrates work commitments with the opportunity to relax and rejuvenate. Whether a workationer prefers a leisurely stroll along the Chao Phraya River or seeks tranquility in one of the numerous serene parks, Bangkok offers an ideal escape from the daily routine (Expats in Bangkok, 2023).

3.3. Sampling and data collection

An onsite survey was conducted in Bangkok between 3 October and 2 December, 2023. Two researchers contacted potential workationers who were working on holiday in Bangkok. Participants were informed about the study's purpose and guaranteed anonymity before responding to the questionnaire. Once they gave their consent to partake in the research, a self-administered survey questionnaire was distributed. The choice of convenience sampling was made to efficiently gather a substantial number of respondents while saving costs and time in data collection (Sinclair-Maragh, 2017). Also, this approach has been employed in similar contexts with comparable samples (De Rojas and Camarero, 2008). To mitigate common method variance (CMV), the recommendations of Podsakoff et al. (2003) were followed.

The questionnaire was initially developed in English; then, it was translated into Thai and back-translated into English to ensure the consistency and correctness of the content. An English professor and an editor, who edit the questionnaire from English into Thai and vice versa, both of whom were native Thai, reviewed the content of both

copies to ensure the correctness of the translation. The English version was used with international workationers while the Thai version was used with domestic Thai workationers. After being completed by workationers, the surveys were collected by the researchers. Overall, 530 questionnaires were administered, out of which 494 were found useful for analysis.

4. Analysis and results

4.1. Demographic profiles of respondents

Table 1 shows the demographic profiles of respondents. Most respondents were male (51%), single (57%), and between 25 and 34 years old (27%). Also, most of them held a bachelor's degree (43%) and drew monthly income between 35,000 baht and 49,999 baht (roughly USD\$994 and USD\$1420) (30%). In addition, the majority of them came to Bangkok to work on holiday (58%).

Table 1. Respondents' demographic information ($N = 494$).

Variables		#	%
Socio-demographics			
Gender	Male	254	51.42
	Female	240	48.58
Marital status	Single	280	56.68
	Married	214	43.32
Age (years)	18–24	108	21.86
	25–34	135	27.33
	35–44	114	23.08
	45–54	80	16.19
	55 or over	57	11.54
Educational level	High school or less	68	13.77
	Associate degree	112	22.67
	Bachelor's degree	210	42.51
	Graduate or higher	104	21.05
Income/per month	Below 9999 baht	54	10.93
	10,000–19,000 baht	83	16.80
	20,000–34,999 baht	108	21.86
	35,000–49,999 baht	148	29.96
	50,000 baht or above	101	20.45
First time to go on workation in Bangkok	Yes	288	58.30
	No	206	41.70

Note: 35.20 baht is equivalent to \$1 USD (in January, 2024).

4.2. Common method bias (CMB)

The problem caused by CMV was checked through Harman's single factor test. The analysis results display that the first common factor's overall variance was 47.25%, which was less than 50% of the of the criterion proposed by Podsakoff (2003). Moreover, the researchers conducted the CMV measurement model, which consistently relies on a common methodological latent factor. The measurement results display that some significant improvements were not generated in the fit indices of the CMV measurement model. Accordingly, the absence of CMB problems is confirmed in this paper.

4.3. Exploratory factor analysis (EFA)

EFA was applied to the captured responses corresponding to attributes. Before establishing the factor structure, the correlation matrix was initially checked to determine its suitability for factor analysis. The sample size adequacy for factor analysis was determined by the Kaiser-Meyer-Olkin Measure of Sampling Adequacy value, which was found to be more than 0.91 (Kaiser, 1974). Also, the test statistic for Bartlett's Test of Sphericity (BTS) (Bartlett, 1954) value was found to be big enough. The BTS was also significant at a low significance level (0.000). To extract the factors, the principal axis factoring method was used by applying the constraint of higher than one eigenvalue for each factor (Malhotra and Birks, 2007). Moreover, only variables with loadings of more than 0.50 were included in the analysis. After EFA was conducted, a total of 47 items were loaded properly on the factors. One item (i.e., "I think I can easily communicate with or influence other workationers in the workation environment") from workationer power, one item (i.e., "I think I did the right thing when I went on worktion") from workation satisfaction, one item (i.e., "the workation has high integrity") from workation trust, and two items (i.e., "the workation is prepared to make short-term sacrifices to maintain our relationship" and "I believe that I view my relationship with workation as a long-term partnership") from workation commitment were removed from this study, respectively, since they did not load on any of the factors and their factor loading values were under 0.50. At the final stage, the identified factors were named as follows, according to the related literature and professional experience of the authors: As recommended by Ford et al. (1986), the factors with eigenvalues exceeding one were retained, and these factors accounted for 64.75% of the cumulative total variance. Put differently, with less than 50% of the total variability attributed to randomness, these factors could serve as a suitable foundation for EFA. Moreover, only factor loadings greater than 0.50 were included in this study (see **Table 2**). Following the execution of EFA, the identified factors were named as follows according to the related literature and professional experience of the authors: (1) workation expectation (four items), (2) workation social bonding (three items), (3) workation memory (four items), (4) workation identity (four items), (5) workation dependence (three items), (6) workation affect (four items), (7) workationer power (four items), (8) workation satisfaction (three items), (9) workation trust (four items), (10) workation equity (four items), (11) workation commitment (six items), and (12) workation intention (four items).

Table 2. Model measurement and confirmatory analysis of factors.

Construct	Items	Factor loadings	α	CR	AVE	VIF	Skewness	Kurtosis	<i>M</i>	<i>SD</i>
Workation expectation Chen et al. (2014b, 2015)	WE1. I will be enjoying workation in the future more than now.	0.93***	0.93	0.83	0.95	4.19	−0.35	−0.40	5.13	1.21
	WE2. In the future workation continues creating unique experiences for me.	0.93***					−0.52	−0.11	5.20	1.22
	WE3. In the future workation is better than now.	0.94***					−0.44	−0.03	5.02	1.25
	WE4. I feel connected to workation in the future due to my experiences here.	0.84***					−0.65	0.46	5.21	1.25
Workation social bonding Chen et al., (2014b, 2015)	WSB1. I have friends/family who go on workation.	0.91***	0.82	0.78	0.91	1.91	−0.46	0.14	4.85	1.41
	WSB2. If I were to go on workation, I would lose contact with a number of friends.	0.89***					0.69	0.10	4.72	1.31
	WSB3. My friends/family would be disappointed if I were to go on workation.	0.84***					0.51	0.67	4.79	1.21
Workation memory Chen et al., (2014b, 2015) Huang et al. (2022)	WM1. My experiences with workation are unique.	0.89***	0.88	0.74	0.92	3.61	0.39	−0.38	4.97	1.34
	WM2. My experiences with workation are unforgettable.	0.91***					0.55	−0.11	4.89	1.31
	WM3. My experiences with workation make me feel loving workation more.	0.75***					0.27	−0.33	4.07	1.31
	WM4. I feel connected to workation due to my experiences here.	0.88***					0.70	0.28	4.59	1.16
Workation identity Chen et al., (2014b, 2015)	WI1. I identify strongly with workation.	0.71***	0.74	0.72	0.91	4.63	0.85	0.39	4.77	1.37
	WI2. I feel commitment to workation.	0.93***					−0.73	0.10	5.25	1.33
	WI3. I feel that that I can really be myself in workation.	0.87***					−0.63	0.14	5.23	1.31
	WI4. Workation is very special to me.	0.86***					−0.56	0.17	5.14	1.18
Workation dependence Chen et al., (2014b, 2015)	WD1. I prefer workation over others for the activities that I enjoy.	0.88***	0.85	0.79	0.92	5.42	−0.76	0.51	5.46	1.19
	WD2. Workation is my favorite type of job I love to do.	0.87***					−0.55	−0.31	4.92	1.45
	WD3. I really miss workation when I am away from it for too long.	0.91***					−0.79	0.77	5.29	1.21
Workation affect Zhan et al. (2020)	WA1. I am very attached to workation.	0.87***	0.91	0.80	0.94	4.68	−0.73	0.60	5.28	1.21
	WA2. The workation means a lot to me.	0.89***					−0.56	−0.14	5.14	1.27
	WA3. The workation is a very special work pattern for me.	0.90***					−0.66	0.20	5.23	1.25
	WA4. I am charmed and enjoyed going on workation.	0.92***					−0.84	0.88	5.29	1.22
Workationer power Kucuk (2012) Lee and Kim (2019) Wang and Head (2007)	WP1. Going on workation makes me feel that I have social power over other people.	0.92***	0.94	0.83	0.96	5.86	5.27	1.19	−0.65	0.36
	WP2. Going on workation makes me feel that I have more authority than other people.	0.90***					5.04	1.26	−0.50	0.21
	WP3. Going on workation makes me feel more influential over others.	0.91***					5.01	1.28	−0.44	0.16
	WP4. I feel I have the power to influence the workation environment.	0.92***					5.14	1.22	−0.41	−0.02
Workation satisfaction Ranaweera and Prabhu (2003) Rather et al. (2019)	WS1. Overall, I am happy with workation.	0.90***	0.92	0.82	0.95	4.85	5.06	1.29	−0.45	0.06
	WS2. The workation satisfies my expectations.	0.93***					4.97	1.30	−0.36	−0.16
	WS3. I really enjoy going on workation.	0.86***					4.85	1.39	−0.33	−0.18

Table 2. (Continued).

Construct	Items	Factor loadings	α	CR	AVE	VIF	Skewness	Kurtosis	M	SD
Workation trust Martínez and Del Bosque (2013) Ranaweera and Prabhu (2003)	WT1. The workation make me feel a sense of security.	0.70***	0.79	0.81	0.93	2.81	5.52	1.10	−0.81	0.84
	WT2. I trust on the quality of the workation.	0.81***					4.99	1.34	−0.51	−0.03
	WT3. The workation can be counted to do what is right.	0.75***					5.24	1.34	0.30	−0.09
	WT4. The workation can be trusted at times.	0.72***					4.87	1.20	0.43	−0.08
Workation equity Omar et al. (2011)	WEQ1. The workation always tries to treat me right.		0.83	0.64	0.88	6.69				
	WEQ2. The workaiton's outcomes and earnings are fair when compared to cost that I have made to support this workation.	0.82***					4.87	1.23	0.53	0.14
	WEQ3. The workation's outcomes and benefits are fair when compared to what other workation has offered.	0.83***					4.82	1.16	0.39	−0.10
	WEQ4. I am treated fairly by this workation.	0.75***					4.62	1.18	0.73	0.40
Workation commitment Dagger et al. (2010)	WC1. My relationship with workation is something that I am very committed to.	0.80***	0.81	0.69	0.95	6.90	5.31	1.11	−0.73	0.90
	WC2. My relationship with workation is very important to me.	0.88***					5.23	1.17	−0.67	0.56
	WC3. My relationship with workation is something I really care about.	0.82***					5.19	1.12	−0.63	0.68
	WC4. My relationship with workation deserves my maximum effort to maintain.	0.86***					5.19	1.16	−0.56	0.17
	WC5. I believe that I am committed to the relationship with workation.	0.79***					5.08	1.13	−0.40	−0.08
	WC6. I have a strong sense of loyalty to workation.	0.80***					4.84	1.07	0.40	−0.25
Workation intention Rather et al. (2019)	WIN1. I intend to keep going on workation.	0.86***	0.94	0.85	0.96	4.67	5.20	1.10	−0.64	0.56
	WIN2. I would recommend this workation to someone who seeks my advice.	0.91***					5.07	1.06	−0.32	0.16
	WIN3. I would encourage friends and relatives to go on workatin.	0.94***					4.99	1.04	−0.47	1.14
	WIN4. I would say positive things about this workation to other people.	0.91***					5.23	1.04	−0.43	−0.09
		0.93***					5.23	1.03	−0.76	1.31

Note: *** $p < 0.001$, α = Cronbach's alpha, CR = composite reliability, AVE = average variance extracted, VIF = variance inflation factor, M = mean, and SD = standard deviation.

4.4. Convergent and discriminant validity of the measures

As proposed by Hair et al. (2010), the presence of multi-collinearity becomes problematic when the variance inflation factor (VIF) exceeds 10. In this study, the VIF values for all extracted variables fell within the range of 1.91 to 6.90, well below the acceptable threshold. Thus, none of the VIF values surpassed the critical limit of 10, indicating an absence of multi-collinearity issues. Also, the skewness and kurtosis values adhered to the range between -2 and $+2$, signifying a normal univariate distribution as recommended by George and Mallery (2016). Nunnally (1978) asserts that a variable demonstrates internal consistency if its Cronbach's alpha (α) value is equal to or exceeds 0.70. The α values for all variables in this study are detailed in **Table 2**. Furthermore, in line with previous research, which suggests that the factor loadings of questionnaire items should be 0.50 or higher, the measurements for these items in this paper can be deemed appropriate (Hair et al., 2010). The composite reliability values in this work surpassed the specified cutoff of 0.70 as recommended by Hair et al. (2010). As presented in **Table 2**, the average variance extracted (AVE) values exceeded 0.50, as proposed by Fornell and Larcker (1981). As a result, the results indicate that the measurement model satisfies the criteria for convergent validity and reliability. **Table 3** illustrates that the AVE value surpassed the correlation coefficient of other constructs, confirming the achievement of discriminant validity and validating the model's reliability.

Table 3. Descriptive statistics and correlation matrix for the items.

Constructs	1	2	3	4	5	6	7	8	9	10	11	12
1. Workation expectation	1.00											
2. Workation social bonding	0.56	1.00										
3. Workation memory	0.78	0.58	1.00									
4. Workation identity	0.58	0.49	0.67	1.00								
5. Workation dependence	0.59	0.45	0.68	0.75	1.00							
6. Workation affect	0.59	0.46	0.70	0.79	0.83	1.00						
7. Workationer power	0.70	0.50	0.78	0.56	0.58	0.62	1.00					
8. Workation satisfaction	0.67	0.42	0.74	0.54	0.56	0.60	0.87	1.00				
9. Workation trust	0.66	0.34	0.48	0.40	0.40	0.40	0.39	0.40	1.00			
10. Workation equity	0.80	0.60	0.87	0.63	0.51	0.55	0.74	0.67	0.49	1.00		
11. Workation commitment	0.73	0.50	0.79	0.84	0.89	0.94	0.76	0.74	0.49	0.68	1.00	
12. Workation intention	0.79	0.54	0.87	0.80	0.83	0.88	0.79	0.81	0.54	0.77	0.97	1.00

Note: Squared correlations of paired constructs are on the off-diagonal.

4.5. The measurement model test

To evaluate the performance of the measurement model, a confirmatory factor

analysis (CFA) was conducted on the 12 measured constructs using AMOS, employing maximum likelihood estimation. The collected data underwent scrutiny through a two-step structural equation modeling (SEM) approach (Anderson and Gerbing, 1988). As displayed in **Table 2**, the comprehensive goodness-of-fit indices for the CFA were deemed satisfactory, meeting established criteria (CFI, GFI, IFI, NFI, and AGFI > 0.90; RMSEA < 0.08; Bentler and Bonnett, 1980). The overall CFA measurement model demonstrated an excellent fit. ($\chi^2 = 1071.38$, $df = 459.82$, $\chi^2/df = 2.33$, $p < 0.0001$, CFI = 0.98, GFI = 0.94, IFI = 0.98, NFI = 0.98, AGFI = 0.92, RMSEA = 0.06, and SRMR = 0.07).

4.6. Findings and the structural model test

The hypothesis-testing results using the SEM involve the 12 constructs of this paper outlined in **Figure 1**. The analysis of the structural model indicates a favorable fit, with overall model fitness indices as follows: $\chi^2 = 1061.98$, $df = 442.49$, $\chi^2/df = 2.40$, CFI = 0.98, GFI = 0.92, IFI = 0.97, NFI = 0.98, AGFI = 0.91, RMSEA = 0.05, and SRMR = 0.06.

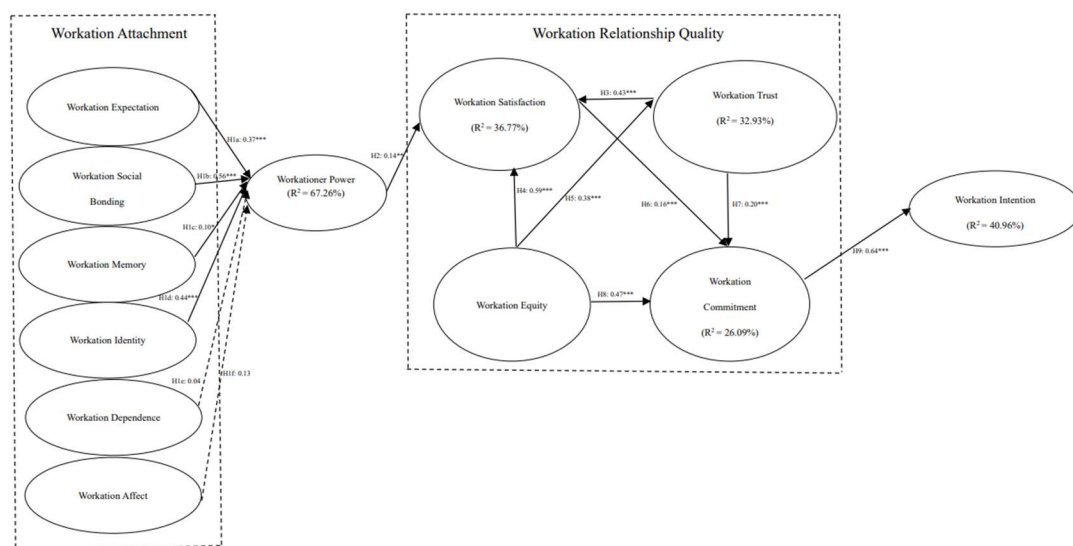


Figure 1. A path model.

Significant —————→
 Non-significant - - - - -→
 Standardized path coefficient
 * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Statistically significant findings, accompanied by large effect sizes, were observed for the positive impacts of workation expectation ($\beta = 0.37$, $t = 7.52$, $p < 0.001$), workation social bonding ($\beta = 0.56$, $t = 18.43$, $p < 0.001$), workation memory ($\beta = 0.10$, $t = 2.31$, $p < 0.05$), and workation identity ($\beta = 0.44$, $t = 15.31$, $p < 0.001$) on workationer power, providing support for H1a, H1b, H1c, and H1d. However, workation dependence ($\beta = 0.04$, $t = 1.15$, $p = \text{n.s.}$) and workation affect ($\beta = 0.09$, $t = 1.74$, $p = \text{n.s.}$) did not exhibit any influences on workationer power, leading to the rejection of H1e and H1f.

Workationer power ($\beta = 0.14$, $t = 3.26$, $p < 0.01$) and workation equity ($\beta = 0.59$, $t = 17.82$, $p < 0.001$) demonstrated statistically significant positive effects on

workation satisfaction, thereby supporting H2 and H4. Similarly, workation satisfaction ($\beta = 0.43, t = 5.37, p < 0.001$) and workation equity ($\beta = 0.38, t = 7.89, p < 0.001$) were found to exert statistically significant impacts on workation trust, providing support for H3 and H5. Furthermore, workation satisfaction ($\beta = 0.16, t = 3.76, p < 0.001$), workation trust ($\beta = 0.20, t = 4.59, p < 0.001$), and workation equity ($\beta = 0.47, t = 16.11, p < 0.001$) were identified as having positive influences on workation commitment, thereby supporting H6, H7, and H8.

The results from the path model indicated that workation commitment positively influenced workation intention ($\beta = 0.64, t = 120.90, p < 0.001$), providing strong support for H9.

5. Discussion and conclusions

The existing literature lacks a definitive understanding of how workation intention can be established and sustained within a comprehensive framework in the context of workation. Consequently, this paper proposes an approach that delineates the dimensions of workation relationship quality to initiate the construction of workation intention within the domain of workation management. The study formulates a research framework for workation intention and explores its associations with the dimensions of workation attachment, workationer power, and various aspects of workation relationship quality. Empirical validation of the model was undertaken using data obtained from workationers who embarked on workations in Brisbane. The development of a theoretical model encompassing the aforementioned factors was informed by a thorough review of relevant literature.

In conclusion, this study used attachment and relationship quality theories linking workation attachment, workationer power, and workation relationship quality as antecedents of workation intention. The results provide insights into how the dimensions of workation attachment affect workation intention. Therefore, the study extends the workation marketing literature by displaying that workationer power influences the dimensions of workation relationship quality. The results of H1a, H1b, H1c and H1d display that workation expectation, workation social bonding, workation memory, and workation identity influence workationer power. The findings concur with Hashemnezhad et al. (2013), who propose that the dimensions of place attachment (place expectation, place social bonding, place memory, and place identity) developing with people's positive interaction have direct influences on place power. However, workation dependence (H1e) and workaton affect (H1f) have no influence on workationer power. The outcome contradicts Alrobaee and Al-Kinani's (2019) argument that place dependence affects perceptions of attachment power between individuals and the specific place linked to its unique qualities and the qualities of other alternative places in comparison to the intended location. Also, the result is inconsistent with Singh et al. (2022), who propose that play affection plays an essential role in driving the required consumer power. There are two reasons to explain these insignificant hypotheses. One reason is that workation dependence and workation affect are essential but not sufficient conditions for forming workationer power. The other reason is that higher perceptions of workation dependence and workation affect do not contribute to higher perceptions of workationer power. This variation in results

may be explained by several researchers (Bassiyouny and Wilkesmann, 2023; Kastenholz et al., 2020; Sánchez-Sánchez et al., 2021), who propose that workation dependence and workation affect have not been selected as innovative factors determining positive tourist power in the context of workation.

Workationer power has a positive effect on workation satisfaction, as predicted by H2, which is supported by the contentions of Brick et al. (2022) and Fan and Jia (2023) that increased perceptions of power result in higher satisfaction within the relationship where decisions are made. Workation trust (H3) and workation equity (H4) can predict workation satisfaction. The result supports Chang (2014) and Shin et al. (2023), who contend that tourists' perceived trust has a significant and positive effect on tourist satisfaction in the context of workation. Also, the finding agrees with Bassiyouny and Wilkesmann (2023) and Hutchinson et al. (2009), who contend that the degree of satisfaction among workationers after a purchase transaction is influenced by their perceptions of equity. Workation equity (H5) has a positive influence on workation trust, supporting the propositions of Bassiyouny and Wilkesmann (2023) and Hao and Chon (2022) that higher workationer equity indicates that the destination possesses distinctive qualities that foster consistency, competence, honesty, and responsibility, thereby resulting in increased trust. Workation satisfaction (H6), workation trust (H7), and workation equity (H8) positively influence workation commitment. The empirical result aligns with Voll et al. (2023) and Zhong et al. (2017), who contend that satisfaction positively contributes to tourists' affective commitment to workation. Also, the finding concurs with the proposition of Pesämaa and Hair Jr. (2008) and Shin et al. (2023) that commitment can be reinforced through workationer trust. Moreover, the structural result is consistent with several studies (Bassiyouny and Wilkesmann, 2023; Rust et al., 2001; Voll et al., 2023), who propose that workationers who have equity in certain workation destinations tend to be fiercely committed to workation. Workation commitment (H9) has a direct influence on workation intention, supporting Bassiyouny and Wilkesmann (2023) and Haery et al. (2014), who contend that commitment is a predictor of intention to go on workation. Building on existing conceptualizations, the main objective of this study was to test a conceptual framework linking perceptions of workation attachment, workationer power, workation relationship quality, and workation intention. The theoretical model was tested in the context of workation. The findings offer important theoretical and practical implications.

6. Implications

6.1. Theoretical implications

This study offers theoretical contributions to existing research on workation marketing. First, this study highlights the simultaneous roles of workation expectation, workation social bonding, workation memory, and workation identity in workationer power. While prior studies have investigated how place expectation, place social bonding, place memory, and place identity are related to consumer power (Chen et al., 2014b; Huang et al., 2022; Li and Wu, 2020), this study attempts to investigate those variables from the perspectives of workation and its workationers. Namely, this paper finds that workation expectation, workation social bonding, workation memory, and

workation identity play important roles in increasing workationer power while going on workation. Although workation identity and workation dependence are not antecedents of workationer power, workation identity and workation dependence stemming from the affective aspects of workationers' understanding of the workation, need to be cultivated. Second, this paper focuses on relationship quality consisting of satisfaction, trust, equity, and commitment based on several studies (Chung and Shin, 2010; Tsao and Hsieh, 2012; Waldron and Kelley, 2008; Williams, 2017). Despite numerous studies on the dimensions of relationship quality in the tourism industry, studies of the dimensions of relationship quality from the perspective of workation still remain sparse. Therefore, this study creates workation relationship quality consisting of workation satisfaction, workation trust, workation equity, and workation commitment. The finding displays that workationer power, workation trust, and workation equity are determinants of workation satisfaction. Without one of the determinants of workation satisfaction, workationers' perceptions of satisfaction while going on workation cannot increase. Also, the study results show that workation equity plays a critical role in triggering perceptions of trust in workation. Moreover, with evidence from workationers working on holiday in Bangkok, this study empirically testifies that workation satisfaction, workation trust, and workation equity can be a function of workation commitment in this marketplace. Namely, workation satisfaction, workation trust, and workation equity can be considered as the workationers' interpretation of the workation experience, which means only when workationers attend and experience the workation can they evaluate whether or not a variety of facilities, conditions, or the environment increase their commitment to workation. Finally, although behavioral intention has been widely studied in the tourism and hospitality industries, it has not been examined in the workation context. Therefore, this paper creates workation intention and finds that it is influenced by workation commitment. This means that only workationers who are strongly committed to their workation are willing to have the intention to work on holiday.

6.2. Practical implications

The workation context explored in this paper also presents interesting practical implications. This study thoroughly considers the psychological scenarios of workationers during their travel and constructs a comprehensive research model based on the collaborative effects of Workation expectation, Workation social bonding, Workation memory, Workation identity, Workation dependence, and Workation affect. This study comprehensively explores the formation mechanism of Workation intention, providing valuable information for both work managers and workation destinations. For employers, this research can assist in better understanding the needs and expectations of workationers, thereby enabling the formulation of more market-oriented service strategies. By understanding their work environment, needs, and challenges, managers can provide support and services that are more aligned with the actual circumstances. As employers become familiar with the power structure and needs of traveling workers, measures can be taken to enhance their sense of empowerment. In-depth research into the team dynamics of travel work allows managers to identify and address potential work relationship issues. This

comprehensive management approach not only contributes to enhancing employee satisfaction and loyalty but also aids in the long-term success and competitiveness of the organization. For workation destinations, workation itself is a unified act of work and travel. A positive work experience enhances the mood and emotional state of workationers, with work satisfaction closely related to destination satisfaction. Furthermore, a positive work experience encourages individuals to engage in workation willingly (Rizky et al., 2022; Amah, 2023). Additionally, the positive experience of a friendly and comfortable work environment may extend to form a positive overall impression of the destination, creating a positive word-of-mouth effect. These factors collectively make a positive workation experience a key element in shaping individuals' perceptions of the destination, playing a crucial role in enhancing its attractiveness, reputation, and competitiveness.

The research results indicate that Workation expectation, Workation social bonding, Workation memory, and Workation identity have a significant positive impact on Workationer power. Workation expectations, in particular, may shape workationers' expectations for work conditions (Sandi et al., 2021; Shin et al., 2023; Voll et al., 2023). When their expectations for a good work environment, facilities, and support are met, it enhances their perception of Workationer power. This suggests that employers and workation destinations can shape expectations before workation starts. From the perspective of Workation social bonding, the research finds that it has a profound impact on Workationer power, explaining the crucial role of social connections in workation behavior (Lee et al., 2021; Woo, 2020; Park et al., 2023). Employers should encourage workationers to maintain social connections with family or friends, as this encouragement significantly influences the shaping of Workationer power. Additionally, Workation memory also has a significant positive impact on Workationer power. Employers should leverage the unique features of Workation destinations, integrate work with local culture and customs, and shape distinctive Workation memories to enhance the perception of Workationer power. Furthermore, Workation identity also has a significant positive impact on Workationer power, and employers should create a positive atmosphere in work arrangements and management to boost Workation identity (Murrell & G. O., 2022). Interestingly, the research found no significant correlation between Workation dependence and Workationer power, revealing the uniqueness of the workation state and workationers' purposes. From the perspective of workation status, workation can include domestic or international business trips, short-term business meetings, long-term project work, international collaborations, or market expansion, often requiring frequent movement between different regions with clear work goals. In strong purpose scenarios, this may lead to a conflict relationship between Workation dependence and Workationer power.

Secondly, statistical results show that Workationer power and Workation equity have a significant positive impact on Workation satisfaction. This highlights the importance for employers to safeguard Workationer power and equity, as these protections are crucial for overall workation satisfaction (Afshari, 2023; Shin et al., 2023; Grobelny, 2023). Lastly, the research results indicate that Workation satisfaction, Workation trust, and Workation equity have a significant positive impact on Workation commitment. Managers should strengthen satisfaction, trust, and equity in work arrangements to achieve higher Workation commitment, ultimately deepening

Workation intention. Understanding the needs and motivations of travel workers is crucial for establishing flexible work arrangements, enhancing team collaboration, and providing challenging development opportunities, thereby fostering employees' Workation intention.

7. Limitations and future research avenues

Although this study has both theoretical and practical implications, it is important to acknowledge its limitations, which present various opportunities for future research. Firstly, the data for this paper were gathered from workationers going on workation in Brisbane, Australia, limiting the generalizability of the study findings. Therefore, future studies could validate the results in different regions or countries. Secondly, as this paper employed a cross-sectional survey-based approach, future research could explore alternative research designs, such as experimental or longitudinal studies, to enhance the understanding of workation dynamics. Thirdly, this paper does not delve into whether respondents' demographic information, including factors like sex, marital status, age, race, education, occupation, and income, has varying influences on the dimensions of workation attachment, workationer power, workation relationship quality, and workation intention. Subsequent studies could examine whether these demographic characteristics significantly and positively impact the dimensions of workation attachment, workationer power, the dimensions of workation relationship quality, and workation intention in the context of workation. Finally, this study only focused on the effect of workation commitment on workation intention. Future studies should investigate more dynamic interaction between pull or push travel motivation and workation intention. For example, Bassyiouny and Wilkesmann (2023) and Khuong and Ha (2014) indicate that both pull and push motivation factors have positive direct effects on workation intention. Displaying such relationship dynamics through longitudinal studies may be insightful.

Author contributions: Conceptualization, HCW and HX; methodology, HCW; software, HX; validation, HX; formal analysis, HX; investigation, HX; resources, HCW; data curation, HCW; writing—original draft preparation, HCW; writing—review and editing, HCW; visualization, HCW; supervision, HCW and HX; project administration, HCW. All authors have read and agreed to the published version of the manuscript.

Conflict of interest: The authors declare no conflict of interest.

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Article

Organizational commitment and ethical environment: Reducing nomophobia in the workplace

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CITATION

Bai A, Hessari H, Vahedian M, Bai M. (2024). Organizational commitment and ethical environment: Reducing Nomophobia in the workplace. *Human Resources Management and Services*. 6(4): 3541.
<https://doi.org/10.18282/hrms3541>

ARTICLE INFO

Received: 31 July 2024

Accepted: 27 October 2024

Available online: 11 November 2024

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Abstract: Nomophobia, the anxiety experienced when individuals are separated from their mobile phones, is becoming increasingly prevalent in modern workplaces. This study investigates the role of organizational commitment in mitigating nomophobia, with a focus on the mediating influence of the ethical environment. Data were collected from 600 participants and analyzed using Structural Equation Modeling (SEM). The findings show that a strong sense of organizational commitment significantly reduces nomophobia among employees. Additionally, an ethical environment within organizations further mitigates this anxiety by fostering a workplace culture that encourages psychological well-being. This research provides practical insights for organizations looking to reduce the psychological strain associated with digital dependency, emphasizing the importance of both commitment and a strong ethical climate.

Keywords: nomophobia; organizational commitment; ethical environment; workplace anxiety; employee well-being

1. Introduction

In the current era of digital ubiquity, nomophobia—the anxiety associated with being without a mobile phone—emerges as a critical factor influencing organizational behavior, impacting job satisfaction and employee performance significantly (Hessari et al., 2024b). This phenomenon underscores the intricate link between technological dependency and workplace dynamics, especially as organizations increasingly rely on technology (Kaviani et al., 2020). The psychological ramifications of this dependency, such as anxiety and distraction, manifest prominently, affecting both employee well-being and the broader organizational culture. Considering that the global footprint of smartphones has increased dramatically predictions show that their use will increase from 7.1 billion to 7.7 billion by 2028 (Press, 2024). Understanding this phenomenon is necessary in organizational culture Because the ubiquity and technological evolution of this device have made them enter the dynamics of environments, human behavior, and social cohesion (Ling, 2008).

A pivotal element in mitigating nomophobia's effects is organizational commitment, which encompasses an employee's psychological bond with their workplace. This research draws on the three-component model of commitment— affective, continuance, and normative, as proposed by Allen and Meyer (1991), to explore how these dimensions can attenuate the adverse effects of nomophobia. A robust organizational commitment might buffer employees against the stressors of

disconnection (Sonnentag, 2018) reducing anxiety levels when apart from their digital devices. Further integral to this discourse is the role of the ethical environment within organizations. A constructive ethical climate is instrumental in diminishing job-related anxieties and bolstering job satisfaction (Schwepker, 2023). The work of Bai et al. (2024a, 2024b, 2024c) highlights the critical influence of ethical environments on employee well-being and satisfaction, thereby fostering a supportive workplace that mitigates technological stress.

This research stands at the confluence of several pivotal organizational challenges: the need to leverage technology for enhanced business outcomes while safeguarding employee well-being in an era of continuous connectivity (Hessari et al., 2024d). As reliance on digital tools escalates, so do the implications for productivity, cybersecurity, and work-life balance (Gupta et al., 2021). The topic of digital leadership has evolved as a critical component of organizational success in the changing digital landscape (Balcioglu and Artar, 2024). This study aims to delve into organizational commitment's impact on nomophobia and assess how the ethical environment serves as a mediating factor in this relationship.

By integrating insights from organizational behavior, information systems, and ethics, this study offers a comprehensive perspective on how contemporary technology influences employee commitment and organizational dynamics. It builds on recent findings, such as those by Hessari et al. (2022) And Murugan and Srivastava (2024), which emphasize the crucial role of leadership and co-worker support in reducing the effects of nomophobia. Additionally, Hessari and Nategh (2022) explore the dual consequences of smartphone addiction on job performance, focusing on the mediatory roles of life invasion and techno-exhaustion. These insights reveal technology's nuanced and extensive impact on the workforce, underscoring the imperative for organizations to navigate both the benefits and challenges posed by an increasingly digital workplace environment.

1.1. Theoretical development

1.1.1. Nomophobia

Modern organizations extensively utilize digital technologies such as internet connectivity, computers, and smartphones to facilitate essential functions like online scheduling, operations management, and communications (Esamah et al., 2023; Hessari et al., 2024c; Murugan and Srivastava, 2024). While these tools are vital for business operations, they also introduce significant challenges such as bandwidth constraints, internet misuse, and adverse behaviors like unauthorized downloading, posing potential financial risks (Brown and Ryan, 2023; Brunner et al., 2021). The reliance on digital tools has engendered both personal and professional challenges. Employees increasingly face higher levels of distraction, reduced productivity, and concerns over privacy and technology addiction. The lack of access to mobile devices or the internet triggers symptoms like anxiety and frustration, which are recognized manifestations of nomophobia (Bhattacharya, 2019; Duke and Montag, 2017; Lin et al., 2015; Lupo et al., 2020). This condition impairs concentration and undermines effective performance (Alavi et al., 2020; Bian and Leung, 2015).

As the workplace evolves with technological advancements, it presents a dual-

edged sword of opportunities and challenges for both employees and employers (Hessari et al., 2024a; Hessari et al., 2024d). Businesses must equip their workforce with the necessary skills and tools to navigate this landscape, while employees must adapt to maintain competitiveness in the evolving job market (Arlitt et al., 2023; Hakkak et al., 2016; Rotatori et al., 2021). Consequently, research is increasingly directed towards understanding these shifts, particularly with the proliferation of digital devices like smartphones (Colbert et al., 2016).

Nomophobia not only poses personal challenges but also catalyzes disruptions in the workplace. It is critical to explore its impact on employment and develop strategies to mitigate its effects. Nomophobia can be dissected into four dimensions: the inability to communicate, loss of connectedness, lack of access to information, and forfeiture of convenience, each underscoring the anxiety associated with digital disconnection (Yildirim and Correia, 2015). The escalating integration of digital devices amplifies concerns about nomophobia, which can diminish individual productivity and induce broader organizational issues like internet misuse and financial challenges (Tuco et al., 2023). As organizations navigate this digital transformation, there is a pressing need to balance the benefits of technology with its potential downsides. The current body of literature underscores the importance of conducting comprehensive research to delve into the causes, consequences, and possible interventions for nomophobia, aiming to cultivate a healthier work environment tailored for the digital age.

1.1.2. Ethical environment

The ethical environment within an organization defines the atmosphere surrounding ethical work behavior. It shapes perceptions of what is deemed “right” or ethical professionally, significantly influencing employees’ decision-making and actions (Ravesangar and Narayanan, 2024; Victor and Cullen, 1988). The perceived ethical climate guides identify and address ethical issues, helping individuals evaluate and respond appropriately (Barnett and Vaicys, 2000; Slavin, 2024). This climate reflects and shapes the organization’s procedures, policies, and performance, intertwining with elements such as the cultural and social environment, organizational norms, ethical codes, management practices, and communication methods (Naiyananont and Smuthranond, 2017). As an integral component of the broader organizational climate, it reflects the organization’s ethos and plays a crucial role in fostering ethical behavior and curtailing unethical practices (Cai et al., 2024; Hakkak et al., 2023).

Research indicates that ethical decision-making within an organization is influenced by both individual traits and organizational factors, such as reward systems, norms, and operational procedures (Barnett and Vaicys, 2000). The ethical climate is foundational in examining and addressing unethical behaviors within organizations. Leadership behavior and established ethical practices shape organizational ethics (Ivcevic et al., 2020; Nanjundeswaraswamy et al., 2024). While personal financial needs may exert a lesser impact on ethical behavior than leadership and peer influences, they still play a role in ethical decision-making (Jahanshahi et al., 2020; Shayari, 2005). The influence of peers and superiors profoundly shapes the organizational ethical climate and, by extension, managerial and employee conduct (Brown and Treviño, 2006; Jones and George, 1998). The extent to which the

organizational climate impacts ethical behavior can vary across different contexts, requiring a nuanced understanding (Trevino et al., 2014; Vermeer et al., 2019).

Navigating the complexities of organizational ethics demands that managers consider a variety of factors, including leadership behavior, peer dynamics, industry standards, formal policies, and personal values (Campbell et al., 2021; Drescher et al., 2023; Greve and Palmer, 2022). A comprehensive and nuanced approach to ethical decision-making is essential, recognizing the interplay between these diverse elements to cultivate a robust ethical environment (Trevino et al., 2018). The ethical climate is pivotal in guiding individual and collective behavior toward ethical conduct, fostering a shared understanding of ethical norms, and assisting employees in navigating complex ethical dilemmas (Deng et al., 2023). Moreover, cultivating a positive ethical climate is paramount in promoting ethical behavior and enhancing overall organizational performance across various sectors, including business and healthcare (Essex et al., 2023; Swalhi et al., 2023). Based on the reviewed literature, we propose the following hypotheses:

H1: An ethical environment negatively impacts nomophobia.

H2: An ethical environment mediates the relationship between organizational commitment and nomophobia.

1.1.3. Organizational commitment

Organizational commitment is defined as the psychological state that characterizes an employee's relationship with their organization, significantly influencing their decision to continue employment (Meyer and Allen, 1990). From Mayer and Allen's perspective, affective commitment implies emotional attachment, identification, and participation in the organization, continuance commitment represents the perceived costs associated with leaving the organization, and normative commitment represents the perceived commitment to remain in the organization (Meyer et al., 2002).

The three-dimensional model of organizational commitment, proposed by Allen and Meyer (1990), is esteemed for its comprehensiveness and empirical validity, offering a nuanced view of how emotional bonds, perceived costs, and moral obligations collectively influence employee commitment (Frank et al., 2009). This model serves as the theoretical backbone for our study, enabling an exploration of the intricate interactions among organizational commitment, nomophobia, and the ethical environment. While other frameworks focusing solely on one aspect, such as affective commitment, were considered, they were deemed inadequate for capturing the full spectrum of employee commitment necessary for this research. Each type of commitment has distinct implications for employee behavior and organizational outcomes. Affective commitment is often the most sought-after form, as it fosters high job performance, organizational citizenship behaviors, and low absenteeism (Allen and Meyer, 1990). Normative commitment contributes to organizational stability by promoting a sense of duty among employees (Meyer and Morin, 2017). However, continuance commitment can have ambiguous effects; while it aids in retention by reducing turnover, it may not always enhance engagement or discretionary effort. Employees who stay primarily due to the perceived costs of leaving might not be as motivated to contribute to the organization's long-term success (Allen and Meyer,

1990; Umezulike et al., 2024; Wang et al., 2022).

Therefore, organizations should strategically cultivate affective, normative, and continuance commitments to boost performance and employee well-being. Understanding the varied types of commitment and their impacts allows managers to develop targeted strategies that enhance job satisfaction, performance, and retention. The comprehensive framework provided by Allen and Meyer continues to shed light on the complex dynamics between employees and their organizations, especially critical in an era marked by rapid digitalization and significant workforce transformations.

Organizational commitment has been widely recognized for its profound impact on an array of work behaviors, including job satisfaction, turnover, attendance, and overall performance. Employees with high levels of commitment are typically more aligned with organizational goals and demonstrate a greater willingness to exert effort, which translates into positive work outcomes (Al Balushi et al., 2022; Bateman and Strasser, 1984; Meyer et al., 1993). In contrast, employees exhibiting lower levels of commitment tend to show higher turnover intentions, increased absenteeism, and diminished performance (Mowday et al., 1982). Beyond its influence on retention, organizational commitment significantly shapes daily employee engagement. Studies indicate that employees with strong commitment levels often experience heightened job satisfaction and involvement, driven by their emotional connection to the organization. This connection enhances their sense of purpose and overall job fulfillment (Allen and Meyer, 1990; Nguyen et al., 2020). Such dynamics underscore the strategic importance of nurturing organizational commitment to boost productivity and reduce costs associated with turnover.

The determinants of organizational commitment are diverse, encompassing various demographic and personal factors such as age, education, gender, and marital status. Older employees, for instance, typically display higher commitment levels, likely due to their longer tenure and greater investment in the organization, coupled with fewer external job opportunities (Allen and Meyer, 1990). Higher-ranking individuals or those with significant decision-making autonomy also tend to show stronger commitment, deriving a sense of security and empowerment from their roles (Mowday et al., 1982). Conversely, highly educated employees often exhibit lower commitment levels, possibly due to elevated expectations and more opportunities outside the organization (Iaffaldano and Muchinsky, 1984). These factors collectively influence organizational dynamics to shape an employee's commitment level. In organizational psychology, commitment is acknowledged as one of the three essential job-related attitudes, alongside job satisfaction and job involvement (Spector, 1997). Notably, affective commitment is strongly linked to job satisfaction, which correlates with enhanced job performance, reduced turnover, and improved punctuality (Bateman and Strasser, 1984; Chordiya et al., 2017). Employees deeply attached to their organization are more inclined to engage in discretionary behaviors that significantly contribute to organizational success (Meyer et al., 1993).

Employee participation in decision-making processes crucially influences organizational commitment. When employees are actively involved, especially in decisions that impact their roles and the broader organizational direction, their sense of ownership and loyalty intensifies. This involvement nurtures affective commitment

by validating the value of their contributions and their direct impact on organizational success (Lawler, 1992; Kanter, 1983; Ullrich et al., 2023). Supporting research suggests that greater participation in organizational planning and goal setting aligns employees' personal goals with organizational objectives, thereby solidifying their commitment (Ouchi, 1981; Charles et al., 2021). Managers have a pivotal role in fostering an environment conducive to open communication and active employee involvement, which recognizes and rewards individual contributions (Stephens, 2001). Drawing on the literature, we propose the following hypotheses:

H3: Organizational commitment negatively impacts nomophobia.

H4: Organizational commitment positively impacts the ethical environment.

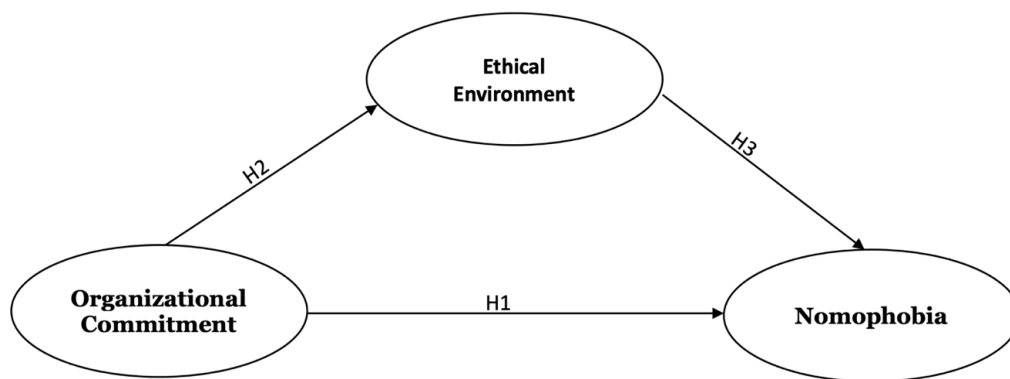


Figure 1. Conceptual framework.

2. Methodology

This study is underpinned by a meticulously crafted conceptual framework that integrates extensive literature reviews and theoretical insights (**Figure 1**). This framework serves as the cornerstone of our research, guiding our inquiry and forming the basis for our hypotheses' development and rigorous testing. To uphold the research's legitimacy and ethical standards, several prestigious Iranian business and entrepreneurship organizations composed and approved a formal letter detailing the study's objectives. A key focus was maintaining strict anonymity and confidentiality, ensuring that individual data remained private.

Addressing nonresponse bias is critical in research, as disparities between survey participants and non-respondents can distort results, leading to inaccuracies due to differing respondent characteristics (Halbesleben and Whitman, 2013). To mitigate nonresponse bias and ensure accuracy, strategies such as follow-up reminders, incentives, and careful sampling were employed (Armstrong and Overton, 1977; Halbesleben and Whitman, 2013). The research sample included 700 participants from various industries, selected to ensure sufficient statistical power for structural equation modeling (SEM) and to enhance the generalizability of our findings across different organizational settings. The sample size was determined based on a power analysis, accounting for the complexity of the SEM and variability in the population. We secured institutional approval from multiple reputable organizations, ensuring ethical standards were met. Of the 700 participants, 650 responded, with 600 completed surveys included in the analysis, resulting in an 85% response rate.

The analysis was conducted using Confirmatory Factor Analysis (CFA) to

meticulously assess the dimensions of our study scales. We employed descriptive statistics and a correlation matrix to confirm the reliability and validity of our data. Furthermore, Structural Equation Modeling (SEM) was chosen as the primary analytical method due to its ability to simultaneously analyze complex relationships between multiple variables (Kline, 2023). This technique is ideal for exploring both direct and indirect relationships within our study, allowing us to investigate the direct impact of organizational commitment on nomophobia and the mediating role of the ethical environment. SEM's ability to model latent variables such as organizational commitment, ethical environment, and nomophobia—while accounting for measurement errors—enhances the reliability of our results. Additionally, using SEM facilitates the validation of the measurement model through CFA, ensuring that the constructs are measured accurately and consistently (Brown and Moore, 2012). The advantages of SEM make it an optimal choice for this research, enabling us to rigorously test the hypothesized relationships and deliver robust and reliable findings.

Data collection and instrumentation

In this study, we employed a series of carefully designed questionnaires to capture valuable insights and ensure a thorough exploration of the research variables. A 6-item questionnaire based on Deshpande's Ethical Environment framework (1996) was meticulously administered to probe the ethical dimensions within the organizations. This tool effectively illuminated the complex interplay of values and principles within the context of the study, providing deep insights into the ethical landscape of the participating organizations. Additionally, the study extensively examined organizational commitment using the comprehensive questionnaire developed by Allen and Meyer (1990). This instrument includes eight questions, each designed to assess one of three facets of commitment: affective, normative, and continuance. This methodical assessment helped gauge participants' levels of dedication to their organizations, contributing to a nuanced understanding of the various dimensions of organizational commitment. To measure participants' nomophobia—the fear of disconnection from smartphones and the internet—a robust 20-item questionnaire developed by Yildirim and Correia (2015), known as the NMP-Q, was utilized. This sophisticated tool allowed for an in-depth exploration of the different aspects of nomophobia, ensuring that the study comprehensively covered this modern psychological condition.

All responses were collected through a refined data-gathering process, where participants expressed their views on a precise 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). This meticulous approach ensured that the data captured were both nuanced and accurate, reflecting the participants' true perspectives and allowing for a comprehensive analysis of the gathered information. By employing these diverse questionnaires and scales, the study was able to paint a detailed and multifaceted portrait of participants' ethics, nomophobia, and job-related commitment.

3. Results

Our analytical process incorporated a structured approach using Confirmatory

Factor Analysis (CFA) to examine the structure of our observed variables. Given the presence of significant multicollinearity among constructs, CFA was chosen as it is particularly suitable for Covariance-based Structural Equation Modeling (CB-SEM), following the recommendations of Hair et al. (2021). For this analysis, the reflective constructs were examined using the lavaan package in R Studio, as endorsed by Rosseel (2012). Additional aspects of our analysis utilized SPSS to ensure a thorough and rigorous evaluation of our data.

3.1. Reliability and validity

Our evaluation of the research instruments demonstrated high reliability. The internal consistency of the items was confirmed using both Cronbach's alpha (CA) and composite reliability (CR), with both metrics exceeding the accepted benchmark of 0.7. This level of scrutiny guarantees that the items within each construct are reliable measures of the intended theoretical concepts, laying a robust foundation for further analysis and interpretation. Our commitment to methodological rigor also extended to assessing convergent validity. A detailed examination showed that all factor loadings surpassed the 0.70 threshold, verifying that the constructs adequately capture the dimensions they are intended to measure. Moreover, the Average Variance Extracted (AVE) values exceeded 0.50, as shown in **Table 1**, reinforcing the convergent validity of the constructs. This rigorous validation process ensures that the measurement items cohesively measure the same construct, thereby confirming the accuracy and consistency of the research findings. These analytical steps underscore the reliability and validity of our measurement model, affirming the integrity of our research methodology. The combination of CFA with R Studio's lavaan package and SPSS provided a comprehensive framework for data analysis, enabling us to confirm our study's theoretical underpinnings and empirical soundness.

Table 1. Reliability.

Constructs	CR	AVE	Cronbach's alpha	Mean	SD
Organizational commitment	0.87	0.79	0.92	2.79	0.96
Ethical environment	0.78	0.68	0.89	2.84	1.10
Nomophobia	0.81	0.72	0.91	2.85	1.16

3.2. Common method bias (CMB)

We implemented several procedural safeguards to mitigate potential common method bias (CMB) inherent in our cross-sectional and self-report study design. Ensuring the anonymity and confidentiality of all participants and randomizing the order of survey questions helped reduce evaluation apprehension and prevented participants from predicting the relationships between variables. Additionally, we conducted Harman's single factor test post hoc to assess common method variance statistically. The findings, which were 41%, indicated that no single factor explained more than 50% of the total variance, which suggests that common method bias was not a significant issue in our data. Furthermore, we employed Confirmatory Factor Analysis (CFA) to affirm the distinctiveness of the study's constructs, offering further evidence that common method variance did not significantly impact our results.

3.3. Discriminant validity

To ensure discriminant validity among the latent variables, we conducted a detailed analysis where variables with factor loadings exceeding 0.50 were closely examined to establish their distinctiveness from other variables (refer to **Table 2**). This rigorous scrutiny was crucial to confirm that each variable was unique and contributed independently to the research model. Such meticulous attention to discriminant validity strengthens the robustness of the study, ensuring that the constructs are reliable, well-differentiated, and contribute uniquely to the research, thereby enhancing the overall quality and credibility of our findings.

Table 2. Discriminant validity.

	Organizational commitment	Ethical environment	Nomophobia
Organizational commitment			
Ethical environment	0.617		
Nomophobia	0.314	0.340	

3.4. Measurement model analysis

We conducted confirmatory factor analysis (CFA) using R Studio software, a method widely recognized in social research and Information Systems (Kline, 2023). The validation of our model adhered to established criteria, achieving fit indices that reflect a strong model fit. Specifically, the Comparative Fit Index (CFI), Normed Fit Index (NFI), and Non-Normed Fit Index (NNFI) all exceeded 0.9, while the Standardized Root Mean Square Residual (SRMR) and the Root Mean Square Error of Approximation (RMSEA) were maintained below 0.08, aligning with the standards set by Hair et al. (2017). Notably, the RMSEA value was exceptionally low at 0.033, and the SRMR at 0.031, further affirming the robustness and adequacy of our hypothesized model.

3.5. Structural equation modeling results

Using the lavaan package in R Studio, we meticulously tested the structural equations of our model, integrating control variables to ensure comprehensive analysis. The model fit indices evaluated included the Comparative-Fit Index (CFI), Tucker-Lewis Index (TLI), Normed Fit Index (NFI), and Non-Normed Fit Index (NNFI), which yielded satisfactory values of 0.904, 0.893, 0.915, and 0.939, respectively. Additionally, the SRMR and RMSEA values registered at 0.031 and 0.032, meeting the rigorous criteria established in the literature (Hair et al., 2017). The Relative Chi-Square value stood at an excellent 1.3, indicating a good fit according to standards recommended by Kline (2023). These results demonstrate that our model not only meets but exceeds the benchmarks for a good fit, indicating that the theoretical framework and the hypothesized relationships within the model are well-supported by the data. This high level of model fit is visually represented in **Figure 2**, showcasing the SEM outcomes derived from our analysis in R Studio software.

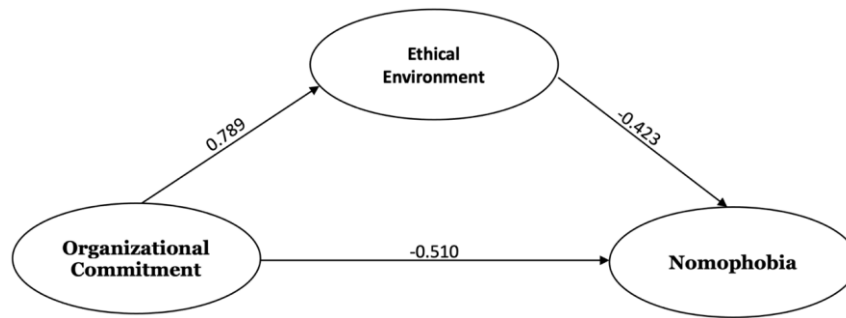


Figure 2. Structural models with standardized estimates.

As detailed in **Table 3**, our findings provide strong empirical support for the hypothesis, revealing a significant negative influence of organizational commitment on nomophobia ($p < 0.000$). This evidence highlights the powerful role that organizational commitment plays in mitigating nomophobia among employees, affirming the protective effects of a strong commitment to the organization. Similarly, the next hypothesis regarding the relationship between the ethical environment and nomophobia was substantiated ($p < 0.000$). This result emphasizes the critical function of the ethical climate in reducing nomophobia across the organization. The ethical environment contributes to lowering nomophobia and enhances the overall workplace atmosphere, making it more conducive to employee well-being. Additionally, our analysis robustly supported the notion that organizational commitment positively influences the ethical environment ($p < 0.000$). This finding suggests that heightened levels of organizational commitment are associated with significant improvements in an organization's ethical climate. Such enhancements to the ethical environment can lead to broader organizational benefits, reinforcing the importance of cultivating strong organizational ties.

Table 3. Hypothesis testing.

Path	Standardized coefficient	P-value	Result
Organizational commitment → Nomophobia	−0.510	0.000	Supported
Ethical environment → Nomophobia	−0.423	0.000	Supported
Organizational commitment → ethical environment	0.789	0.000	Supported

Our research further explored the nuanced interactions within organizational dynamics by investigating the mediating role of the ethical environment. As detailed in **Table 4**, the analysis robustly supports the fourth hypothesis, confirming that the ethical environment partially mediates the relationship between organizational commitment and nomophobia ($p < 0.000$). This finding enriches our understanding of how organizational commitment influences nomophobia indirectly through its impact on the ethical environment. The analysis reveals that a strong organizational commitment enhances the ethical climate, reducing nomophobia among employees. This mediation underscores the complex interplay between these elements and highlights the pivotal role of an ethical workplace in moderating the effects of digital disconnection anxiety.

Table 4. Mediating hypothesis testing.

Path	Mediating	Direct	Indirect	Total	Result
Organizational commitment → Nomophobia	Ethical Environment	−0.510	−0.218	−0.728	Supported

4. Discussion

This paper investigates the complex interplay between organizational commitment and nomophobia, framed within the context of an ethical environment that serves as a mediating factor. Drawing upon the foundational three-component commitment model by Meyer and Allen, this study offers a detailed examination of how deep-seated organizational ties can alleviate the psychological strains associated with nomophobia—the anxiety linked to technological disconnection. Our findings highlight the particularly strong protective effects of affective and normative commitment components, illustrating that these bonds significantly shield employees from the stress of digital disengagement (Erdurmazlı et al., 2022).

Further exploration reveals the mediating role of work-family conflict in the dynamics between nomophobia and organizational identification, suggesting broader implications for how personal and professional spheres interact to influence employee experiences of technology-related anxiety (Erdurmazlı, 2022). This insight prompts consideration of additional mediating factors that could significantly shape these relationships. The study distinctly points to the ethical environment within organizations as a crucial mediator, asserting that a positive ethical climate fosters ethical behavior and acts as a buffer against the pressures of constant digital connectivity (Kim and Vandenberghe, 2021). This dual role of the ethical environment emphasizes the importance of nurturing a workplace that upholds strong moral principles and supports employee mental health in the face of growing technological demands. The implications of our findings extend to the broader organizational strategy, particularly in how technology is integrated into workplace practices. The ubiquitous presence of digital tools in professional settings brings with it a host of psychological challenges, including nomophobia and related issues like social media (Bai et al., 2024c) addiction. These conditions necessitate a balanced approach that leverages technology's benefits while safeguarding employee well-being (Kaviani et al., 2020; León-Mejía et al., 2021).

Our research underscores the necessity for organizations to navigate these complexities thoughtfully. Developing robust strategies to enhance organizational commitment and cultivating a supportive ethical environment are critical. These strategies address the direct impacts of technology and foster an organizational culture that supports employees in managing the psychological impacts of digital dependency. The urgency of addressing these issues is further underscored by findings from Tams et al. (2018), which highlight the significant stress associated with smartphone withdrawal, reinforcing the need for strategic interventions that bolster commitment and ethical practices within organizations.

4.1. Contribution to the literature

This study significantly advances the field of organizational behavior by providing empirical insights into the complex relationship between organizational

commitment and nomophobia, an area that has not been extensively explored in existing research. By applying Meyer and Allen's renowned three-component commitment model, this research reaffirms the model's applicability in contemporary digital contexts and extends its theoretical scope to encompass the challenges posed by technological stressors. This nuanced exploration sheds light on how various dimensions of commitment—affection, normative, and continuance—interact distinctly with the anxiety associated with digital disconnection. Moreover, introducing the ethical environment as a mediating factor in this relationship is a pioneering approach that bridges two critical areas of organizational study: ethics and technology. By demonstrating how ethical climates can buffer the negative effects of digital dependence, the study enriches existing theories and invites further investigation into how organizational ethics influence technological impacts on employee behavior. This aspect of the research highlights the mediating role of ethical environments, underscoring their importance in fostering ethical conduct and enhancing employee resilience against technological stress.

This research also broadens the academic discourse by illustrating the interplay between organizational commitment and technological stress within the ethical context of the workplace. It suggests that the ethical environment can serve as a protective layer that mitigates the psychological impacts of nomophobia, thus contributing to a more comprehensive understanding of how organizations can manage employee well-being in the face of increasing digital demands (Nawaz, 2024). Furthermore, by integrating insights from the fields of organizational behavior, ethics, and information systems, this study offers a dynamic perspective on the challenges of digital dependence in the workplace. It calls attention to the need for organizations to adopt holistic strategies that address both the benefits and challenges of digital tools, ensuring that technological advancements do not overshadow employee well-being.

In sum, this study fills a significant gap in the organizational behavior literature and sets the stage for future research to explore additional mediating factors and the broader implications of digital technologies on organizational dynamics. It paves the way for more detailed investigations into how organizations can effectively balance technological integration with maintaining a healthy, ethical, and committed workforce.

4.2. Contribution to practice

This research provides crucial practical insights for organizational leaders. It highlights strategies to mitigate the adverse effects of nomophobia by nurturing organizational commitment and establishing a robust ethical environment. The findings emphasize the importance of these factors in supporting employee well-being within a digitally connected workplace.

Organizations looking to combat nomophobia should focus on enhancing various dimensions of organizational commitment—affection, normative, and continuance. Initiatives that promote employee engagement and foster a sense of belonging can significantly strengthen affection commitment. These could include team-building activities, company-wide events, or internal campaigns celebrating collective achievements, reinforcing emotional bonds between employees and the organization.

Involving employees in decision-making processes, particularly those directly impacting their roles and future within the company, can boost their normative commitment by aligning their personal goals with organizational objectives. This involvement can be facilitated through regular feedback sessions, inclusion in strategic meetings, or transparent communication about company policies and goals. Further, enhancing continuance commitment involves providing clear career progression paths and developmental opportunities, emphasizing the long-term benefits of staying with the organization. Training programs, mentorship, and succession planning are crucial in showing employees the tangible advantages of their continued employment.

Leaders play a critical role in cultivating an ethical environment. By demonstrating ethical behavior and advocating for fairness in performance evaluations and reward systems, leaders can instill a strong sense of moral obligation among employees. Leaders must also remain accessible and open to discussions about ethical concerns, setting a standard for integrity and open communication throughout the organization. Reducing workplace anxiety, including nomophobia, requires a supportive ethical environment where clear policies are well-communicated and consistently enforced. Organizations should ensure that all employees understand the expected ethical standards and have access to training that reinforces these expectations. Mechanisms for reporting and addressing ethical violations should be transparent and effective, fostering a culture of accountability and respect.

To help employees manage digital stress, organizations should advocate for a healthy work-life balance by implementing policies that limit the need for constant connectivity. Suggestions include designated ‘unplugged’ periods, wellness programs that address digital habits, and creating spaces or opportunities for employees to engage in non-digital activities during breaks. While digital tools are indispensable in the modern workplace, their use should be balanced thoughtfully with the need for employee well-being. This could involve training programs that teach efficient digital practices, promoting digital mindfulness, and providing support systems for employees to discuss their challenges with technology.

By focusing on these areas, organizations can foster a more supportive workplace that enhances employee commitment and ethical behavior and addresses the unique challenges posed by the digital age. This strategic approach helps create a resilient and productive workforce better equipped to manage the complexities of digital dependency.

5. Conclusion

Nomophobia, the fear and anxiety of being separated from one’s mobile phone, has become a critical issue in today’s digital workplace, significantly impacting employee well-being and productivity. This study demonstrates that organizational commitment plays a crucial role in reducing the effects of nomophobia on employees. The presence of a positive ethical environment further strengthens this impact, alleviating the anxiety associated with being disconnected from smartphones in the workplace. Organizations aiming to address the challenges of digital dependency should focus on enhancing commitment and fostering ethical environments that prioritize employee well-being. These strategies not only reduce nomophobia but also

contribute to a healthier and more productive workplace. Future research should explore other interventions to further reduce nomophobia.

Author contributions: Conceptualization, AB and HH; methodology, AB and HH; software, MV and MB; validation, MB, MV and AB; formal analysis, AB; investigation, MB; resources, HH; data curation, MV; writing—original draft preparation, HH and AB; writing—review and editing, MB; visualization, MV and HH; supervision, AB; project administration, AB. All authors have read and agreed to the published version of the manuscript.

Conflict of interest: The authors declare no conflict of interest.

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Article

Workforce ecosystems as a model for human capital management in the digital age

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CITATION

Slavin B. (2024). Workforce ecosystems as a model for human capital management in the digital age. *Human Resources Management and Services*. 6(4): 3455.
<https://doi.org/10.18282/hrms3455>

ARTICLE INFO

Received: 30 August 2024
Accepted: 12 November 2024
Available online: 20 November 2024

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Abstract: This paper discusses the use of workforce ecosystems to manage human intellectual capital. The need for work ecosystems has emerged in the digital age because of the rapid growth in the number of engaged partners and freelancers in the digitalization of enterprises. It is shown that this growth is directly related to the use of agile management systems in design and development: agile, DevOps, microservice architecture, turquoise practices, etc. The information systems needed to manage workforce ecosystems should have competency-based metrics to link business needs, recruitment and training, and finding new partners. At the same time, training should be prioritized over recruitment and the search for new partners in the context of staff shortages. When automating workforce ecosystems, a platform approach should be used to integrate both corporate HR, time and business process management systems, and similar systems from partners.

Keywords: workforce ecosystems; digitalization; innovation; HR management; digital platforms; agile management systems

1. Introduction

Apparently, one of the first to talk about the ecosystem approach to labor management was the renowned scholar and educational innovator David Feingold. In his 1999 paper, “Creating self-sustaining high-skill ecosystems”, Feingold (1999) analyzed the role of high-skill ecosystems in the high-tech workforce. He showed that despite more developed education in Germany and Japan, the ecosystem approach in the United States, linking education and business, was more effective, as evidenced by the success in the technological development of U.S. companies. Applying the ecosystem approach to labor at the macroeconomic level is a challenge for governments. However, with the development of the digital age, labor market problems have become so acute that they can no longer be solved by ministry regulation alone but require the involvement of business itself at the corporate level.

The digitalization of the economy is not only increasing the need for skilled information technology (IT) personnel. The shortage of IT professionals could simply be solved by retraining employees released as a result of automation. Digital transformation leads to the emergence of a huge range of new services that are created not only by large businesses but also by various small businesses, start-ups, universities, etc. The lack of integration between a huge number of participants in technological innovation leads to a total shortage of personnel; there is simply no one to train anymore. In this regard, the use of an ecosystem approach to labor resource management, which can significantly reduce staff “hunger”, becomes extremely relevant.

In 2021, research on labor ecosystems was initiated by the MIT Sloan Management Review and Deloitte. The first paper published as part of this research was entitled “The future is for labor ecosystems” (Altman et al., 2021). The authors defined workforce ecosystems as “a structure consisting of interdependent participants inside and outside the organization, working to achieve both individual and collective goals”. According to a survey of CEOs conducted as part of this research, an overwhelming number (about 90%) stated that they consider the capabilities of external specialists in their work. Therefore, they need to be managed in the same way as their own employees.

A study by the same authors from 2022 (Altman et al., 2022) was devoted to analyzing how important labor ecosystems are for business development. In particular, it was found that among companies that manage labor ecosystems, 87% of executives believe that their workforce is aligned with strategic business goals, while in companies that do not manage labor ecosystems, only 36% of executives said such alignment. In the MIT Sloan Management Review 2023 publication (Altman et al., 2023), the authors raise the issues of integration architecture (information systems) for labor ecosystem management. The analysis of companies’ experiences shows that, in this respect, we can rather talk about experiments than about large-scale implementations.

Thus, the topic of corporate governance in labor ecosystems is extremely relevant today. Not only are there no ready-made information systems for such management, but there is not even sufficient experience and understanding of what such systems should include. In order to answer some of these questions, it is necessary to understand what tasks labor ecosystems address primarily. In addition, we need to define the metrics of governance in them. And only then will it become clear what solutions should be used in the creation of workforce ecosystem management information systems. Some answers to these questions will be given below.

2. Research methodology and building of the workforce ecosystems

The research methodology for building workforce ecosystem models in this study was based on approaches that are used to design corporate systems. These are primarily architectural, ecosystem, and flexible approaches. The architectural approach assumes that the functions of information systems should be subordinated to the goals and objectives of the organization. The ecosystem approach assumes the interconnection of systems, due to which all personnel management systems in an organization should be connected to similar partner systems.

A flexible approach assumes the adaptability of information systems to changes. In the digital era, the center of competition between enterprises is shifting to the technological side, which requires a significant acceleration of innovation. According to the Digital Vortex 2023 study conducted by the Global Center for Digital Business Transformation of the International Institute for Management Development, such industries as finance, telecommunications, education, and professional and technological services are in the zone of digital transformation today (Shan and Wade, 2023). Companies in the industries that have found themselves in the center of the “digital vortex” must restructure their work in order to organize a continuous process

of development and implementation of innovations in the field of digitalization. First of all, it concerns project management, which is conducted according to the agile methodology (Agilemanifesto, 2001), which implies the realization of goals that can change in the process of their achievement.

But agile is not the only example of agile management systems. In the field of software development, the DevOps methodology (Gokarna and Singh, 2021), which combines the tasks of development (development) and maintenance (operations), is becoming a standard for innovative companies. DevOps includes not only development and maintenance but also testing, checking for information security, versioning, etc. All these tasks are realized with the help of appropriate technologies that allow automation of most of the operations. The DevOps technology stack consists of dozens of different solutions. But not only the solutions are different, but also the groups of specialists who implement them. And quite often, in the practice of enterprises, groups of specialists may be staffed by different companies and organizations. For example, testing can be performed by a third-party company specializing in testing the operability of the developed software. Separate modules can also be developed by partner companies. All this requires coordination, not only in solving the tasks themselves but also in interaction between specialists from different companies. Conventional human resource management systems will not help here; workforce ecosystems are needed.

Innovative companies today are also experimenting with flexible organizational management structures that include turquoise techniques, sociocracy 3.0 approaches, etc. (Slavin, 2022). Such management structures use self-organization tools that allow employees to choose their own forms of cooperation, both within the organization and with external partners. In flexible organizational structures, the work with personnel can no longer be attributed to resource management because employees perform both resource and management functions. We can say that self-organizing workforce ecosystem management systems do not differ fundamentally from partner or customer management systems, in which neither partners nor customers are resources. Hence, we can conclude that workforce ecosystems are systems of partnership relations between participants in workforce processes, regardless of the organization in which they work.

Another example of flexible management systems is the use of microservice architecture by innovative companies for their information systems (Newman, 2016). If earlier the information systems of companies consisted of rather large program modules that implemented a particular business function (e.g., customer relations, supply chain management, financial planning, and accounting), today the information systems implement small functions (microservices) that can be quickly developed and implemented within the framework of agile methodologies such as scrum. Such functions can be services both for users (for example, a mobile application or a chatbot for a client) and for other applications (for example, a data analysis service or a report generator). Microservice architecture, which has now become a standard for all organizations at the center of the digital vortex, leads to a dramatic increase in the number of partners involved in creating such services.

Previously, companies had only a few technology partners who helped develop and implement large automated systems such as ERP, CRM, document management,

etc. With the transition to a microservice architecture, the number of partners helping to automate the enterprise begins to be measured in dozens, and it should be considered that the human factor (competence of specific specialists in the partner) in the implementation of digitalization tasks is much more important than in other types of activities. All of this also requires special tools for managing human resources that allow monitoring the solution of tasks and the availability of sufficient competencies among the employees of partner organizations. In practice, it is not uncommon when the departure of a qualified employee from a partner organization leads to problems in solving enterprise tasks. Workforce ecosystems are designed to monitor such problems.

3. Features of human capital management in workforce ecosystems

The role of human capital, as well as the role of human intelligence, is growing in the transition to the knowledge economy. This is due to the fact that the share of routine work as a result of automation and robotization processes is falling, and human intellectual and creative abilities are increasingly in demand. The level of human capital today directly affects the potential capabilities of businesses and countries in technological development. It is no coincidence that since 2018, the World Bank has been rating countries according to the Index of Human Capital (IHC—Index of Human Capital). So, for example, according to the level of the IHC (2020 rating, updated for the end of 2022 (The World Bank, 2020)), Russia ranks 41st (1st place—Singapore, the United States—35th). However, in this paper, we will be interested not in human capital in general but in human capital in organizations. Since Stewart's (1999) time, human capital in corporate management has been considered one of the components of intellectual capital (IC) and is also called human intellectual capital. Human capital, as a component of intellectual capital, is directly related to knowledge management (Maddocks, 2002). In the study of Slavin (2019), it is shown that human IR is not the knowledge of the organization in general, but implicit knowledge that is inseparable from the person (Nonaka and Takeuchi, 2001). It can be said that human ICs are those people who transform and change the company.

If we consider a company's full-time employees, human IC can include management (to the extent that it develops the company), technologists (who create new products), and IT specialists engaged in the company's digital transformation. However, it is not difficult to understand that in a modern company that develops innovatively and with a significant advance, employees of partner organizations, consultants, freelancers, and sometimes even clients take part in its development and transformation. Thus, human IC includes both regular employees of the company and external employees (employees of partner organizations, freelancers) engaged in the development of the company. It is human IC that should become the main object of management in workforce ecosystems.

In order to manage any object, it is necessary to be able to measure its state. A convenient tool for measuring human IC is the competence metric. A person's competencies are his/her abilities (and those confirmed in practice) to use his/her knowledge, skills, and abilities in labor activity. A competency-based approach is used today in most countries around the world to link education and labor activities.

Businesses formulate requests for labor resources in terms of competencies required for their activities, and educational organizations formulate training programs that develop certain competencies. In many countries, this approach is used not only by businesses but also by authorities to organize the activities of civil servants (Vasilyeva and Slavin, 2018).

Modern models of corporate competence management described in various standards (for example, in the European ICT competence framework (ITPE, 2019)) imply the following steps: The first step is to identify the whole range of competences (technical and organizational) that are necessary to have now and, in the future, to realize the goals and objectives of the organization. The second step is the identification of the existing competences of employees and partners of organizations. At the third step, competence development plans are formed in three directions: training of employees; search for new employees; search for new partners or freelancers. Competency development planning should be consistent with plans for implementing the organization's goals and objectives. However, the ecosystem approach assumes that both partners and freelancers are one with the organization's full-time employees, which means that learning processes should apply to all. **Figure 1** shows the organization's competency development framework to be implemented within the organization's work ecosystem (all the diagrams in this article were compiled by the author).

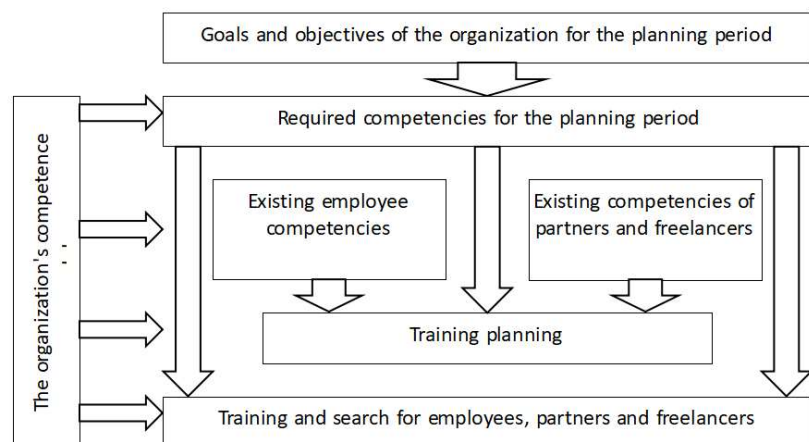


Figure 1. Framework for corporate competence management in workforce ecosystems.

At all stages of competence management (determination of competences required by the organization, identification of existing competences, planning of training, and search for employees, partners, and freelancers), it is necessary to develop a corporate model (classifier) of competences, which will be the metric of the whole process of competence management. The model should be of a basic nature and should not change more often than the company's strategic goals change. Training (for both in-house and external employees) should be a priority process. It is advisable to use labor resources as sparingly as possible; recruitment or searching for new partners and freelancers is necessary only if training does not allow obtaining new competencies. Unfortunately, in the current practice of many companies, in cases where new

competencies are needed, they often turn to the labor market, “heating it up” and worsening the already difficult situation with personnel.

Training of specialists from partner organizations and freelancers should be included in the contractual obligations, but it can also take place in a joint format (when in-house staff and external specialists learn together). Not only the format but also the competency planning should consider the interests of both in-house and outsourced professionals, as well as the development goals of the organizations where outsourced professionals work. The approach based on workforce ecosystems implies partnership relations in the management of human intellectual capital. Human intellectual capital does not include all labor resources, but only those involved in the transformation of the company. Work ecosystems do not replace and do not fully include HR management systems; they are a tool for managing human IR, which combines the tacit knowledge of both full-time employees and all those involved in the organization.

4. Digital platforms for workforce ecosystems

Taking into account the fact that workforce ecosystems include the workforce of not only the organization itself but also partner organizations and various third-party individuals: freelancers, consultants, and sometimes even clients, it is possible to manage such ecosystems only with the use of information systems. And the most effective in this case will be platform solutions (Slavin et al., 2019). Digital platforms allow communicating different subjects of activity with different interfaces to the information system. The most well-known digital platforms are marketplaces, which provide communication between sellers of goods and services, buyers, couriers, etc. All users of marketplaces have their own interfaces to access the platform, depending on the tasks they solve. As a rule, individuals interact with the digital platform through a web interface or mobile application, while organizations integrate access to platforms with their information systems.

The diverse nature of access to digital platforms leads to an important requirement for their functionality—the need for easy integration with other systems. This requirement, along with the fact that platforms provide different access to their users, is an important feature of digital platforms as opposed to other enterprise information systems. However, there is another feature of digital platforms—the addition of value not directly related to communications. For marketplaces, such added value (for many users, it is very important) becomes customer ratings or reviews. Such value increases in the process of functioning of the digital platform and creates a real asset for the company-provider of the platform service, most often more valuable than the software created for the platform.

Ratings on digital platforms can be different. While in conventional marketplaces it is the usual rating of goods and services, in digital cab aggregators, for example, all participants in trips, both cab drivers and passengers, are rated. In social networks, whose services are free for most users, the added value is user data that allows advertisers to target their offers. In the case of workforce ecosystems, such value can be the labor and educational trajectories of users, which will allow for more efficient

use of the labor of certain specialists, consider their individual characteristics, and more accurately determine the experience and potential capabilities of a person.

The digital platform of the workforce ecosystem should be integrated into the information systems of the enterprise and allow external users of partner organizations to work with it. **Figure 2** shows the functional scheme of interaction of the digital platform of the workforce ecosystem with other information systems (the dotted line indicates the boundaries of the information systems of the organization and partners). The digital platform integrates with the HR (human resources) systems of all participants, thus forming a register of all specialists who make up the human resources of the organization. The digital platform also receives information from time tracking systems (TT) of employees of all partner organizations, including freelancers. Thus, the digital platform of the workforce ecosystem allows monitoring of all labor activities related to innovation and the development of the organization.

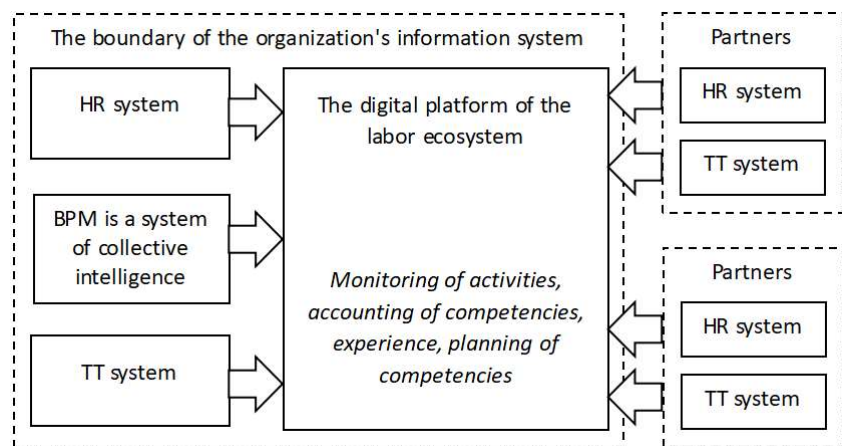


Figure 2. Functional scheme of the digital platform of the workforce ecosystem.

An important condition for the effective use of human IR in innovative activities is the organization of business processes (business process management—BPM) with the use of collective intelligence technologies (Slavin, 2022). The solution to digital transformation tasks is possible only with the organization of group work, which considers both the professional competencies of participants and their ability for creative or analytical activity. Correct association of specialists into groups (for example, scrum teams), involvement of external consultants, tutors, and visionaries at different stages of project implementation, allows to increase the productivity of creative labor activity many times, and also gives the opportunity to get feedback for planning the development of competencies, both through training and through recruitment and the search for new partners.

Capterra.com, part of Gartner’s digital markets family of global digital market research sites, lists more than a thousand digital workforce automation solutions. However, the use of a platform approach in these solutions is extremely rare (no more than ten solutions as of mid-2023), and even these solutions are very limited in functionality (platforms are typically used for distributed labor). In most cases, enterprises must develop relevant solutions in-house to manage workforce ecosystems. This suggests that the market for digital platforms for workforce ecosystems is still in its infancy.

5. Conclusions

The digital age, which is accelerating competition in the technological sphere, requires new approaches to labor management. Many partners, consultants, and freelancers are involved in the transformation of organizations' activities due to the introduction of new technologies. For all professionals, both internal and external, to interact effectively, it is necessary to develop and implement workforce ecosystems. In 2023, the Dutch Academy to Innovate HR AIHR (Academy to Innovate HR AIHR) mentioned managing workforce ecosystems among the main HR trends.

However, workforce ecosystem management does not replace HR management systems; it should be focused on those professionals (both inside and outside the company) who are involved in transforming the company, implementing new technologies, optimizing processes, etc. In fact, workforce ecosystem management systems are the tacit knowledge management systems required for organizational development. Today, there are still few examples of the development and implementation of workforce ecosystem management systems, but soon most enterprise software vendors will surely offer their solutions in this area. And most likely, these solutions will be in the form of digital platforms that are designed to address ecosystem challenges.

Conflict of interest: The author declares no conflict of interest.

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Article

Effect of personal histories of top executives and company headquarters geographical relationship on corporate performance: Empirical study from China

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CITATION

Wang L, Wu X. (2024). Effect of personal histories of top executives and company headquarters geographical relationship on corporate performance: Empirical study from China. *Human Resources Management and Services*. 6(4): 3546.
<https://doi.org/10.18282/hrms3546>

ARTICLE INFO

Received: 14 September 2024
Accepted: 11 November 2024
Available online: 29 November 2024

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Abstract: This paper analyses wherever top executives were born and wherever they attended university to reveal regional groupings of the executives that form company culture and strategy in China and the mechanisms by which they affect corporate performance. It was found that the personal histories of top executives affect their decision-making orientation, and, in turn, company culture. The personal histories of executives and intra-regional, intra-provincial and intra-city links of corporate headquarters were obvious factors for executive selection. Distances were higher, and percentages of intra-regional links were lower for higher profit and growth companies. This shows that more competitive companies are more likely to hire executives who have lived in different regions or institutions in their lifetimes and university educations. The study concludes that Chinese firms' key choices are influenced, in part, by external geographic factors way more advanced than the self-operation of individual enterprises.

Keywords: executive personal histories; enterprise geography; corporate culture geography; China

1. Introduction

China's economy has undergone a metamorphosis from high-speed development to high-quality development. The fierce competition within the market and therefore the structural adjustment of the economy has made the development of enterprises face greater pressure for survival and development. As the key survival and development goal of enterprises, performance has become the research object of many scholars, including geographers. The existing research literature on the study of the linkage between corporate culture and corporate performance, especially the study of individual characteristics of executives that influence corporate culture, is one of the hot topics in corporate performance research (Chandler, 1962; Domhoff, 2010; Drucker, 1946). Studying the relationship between executives' personal histories and the location of the headquarters is of great significance, which is of great significance to understanding the corporate culture, enhancing the core competitiveness of enterprises, and improving the performance of enterprises.

In the process of enterprise production and operation, many factors will affect it. External factors such as national policy, market demand and industry competition, internal factors such as corporate governance structure, corporate strategy, organizational management, capital operation, management capability and corporate culture construction. Compared with external factors, internal factors are the key factors affecting the survival of enterprises and have a more important impact on the

development of enterprises. In recent years, the influence of corporate culture and executive characteristics on corporate culture and corporate performance has begun to attract academic attention. Corporate culture is a social practice that includes behavioral standards and customs and is the value that guides corporate behavior (Schoenberger, 1997). Corporate culture generally refers to the values and beliefs that provide norms for expected behaviour by employees (Schein, 1992), and organisations actively promote these values and principles (Guiso et al., 2015). Domhoff (2010) argues that the board has largely influenced this culture, in which individual members of the board come back to the corporate with preconception beliefs. Zhang (2019) also shows that, with the continuous enrichment of corporate culture, executives have a positive effect on the growth of enterprises. The personal characteristics of administrators may be deemed a latent impact on the culture of the corporate. Geographers include the spatial dimension, as senior executives' personal characteristics occur within a realm where location is a key variable in shaping the pattern of personal development paths. As Yusuff et al. (2008) argued, employees bring social culture to their work, and the people hired by every organization collectively influence and create the particular culture of the organization. By analyzing the birthplace of each company's most important members and where they went to college, this paper attempts to investigate the geographical location of the most influential people related to the formation of corporate culture and strategy. If there are differences in the geographical characteristics of individuals in this key group, recognizing these differences may help us understand business performance. Here, the study develops Markusen's (1994) concept of studying regions through the study of businesses, because how a business performs is ultimately a key influence on the competitiveness of the city and region to which it belongs.

What is the relationship between corporate culture and geography? To begin, it is important to define corporate culture correctly. Shao (2024) believed that corporate culture is a set of general rules for corporate employees and corporate behavior, which originates from the continuous practice of the enterprise. Its main body is the consciousness of the enterprise management subject, and the pursuit is to achieve the development goals of the enterprise. Hofstede et al. (2005) added a geographical analysis approach to the concept of corporate culture by examining how corporate culture is formed spatially. Accordingly, a company's location affects its culture. But on the non-public level, Dupré (2005) argued that an idea is gradually cultivated by individuals through their past experience. Frenken et al. (2011) also showed that the spatial differentiation of regional differences can influence different individual behaviors. Related to this paper, the behavior of protagonists within the firm is fostered by the different environments of these individuals with personal histories. To further study, Nonaka and Takeuchi (1995) suggested that knowledge producing is an upward-spiraling process, which can effectively transfer individual knowledge to the organization and expand the knowledge base of individuals and organizations. This collective knowledge creation can improve their competitiveness. When employees and executives are also the core strength of business operations, some of the behavioral characteristics they have learned in the past experience will affect the competitiveness of the organization they manage. This paper examines whether there are differences in the geographical characteristics of individuals in this key group by

analyzing the birthplace and university location of the executives of the company who are most influential in shaping corporate culture and corporate strategy. If there are differences, recognizing these differences may help us to further understand corporate performance.

This study builds on the evolutionary economic geography literature (Boschma et al., 2019; Wang et al., 2013), which argues that firms exhibit considerable inertia in their management. Research in this area analyzes the locational choices of corporations (e.g., start-ups), whose house owners favor geographically neighboring locations due to regional knowledge (or defect of external knowledge)-even at the expense of profit maximization. Boschma et al. (2019) suggest that corporations have incomplete information regarding potential locations and variations in their ability to use this information are also different. Gray (2012) pointed out, though the practice communities of regional corporate governance are units comparatively distinct, there are units that still have a higher connection between corporate leaders and external resources. Those individuals symbolize latent knowledge channels and provide greater opportunities for companies to avoid corporate inertia. Combining relevant theories from evolutionary economics, O'Hagan and Rice (2011) and Rice and Lyons (2011) analyze how personal histories occur within the spatial domain of individual social networks. Boschma and Frenken (2011) show that a lot of entrepreneurs build their knowledge base within the same industry before creating a company. They are additionally doubtless about forming a new brand company in acquainted areas in familiar areas. The knowledge, experience and personal social networks that top executives have acquired over a lifetime of work and development influence their decision-making processes and, in turn, the viability of the companies they now work for. From a geographical perspective, early Saxenian's on corporate culture and regional linkages were typical case studies. He compared the network-based system of Silicon Valley with the enterprise-based system of Route 128. The results show that the enterprise-based system Route 128 isolate manufacturers from external sources of knowledge. Silicon Valley's corporate culture inspired a lot of relationships between companies and external organizations and then produces innovative products, which improved the competitive advantage of enterprises (Liu, 2022). Enterprise culture is increasingly valued by corporate managers and can effectively guide corporate management, drive the enterprise to create more economic as well as social benefits, and also influence the work attitude and behavior of corporate employees. Therefore, top managers and their background characteristics are a significant part of the corporate culture. The key assertion examined by this research is that the acquisition of executives with personal histories geographically proximate to the firm negatively influences firm performance. That said, it is important to note that executives are only one factor influencing the culture of the firm, and thus firm performance. Alliances, mergers, and links to suppliers and customers are just a few examples of other important (if not more important) influences that shape corporate culture and profitability. Nonetheless, the literature suggests that executives and their backgrounds are an important part of the corporate culture mix, and thus worthy of attention.

This study attempts to contribute to the evolution of economic geography literature by focusing on a well-defined group of executives. These executives not

only influence the corporate culture but may also have important links (and thus knowledge) to the broader competitive environment of business. These links can lead to the dissemination of innovative processes and strategies that themselves contribute to firms becoming more competitive. The goal of this paper is to examine the assertion that external typologies result in knowledge generation and connections that translate into higher levels of corporate performance. We hypothesize that companies that obtain executives with geographically distant personal histories to firm headquarters, and thus disparate institutions, achieve higher growth and profit compared to companies that obtain executives with spatially proximate personal histories to firm headquarters.

2. Research content and data sources

2.1. Research content

Top executives are at the core of decision-making in the company. They are the core strength of the entire company and play a vital role in the formation and maintenance of corporate culture. Enterprises also have a high dependence on executives. The personal background characteristics of executives, including personal history, have a significant impact on corporate layout decisions and corporate development. So, is there a reliance on executives from the same city, province, or region when companies hire executives? If so, can the location of the executives' birthplace and school be the same as that of the headquarters to enhance or weaken the competitiveness of the enterprise? Based on this, this paper's research targets top executives of Chinese listed companies, identifies the birth and schooling locations of top executives, and conducts a comparative analysis with their related corporate headquarters locations.

2.2. Data source and processing

This paper selects data related to Chinese A-share listed corporations in Shanghai and Shenzhen in 2020 as the research sample, and makes the following screening of the sample: i) exclude listed companies in the financial industry; ii) exclude ST and *ST enterprises; iii) remove listed companies that incomplete and valid data and samples with missing data on major variables. The data used in this paper mainly comes from the China Stock Market & Accounting Research database and the Wind database. To avoid data omissions, the data on executives' personal history was revised and supplemented by combining personal biographical information of executives from websites such as Sina Finance, the annual reports of each company, and Flush Finance. We screened the data and obtained a final number of 1723 samples, which we then processed using spss 23.0 software.

3. Model and results

3.1. Overall spatial correlation analysis

Table 1 shows the association between corporate headquarters and the places of birth and schooling of executives at the city, provincial, and regional scales. In terms

of the relationship between the executives' university city and corporate headquarters city, 32% of the top executives within the research work at the company headquarters in the same city as their schooling. Moreover, 36% of these individuals attended universities in a similar province, whereas 58% of executives attended universities within a similar area as their headquarters. It reveals that there is a strong correlation between the place where top executives attended universities and the headquarters, and this correlation becomes more significant as the geographical scale becomes larger. This indicates that the spatial mobility of talents is still mainly concentrated in the same area, and the spatial scale has expanded but is still dominated by the flow of close distance. **Table 1** also shows that the birthplace of executives and the location of corporate headquarters are located in the same city in 38% of the country, the same province in 63%, and the same region in 75%. This phenomenon contains the influence of the localization of enrollment in most provinces and cities in China and the phenomenon of entrepreneurs returning home to start businesses (Wang et al., 2020). Overall, the overall level of executive personal history is the same as headquarters accounts for surpassing 1/3 of the national proportion, which indicates the significant correlation between executives' place of schooling and birth and the location of headquarters. At the same time, it also shows that geographical location is an important factor in executives' choice of entrepreneurial practice.

Table 1. Aggregated intra-city, intra-province, and intra-regional connections for the personal histories of top executives and their corporate headquarters.

	Intra-City City Connections as % of Total City Connections	Intra-Province Connections as % of Total Province Connections	Intra-Region Connections as % of Total Region Connections
Birth	38	63	75
University	32	36	58

3.2. Spatial association analysis based on city perspective

Table 2 subdivides the special relationship to investigate the links between the top city and the city. In particular, it lists the top 20 cities in the number of the combination of the city where the company's headquarters are located and the city wherever the executives are educated and born and calculates the proportion of this correspondence in the country. Most significantly, an evident relationship is disclosed as 11 of the corresponding relationships are the corporate headquarters and the executives who attend university in the same city, and 15 corporate headquarters and senior are born in the top 20 links of the same city. Among them, Beijing-Beijing and Shanghai-Shanghai links have always been the top two, accounting for a much higher proportion of the country than other cities. This presents that the educational resources in different regions and cities in China are uneven. Shanghai and Beijing have stronger headquarters adsorption capacity, and the number of educational institutions is also at the forefront of China. They have introduced more advanced foreign technology and high-tech capital equipment, attracting more talent inflows, and maintaining leading overall competitiveness. Taking corporate headquarters and executives attending university places as an example, the total number of

combinations of Beijing-Beijing links is 148, which happens around 2.5 times that of the second largest connection. This is mainly a desirable regional difference in high-quality higher education in China and the relative lack of quality higher education resources in Shanghai in contrast to the dense quality higher education in Beijing (Liu, 2020). Additionally, the total number of Hangzhou-Hangzhou links is 30, which also ranked relatively high. This may be related to the expansion and development of educational institutions. According to the latest statistics of the education enterprise list, the number of off-campus education enterprises in Hangzhou exceeded 10,000 in 2020, ranking in the top six in the number of educational institutions.

Table 2. The link between corporate headquarters city and the city where top executives were born and attended university.

Headquarters City	University City	Total Links	University-Headquarter Combinations as % of Country	Headquarters City	Birth City	Total Links	Birth-Headquarter Combinations as % of Country
Beijing	Beijing	148	34	Beijing	Beijing	27	10
Shanghai	Shanghai	58	13	Shanghai	Shanghai	16	6
Shenzhen	Beijing	38	9	Fuzhou	Fuzhou	15	5
Hangzhou	Hangzhou	30	7	Hangzhou	Hangzhou	14	5
Guangzhou	Guangzhou	29	7	Shaoxing	Shaoxing	12	4
Shenzhen	Guangzhou	22	5	Changsha	Changsha	9	3
Shenzhen	Shanghai	22	5	Shenzhen	Meizhou	9	3
Chengdu	Chengdu	21	5	Shantou	Shantou	8	3
Changsha	Changsha	20	5	Ningbo	Ningbo	7	3
Shanghai	Beijing	16	4	Suzhou	Suzhou	7	3
Hefei	Hefei	16	4	Qingdao	Qingdao	6	2
Nanjing	Nanjing	15	3	Shenzhen	Guangzhou	5	2
Fuzhou	Xiamen	10	2	Wuhan	Wuhan	5	2
Beijing	Shanghai	10	2	Nantong	Nantong	5	2
Wuhan	Wuhan	9	2	Jiaying	Jiaying	5	2
Xi'an	Xi'an	9	2	Wuxi	Wuxi	4	2
Changchun	Changchun	9	2	Chongqing	Chongqing	4	2
Jinan	Jinan	9	2	Xuchang	Xuchang	4	2
Shenzhen	Xi'an	8	2	Hangzhou	Jinhua	4	1
Guangzhou	Beijing	8	2	Jinhua	Wenzhou	3	1

3.3. Spatial association analysis based on regional perspective

So far, the results confirm the spatial connection between wherever executives work and their personal histories. The next logical structure level of exploration is to verify this connection from a regional scale. **Table 3** divides the corporations geographically, supported their headquarters locations into seven regions: the Pan-Yangtze River Delta region, the Pan-Bohai Sea region, the Pan-Pearl River Delta region, the middle and lower reaches of the Yangtze River, the middle and lower reaches of the Yellow River, the Northeast region and the Northwest region.

Importantly, we also amalgamate the birthplace of executives and the place of the university into a region. As a whole, Intraregional linkages from corporate headquarters and the place of birth and schooling of executives are prevailing in all told areas. This is particularly evident in the Pan-Yangtze River Delta, the Pan-Bohai Sea, and the Pan-Pearl River Delta where approximately 19% of executives sitting in all the executive teams of listed companies were born and attended university in the Pan-Yangtze River Delta. Meanwhile, the proportion of birthplaces and school places in the Pan-Bohai Sea and the Pan-Pearl River Delta is 18% and 17.9% respectively. In contrast, corporate headquarters in the Northeast and Northwest hire people with personal histories from their region the smallest amount, willing to depend on executives generally scattered throughout the country. In contrast, the proportion of corporate headquarters and senior executives' birthplaces and places of schooling in the northeast and northwest regions is relatively small, and their companies are more willing to recruit executives who rely on distribution throughout the country. The above results show that the association between the birthplace and school place of executives and headquarters, based on regional scale analysis, the expansion of the spatial distance is mostly the expansion of the close distance, and still has a significant spatial correlation. To sum up, when executives have a certain learning and living experience in a city, province, or region, they will choose to sit on the board in this same space. This conclusion is also echoed by some research findings. He and Zhai (2015) and Zhang and Zhou (2018) showed that due to long-term living and learning experiences, college graduates have long been accustomed to the urban civilization, diet, and language habits of their birthplaces. At the same time, the social network of college graduates in their birthplace is relatively complete, and the flow of employment in alternative places will cause pressure on individuals and erode their mental health. (He et al., 2015; Wang et al., 2023)

Table 3. Regional links between headquarter region and birth and university region for top executives.

Corporate Region	Birth and University Region %						
	Pan-Yangtze River Delta	Pan-Bohai Sea	Pan-Pearl River Delta	middle and lower reaches of the Yangtze River	middle and lower reaches of the Yellow River	North east	North west
Pan-Yangtze River Delta	19.0	3.7	1.3	1.0	0.7	0.5	0.0
Pan-Bohai Sea	2.6	18.0	1.3	1.1	1.0	0.8	0.3
Pan-Pearl River Delta	4.2	6.1	17.9	2.5	1.7	0.7	0.1
middle and lower reaches of the Yangtze River	0.7	1.2	0.6	4.7	0.3	0.0	0.0
middle and lower reaches of the Yellow River	0.4	0.7	0.0	0.2	2.7	0.0	0.0
Northeast region	0.0	0.5	0.0	0.1	0.0	1.2	0.0
Northwest region	0.3	0.8	0.0	0.0	0.0	0.0	1.0

3.4. Impact of executives' personal history and headquarters links on enterprise performance

3.4.1. Methodology and variable selection

Linear regression model. Through the analysis of A-share listed companies in

China, taking the corporate performance and the personal history of top executives as the research object, according to the linear regression model, the following formula is established:

$$Y = \beta_0 + \beta X + \varepsilon \quad (1)$$

where, Y , X , β_0 , β and ε indicate the dependent variable, the independent variable, the constant term, the regression coefficient and the random error term, respectively.

T test. Using the *t*-distribution allowed us to determine the significance of the regression coefficients. The null hypothesis is $H_0: \beta \neq 0$, there is no relationship or linear relationship between executives' personal history and corporate performance. The alternative hypotheses is $H_1: \beta \neq 0$, there is a linear relationship between executives' personal history and corporate performance. When the test level is set at $\alpha=0.05$, $P<0.05$, the regression coefficient is significant.

Distance between the place of birth and university of executives and corporate headquarters. The explanatory variable of this paper is that the distance (calculated by geodesic distance) between the headquarters' location and the executive's birthplace. This paper defines executives as those who are in the top three of the total executive compensation of listed companies (Shi et al., 2023; Tang et al., 2023). The executive compensation used is the total compensation received by executives during the reporting period, excluding long-term incentive compensation, such as equity incentives (Xu et al., 2021).

Enterprise performance. The explanatory variable of this paper is corporate performance. This paper selects indicators such as 'Profit', 'Operating Profit Margin', 'Earnings per Share', 'Earnings per Share 1 Year Ago' and 'Return on Assets' to represent corporate performance and measure corporate profitability and growth ability (O'Hagan S and Rice, 2013).

3.4.2. Impact of distance between headquarters location and where the executives' birthplace attended university on corporate performance, respectively

Before constructing the regression model of executive personal history and headquarters' location and corporate performance, a *t*-test is required for the variables. *T*-tests were then conducted on several variables to test whether the profitability and growth rates of the companies related to these two teams were statistically significant. From the test results (see **Table 4**), companies with higher ratios of executive personal histories and the same corporate headquarters region have lower 'Profit', 'Earnings per Share', 'Earnings per Share 1 Year Ago', and 'Return on Assets'. Only the *p*-value of 'Earnings per Share 1 Year Ago' is greater than 0.05, which is not statistically significant. This discovery shows that there is a linear correlation between company performance and executives with various personal background characteristics. The higher performing firms are related to executives related to a range of backgrounds, supported executives can obtain richer growth and learning experience in regions external to the company, and will display greater enthusiasm in their work and achieve better job performance. Furthermore, companies with less performance are a lot of likely to embed executives in

intra-regional establishments that are already representative of the company.

Table 4. *T*-test shows the relationship between company growth and profitability with the personal history within the region or region of executives.

Variable	Sample	Mean	Fobs	Sig.
Profit	birth or univ. reg. = headquarters reg.	512,495,301.463	20.404	0.000
	birth or univ. reg. ≠ headquarters reg.	713,999,105.225		
Operating profit margin	birth or univ. reg. = headquarters reg.	320.296	1.533	0.000
	birth or univ. reg. ≠ headquarters reg.	−20.226		
Earnings per share	birth or univ. reg. = headquarters reg.	0.493	3.908	0.048
	birth or univ. reg. ≠ headquarters reg.	0.623		
Earnings per share 1 year ago	birth or univ. reg. = headquarters reg.	0.353	0.246	0.620
	birth or univ. reg. ≠ headquarters reg.	0.423		
Return on assets	birth or univ. reg. = headquarters reg.	0.035	3.153	0.016
	birth or univ. reg. ≠ headquarters reg.	0.044		

To verify whether there is a statistical link between corporate profitability and executive personal history. A regression model of the distance values (calculated by geodesic distance) between the headquarters' location and the executive's birthplace and corporate performance is developed. The regression results of the birthplace of executives (see **Table 5**) indicate that the regression coefficients of the five indicators measuring corporate performance are all positive, except that the p-value of the 'Earnings per Share 1 Year Ago' index is greater than 0.1, 'Profit', 'Operating Profit Margin', 'Earnings per Share' and 'Return on Assets' are obvious at significant the levels of 10%, 1%, 5%, and 10%, respectively. The β -value of 'Earnings per Share 1 Year Ago' is less than 'Profit', 'Operating Profit Margin', and 'Earnings per Share'. **Table 6**-Model 2 verifies the relationship between the location of the headquarters and the place where executives went to university. Similarly, the regression coefficients of the five indicators measuring corporate performance are all positive, except that the p-value of the 'Earnings per Share 1 Year Ago' index is greater than 0.1, 'Profit', 'Operating Profit Margin', 'Earnings per Share' and 'Return on Assets' are obvious at significant the levels of 10%, 1%, 10%, and 5%, respectively. The above empirical results suggest that as the distance to university for executives increases, so does corporate performance. These findings were even additional convincing, solely 'Earnings per Share 1 Year Ago' were not statistically significant. This makes sense as executives obtain a great deal of their business knowledge during this time of their personal histories, which is also the best value for return efficiency. It promotes the improvement of the profitability of the enterprise. The β -value for Return on Owners' Equity 1 Year Ago was low, although it is positively correlated with distance.

Table 5. Regression results between corporate growth and profitability with distance to birth of executives.

Dependent variable	Modle1-Birth			
	β	SE	Intercept	R^2
Profit	0.086*	376.515	735.276	0.007
Operating profit margin	0.240***	0.304	−0.297	0.058
Earnings per share	0.108**	0.122	0.413	0.012
Earnings per Share 1 Year Ago	0.056	0.059	0.349	0.003
Return on assets	0.073*	0.006	0.033	0.005

Note: *, ** and*** represents rejection of the null hypothesis at 10%, 5%, and 1% significance levels of, respectively.

Table 6. Regression results between corporate growth and profitability with distance to where executives attend university.

Dependent variable	Modle2-University			
	β	SE	Intercept	R^2
Profit	0.070*	173.131	335.834	0.005
Operating profit margin	0.112***	1.138	−1.078	0.013
Earnings per share	0.062*	0.062	0.401	0.004
Earnings per Share 1 Year Ago	0.043	0.049	0.329	0.002
Return on assets	0.91**	0.016	0.018	0.008

Note: *, ** and*** represents rejection of the null hypothesis at 10%, 5%, and 1% significance levels of, respectively.

3.4.3. Impact of between the birthplace attended university of executives and where the corporate headquarters on corporate performance

Table 7 constructs a multiple regression analysis model of the distance between the headquarters' location and executives' birthplace, with five indicators measuring corporate performance. The multivariate results are similar to the first two models. Where R^2 is used to represent the proportional change in the dependent variable explained by the linear regression model with values ranging from 0.016 to 0.135, indicating that there is a relatively large difference in the profitability of the company due to the distance between the birthplace of the executive and the university. The reason is that executives are the conceptualizers and implementers of enterprise development and can exert a dominant influence on the whole process of setting and implementing goals. They play a vital role in the construction of corporate culture (Bao, 2002), which in turn also affects corporate performance (Zhang, 2019). In addition, once the two factors related to personal history are combined in **Table 7-Model 3**, R^2 values in the regression results are stronger than those **Table 5-Model 1** and **Table 6-Model 2**. As suggested earlier, the culture of other employees brings to the firm alliances, mergers, and links to suppliers, and buyers, which are just a few examples of other important influences that shape corporate culture and profitability.

Table 7. Regression results the relationship between company growth and profitability with distance to birth and attend university of executives.

Dependent variable	Modle3-Birth and University				
	β -Birth	β -University	SE	R ²	Intercept
Profit	0.108*	0.097*	323.590	0.021	561.266
Operating profit margin	0.214***	0.138**	0.139	0.071	−0.125
Earnings per share	0.138**	0.252***	0.08	0.084	0.143
Earnings per Share 1 Year Ago	0.109	0.022	0.074	0.016	0.336
Return on assets	0.127*	0.302***	0.009	0.135	0.005

Note: *, ** and*** represents rejection of the null hypothesis at 10%, 5%, and 1% significance levels of, respectively.

B = Standardised regression coefficient; SE = Standard error.

4. Discussion

The focus of this paper is not just a separate examination of corporate culture alone. On the contrary, the purpose of this study is to analyze varied aspects of the personal history of executives and headquarters and explore how the spatial relationship of the personal histories of critical executives could also be touching corporate performance through the effect of those critical people on corporate culture. Hamel (1996) has shown that top managers are more inclined to retain past management experience and are reluctant to adapt to variations within the outside circumstances. Putting this criticism in the context of space, we have a tendency to suggest that if the corporate headquarters and its critical executives are located in the same region, tries to sustain capacity are probably to be dominant. This approach will limit the company's ability to create new strategies for adopting the business experience of companies in other regions. Therefore, this study examines whether or not the practice of enterprises achieving protagonists from outside their headquarters can improve their competitiveness.

The results of this study demonstrate that there is a substantial tendency for executives born and educated in a region also to end up working in that same region. When executives have previous experience in a city, province, or region, they are more likely to be associated with firms in that same area. Research that exists on the relationship between boards of directors and their educational affiliation argues that this experience influences managerial style (Wang et al., 2019), which impacts the firms for whom these people work and the places where these firms are located. Ren et al. (2004) pointed out that extensive and tight inter-firm chains may also promote firm-level or managerial-level complicity and break economic order and efficiency. We can see that such internal linkages predominate, and it is not conducive to regional economic development. But when companies focus on hiring executives from the local setting, is it very a retardant for the company itself? To answer this question, this paper will shift the focus from geospatial relationship analysis to corporate performance. The results of **Table 4** shows that compared with executives in the same region, companies owning executives who have a personal history outside the same region as the company headquarters, the profitability and growth

are higher. O'Hagan and Rice (2018) provide some evidence connected to this phenomenon. They illustrate how companies in the northeast of the United States rely severely on executives (both internal and external) who have personal histories in the identical region, which ultimately negatively affects the company (Wang and Zhang, 2022). Further, it is also in line with Sun's (2019) research, which argues that the construction of corporate culture requires appropriate cultural resources and that different regions have different cultural backgrounds. Enterprises need human participation to carry out any production activities, and people will be influenced by different regional cultures, so introducing external cultures into enterprises in different cultural backgrounds will benefit them.

Thus, the present research findings focused on firms and directors, a different analytical context in comparison with the work of Jiang et al. (2023) and Wang (2024), provides new support for the assertion of the importance of a culture/performance connection in general and insights into the role played by knowledge connections between firms and external regions in particular. Further, these findings also support the evolutionary economic geography theory that emphasizes inertia. Koenig and Gogel (1981) focus on how entrepreneurs use the relevant experience they have accumulated as employees to ultimately choose to begin a firm within the same city or region. There are two main reasons for this: First, they have rich knowledge and experience and are more familiar with the surrounding environment. Second, because the internal directors may be too inbred, too specialized, and unwilling to change their inherent way of thinking, they are prone to strict rigidity in management. Evolutionary economic geographers premise their research on the fact that owners are biased in geographically proximate locations because of their lack of knowledge outside their immediate environment—even though it influences firm viability. Our results suggest the importance of individuals bringing knowledge and experience from outside the region.

5. Summary and conclusion

Based on the relevant data of the place of birth and university of executives and corporate performance in A-share listed firms in China in 2020, this study explores the geographical links between corporate headquarters and personal history. The influence of the executive personal history on the performance of the company is analyzed through the distance between the headquarters and the university where the executives were born. The research refers to the relevant research results of Yang et al. (2015). Our results argued that the cultural characteristics and contents of different regions in China vary and that this broad regional culture affects the personal characteristics of executives, which in turn affects corporate culture and even corporate performance. Therefore, this study analyzes the impact of executive personal history on corporate performance and can provide a new perspective on corporate strategy and corporate performance.

First, the study analyzed the spatial relationship between corporate headquarters, where top executives were born and attended the university from a holistic perspective. The results found that there is a significant geographical correlation between executives' personal history and corporate headquarters, and the correlation

is more obvious at the provincial and regional. It also revealed that intra-regional, intra-provincial, and intra-city linkages were important elements in administrative choice. The results were consistent with the current 'path dependence' research on evolutionary economic geography (Wang and Wu, 2023; Zhu et al., 2019). From the perspective of the city, there is a hierarchical model in the results, with a Beijing–Beijing and Shanghai–Shanghai affiliation dominating. The second echelon, composed of the new Tier 1 cities of Hangzhou and Changsha, and the top Tier 2 cities of Fuzhou and Shaoxing, was also apparent. Intra-regional linkages from corporate headquarters to birth and university data were particularly evident in the Pan-Yangtze River Delta region, the Pan-Bohai Sea region, and the Pan-Pearl River Delta region.

Second, there was a statistical relationship between the distance between company growth and profitability with the acquisition of geographically proximate executives. We can find that companies with higher profits and faster growth had farther distances and lower percentages of intra-regional connections. As previously analyzed, this means that additional competitive companies buy executives who have experienced different institutions in their life and university education. These findings can contribute to the doctrine of evolutionary economic geography because they are related to the inertia of firms.

This paper suggests that key decisions created by companies in China are influenced, partly because the geographical environment is far more complex than the factors associated with the operation of any individual company. At the spatial level, the experience and contacts that executives gain in a city or region play a role in building corporate culture and corporate decision-making strategies. Managers embed institutional regions in the decision-making process, which may stifle corporate adaptation if they rely too heavily on intra-regional top executives. And the results of this analysis have implications in terms of the evolutionary economic geography of enterprises moving away from the constraints and current emphasis on path dependence. It also shows that research related to evolutionary economic geography around inertia-related research can benefit from exploring research questions from different perspectives. Currently, most leaders of large companies in China work in cities or regions where they have residential and learning experiences. However, the results of this paper show that someone negatively related such practices to firm prosperity. As a result, in an increasingly competitive commercial environment, companies may need to consider deeper regional factors when recruiting executives.

Author contributions: Conceptualization: LW; methodology: LW; software: LW; Validation: LW; formal analysis: LW; investigation: LW and XW; resources: XW; data curation: LW; writing—original draft preparation: LW; writing—review and editing: LW and XW; visualization: LW and XW; supervision: LW; project administration: LW and XW; funding acquisition: LW and XW. All authors have read and agreed to the published version of the manuscript.

Conflict of interest: The authors declare no conflict of interest.

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Article

Perceived workplace safety, workload and pay satisfaction as predictors of mental health among employees in a Nigerian health-related organization

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*** Corresponding author:** Ehigie Benjamin Osayawe, benosang@yahoo.com; benosang18@gmail.com**CITATION**

Onifade OA, Benjamin Osayawe E. Perceived workplace safety, workload and pay satisfaction as predictors of mental health among employees in a Nigerian health-related organization. *Human Resources Management and Services*. 2024; 6(4): 3559. <https://doi.org/10.18282/hrms3559>

ARTICLE INFO

Received: 14 October 2024
Accepted: 29 November 2024
Available online: 16 December 2024

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Abstract: The health of employees is so paramount for employee productivity. While emphasis is often placed on the physical health of employees, less emphasis is placed on the psychological or mental health of the employees. Similarly, it seems as if health challenges are more occurring in manufacturing industries, but the service organizations employees are as well susceptible to mental health challenges. Understanding the predictive factors to mental health challenges therefore becomes imperative. It is on this note that the present research examines how employee mental health is predicted by work safety measures like perceived workplace safety, work overload and pay satisfaction. The workplace safety variables include perception of job, co-worker, supervisor, management, and safety programs. A cross sectional survey method was adopted, using ex-post-facto research design. Data were gathered from 258 employees, including 150 (58.1%) females and 108 (41.9%) males of a non-governmental organization. Correlation and regression analyses were used to analyze data obtained from the standardized psychological scales that were administered. The results showed that mental health correlated positively with perceived job safety, but negatively with perceived co-worker, supervisor, management, safety programs and pay satisfaction. Workplace safety variables jointly predicted mental health, accounting for 23% variance, but only perceived job safety and supervisor safety were significant. The higher employees perceived job safety, the lower their mental health challenges. Similarly, the higher they perceived supervisor safety, the lower their mental health issues. Pay satisfaction accounted for 3% variance in mental health, and the higher the pay satisfaction, the lower the level of employee mental health issues. It is implied that the human resource unit of service organizations should intermittently examine their organizations to identify and prevent possible job and supervisor safety threats. Supervisors should be trained on how to be discrete in communicating safety measures to subordinates so that it will not boomerang to hamper mental health. The human resources unit should also intermittently organize workshop, training, and employee-assisted programs for younger and lower grade employees on adaptive mechanisms for reducing mental health challenges.

Keywords: workplace safety; workload; pay satisfaction; employee mental health

1. Introduction

Mental health is a vital factor of health, which could have major impacts on individuals, families, and communities. Health, generally, is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (WHO, 2014). Mental health, in particular, is a state of well-being whereby an individual is cognizant of his/her own abilities, can cope with normal stresses of life, work efficiently and is able to positively impact own community (WHO, 2022). The significance of employees' mental health in enhancing workplace productivity cannot be overruled. Studies (Lu et al., 2022; Paliga, 2023) have shown that mental

health conditions can have significant impact on employees' well-being, leading to a range of negative outcomes such as reduced productivity, increased absenteeism, and impaired quality of life. Mental health covers psychological states like depression, anxiety and stress (Ejoke et al., 2023; Lovibond, 1995), and has become a growing concern in the workplace, in recent years.

Depression, a component of mental health, is an emotional state, characterized by persistent feelings of sadness, hopelessness, guilt and reduced ability to enjoy life (Siegrist and Marmot, 2006). Anxiety is a condition, characterized by excessive and persistent worry, fear, and apprehension. Stress is a state of psychological and physiological tension caused by perceived external or internal threats and job demands, leading to feeling overwhelmed, irritable, and coping with difficulty. The mental health of employees is a key component of organizational success, believed to be influenced by a number of variables or factors, including workplace safety, workload, and pay satisfaction.

Workplace safety refers to an employee's perception of the level of safety and security within their workplace. This includes the measures employers take to minimize or guard against fatal incidents or accidents at work. Hayes et al. (1998) identified five dimensions of workplace safety, including job safety, co-worker safety, supervisor safety, management safety, and safety programs. Job safety refers to perceived physical and psychological safety conditions within a workplace that protect employees from occupational hazards and minimize the risk of accidents or injuries. Co-worker safety refers to the extent to which individuals believe that their colleagues are protected from hazards, adhere to safety protocols, and contribute to a safe working environment. Supervisor safety relates to the sense of security and wellbeing that employees have with respect to their managers or supervisors at work, covering employee thoughts about how managers put safety first and encourage it, give them the resources and assistance they need, and clearly explain and implement safety rules. Management safety involves the belief that the management team prioritizes and supports a safe working environment, establishes effective safety policies and procedures, and fosters a culture of safety within the organization. Perceived safety program refers to the belief that safety programs address potential hazards, provide necessary training and resources for employees, and actively promote a culture of safety within the organization.

Workload is another possible predictor of employee mental health, and refers to the amount of work and responsibilities that an employees are expected to handle within their role. Pay satisfaction, a third predictor variable, is the subjective attitude of staff to salary or wage, including feelings for payment of fair wages, which is a complex process that individuals and others utilize to compare work settings (Xu, 2016).

Statement of the problem

The World Health Organization (WHO) has estimated that 20% of Nigerians, or around 40 million people, are affected by mental illness (Coker, 2024). Research has further implicated that of the 174 million Nigerian population, 64 million suffered from one form of mental illness or the other (Olaniyan, 2023). The most prevalent

mental illnesses reported among Nigerians include depression and anxiety disorders. More specifically, it is reported that in 2017, about 7 million Nigerians (3.9% of the population) had depressive disorders, and 4.9 million Nigerians (2.7%) had anxiety disorders (Coker, 2024). In organizations, mental health issues are among the costliest burdens faced in both the developed and developing countries (Dimoff and Kelloway, 2019; Jansson and Gunnarsson, 2018).

A report published by the Mental Health Leadership and Advocacy Program (2012) presents the prevalence rate of workplace mental illness in Nigeria as within the range of 30%–50%. The statistics presented, thus, connotes that mental health is a complex social and psychological issue that has critical issue for human resources managers and the workplace entirely. Psychological distress, characterized by mental and physical symptoms, is associated with a state of emotional suffering (APA, 2020), with negative consequences to both employees and employers, such as decreased work engagement, increased sickness leave, as well as higher absenteeism and presenteeism (Chan et al., 2020; Wee et al., 2019).

In recognizing the need to reduce mental disorder, human resources personnel in many organizations are implementing mental health services for their employees to facilitate better health (Dimoff and Kelloway, 2019). But it is not clear if they bother to research on the factors that predispose employees to mental health challenges. Because organizations differ, it is likely that the predictors of mental health issues in one organization would differ from another. It is on this note that the present research seeks to identify the predictors of mental health state among employees in a non-governmental health-related organization.

Research questions:

- 1) Will workplace safety have significant influence on employee mental health?
- 2) Will workload have significant influence on employee mental health?
- 3) Will pay satisfaction have significant influence on employee mental health?
- 4) Will workplace safety, workload and pay satisfaction have significant joint influence on employee mental health?

2. Literature review

2.1. Theoretical review

Some theories, explaining the relationship between work environmental factors and mental health, are presented.

Ryff's model of psychological well-being

Ryff (1995) proposed a theory of psychological well-being, and posits the key components of wellbeing as self-acceptance, positive relationships with others, autonomy, environmental mastery, purpose in life, and personal growth. Ryff (2018) believes that any person who lacks these components of psychological well-being can create psychological manifestations of mental health issues like depression, anxiety, and addictive behaviors. Ryff (2018) believes that these dimensions of well-being are universal, even though their expression may be culturally dependent. The theory identified individual variables of importance in mental health problems, without regard to the environmental factors. The present study therefore seeks to study how

some environmental factors like workplace safety, workload and pay could predict employee mental health.

2.2. Theory of subjective well-being

Subjective well-being (SWB) theories explain well-being, as individual's current evaluation of his/her happiness (Schwartz and Strack, 1999). Subjective wellbeing authors identified its correlates and determinants, and classified them in six broad groups, including personality factors, contextual and situational factors, demographic factors, institutional factors, environmental factors, and economic factors. The predictor variables in the present study align more with the contextual and situational factors, and data are based on self-report from the participants.

Job-demand resource (JD-R) model

Demerouti (2001) defined job demands as those physical, social, or organizational aspects of the job that require sustained physical or mental effort and are therefore associated with certain physiological and psychological costs, like mental health of employees. Examples of job demands are work overload, heavy lifting, interpersonal conflict, and job insecurity. The JD-R model was first published, to understand the antecedents of burnout, with the assumption that when job demands are high, additional effort must be exerted to achieve the work goals and to prevent decreasing performance; this eventually stresses the employee. The state of sustained activation gradually exhausts the employee physically and/or mentally (Knardahl and Ursin, 2015), leading to employee mental health issues.

Three years after the introduction of the JD-R model, Schaufeli and Bakker (2004) revised the model. Analogous to the early JD-R model, the revised model assumes that burnout results from high job demands and poor job resources. It is believed that burnout will lead to health problems, such as depression, cardiovascular disease, or psychosomatic complaints (Melamed et al., 2006).

2.3. Equity theory

The proposition of poor job resources in the revised JD-R model prompted the necessity for another theory; the equity theory. The theory (Huseman et al., 2017), explains how a person perceives fairness in regard to social relationships. The theory presupposes that during a social exchange, a person identifies the amount of input gained from a relationship, compared to the output, as well as how much effort another person puts forth. If an employee feels underpaid, he/she would be dissatisfied and therefore becomes hostile towards the organization and co-workers, which may ultimately result to lack of motivation, low performance, and consequent mental health problems.

2.4. Empirical review

2.4.1. Perceived workplace safety and mental health

Nigeria, as a member of the United Nations, has adopted the conventions and recommendations of the International Labor Organization (ILO). In Nigeria's labor law, one of the requirements of the employer is to provide a safe place for employees to work (Flippo, 1984; Somers and Somers, 1984). Consequently, studies have been

carried out to unravel the link between workplace safety and mental health or well-being of employees, because workplace safety has functional role with the mental health of employees (Janssen and Gunnarsson, 2018).

Olaoye and Bello (2024) reported a survey in Nigeria that explored the key issues surrounding the mental health of Nigerian workers. The survey centered on perception of mental health support in different workplaces, the challenges, and the need for change. The survey found that 98.3% of respondents value their mental health. Many reported that their work is mentally exhausting, with 63.3% experiencing burnout, 65% struggling with anxiety, 33.3% deal with depression, while 25% face workplace bullying. Healthcare workers, who care for others, reported suffering from burnout, anxiety and post-traumatic stress disorder, stressing the need to limit work hours and the number of patients they attend to. The study simply investigated the prevalence of perceived mental health issues among employees, but did not identify possible predictors of mental health challenges among employees.

Research on workplace hazards and their relationship to work-related stress and health has focused on both physical (EU-OSHA, 2010) and psychosocial risks (EU-OSHA, 2010; WHO, 2010). Cox et al. (2000) reported that physical hazards reflect on the brain and their unpleasantness can give rise to the experience of stress. There is also strong evidence of an association between work-related health complaints and exposure to psychosocial risks due to poor workplace safety practices (Cox et al., 2000). A meta-analysis (2004–2005) suggested that poor workplace safety is associated with psychological disorders, such as depression and anxiety (Stansfeld and Candy, 2016). This report is more of a secondary data source, not a primary data source. Nkporbu and Douglas (2016) conducted a study among staffers of a University in Nigeria, wherein results were presented through descriptive and analytical methods. The study revealed that work place bullying was common and verbal abuse was the most prevalent (43.9%), followed by assigning meaningless tasks unrelated to the employee's job (41.2%). Among the risk factors capable of making a worker vulnerable to work place bullying are work load (98.2%), as the most prevalent risk factor perceived by the respondents, followed by home-work interface (82.0%), lack of possibilities to advance (70.1%), and interpersonal relationship (64.0%). The research has limitations in terms of data based on descriptive statistics only. It is very much likely that a research that accommodates inferential statistics would be more informative.

To develop an intervention framework for the prevention and mitigation of mental ill-health among workers in a construction industry in Nigeria, Nwaogu (2022) conducted a mixed method research, where a range of validated psychometric instruments were used for data collection. Logistic regression deduced that the prevalence rates of depression, anxiety, and suicidal ideation among supervisors were 55.1%, 14.8%, and 9.2%, respectively and 74.5%, 36.4%, and 14.6%, respectively, among tradesmen. Some work-related risk factors to mental health were discovered; this include work-home/life imbalance, lack of medical subsidies, and fear of failure. The study also relied more on descriptive statistics, with focus on prevalence of mental health challenges among workers. The present study is directed at employing research methods that would accommodate inferential statistics.

In a recent workplace wellness research conducted by Mental Health America (2023), it was discovered that 81% of workers who feel mentally or emotionally safe in their workplace report that workplace stress does not affect their mental health. Workers in unhealthy work environments report higher rates of psychological distress that lead to mental health concerns. In a previous study conducted in 2022, 81% of workers report that workplace stress affects their mental health, compared to 78% of respondents in 2021. 73% of workers reported that workplace stress affects relationships with family, friends, or co-workers. The research reported is among a population that is different from those used in the present study; again the statistical emphasis is on inferential statistics.

2.4.2. Workload and mental health

Studies have shown that workload is one of the crucial factors influencing employee work behavior (Esmaeili et al., 2019; Ingusci et al., 2021). For instance, excessive workload has been demonstrated as having negative effects on work behaviors (Ingusci et al., 2019) such as reduced efficiency, low productivity, unsatisfactory job performance, and low mental health (Salisu et al., 2015; Uche et al., 2017). Workers who are exposed to excessive workload experience severe physical and psychological distress (Salin and Notelaers, 2020), with consequent adverse work behavior like absenteeism and job performance. While these studies revealed some meaningful findings on workload influence on employee mental health, the research environment might not completely align with workers in other clime, like Nigeria.

In recent time, there have been frequent retrenchment exercises in the Nigerian work setting; leading to fewer workers discharging the responsibilities that used to be for more people. This has created excessive workloads among surviving staff, as they experience long-term work overload. Consequently, Okon et al. (2021) conducted a study on work overload and how it affected the health of bank employees in Nigeria. The research participants were randomly selected survivors after retrenchment exercise, who were selected through the triangulation of purposive and simple random sampling techniques, while questionnaires and in-depth interviews (IDIs) were used to gather data. The quantitative data were analyzed using frequency percentage distribution, and content analysis for qualitative data. Findings revealed that employees in both old and new generation banks were continually experiencing heavier and persistent work overload which resulted in long-term stress. For instance, 83.6% of workers in one bank, 82.0% in another bank stated that they were experiencing stress situations due to persistent and heavier work overloads. They reported also that exposure to stress conditions triggered both physical and psychological health challenges such as headache, ulcer, depression, etc. The study concerns mental health as it relates to the banking industry, which is a service organization but the results might not be generalized to the health-related organizations.

Work overload is also a common issue faced by academic professionals. To understand the impact of work overload on the well-being of lecturers, Oderinde et al. (2024) examined the impact of work overload on the well-being of lecturers at a university in Nigeria. The study used a qualitative approach and collected data from secondary sources such as newspapers, academic journals, textbooks, theses, and

dissertations, among others. The findings indicate that the lecturers face high levels of work overload, which has significant negative impact on their physical and mental health. It was concluded that work overload has a detrimental effect on the well-being of workers. Although the research is on educational service organization, but cannot be generalized to health-related organization; hence a gap in the research. Moreover, the study was based on data from secondary sources; a primary source of data therefore need to be investigated.

Researching in security service organization in Nigeria, Adebusi (2023) investigated burnout among police cadets, simultaneously combining university education and police training. The antecedent influence of work overload, role conflict and emotional distress on burnout was studied among cadets. In a cross-sectional study, using regression path analysis, it was revealed that academic and police work overload led directly to burnout. In addition, academic work overload led indirectly to burnout through academic role conflict and emotional distress, whereas police work overload led to burnout through police-emotional distress. This study extends extant literature on the antecedents of burnout in police organizations, a service organization, but fails to fill the gap on mental health studies in health service organization.

However, some researchers have studied mental health among employees in health organizations, where workplace stressors have been examined as factors influencing employees' psychological and physical health. Bello et al. (2021) assessed job satisfaction and its relationship with the psychological health of health workers at a health service institution. There was a consistent weak negative correlation between job satisfaction scores and general health questionnaire. Thus, respondents who were satisfied with their job were less likely to have psychological morbidity. In the study only one job context factor was examined as predictor of mental health in a health-relation organization. It is expedient for other job-related factors affecting employee mental health in health-related organizations be studied, hence the present study examines three predictor variables

2.4.3. Pay satisfaction and mental health

Pay is an important factor in human resources management, covering economic rewards like wages and salaries, and non-wage economic payments like fringe benefits, indirect compensation or supplementary pay (Martocchio, 2011). Pay is the single largest cost for many organizations, aimed at reimbursing employees for their work and motivating them to better performance (Fapohunda, 2015). The happier people are with their jobs, the more satisfied they are (Odunlade, 2012), and the more likely they experience good mental health. In a systematic review of literature, Hunefeld et al. (2020) discovered that most studies consistently reported positive relationship between pay satisfaction and mental health. Pay satisfaction is reported to be positively correlated with employee well-being and mental health (Clark et al., 2009).

The World Health Organization (WHO) says that work can be a protective factor for mental health, but it can also contribute to worsening mental health. To examine the relationship between pay and mental health of mental healthcare workers, Sowunmi (2022) conducted a study at a Nigerian neuropsychiatric hospital. The researcher found that job satisfaction among respondents was low, and was associated

with a high level of psychological morbidity. Janyam (2011) investigated the dimension of job satisfaction that influences factory workers' mental health. A survey was conducted, evaluating 5 domains of job satisfaction, which include pay, work security, co-worker, supervision, and promotion opportunity. Frequency, mean, standard deviation, correlation and multiple linear regression analysis were used for the data analysis. The results revealed that 33.5% of the workers had poor mental health, with anxiety and insomnia at the highest level (29.5%), followed by somatic symptoms (28.9%), social dysfunction (23.7%), and severe depression (12.1%). The results from correlation analysis indicated increased overall job satisfaction and increased work security were related to better mental health, whereas lower overall job satisfaction and work security were related to poorer mental health. The present study would specifically examine pay, as it relates to employee mental health.

In other climes, Larson et al. (2015) examined organizational workers in Canada and found that pay satisfaction had significant influence on mental health. Engels et al. (2005) also found that pay satisfaction plays significant role in mental health of workers in Slovenia. Kleiman and Liu (2013) investigated the relationship between pay satisfaction and mental health among young working adults in Wales, and found significant positive relationship. Kleiman and Riskind (2012) examined organizational workers in Slovakia and reported that pay satisfaction had significant influence on mental health.

From the reviews on the relationship between pay satisfaction and mental health and psychological wellbeing, there seems to be consistent findings in the positive relationship between the variables. Studies reviewed cut across different countries, adopting cross-sectional or ex-post facto research design, and using systematic, cluster, and random sampling techniques. However, the present study conducted in Nigeria is expected to have a different outlook, due to the economic downturn pervading the country and the organizations, as at the time the research was conducted.

Hypotheses

- 1) Workplace safety (job, co-worker, supervisor, management, and practice safety) will significantly predict employee mental health.
- 2) Workload will significantly predict employee mental health.
- 3) Pay satisfaction will significantly predict employee mental health.
- 4) Workplace safety, workload and pay satisfaction will jointly predict employee mental health, with demographic variables controlled.

3. Methods

3.1. Research design

This study adopted cross-sectional ex-post facto design, as the variables studied were not subjected to any manipulation and were collected across groups in a single study. The independent variables are perceived workplace safety, workload, and pay satisfaction, while the dependent variable is employee mental health.

3.2. Setting

The study was conducted in an indigenous health-related not-for-profit/non-governmental Organization (NGO). The organization has her offices across six states

in Nigeria, but covers 20 States of the Country; providing innovative and high impact programs for improved health and well-being of individuals and families.

3.3. Participants

Data were gathered from 258 staff, with inclusion criterion that participants must be employees of the organization. Thus, trainee health practitioners and those on internship were excluded. More of the respondents (150; 58.1%) were females, and the others (108; 41.9%) males, with ages ranging between 19 and 64 years. On educational qualification, 124 (41%) were university degree/HND holders, 99 (38.4%) postgraduate certificate holders, 20 (7.8%) ND/NCE certificate holders, and 9 (3.5%) had other qualifications. On family background, 200 (77.5%) were from monogamous families, and others (58, 22.5%) from 256 polygamous families.

3.4. Instruments

A questionnaire, consisting of five (5) sections, was used for data collection. Section A covered the demographic characteristics, including gender, age, religion, educational qualification, family background, and job status. Section B measured the psychological health of employees, comprising depression, anxiety, and stress (DASS). The Depression Anxiety Stress Scale (DASS) is a self-report questionnaire developed by Lovibond and Lovibond (in 1995 to assess the severity of symptoms of depression, anxiety, and stress, each having 14 items. The original version of the scale has 42 items, while the brief version has 21 items; the higher the score, the poorer the mental health state. The Depression sub-scale assesses dysphoria, hopelessness, devaluation of life, self-depreciation, lack of interest/involvement, anhedonia, and inertia. The Anxiety sub-scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The Stress sub-scale assesses difficulty in relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive and impatient.

Scores of Depression, Anxiety and Stress are calculated by summing the scores for relevant items. The depression sample items include ‘I felt that I had nothing to look forward to’; ‘I felt that I had lost interest in just about everything’ and ‘I felt I wasn’t worth much as a person’. For anxiety, ‘I had a feeling of shakiness (e.g. legs going to give way)’; ‘I experienced breathing difficulty’ and ‘I felt scared without any good reason’. For stress scale, ‘I found it difficult to relax’, ‘I found it difficult to relax’ and ‘I felt that I was rather touchy’. Responses ranged from 0 (did not apply to me at all) to 3 (applied to me very much/most of the time). The scale developer reported reliability coefficient of 0.82 for Depression, Anxiety (0.76) and stress (0.78).

Preliminary evidence suggested that the DASS possesses adequate convergent and discriminant validity (Lovibond and Lovibond, 1995). A large student sample ($N = 717$) was administered the Beck Depression Inventory (BDI), the Beck Anxiety Inventory (BAI), and the DASS. The BAI and DASS anxiety scale were highly correlated ($r = 0.81$), as well as the BDI and DASS depression scale ($r = 0.74$). However, between construct correlations were substantially lower ($r = 0.54$ for DASS depression and BAI; $r = 0.58$ for DASS anxiety and BDI). Antony et al. (1998) confirmed that the DASS is a reliable and valid method of assessing features of depression, anxiety, and tension-stress in both clinical and nonclinical groups. The psychometric properties of the DASS and normative data for the DASS are described

in detail in the DASS manual. (PsycTests Database Record (c) 2024 APA, all rights reserved).

In the present study, the alpha coefficients are 0.91, 0.89, and 0.91 respectively for Depression, 277 Anxiety and stress, and 0.90 for the entire mental health scale. The workplace safety scale was developed by Hayes et al., (1998) with 50 items, requesting employees to rate how much safety practices is put in place for them. The instruction to respondents was: “Think about the people you work with. Do you agree or disagree that each of the following words or phrases describes these people?” Circle one answer for each statement using the scale at the top of the page. The scale has five (5) dimensions; job safety, co-worker safety, supervisor safety, management safety, and safety programs. Participants rating was on a Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Example of job safety items include ‘Could get hurt easily,’ ‘Fear for health,’ ‘Chance of death’. On Co-worker items, examples are, ‘Ignore safety rules,’ ‘Don’t care about others’ safety,’ ‘Follow safety rules’. ‘Pay attention to safety rules’. On supervisor safety items examples are, ‘Praises safe work behaviors,’ ‘Encourages safe behaviors,’ ‘Keep workers informed of safety rules’. On management safety practices, items examples include, ‘Provides enough safety training programs,’ ‘Conducts frequent safety inspections,’ ‘Investigates safety problems quickly’. On safety program (policies) the sample items include, ‘Helps prevent accidents,’ ‘Effective in reducing injuries,’ ‘Does not work’.

The authors reported internal consistency for job safety (0.71), co-worker safety (0.78), supervisor safety (0.81), management safety (0.77) and safety programs (0.87). In the present study, the internal consistencies obtained include job safety (0.89), co-worker safety (0.72), supervisor safety (0.93), management safety (0.93) and safety programs (0.92).

Perceived workload was measured using the perceived workload scale developed by Braarud (2001). The scale measured the extent to which employees experience high job role and demands, with response pattern ranging as Very low (1), Low (2), Somewhat low (3), Moderate (4), Somewhat high (5), High (6) and Very high (7). Examples of the items are ‘Mental demand,’ ‘Physical demand,’ ‘Temporal demand’. The author reported an internal consistency of 0.82, and for the present study it is 0.74, with the full-scale reliability as 0.77.

The pay satisfaction scale is an 18-item scale developed by Judge and Welbourne (1993), to measure the extent employees are satisfied with the monetary reward received, in form of salary or wage, on a daily or monthly basis. The response format ranged as; Extremely Satisfied (ES), Satisfied (S), Moderate Satisfaction (MS), Not Satisfied (NS). The higher the score, the higher the satisfaction with the pay. Examples of items include, ‘Information the company gives about pay are issues of concern to me’ ‘The information the company gives about pay are issues of concern to me,’ ‘Influence my supervisor has over my pay’. The author reported a split-half reliability coefficient of 0.67, and an internal consistency of 0.91, while for the present study an internal consistency of 0.96, and full-scale reliability of 0.79 is reported.

3.5. Procedure

3.5.1. Sampling technique

The study adopted online survey method for data collection. Permission was sought from the management of the organization and each employee was given the liberty to participate, or not to participate. All employees in the purposively selected organization received email message introducing the research, and requesting for voluntary participation. Those willing to participate were requested to fill a consent form and return through their email. Subsequently, those willing to participate were sent a survey link, using the existing database in the organization. The organization has a total of nine (9) departments and each department has at least 50 employees.

3.5.2. Ethical considerations

The research proposal was first submitted to an Ethical Review Board of the university where the authors are affiliated. After due assessment and approval granted, the modified version of the research proposal was submitted to the management of the organization where the study was conducted; for approval. Some modifications were suggested for the implementation of the study, on the basis for which the research was approved for execution. Further ethical issues were considered as individuals who voluntarily participated were still encouraged to discontinue if they were not comfortable with answering the questionnaire items; such were excluded from the study. Similarly, those who skipped 95% of the items in the questionnaire were excluded from the analysis. The benefits of the research was centered on the disclosure of the findings from the study to the organization management, for possible human resource actions. The participants were assured of confidentiality of their responses and no divulging of their personal information was made to a third party.

3.5.3. Statistical analysis

Both descriptive and inferential statistics were used in analyzing the data. Simple frequencies and percentages were used on the demographic variables. Hypothesis 1 to 3 were tested with linear and standard multiple regression analyses, while the fourth hypothesis was tested using hierarchical regression analysis.

4. Results

Table 1. Zero-order correlation showing the relationship among the predictor variables and mental health state (depression, anxiety and stress).

SN	Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1	Depression	3.51	5.24											
2	Anxiety	3.97	4.96	0.86**										
3	Stress	6.34	6.49	0.85**	0.83**									
4	Ment. Health	13.82	15.81	0.95**	0.94**	0.95**								
5	Job safety	18.65	7.08	0.45**	0.36**	0.44**	-0.44**							
6	Cow. safety	26.76	3.53	-0.22**	-0.20**	-0.17**	-0.20**	-0.18**						
7	Supv safety	37.92	6.76	-0.20**	-0.22**	-0.23**	-0.23**	-0.16**	0.50**	-				
8	Mana safety	30.72	5.63	-0.14*	-0.16*	-0.22**	-0.19**	-0.29**	0.43**	0.69**	-			
9	Safety prog	23.32	4.45	-0.18**	-0.15*	-0.12	-0.15*	-0.18**	0.53**	0.60**	0.63**	-		
10	Workload	24.59	4.50	0.05	0.06	0.14*	0.09	0.10	0.06	0.03	0.07	0.15*	-	
11	Pay satis.	31.68	10.90	-0.13*	-0.16*	-0.21**	-0.18**	-0.16*	0.13*	0.23**	0.22**	0.14*	-0.20**	-

* $p < 0.05$; ** $p < 0.01$.

The data collected from 258 respondents were analyzed and the results are presented. **Table 1** presents the inter-correlation results of the variables studied, and their sub-scales.

4.1. Inter-correlation among the variables

Table 1 shows that depression is positively correlated with anxiety ($r = 0.86$; $p < 0.01$) and stress ($r = 0.85$; $p < 0.01$), and anxiety is significantly correlated with stress ($r = 0.83$; $p < 0.01$). The significant positive inter-correlations among the three sub-scales of mental health justifies the use of their composite score for mental health (Ehigie, 2005). Each of the components also correlated significantly with mental health, with correlation coefficients as 0.95 (depression), 0.94 (anxiety), and 0.95 (stress) at $p < 0.01$; this justifies the internal consistency of the mental health scale.

Mental health correlated negatively with job safety ($r = -0.44$; $p < 0.01$), co-worker safety ($r = -0.20$; $p < 0.01$), supervisor safety ($r = -0.23$; $p < 0.01$), management safety ($r = -0.19$; $p < 0.01$), safety programs ($r = -0.15$; $p < 0.05$) and pay satisfaction ($r = -0.18$; $p < 0.01$), and with workload there is no significant relationship ($r = 0.09$; $p > 0.05$). This means that the higher the perceived job safety, co-worker safety, supervisor safety, management safety, safety programs and pay satisfaction, the lower the reported mental health challenges. However, workload is not significantly related to mental health.

4.2. Hypotheses testing

Standard multiple regression analysis was used to test the first hypothesis which stated that workplace safety will significantly predict mental health; the results are presented in **Table 2**.

Table 2. Multiple regression analysis of mental health on workplace safety.

Predictors	β	t	p	R	R^2	F	p
Job safety	-0.43	-7.38	< 0.01				
Co-worker safety	-0.08	-1.17	> 0.05				
Supervisor safety	-0.20	-2.41	< 0.05	0.48	0.23	15.08	< 0.01
Management safety	0.09	1.08	> 0.05				
Safety program	0.02	0.29	> 0.05				

The components of workplace safety (Job, co-worker, supervisor, management, and safety program) jointly predicted mental health [$R = 0.48$; $R^2 = 0.23$; $F(5, 252) = 15.08$; $p < 0.01$], accounting for 23% variance in mental health. However, only job safety and supervisor safety were significant independent predictors, showing that the higher the perceived job safety ($\beta = -0.43$; $t = -7.38$; $p < 0.01$), and the higher the perceived supervisor safety ($\beta = -0.20$; $t = -2.41$; $p < 0.05$), the lower the mental health issues reported. Linear regression analysis was used to test the second hypothesis that workload will significantly predict employee mental health, and the result is presented on **Table 3**. It is revealed that workload is not a significant predictor of mental health $F(1, 256) = 2.04$; $R = 0.09$, $R^2 = 0.01$; $p > 0.05$].

Table 3. Linear regression showing the influence of workload on mental health.

Predictor	β	<i>T</i>	<i>p</i>	<i>F</i>	<i>R</i>	<i>R</i> ²	<i>p</i>
Workload	0.09	1.43	> 0.05	2.04	0.09	0.01	> 0.05

Using linear regression analysis, the third hypothesis stating that pay satisfaction would significantly predict mental health of the employees was tested, and the results are presented in **Table 4**. It is revealed that pay satisfaction significantly predicted mental health status [$F(1, 256) = 8.29$; $R = 0.18$, $R^2 = 0.03$; $p < 0.05$], accounting for 3% variance in mental health; the higher the pay satisfaction, the lower the level of mental health.

Table 4. Linear regression showing the regression of mental health on pay satisfaction.

Predictor	β	<i>T</i>	<i>p</i>	<i>F</i>	<i>R</i>	<i>R</i> ²	<i>p</i>
Pay satisfaction	−0.18	−2.88	< 0.05	8.29	0.18	0.03	< 0.05

To test the fourth hypothesis that workplace safety, workload and pay satisfaction will jointly predict mental health while controlling demographic variables, the hierarchical regression analysis was used. The results are presented in **Table 5**. In model 1, when the demographic variables were introduced into the regression, gender, age, educational qualification and job status were significant joint predictors of mental health [$R = 0.20$; $R^2 = 0.04$; $F(4, 253) = 2.68$; $p < 0.05$], accounting for about 4% variance in mental health. However, only age ($\beta = -0.14$; $t = -2.11$; $p < 0.05$) had significant independent influence on mental health, showing that the older a worker the lower the reported mental health issues. When workplace safety was added to the demographic variables, both variables jointly accounted for 27% variance in mental health [$R = 0.52$; $R^2 = 0.27$; $F(6, 251) = 10.24$; $p < 0.01$]. Among the demographic variables, only job status ($\beta = -0.10$; $t = -1.48$; $p > 0.05$) contributed significantly while age was suppressed by the presence of perceived workplace safety variables, thus, job status was enhanced, showing that the higher the job placement the lower the mental health challenges reported.

Table 5. Summary of hierarchical multiple regression analysis of the incremental influence of workplace safety, workload and pay satisfaction on mental health.

Model	Predictors	β	<i>t</i>	<i>p</i>	<i>R</i>	<i>R</i> ²	<i>R</i> ² Change	<i>F</i>	<i>p</i>
Model 1	Gender	−0.01	−0.19	> 0.05	0.20	0.04	0.04	2.68	< 0.05
	Age	−0.14	−2.11	< 0.05					
	Educational qual	−0.06	−0.93	> 0.05					
	Job status	−0.10	−1.48	> 0.05					

Table 5. (Continued).

Model	Predictors	β	t	p	R	R^2	R^2 Change	F	p
Model 2	Gender	−0.01	−0.11	> 0.05	0.52	0.27	0.23	10.24	< 0.01
	Age	−0.07	−1.21	> 0.05					
	Educational qual	0.01	0.14	> 0.05					
	Job status	−0.18	−2.97	< 0.05					
	Job safety	−0.42	−7.16	< 0.01					
	Co-worker safety	−0.11	−1.62	> 0.05					
	Supervisor safety	−0.24	−2.91	< 0.05					
	Management safety	0.10	1.14	> 0.05					
	Safety program	0.06	0.74	> 0.05					
Model 3	Gender	−0.01	−0.12	> 0.05	0.52	0.27	0.00	9.19	< 0.01
	Age	−0.07	−1.22	> 0.05					
	Educational qual	0.01	0.13	> 0.05					
	Job status	−0.17	−2.84	< 0.05					
	Job safety	−0.42	−7.03	< 0.01					
	Co-worker safety	−0.11	−1.61	> 0.05					
	Supervisor safety	−0.24	−2.85	< 0.05					
	Management safety	0.10	1.12	> 0.05					
	Safety program	0.05	0.68	> 0.05					
	Workload	0.02	0.31	> 0.05					
Model 4	Gender	−0.01	−0.20	> 0.05	0.53	0.28	0.01	8.60	< 0.01
	Age	−0.08	−1.36	> 0.05					
	Educational qual	0.03	0.43	> 0.05					
	Job status	−0.17	−2.79	< 0.05					
	Job safety	−0.41	−6.97	< 0.01					
	Co-worker safety	−0.11	−1.62	> 0.05					
	Supervisor safety	−0.23	−2.68	< 0.05					
	Management safety	0.10	1.23	> 0.05					
	Safety program	0.06	0.71	> 0.05					
	Workload	0.00	−0.01	> 0.05					
	Pay satisfaction	−0.09	−1.50	> 0.05					

** $p < 0.01$; * $p < 0.05$.

Among the workplace safety factors, job safety ($\beta = -0.42$; $t = -7.16$; $p < 0.01$) and supervisor safety ($\beta = -0.24$; $t = -2.92$; $p < 0.05$) were the only significant independent predictors of employee mental health. Workplace safety accounted for 23% change in variance in mental health ($\Delta R^2 = 0.23$; $p < 0.01$). In model three when workload was added to the demographic variables and workplace safety, all the variables significantly accounted for 27% variance in mental health [$R = 0.52$; $R^2 = 0.27$; $F(7, 250) = 9.19$; $p < 0.01$]; however, only job status ($\beta = -0.17$; $t = -2.84$; $P < 0.05$), job safety ($\beta = -0.42$; $t = -7.03$; $p < 0.01$) and supervisor safety ($\beta = -0.24$; $t = -2.85$; $P < 0.01$) had significant independent influence. The inclusion of workload had no significant change in mental health variance ($\Delta R^2 = 0.00$; $p > 0.01$).

In model four, when pay satisfaction was added to the demographic variables, workplace safety and workload, all the variables accounted for 28% variance in mental health [$R = 0.53$; $R^2 = 0.28$; $F(8, 249) = 8.60$; $p < 0.01$], but only job status ($\beta = -0.17$; $t = -2.79$; $P < 0.05$), job safety ($\beta = -0.41$; $t = -6.97$; $P < 0.01$), and supervisor safety ($\beta = -0.23$; $t = -2.68$; $P < 0.05$) had significant independent influence. The inclusion of pay satisfaction had no significant change mental health ($\Delta R^2 = 0.01$; $p > 0.01$). In both models 3 and 4, job status, perceived job safety, and supervisor safety had negative influence in the prediction; meaning that the higher the job status, perceived 387 job safety and supervisory safety, the lower the mental health state.

5. Discussion

The mental health state of employees is a key component of organizational success, which could be influenced by a number of factors, including workplace safety, workload and pay satisfaction, as examined in this study. Employee mental health has been an area of growing concern in recent years. Studies have shown that individuals' well-being and mental health can lead to a range of negative outcomes, such as reduced productivity, increased absenteeism, and impaired quality of life (Lu et al., 2022; Paliga, 2023). It is to this effect that the present study examined perceived workplace safety, workload and pay satisfaction as predictors of mental health, among the staff of a non-profit health-related organization in Nigeria. On the first hypothesis, it was discovered that workplace safety (Job, co-worker, supervisor, management, and safety program) were significant joint predictors of mental health, but only job safety and supervisor safety contributed significantly.

The finding revealed that a safer work environment is associated with better mental health outcomes. This aligns with studies that demonstrated a strong link between workplace safety and mental well-being. Janssen and Drury (2013), for instance, revealed that workplace safety has functional role with mental health of employees. The finding also supports Cox et al.'s report on the psychological effect of workplace hazard on the mental health of employees. Jehanzeb et al. (2015) added that employee overall mental health is influenced by the perception of safety in the organization. Consequent upon the discovery that job safety contributes to overall mental health and well-being of organizational employees, Cabral et al. (2016) recommended improving the culture of safety by implementing existing safety practice procedures. Supervisor safety negatively predicted employee mental health. Supervisor safety is the sense of security and wellbeing that employees have with respect to their managers or supervisors at work. It is the degree to which subordinates think their managers put safety first and encourage it, giving them the resources and assistance, they need, and clearly explain and implement safety rules. The finding is that the higher the employees perceived their supervisors' safety, the lower the mental health issues reported.

Ryff's (2019) theory of psychological wellbeing explains that a person who lacks well-being can create psychological manifestations of mental health challenges like depression, anxiety, and stress. Menger et al. (2016) posited that managers sought to reduce workplace accidents in the organization to promote the overall safety and well-being of employees in the organization. It is likely that the safety measures supervisors

try to put in place for their subordinates are perceived positively by the subordinates, leading to reduced mental health issues. A subordinate who perceives supervisor's insistence on safety and its negative affect (Cheng and Lam, 2010), would experience less mental health issues. In the subjective wellbeing theory, Schwartz and Strack (1999) referred to wellbeing as the individual's current evaluation of his/her happiness. The finding of negative prediction of employee mental health resulting from job and supervisor safety is related to the meta-analysis results by Stansfeld and Candy (2016) who observed that particular combinations of high demands and low decision latitudes are associated with psychological disorders, such as depression and anxiety. Perceived workplace safety, in this case supervisor safety, has been found to be associated with low self-perceived health issues, and mental disorders (Siegrist and Marmot, 2006). But the results of the present study support these early findings. Hypothesis two stated that workload will significantly predict employee mental health; this was not supported in the present study. The findings support that of Salin and Notelaers (2020) who reported that workers exposed to excessive workload are likely to experience severe physical and psychological distress. Viotti et al. (2015) found significant relationship between work overload and employee psychological wellbeing. The job resource model (Demerouti, 2001) holds that job demands are physical, social, or organizational and require sustained physical or mental effort, which results in certain physiological and psychological costs.

The results of the present study show that where there is perceived job and supervisor safety, employee mental health issues are less. This aligns with Hockey's (1997) model of compensatory control. The influence of workload on mental health was not significant in the present context, probably because of the nature of the organization where the study was conducted. Employees are provided with supportive health care facilities at reduced cost, and because it is a health-related organization there are no much pressure on the workers that could degenerate to mental health challenge. The workers also undergo intermittent training on stress management; this might have informed the result obtained. The testing of hypothesis three showed that pay satisfaction is a significant predictor of employee mental health. This finding supports the research, showing that pay satisfaction is positively correlated with employee well-being and mental health (Clark et al., 2009). Pay satisfaction refers to the level of contentment employees feel regarding their compensation, including factors such as salary, benefits, and recognition for their work. When employees are satisfied with their pay, it can positively affect their overall job satisfaction and psychological well-being. The equity theory propounded that when employee perceives fairness in what they get, in terms of pay, it enhances their level of mental state stability (Huseman et al., 2017). It is possible therefore that the employees in the present research perceived equity in their pay, hence the positive relationship between pay satisfaction and mental health. The study further revealed that employees' satisfaction with their compensation has an impact on their mental well-being. The 451 happier people are with their jobs, the more satisfied they are said to be (Odunlade, 2012).

Hypothesis four stated that perceived workplace safety, workload and pay satisfaction will have significant incremental influence on employee mental health of employees. Although all the predictor variables jointly predicted employee mental

health, but only job status, job safety and supervisor safety contributed significantly in the prediction. The strength of significance of pay satisfaction was, however, suppressed by the other variables.

5.1. Implications of findings

The results of the joint prediction of perceived workplace safety, work load, and pay satisfaction on mental health implies that their combined influence is important in driving home a balanced mental health status of employees. The findings emphasize the need for organizational management to create a safe work environment, manage workload effectively, and ensure fair compensation to promote positive mental health outcomes in the organization. Strategies such as implementing safety protocols, workload management systems, and fair compensation structures can contribute to overall employee well-being.

The hierarchical regression results emphasize the importance of prioritizing workplace safety in organizations. Strategies such as implementing comprehensive safety policies, providing appropriate training, conducting regular risk assessments, and ensuring the physical security of employees can contribute to fostering a safer work environment. These measures not only protect employees from potential harm but also support their overall mental well-being. When employees perceive their workplace as safe, it can contribute to a sense of security, reduced stress levels, and improved overall mental health. The presence of workplace safety measures, like job safety, can directly impact mental health outcomes. For example, when employees feel protected from physical hazards, they are more likely to experience better mental health. Non-governmental organizations (NGOs) may face unique risks related to their work, such as exposure to violence, trauma, or hazardous conditions. Addressing and mitigating these risks through safety protocols and supportive measures can contribute to better mental health outcomes for employees. Supervisors are also encouraged not to be too vehement in their insistence on safety compliance by subordinates. They should as well receive training on how to introduce corrective measures for safety compliance.

5.2. Human resource management implications of findings

1) The study shows that employees of lower age and job status are more susceptible to mental health challenges than those of older age and higher status. The human resource management unit of work organizations should intermittently arrange workshop and training programs to enhance the psyche of the younger and junior employees on how to live a more healthy life, especially in overcoming the stress at work.

2) The result of significant influence of perceived job safety on mental health shows that the higher the perceived safety, the lower the mental health challenges faced by employees. Organizational management should put in place measures that could enhance the physical and psychological safety conditions within the workplace, and protect employees from occupational hazards and minimize the risk of accidents or injuries. Such human resource management action would help to enhance the

employees' perception of job safety, and thereby reduce 493 mental health challenges experienced by employees.

3) Supervisor safety is a significant predictor of mental health. This safety type relates to the sense of security and wellbeing that employees have with respect to their managers or supervisors at work, covering employee thoughts about how managers put safety first and encourage it, give them the resources and assistance they need, and clearly explain and implement safety rules. The human resource experts in an organization should devise programs whereby supervisors are trained on how to disseminate security related information to their subordinates so that it will be impactful in reducing mental health challenges of the employees.

5.3. Conclusions

- This study revealed that workplace safety is a significant predictor of employee mental health among employees of Non-governmental organizations. However, among all the components of workplace safety, only job safety and supervisor safety are significant independent predictors of employee mental health.
- Job status is also a significant predictor of mental health, in favor of higher status
- Workload is not a significant predictor of employee mental health.
- Pay satisfaction is a significant predictor of employee mental health.

5.4. Limitations of study and suggestions for future research

- The study findings are limited, as only employees in a non-governmental organization were the participants. It is suggested that a larger population could be examined, covering especially the public sector and other private sectors.
- A self-report questionnaire was used, which has the challenge of subjectivity. This is because self-report answers may be exaggerated by respondents, and they may not want to report certain occurrences about their organization, as they still remain employees in the organization. There may therefore be the presence of social desirability of the respondents, as their responses might have been a reflection of what they think would be expected of loyal workers. Other methods of data collection like the qualitative methods could be used to overcome the challenges of self-report research approach. By this, respondents are allowed to freely express themselves on the questions raised.
- In addition, the surveys were closed ended, thus limiting the responses of respondents to that specified alternative responses provided by the researcher. For future research, open-ended questions could be included in the questionnaire, for self-expressions.

Author contributions: Conceptualization, OAO and EBO; methodology, OAO and EBO; software, OAO; validation, OAO and EBO; data curation, OAO; writing-original draft preparation, OAO; writing-review and editing, EBO; visualization, OAO; supervision, EBO; project administration, OAO. All authors have read and agreed to the published version of the manuscript.

Conflict of interest: The authors declare no conflict of interest.

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Review

Succession planning in higher education: A systematic literature review (2012–2022)

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CITATION

Hoque KE, Zheng C. (2024). Succession planning in higher education: A systematic literature review (2012–2022). *Human Resources Management and Services*. 6(4): 3391. <https://doi.org/10.18282/hrms3391>

ARTICLE INFO

Received: 26 August 2024
Accepted: 30 October 2024
Available online: 7 November 2024

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Abstract: This research investigates the dynamic landscape of succession planning (SP) strategies in higher education, with a focus on synthesizing existing literature to guide improvements in presidential succession practices. The intense global competition in higher education has led to imbalances in the quantity and composition of potential successors, hindering institutions' rapid advancement and affecting their competitiveness on the global stage. The study addresses critical challenges such as attracting, retaining, and nurturing successors in key positions beyond material incentives. Employing a literature analysis methodology, the research comprehensively examines the existing body of literature related to succession planning, offering recommendations to promote stability in leadership, foster continuous talent development, and mitigate talent crises. The study evaluates the current state of succession planning in higher education, identifying issues and their root causes. It provides a summary and analysis of ongoing research efforts related to successor quality, team formation, and cultivation models. Despite advancements through national talent cultivation policies, persistent challenges like talent scarcity, the absence of gender-inclusive succession plans, a lack of originality, and inconsistent staff flow hinder progress. The research attributes these challenges to traditional personnel systems and university administrators. Proactive measures are proposed, including creating awareness of succession planning, advocating for personnel mechanism reform, establishing a comprehensive training system, and developing a scientifically-grounded succession plan. Though the study aims to contribute to leadership development and address pressing issues faced by higher education institutions, with only a limited number utilizing mixed techniques, it restricted the comprehensive inclusion of social context knowledge and evidence regarding the motivations, beliefs, and experiences of individuals in this investigation.

Keywords: succession planning; higher education; leadership development; talent cultivation; competitiveness

1. Introduction

The potential crisis of changing leadership and loss of institutional understanding that will diminish institutional effectiveness in higher education succession planning is not seen as a short-term problem (Eddy & Garza Mitchell, 2017). Therefore, formalized succession planning that addresses leadership shortages and organizational sustainability and provides a strategy for identifying long-term sustainability is imminent. In their review, Fusarelli et al. (2018) revealed how forward-thinking superintendents could collaborate with colleges and other institutions to address the leadership issues they face by developing long-term, strategic plans for leadership development that foster capacity for leadership and may result in notable improvements in student outcomes. Research suggests that succession planning

provides value in advancing higher education institutions' reassessment of recruitment and retention practices for future leaders (Ghazali et al., 2023). They recommended that higher education institutions need to document support to address leadership succession, promote quality improvement, and address cultural high-performance issues.

Several succession planning (SP) studies to assess the lack of SP at higher education institutions have been completed (Upadhyaya & Lele, 2022). Formal SP has been found in previous studies to suffer from lack of communication, lack of knowledge, gender inequality, lack of leadership, low priority, and lack of talent as barriers to establishing a formal succession plan (Bano et al., 2022). However, the lack of knowledge will have a higher impact on SP education as opposed to philosophy and strategy (Abd Rahman Ahmad et al., 2020). Aggressive SP will impact institutional success and growth, and research has shown that some academic institutions have developed succession plans that sweep away the loss of organizational knowledge caused by changes in expertise and leadership (Chapman, 2017). The American Association of Community Colleges (2021) sees the need to prepare preemptive actions to reduce leadership losses in higher education. Leaders of organizations may influence both parties through mechanisms of role creation and knowledge transfer through modeling, role creation, reflexive activities, processes, and insights (Areed et al., 2021). These activities are all part of the SP process to effectively identify the internal candidates who possess leadership competencies and provide opportunities for ongoing knowledge acquisition, sharing, and transfer.

Internal candidates must be chosen and trained as part of the SP process. The argument put up by proponents of choosing external candidates for succession is that leadership is a transferable skill and that competent internal candidates do not need to undergo leadership training (Farah et al., 2020). For academic internal leadership promotion, it may be based on an identified faculty member's identification through the development of his or her teaching abilities rather than one's leadership and management abilities. A faculty member selected for completion from administrative leadership using this lack of assurance would not be an effective leader (Griffith, 2012).

Another barrier to internal SP identified in academia is the inference that internal candidate commitments cannot always be retained. Whether higher education chooses internal or external successors is also controversial (Hillman & Baydoun, 2019). Few institutions of higher education prepare formal succession plans. The lack of effective SP at higher education institutions may limit organizational knowledge transfer as well as contemporaneous predictions of leadership shortages in terms of organizational effectiveness.

Research gap

Despite such realistic projections, gender parity in leadership and management positions remains a worldwide dilemma. There hasn't been a turning moment for diversity and inclusion in leadership, workplaces, and decision-making authority. For institutions, having unequal access to power has proven difficult (Gillard & Okonjo-Iweala, 2021). Professionals who want to hold leadership roles nevertheless face

several obstacles, notwithstanding the modest rate of progress. In business and industry, the leadership crisis has been a major topic of concern, and there hasn't been much effective planning to address the issue. These difficulties range from researching prospects, the dominant role of domesticity, and the absence of workplace policies to gender stereotypes and unsupportive laws (Keohane, 2020).

The United Nations established 17 Sustainable Development Goals (SDGs) for the period 2016–2030, with a focus on providing “women with equal access to education, health care, decent work, and representation in political and economic decision-making processes.” According to projections based on current trends, it will take 107 countries 99.5 years to close the average gender gap in the world, which is still 31.4% (World Economic Forum, 2020). The few studies that have looked into the problem of leadership crises in higher education hardly ever make connections between them and SP and gender inequities. For institutions, it might be difficult to fill open leadership posts due to the high turnover rates in academics (Ebberts et al., 2010).

Because most organizations are unable to create SP strategies or offer sufficient training for future employees who can take over leadership positions, the academic literature refers to this issue as a “leadership crisis” (Luzebetak, 2010). Traditional leadership theory continues to ignore and undervalue the feminist literature on the subject of leadership (Welde et al., 2019). The lack of qualified individuals in senior management positions makes it challenging for institutions to run their operations. Most institutions are unable to transmit the same work style model to new executives because of the mission and vision established by older senior leaders.

Some institutions frequently create new important positions, like heads of academic, administrative, student affairs, and information officers, to establish succession plans. These positions may be linked to senior management positions like associate directors, vice presidents, and executive directors to ensure efficient operations. It has not been thoroughly investigated in a variety of circumstances to what extent these new key positions offer chances to ensure gender equity in leadership positions.

There hasn't been any empirical research done on or description of the change and transformation agenda from the perspective of achieving gender parity in leadership roles. The scant study justifies more investigation in the context of institutional SP programs and mixed-gender participation in leadership roles. The concept of SP in higher education is still new, and academic research has scarcely touched on it (Alghofaily, 2019). Contrast this with SP in businesses and corporations, which have formal systems for evaluating and regulating plans along with research-based initiatives, strategic designs, and processes. Several recently developed study areas support succession planning, including higher education evaluation, employee performance reviews, and leadership development (Davies & Davies, 2010).

2. Research questions

A synthesis of the research that supports the understanding of the role of SP in higher education was used to review the literature on SP. It is found that in the international competitive dynamics of higher education, succession to higher

education institutions presents imbalances in the number and structure of dimensions that constrain the rapid development of higher education and affect the competitiveness of universities in the global education market. How to attract, retain, and cultivate university successors, especially those in key positions, and how to develop the potential of successors to the maximum through a series of other means in addition to material incentives to strengthen the construction of innovative teams and promote the development of disciplines have become important issues facing higher education.

With the implementation of the talent training policy, the training of university leaders has achieved obvious results, but some problems still exist, such as the low number of high-level talents, the lack of female succession planning, the lack of originality, and unreasonable staff mobility, which restrict the development of higher education. Current work is hardly addressing the scarcity of female SP in academia, especially in the unique context of describing organizational, cultural, and individual nuances that heterogeneously overwhelm performance. Based on these research gaps, the following questions are posed:

- What is the current status of SP in higher education?
- What are the challenges of introducing SP into higher education?
- What are the problems and causes of SP in higher education?
- What are the gender differences in the implementation of SP?

3. Methods

3.1. Search

In this paper, the author used Scopus, Web of Science, Google Scholar, and other foreign language literature search engines to search for SP in education, SP + higher education, and principal SP as the title of the search. A total of 18 core documents were screened in January 2023. Apart from the online literature, monographs are the least, which indicates a lack of systematicity in SP research. In addition, the keywords of SP research papers in descending order of occurrence are succession planning, succession principal, and SP in higher education. Currently, there are still relatively few core researchers on this topic, and there is a lack of sustained and in-depth attention to the issue of SP in higher education.

In the search provision step, a search string is used to access the chosen database and gather a variety of pertinent literature pieces. The number of papers that are accessible will be determined by running the search phrase against the chosen database, with the results appearing in **Figure 1**. The researcher's search criteria and intended outcomes will, however, affect the total number of publications considered in the study. The size and nature of the database utilized to hunt up relevant publications might also have an impact on the sample size of the analysis. To fine-tune the search terms to replicate the intended study objectives, a pilot literature search should be conducted before the actual systematic review search. A pilot search should be conducted before selecting the actual search engine to properly define the search keywords. For instance, during our pilot search, the results from the author's three database choices were adequate to infer the existence of a large number of pertinent

articles. The longer time frame, the use of larger search terms, and the fact that the outcomes from each database were independent all contributed to these. Only publications released between 2012 and 2022 were included in the article search.

Databases	Searching Stream and terms	No of articles	Date of acquisition
Scopus	Main searching terms-using doc title, abstract, and keywords (succession planning), (Principal Succession) Secondary searching terms: (SP and challenges), (Succession Planning and high education)	55	05/01/2023
Web of Science	Main searching terms-using doc title, (succession planning), Secondary searching terms: (high education)	98	05/01/2023
Google Scholar	Main searching terms-using doc title, (Succession Planning + higher education)	7	05/01/2023

Figure 1. Literature screening table.

3.2. Appraisal

The evaluation stage is where the chosen articles are compared to the goals of the review work. Study selection entails sifting through the chosen literature to find pertinent articles for the review. It involves two simple steps: (1) quality evaluation and (2) inclusion criteria-based study selection.

Study selection utilizing inclusion criteria: Papers that match the inclusion criteria are chosen for additional study and content analysis utilizing inclusion and exclusion criteria. The majority of the publications were excluded, including gray literature, extended abstracts, presentations, keynote speeches, review articles, and works written in languages other than English.

Figure 1 shows the beginning step of the selection process and the selection of pertinent literature, with 160 records discovered (7 from Google Scholar, which uses advanced search techniques), 98 from Web of Science, and 55 from Scopus. **Figure 2** shows how the number of works decreased to 70 after the exclusion of grey literature, longer abstracts, keynote addresses, non-English articles, publications that are difficult to get, and book chapters. After reading the abstract and topic, duplicate papers and publications on on-the-job training that lacked fresh information were manually eliminated. Finally, 18 publications continued to meet every inclusion requirement for the SLR work (**Figure 2**).

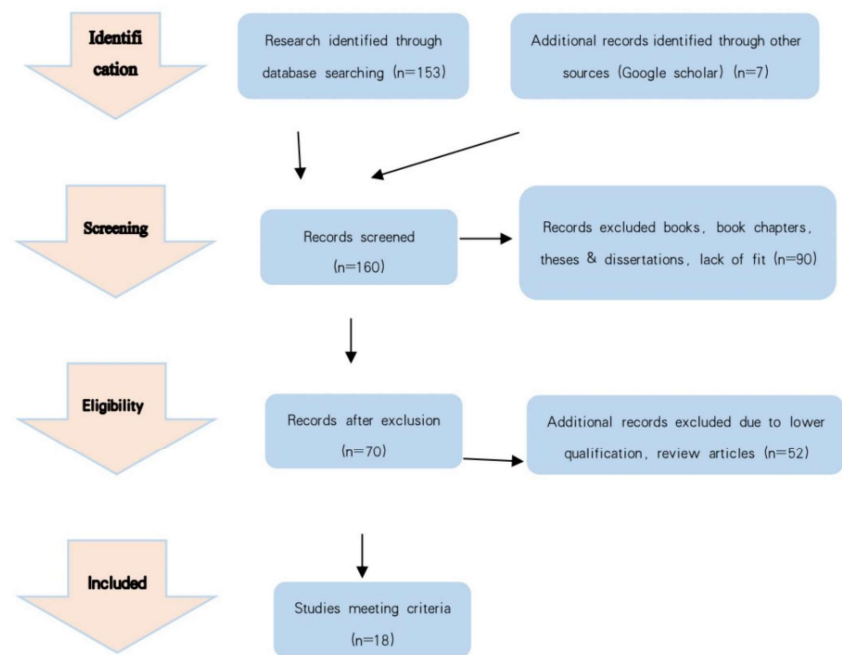


Figure 2. Data screening flow chart (Prisma).

For additional study, the complete list of relevant papers was obtained. 11.25% of the original articles in the databases made up the articles used for subsequent research. In contrast to Hoque et al. (2021) and Qi et al. (2020), which employed 0.7% and 2.8% of the original number of articles in the databases, respectively, this review effort used a larger sample size. The number of publications included in the analysis depends on the search criteria and the goals of the study. The size of the sample used for analysis depends on the quality and kinds of databases that are used to search publications (**Figure 3**). Additionally, the majority of research articles on the subjects were not open sources, which reduced the total number of published articles considered for additional evaluations.

Quality assessment:

- Each SLR was evaluated using the following criteria which are based on four quality assessment (QA) questions:
 - QA1. Are the review's inclusion and exclusion criteria described and appropriate?
 - QA2. Is the literature search likely to have covered all relevant studies on the topic?
 - QA3. Did the selected publication had blind reviewers that assess the quality/validity of the study?
 - QA4. Was the type of BL mentioned in the publication described adequately?

Figure 3. Criteria of quality assessment.

The same analytical procedures of looking for patterns in data, evaluating the synthesis's quality, and some sort of data transformation are used in all types of synthesis. combining data to respond to the review question (Thomas et al., 2012).

It was needed to sort the data into categories in order to prepare it for further analysis. **Figure 4** shows how we sorted the data into categories based on the iterative (Repetition of an action) description. data evaluation (Organization of the data into quantitative categories, descriptions, and narrative analysis).

No	Criteria	Categories considered	Justification
1	Year of publication	Between January 2012–Dec. 2022	Those studies before 2012 were discarded
2	Name of journal	-	To describe the distribution of the work
3	Study site	Name of the country	Geographic site
4. Types of data sources	-	Primary data	Data derived from sampling in the field (e.g., field data, surveys, or interviews or census data)
	-	Secondary data	Data types which were derived from other readily available information and not verified in the field (e.g., remote-sensed data, socioeconomic data, and mixed sources like databases like global statistics)
	-	Mixed data	Database (global statistics, e.g., map of carbon storage and FAO reports), bibliography, modeling, surveys, and field data.
	-	Look-up tables	Use of existing MES values from the literature
	-	Expert knowledge	Experts are invited to rank MES types based on their potential to provide specific ecosystem services to human beings
-	Method	Causal relationships	Incorporate existing knowledge to link with related ecosystem processes and the services to create a new proxy layer of the MES
-	-	Models	Employing field data of MES as response variables and proxies (e.g., biophysical data and information obtained from GIS) as explanatory variables.
-	The scale of the study site using Martínez-Harms and Balvanera [Ref]	-	-
-	Mode of assessment	-	-
-	Number of IST assessed	-	-
-	Purpose of publication	-	-
-	Difficulties mentioned	-	-

Figure 4. Synthesis criteria.

4. Analysis

Discussion and findings

Findings of the study have been reported based on the research questions

(a). Current status of SP in higher education

The results imply that there is a lack of a solid framework that institutions can employ for SP in higher education. In many areas, it is still unclear how to eliminate gender inequalities in women's roles in leadership positions. The traditional academic career path is still being followed by higher education institutions. As a result, current patterns should be modified to meet market needs.

There is a limited amount of research on SP practices in private institutions that describes academic SP, including definition, planning, and value proposition (Klein & Salk, 2013).

Without a succession plan in place, academic institutions would have a very difficult time attracting and keeping talent. This is a truth: higher education cannot change anytime it has to, but it must execute succession plans to build internal talent, despite the resulting absence of succession planning in higher education.

The necessity for staff career development is understood by higher education institutions, but it is unclear how to approach this problem strategically (Keller, 2018). A structured succession plan is in place in 32% of firms, according to the Society for Human Resource Management. However, improper SP implementation can result in a lack of motivation, high staff turnover, low employee morale, and decreased market competitiveness (Johnson et al., 2018). Higher education, in contrast, lacks long-term succession planning and qualified personnel to assist with designing succession plans. To be more precise, succession planning, when included in a business strategy, aids in the retention of skilled workers, adds value, better positions the organization to face future problems, boosts general employee engagement and productivity, and fosters fresh thinking and creativity. And it helps organizations grow, develop, and hold onto the people they need. SP in higher education is still essential to academic settings at this point, but the discipline needs a theoretical foundation on which to build concepts and a strong strategy for dealing with it. To cope with the fierce competition in the market, organizations are now focusing on how to attract, retain, and develop employees. To find the appropriate person for the right job at the right time and to develop high-potential talent, SP is the process of identifying and training potential successors for a specific level of management (Titzer et al., 2013). There is some foreign research on succession planning, some involving SP systems, and some guidance on the methods and steps needed to implement a succession plan and the elements that a successful succession plan should have.

The success of SP depends critically on an organization's chief executive officer or top managers (Singh et al., 2014). They should also keep in mind that succession management is a long-term process, an organizational effort that can never be replaced by any short-term commitment, and they should be patient enough not to favor those with similar educational backgrounds, early work experiences, and other experiences.

The form of SP varies greatly from company to company, depending on their strategic goals. A succession plan can be very simple, with a list of candidates and

those who have the potential to progress to higher management levels, or it can be very formalized, with a formal written document that includes succession systems for all levels of the organization. SP is a complex process that integrates a variety of factors. Implementing SP in management change suggests that the ideal succession plan should include the creation of a candidate database, a systematic approach to candidate selection, activities to develop candidate potential, and a development program. The main factors for a successful succession management plan are planning rigor and well-thought-out plans (Berns & Klarnier, 2017).

(b). Challenges of introducing SP into higher education

Academic leaders don't know about the succession plans or programs for their college or university, and they don't think their organization is ready for a leadership crisis, according to research on leadership development and succession planning. The private sector, in contrast to public higher education, has more flexibility in selecting and appointing leaders. Academic planning is an institutional value, while enterprise planning plays a dominant role in the structure (Dozier, 2013). In a higher education setting, grooming someone for a certain post is viewed as unequal and a violation of the institution's egalitarian ideals. Teachers in higher education describe the academic culture as inclusive, friendly, and open. However, professorships are frequently utilized as stepping stones to future leadership roles because leadership readiness requires various stakeholders to impose their decisions and take advantage of trust-based qualities. However, individuals who desire leadership positions claim that there are no clear paths for progression. In addition, a strong community makes the administrative process of higher education work. Research has demonstrated that these programs are frequently led by individuals rather than institutions, even though many university administrators have started to acknowledge the need to develop the next generation of leaders (Caldwell, 2007). In higher education, leadership takes both an organisational and personal form. In this context, selection committees and boards outside the department typically supervise and regulate succession decisions. The selecting committee has the full right to keep things going on the same path or alter it. To effectively lead higher education institutions in the current period and help them accomplish corporate goals, modern strategic leadership is essential. Old leadership techniques appear ineffective as a result (Kezar & Holcombe, 2017). The absence of teacher interest in volunteering for administrative posts and other similar positions is another factor contributing to the lack of SP in higher education. Additionally, there was a strong correlation between leaders' readiness and their age, years of leadership experience, and academic discipline background (Mohnot, 2019). However, studies on the effects of upcoming studies on the advancement of leadership in academic institutions. The nature and effects of leadership development programs in some innovative and emerging organizational settings need to be explored using a rigorous research methodology, especially for senior leadership styles in educational institutions (Dopson et al., 2019). Studies carried out in Arab nations reveal that women are rising to management and leadership positions as a result of governments' announcements of plans to promote gender equality (Sidani et al., 2015). Because of this, women continue to experience sociocultural challenges in relation to their status at work in organizations (Afiouni & Karam, 2014). There aren't enough institutions of

higher learning in Saudi Arabia. Lack of information and skills prevents women in Saudi Arabia from holding leadership roles (Abalkhail, 2017).

In general, in the case of university positions, the older generation retires, and new successors are created according to seniority. Many universities do not have succession plans at all, or succession plans have only a simple prototype and lack standardized management systems and processes. The so-called succession also only stops at the handover of positions and authority. A succession management plan is a systematic project to identify, track, and cultivate high-potential talents and to identify suitable candidates for key positions at the right time. It is a long-term process covering several human resource management activities such as selection, development, cultivation, and assessment of high-potential talents.

SP is a systematic project covering specific management modules such as selection, development, cultivation, and assessment of high-potential talents, so when formulating a succession needs list according to the higher education development plan, it is necessary to first assess the successor positions. The successor of the university is not only responsible for the management of the university but also for the organization and deployment of human, financial, and material resources and the coordination of interpersonal relations for the construction of the discipline. Therefore, only through a reasonable evaluation of the position (Keerio et al., 2022).

Therefore, only a reasonable assessment of the position can determine the competent characteristics of the successor, such as political quality, professional quality, learning ability, organizational and coordination ability, communication ability, leadership ability, innovation, scientific spirit, and social activity ability. In addition, the imperfection of the system of job evaluation affects to a certain extent the assessment of the quantity and quality of successor needs, which in turn affects the development, training, and assessment of successors (Ghazali et al., 2021). With the development and implementation of a high-quality talent cultivation plan by the Ministry of Education, the Ministry of Personnel, and other related departments, the competition for backbone personnel resources has been launched among universities. But compared with developing and cultivating high-potential talents, universities are more willing to introduce talents vigorously. The blind introduction of talents may lead to the situation of “attracting one but running away a bunch” and may not match well with the development of the university, resulting in the waste of high-level human resources. With the serious problem of losing core talents in universities, the lack of attention to high-potential talents not only leads to the loss of high-potential talents but also shows a fault in key positions (Weisblat, 2018).

It is a revolutionary leap in human resource management to establish a talent database when making succession plans, which requires the use of high technology for talent assessment and management, including the assessment and analysis of successor attributes, individual characteristics, the external environment, and other factors. In addition, the methods of succession competency assessment are not diverse enough, lack the support of expert teams, and are not scientific and effective (Phillips, 2019). For example, the organization’s performance appraisal system is used to determine the strengths and weaknesses of employees, or the psychological testing

method is used to assess employees' competencies, mostly requiring the Internet and computer systems.

(c). Problems and causes of SP in higher education

The main problem of the metabolism of the leadership team is to deal with the relationship between the successor and the predecessor, to complete the relay race, to grasp the principle of succession, and to complete the handover not only of positions and powers but also of experimental equipment, assistants, etc., and invisible knowledge and skills, interpersonal network, and social activity skills (Chia et al., 2021). At present, the lack of SP in some universities has led to the inability of the personnel in charge of key positions, especially the leaders, to gradually transfer the power, responsibilities, relationships, and business matters related to the positions in a planned manner. In some universities, the lack of planning for the handover between the successor and the predecessor has resulted in the inability of the successor to obtain the details of the predecessor's work, making it difficult to carry out the follow-up work, which not only affects the efficiency of work but may even lead to the waste of resources.

The lag between the management concept and the talent team-building concept in universities determines the development of a talent training plan and affects the existence of a succession plan. Under the conditions of the market economy, the international competition for higher education is intensifying, and high-level talents have become the core element of the competition of universities and even the competition for national comprehensive power (Sverdlik, 2012).

In this situation, the lack of talent competition consciousness among university management will lead to drawbacks in personnel management in terms of personnel plans, work targets, and work implementation, which cannot meet the goal of high-level talent cultivation. In addition, the administrative performance concept of college leaders also tends to affect the short-term development goals of colleges and universities. SP requires a lot of human, material, and financial resources for the training of successors, and the leadership may worry about the negative impact of SP on the performance of key positions, such as the loss of other excellent personnel due to the pre-designation of successors, which affects the stability of people's hearts (Obianuju et al., 2021).

SP is a long-term process, and the selection, development, training, and evaluation of successors require significant human, material, and financial resources, which makes SP a challenge for universities that are rapidly expanding in size and underfunded. SP is a complex system project, which requires the managers of personnel departments responsible for SP to have professional backgrounds and be capable of succession planning, selection of high-potential personnel, assessment of key positions, and construction and application of competency characteristics models (Larcker & Tayan, 2016).

However, many colleges and universities still use the traditional rigid management for personnel management, and the work content of people management staff is restricted to administrative matters, such as file administration, salary, and welfare, and it remains at the simple business level: labor relations, title evaluation, and so on. Personnel work is the top priority of university management, and the ability

and quality of personnel department staff in universities will directly affect the whole university management, and their professional level also affects the scientific process of the selection of successors, the effectiveness of development and training work, and then the quality of a high-level innovative talent team.

With the deepening of higher education reform, organizations and personnel are bound to encounter many new situations and contradictions. Principals should take innovation consciousness, innovation ability, and innovation results as the basis for training, measuring, and using talents and effectively grasp the work of using, caring for, and motivating talents. Principals should establish the idea of “talents strengthening the university”, actively explore and improve the talent selection mechanism with open selection, fair competition, and the ability to go up and down, which is conducive to the talents coming out, and strive to make talents with careers, gather talents with the environment, and motivate talents with mechanisms to provide intellectual support and talent guarantee for the reform and development of the university.

SP is generated for successor replacement, which refers to a management activity to achieve the strategic goals of universities, to obtain the leaders who meet the requirements of university discipline construction goals at the right time and in the right way, and to fill the vacancies of future and present positions caused by the flow of personnel such as promotion, transfer, departure, retirement, and death so that universities can operate normally and efficiently (Guise, 2015).

SP is an important part of human resource management, which can prevent the shaking of the school caused by the absence or turnover of leaders, and at the same time, it belongs to the long-term planning of colleges and universities, which needs to be consistent with the strategic goals of colleges and universities and is, in essence, the long-term talent development strategy of colleges and universities. The replacement of a successor due to promotion, transfer, or retirement has certain planning, and the departing person has a period of leading and teaching the successor. The succession happens more calmly, but it also requires colleges and universities to usually pay attention to the training and exercise of the successor to adapt to the new work as soon as possible (Odim et al., 2017).

When colleges and universities are faced with such unexpected events, the sudden departure of leaders will cause losses such as stagnation of work, loss of core technology, interruption of projects, and instability of people. If there is no scientific succession management system for university discipline construction, the loss of high-level staff will cause an incalculable loss to university construction. Thus, establishing awareness of SP can, to a certain extent, avoid potential or real job vacancies, or even possible talent crises, faced by university discipline construction.

Educational practices, teaching and learning environments, and feminist research efforts have led to a boom in women’s studies (Lin, 2019). In terms of equal rights for women to take leadership roles in higher education, the theoretical basis has fallen short. Limitations exist for women seeking equality with men in higher education (Policastro, 2015). Women’s leadership is becoming more widely accepted on a global scale. It is frequently maintained that having more women in the workforce is crucial for both social and economic advancement (Grigoli et al., 2018). Despite making a

significant economic contribution, women still fall short of men in terms of equality (WEF, 2020).

(d). Gender differences in the implementation of SP

Studies show that women are underrepresented as experts in the positioning of service delivery (Murray et al., 2019). In particular, the shift to more supportive female leadership may be associated with growing dissatisfaction with the economic environment and people's attitudes and behaviors (Jones et al., 2018). Due to employment segregation, gender discrimination, color, status, and ineptitude, women confront numerous obstacles to obtaining leadership positions (Hodges, 2017). Even though more women are entering the workforce, they are underrepresented in leadership and management roles (Alaqahtani, 2020).

5. Recommendation

There is a dearth of quantitative information and evaluations on actual SP initiatives and results. Case studies and interviews can provide insightful background. It is necessary to use these methods and tools in future investigations. In order to comprehend the obstacles and enablers that affect the creation and implementation of thorough succession plans, future studies can examine the elements impacting the successful application of succession planning in university settings. To find best practices and areas for development, a comparative study of various succession planning models used by universities can be carried out to investigate the differences in methodology, efficacy, and results of succession planning activities.

Future studies can look into and create more reliable succession planning models that are especially suited to the particular difficulties that institutions face. This could entail looking into cutting-edge methods of succession planning that go beyond the simple transfer of roles and responsibilities and take into account things like social activity skills, personal networks, and experimental equipment. The study can look at practical approaches to succession planning in higher education. The elements of organizational culture, leadership dedication, and the function of human resources in promoting orderly transitions between predecessors and successors are among the elements of succession planning that can be successfully investigated through research.

According to our analysis of the literature, few studies address female leadership in higher education, putting more of an emphasis on the difficulties that women encounter. Research gaps found in the current study can be filled by conducting additional studies in the field of gender representation in leadership posts. Research to examine in depth the particular obstacles that prevent women from achieving leadership roles and how racial, ethnic, age, and socioeconomic status connect should be conducted to gain a deeper understanding of the difficulties that various groups of women encounter. The need for SP research in higher education is for new directions, contextually relevant theory and practice engagement, and female inclusion, which are key aspects of talent development best practices to promote long-term objectives. Thus, three study fields that might support the contributions of academic scholars and doctorate students are suggested for future research initiatives. Additionally, it can aid government organizations that fund studies in higher education and involve women in

succession planning. The majority of SP research is done from a North American and European perspective. It is also advised to look into similar studies in other areas in order to comprehend the variety of phenomena.

6. Limitation

This study faced limitations stemming from insufficient available data or publications pertaining to the correlation between human resources and school performance. Additionally, the prevalence of predominantly quantitative research papers, with only a limited number utilizing mixed techniques, restricted the comprehensive inclusion of social context knowledge and evidence regarding the motivations, beliefs, and experiences of individuals in this investigation.

7. Conclusion

This study is the result of a thorough analysis of the research on higher education succession planning, or SP. It calls for a thorough investigation of the nuances of human capital management in higher education, going beyond a cursory examination. Scholarly research on SP in higher education has been notably scarce, which highlights the necessity of preliminary evaluations of staff career development plans in this setting. These evaluations are essential for understanding the present situation and creating a foundation for academic institutions' succession planning programs.

As a lengthy process, succession planning requires an awareness of how requirements for successors change as universities strategically align and fields go through developmental phases. Effective succession planning necessitates the use of a scientifically sound system of assessment indicators that includes process, reaction, and outcome indicators in order to track and modify plans in accordance with organizational requirements. A system like this should measure a candidate's leadership abilities, sense of teamwork, foresight, creativity, and flexibility in great detail.

The review also emphasizes how crucial it is to conduct more study on management techniques, assessment, and post-succession development. This also applies to the creation of dynamic, cooperative, and cohesive teams. It highlights the particular difficulties experienced by women in higher education in particular, and it suggests that an action research technique could offer fresh perspectives in this area. Thus, this study intends to support the creation of pilot interventions for succession planning by offering fresh data and suggesting directions for future investigation. The research findings could be advantageous not just for academics and higher education establishments but also for government funding agencies that support higher education research, particularly that that focuses on including women in succession planning endeavors.

Conflict of interest: The authors declare no conflict of interest.

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Review

Intellectual capital and human resources: A 26-year thematic systematic review

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* **Corresponding author:** Thiago de Andrade Guedes, thiagoandradeoficial@gmail.com**CITATION**

de Andrade Guedes T, de Rezende BRP. (2024). Intellectual capital and human resources: A 26-year thematic systematic review. *Human Resources Management and Services*. 6(4): 3461.
<https://doi.org/10.18282/hrms3461>

ARTICLE INFO

Received: 26 October 2024
Accepted: 25 November 2024
Available online: 3 December 2024

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Abstract: Intellectual capital is the sum of whatever organizational resources contribute to the value and competitiveness of a company. Though some metrics have been developed for measuring individual and collective capabilities, from a human resources point of view, it is difficult to translate the concept of “intellectual capital” into, for example, financial terms. To better understand the field, the aim of this study is to draw a thematic analysis on the relations between intellectual capital and human resources. We provide an overview of publications and their courses on this subject. We accessed two widely used databases (Scopus and Web of Science) to produce the review. We set a period of 26 years, marked by the subject’s theme entry. In order to handle duplicates, we used RStudio Software, and to manage the data, we used the Bibliometrix package tools (biblioshiny and thematic map). Our analysis revealed how intellectual capital and human resources are important for generating value in organizations. Some results explore innovative ways of managing these resources, such as integrating technological, commercial, organizational, and cultural aspects, using dynamic systems modeling, investing in long-term strategies and in education and training, and studying the relationship between green intellectual capital and green human resources management.

Keywords: intellectual capital; human resources; systematic review

1. Introduction

Intellectual capital (IC) shapes the results of companies (Adelman, 2010; Ahuja et al., 2013; Olander et al., 2015; Liu et al., 2022). It is conceptualized as the total stock of intangible assets, knowledge, capabilities, and relationships associated with organizational valuation (Nahapiet and Ghoshal, 1998; Rehman et al., 2020). Some authors order IC through its dimensions, such as structural capital, innovation capital, and process capital. These dimensions are considered alongside traditional production resources: capital, labour and land (Cappellin, 2003; Ștefănescu-Mihăilă, 2015). On top of that, IC plays a crucial role in human resource management. Human resources (HR) deal with a large amount of resources, with different measuring tools to convey as many facets as possible in understanding and setting IC (Tinelli et al., 2016).

According to Adelman (2010), an essential and strategic role of human resources management is to capture the IC and the organizational insights that derive from it. The author suggests that IC involves different types of knowledge, such as data definitions, business processes and rules, specialized technical procedures, fit with the organizational culture, management styles, relationship history with customers and suppliers, and information flow in the organization. So, to further explore this relationship between IC and HR through a chronological and thematic approach, we take Donthu et al.’s (2021) contributions to propose a thematic analysis of a systematic

review carried out on two databases. We accessed Scopus for emphasis on research papers specific to the management field and Web of Science for a broader approach that encompasses the human and social sciences in general. We used a group management method proposed by Cobo et al. (2011), in which we created a graphical representation that displays thematic elements based on the density of the network's strength in terms of keywords or themes and the centrality of the level of interaction between the networks. This enabled "core themes" identification, which includes the most studied themes and the ones that generated more scientific output.

Our aim is to draw a thematic analysis on the relations between intellectual capital (IC) and human resources (HR), by which we can provide an overview of publications and their course in the last 26 years. This review contributes to highlighting and delineating a growing field of research that involves the challenges and possibilities of the understanding and management of IC through HR practices.

In the following Methods section, we describe the processes of data gathering, filtering, and thematic analysis. We also describe the tools used to operate the data. The results section is divided into two parts. We start by presenting an overview of the research field, its main contributors, and the most cited papers. Then we engage in a thematic and chronological analysis of the research papers, which makes the cut for our aim at the intersection between IC and HR. The final section summarizes the findings, highlighting the value-generation ability of the theme.

2. Method

Scopus and WoS (Web of Science) databases are frequently used in bibliometrical studies (e.g., del Barrio-García and Prados-Peña, 2019; Rojas-Lamoren et al., 2022). Scopus is a reliable source for research in the field of management, while Web of Science approaches more broadly the human and social sciences fields. By this, we understand that the bibliometric research involving both of these databases provides an interesting combination for the purpose of this review. We were able to reach the theme in its specific relation to management and, further, in its appraisal by a more general approach in the human and social sciences. We used a survey overview query in the main collections of WoS and Scopus, considering the entire reference period of the database. For this, the WoS "ALL" field and the Scopus "TITLE-ABS-KEY" field were used. And through the existing literature on the subject, we defined the following boolean argument:

("intellectual capital") AND ("human resource*")

We used an 'asterisk' to include both singular and plural mentions of "human resources", also for disambiguation and broadening of the results. Our goal is to work with "intellectual capital" and "human resources" intersection points. The results show that the first publication enlisted in the query dates from 1997. With that, we established the period for the analysis from 1997 to 2023, the last 26 years. We filtered the results to show only peer-reviewed journal papers. We believe the journal papers represent the most up-to-date source of information in the academy (del Barrio-García and Prados-Peña, 2019). The obtained data consists of 284 articles on WoS and 329 articles on Scopus. To check for duplicates in the merging of the WoS and Scopus bases, we used the R language through the RStudio interface. Doing so, we removed

94 articles, and the remaining articles were exported into a single XLSX file containing 480 documents. As scanning may not be fully efficient, the spreadsheet was manually checked using the DOI link. The final selection consisted of 475 scientific articles with 1170 authors and 1026 keywords; both refined results and individual results per database are available for readers (https://osf.io/h8ewv/?view_only=a291fb78bc28495792db7736b2c331fc).

Analysis tools

The bibliometrics research brings together a variety of studies that address a specific topic within the limits of more than one domain of knowledge. When it comes to big data, the bibliometrics technique is best for making quotation analyses, exploring the intellectual structure of domains, and providing a subjective and objective analysis (Donthu et al., 2021). We used biblioshiny through Bibliometrix on R Studio software to create the list of analytic items.

After reviewing the field's chronological and descriptive perspectives, we used thematic mapping to generate a thematic structure. We then applied a group management method suggested by Cobo et al. (2011). The methodology consisted of creating a graphical scheme that shows the thematic elements based on density (quantity of articles), disposed vertically, and, horizontally, centrality (quantity of quotes). Density shows the strength of the network in terms of keywords or themes, while centrality shows the amount of interaction between the networks. This allows for capturing “motor themes”, which sets, in the high density and high centrality quadrants, both the most researched and the ones that attract more scientific production, and, in the low density and low centrality quadrants, the emerging problems and less frequent issues. The upper left quadrant has high density and low centrality. It presents problems developed internally but isolated or without connection to other networks. Core themes covering multiple areas of knowledge are also represented in the lower right quadrant, which is central and low density.

In addition, we also applied co-word analysis, a tool capable of identifying, describing, and visually illustrating the interactions between keywords in a scientific field. This tool enables the evaluation of the frequency with which two keywords are viewed together. It calculates the number of documents, like our articles, with which these words are associated.

3. Results

3.1. Course of the scientific production

From its first entry in 1997, according to the gathered data, the subject of IC in relation to HR remained active throughout the years, with overall growth, especially in the last five years. **Figure 1** confirms what was mentioned above.

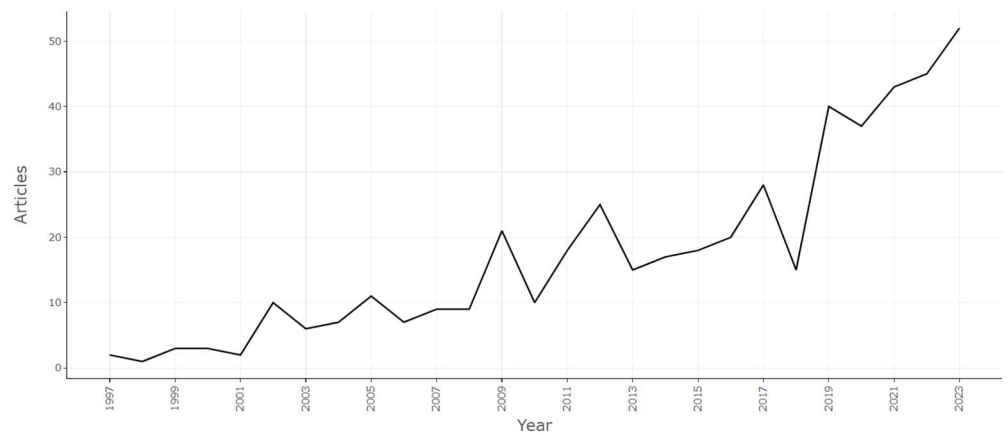


Figure 1. Graph of production by year.

Five authors published the most over the period. The list, hierarchically starting with the one who contributed the most in volume, consists of: (1) Nick Bontis of the De Groote School of Business, McMaster University, Hamilton, Ontario, Canada; (2) Yusliza Mohd of Universiti Malaysia Terengganu, Kuala Terengganu, Malaysia; (3) Tanya Bondarouk from Universiteit Twente, Enschede, Netherlands; and (4) Nadeem Akhtar Khan of the University of Kashmir, India. Finally, (5) Eric Kong from the School of Management and Enterprise, Faculty of Business, Education, Law, and Arts, University of Southern Queensland, Toowoomba, Queensland, Australia.

Among the five most quoted articles (**Table 1**), only Nick Bontis is listed. He is the second, third, and fourth most cited. Bontis studies intellectual capital, knowledge management, human capital measurement, disruptive technology, and knowledge worker productivity. Among the most cited papers, his contributions lean toward the management field, focusing mainly on intellectual capital. The first most cited study approaches an investment and return perspective, while the fifth discusses human resources management and intellectual capital through an ambidexterity learning approach.

Table 1. 5 most cited works (2002–2022).

Document	Title	Citations
Youndt MA, 2004, J MANAGE STUD	Intellectual Capital Profiles: An Examination of Investments and Returns	770
Bontis N, 1999, INT J TECHNOL MANAGE	Managing organisational knowledge by diagnosing intellectual capital: framing and advancing the state of the field	612
Bontis N, 1999, EUR MANAGE J	The knowledge toolbox: A review of the tools available to measure and manage intangible resources	569
Bontis N, 2002, J INTELLECT CAP	Intellectual capital ROI: a causal map of human capital antecedents and consequents	480
Kang SC, 2009, J MANAGE STUD	Intellectual Capital Architectures and Ambidextrous Learning: A Framework for Human Resource Management	441

The co-occurrence of thematic terms (**Figure 2**) provides a comprehensive overview of the possible areas and most researched topics. In this case, three thematic groupings have been identified over twenty-six years. Although “human resources”

appears in the three groups, the blue cluster (top-left) focuses on companies, while the green cluster (middle-left) focuses on issues related to human capital. The red cluster (bottom-right) focuses mainly on educational issues.

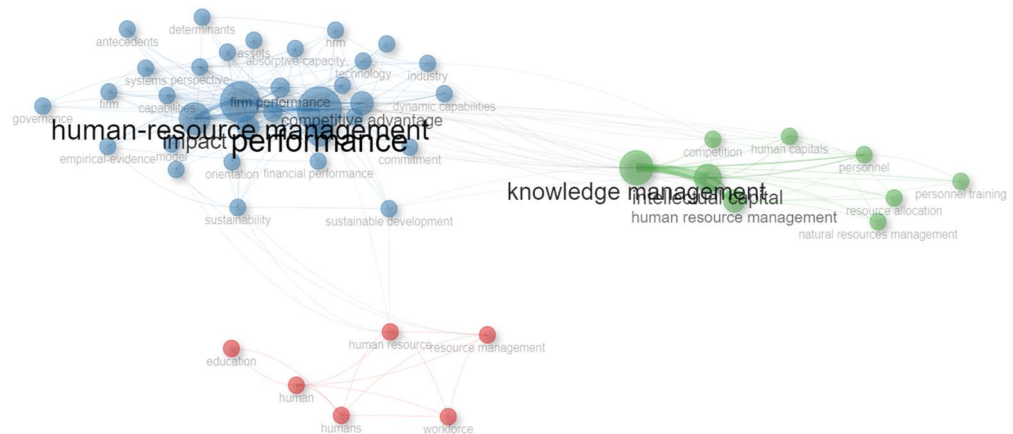


Figure 2. Co-occurrence of thematic terms.

3.2. Thematic analysis

We used the visual information provided by Biblioshiny tool to present a timeline of the topics throughout the period, as illustrated in **Figure 3**.

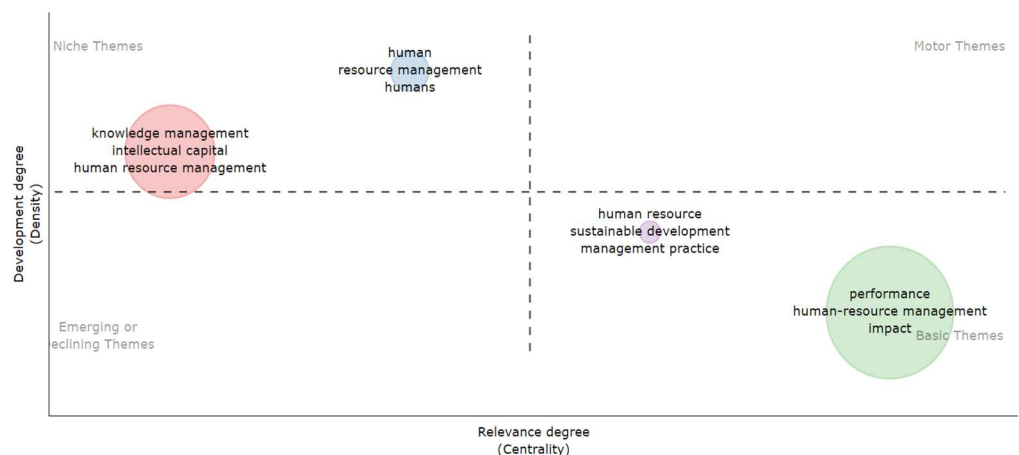


Figure 3. Thematic map of the total period (1997–2023).

The pink cluster located in the “Niche themes” quadrant, top left, indicates that the intersection between IC and HR is still an isolated subject, as it deals with two very specific themes. However, the cluster is also well placed in terms of density, indicating a good audience for the topics (Cobo et al., 2011). Its position in the scheme highlights a strong debate, more noticeable when associated with human resources management. Since the aim of this paper is to investigate the relationship between IC and HR, the pink cluster represents the basis for the thematic analysis. Out of the 475 articles, 45 are associated with this cluster. We filtered and read all the content of 23 articles, including the title and summary, specifically directed to the theme of the present review.

We opted for a chronological analysis to verify the thematic fluctuations and innovations throughout the years. We assume that if the interest in a topic presented

in the initial years reappears in recent years, it could indicate a development to meet new demands. Also, if a topic appears only in recent years, it indicates innovation in the field. Since 1999, there have been papers on the relationship between IC and HR scattered throughout the years, with a peak of three articles in 2021. During the specified years of 2000, 2001, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2013, and 2019, the topic remained unexplored in the literature.

The 1999 article analyzed is titled “Managing organizational knowledge by diagnosing intellectual capital: framing and advancing the state of the field”. This research shows intellectual capital as a diverse field encompassing several perspectives, including balance sheet measurement, system coding, power balance, mental development, ROI calculation, and construction through training and development. According to this study, human capital is a crucial component of intellectual capital as it contributes to innovation and strategic renewal. The authors also show that human resources are an important component of intellectual capital, contributing to innovation and strategic renewal. Human capital, represented by the intelligence, skills, and experience of the organization’s members, is a fundamental aspect of human resources. It is difficult to measure and codify human capital, but in return, it provides a sustained competitive advantage because it adds value and uniqueness and cannot be easily imitated or replaced by concurrent companies. Human capital is considered a source of strategic innovation and renewal, and it plays a crucial role in organizational success. The article also highlights the contributions of human capital to individual learning, which is a prerequisite for organizational learning and human resource management (Bontis, 1999).

In 2002, the article titled “Practical Aspects of Knowledge Management” placed a more specific emphasis on intellectual capital and human resources and their contributions to knowledge management. The authors suggest that organizations in the “Internet age” should take advantage of their highly qualified, skilled, and experienced employees to enhance intellectual capital. The authors argue that next-generation business solutions should focus on adding knowledge-rich components to the workflow to create value. The paper also emphasizes the need for strong human resource management practices to integrate technological and commercial sides and tackle organizational and cultural issues.

“Dynamics of Human Resource and Knowledge Management” is a 2003 article that discusses the importance of intellectual capital and human resources to the knowledge economy. It shows that intellectual capital is identified as a valuable resource for the knowledge economy, contributing significantly to organization evaluation. According to this paper, companies are recognizing their employees as the most valuable asset and are finding ways to measure and manage the intangibles of skills, knowledge, and information. The study proposes an Analytical Hierarchical Process (AHP) method to help companies identify their key capabilities using financial and non-financial measures, such as learning and innovation. The dynamics of recruitment, training, and management of skills and knowledge are illustrated in the form of a causal cycle, and strategies for human resources management are developed using dynamic systems modeling. The article suggests that understanding the dynamics of recruitment and training is essential to developing an effective strategy

for managing intellectual capital. Modeling system dynamics can help organizations develop efficient human resource management strategies.

Another study published in 2003 titled “Territorial knowledge management: towards metrics of the cognitive dimension of agglomeration economies” discusses intellectual capital as knowledge and information within the organization but outside the individual employees. It is also closely linked to organizational capital, which is external to individual companies but internal to a cluster or region. The authors apply a three-dimensional categorization, differentiating structural capital, innovation capital, and process capital. These dimensions are considered alongside traditional resources of production, such as capital, labor, and land. In this paper, intellectual capital is mainly produced by companies for their internal use, and its value is measured based on the cost of replacement or the additional contribution it brings to the company’s returns. In this sense, human capital, which refers to the knowledge and skills of each employee, is an important component of intellectual capital, leading to innovation gains. In conclusion, efforts to strengthen human resources through transfer and learning can be an effective way to stimulate knowledge and innovation (Cappellin, 2003).

Published in 2011, the article “The effect of intellectual capital on employees’ satisfaction and retention” examines the effect of intellectual capital on employee job satisfaction and then identifies two human resource management practices that have a positive influence on intellectual capital. The research conducted a survey involving 1117 employees within an Italian corporation operating in the food market. The structural equation modeling results showed that intellectual capital positively affects employee professional attitudes, although differences have been observed between the three dimensions. Specifically, human capital and relational capital did not directly affect employee satisfaction and retention in the work, according to the hypothesis; these relationships were entirely mediated by structural capital. The study also identified two measures of human resources management practices: communication and alignment, which positively influenced intellectual capital and contributed to improved employee satisfaction and retention at work. The study provides understanding for managing, designing, and implementing intervention programs and policies for effective management of intellectual capital (Longo and Mura, 2011).

“Prioritization of intellectual capital indicators in knowledge-based industries: Evidence from the Pharmaceutical Industry,” published in 2012, deals with intellectual capital and human resources in knowledge-based industries. The discussion proposed states that intellect-based capital (IC) and intangible assets are considered critical tools for successful business in know-how industries. It highlights the importance of prioritizing intellectual capital indicators in knowledge-based industries and that human capital is a key component of intellectual capital, playing a crucial role in innovation, organizational competitiveness, and economic performance in knowledge-based environments. In the paper, we also find that human capital includes knowledge, skills, innovation, and the ability to perform tasks. The authors suggest that organizations need to recruit, cultivate, and retain talent to expand their knowledge base and improve overall productivity. They mention there is a need for reliable indicators to measure and report information on human capital, and effective management of human capital creates and sustains the wealth and competitive

advantage of a company. In conclusion, the paper suggests that the development of a robust human capital indicator can provide value for a company and its stakeholders and encourage greater private investment, contributing generally to human resource management (Mehralian et al., 2012).

Also from 2012, “Cloud computing and human resources in the knowledge era” states that intellectual capital refers to the sum of the knowledge, skills, and experience of employees, which contribute to the achievement of competitive advantage, and is considered an asset when employees use their specific knowledge to create economic value for organizations. The study proposes a conceptual framework that combines cloud-based HRMS, knowledge management (KM), intellectual capital (IC), innovation, and performance. This structure aims to enhance organizational innovation and increase intellectual capital by leveraging cloud computing in HRMS. The author points out that cloud computing, as a new trend in information technology, offers innovative solutions to help companies make significant savings in managing human resources; however, this also creates challenges for human resources professionals, requiring them to change their skill sets and tasks. The article emphasizes the importance of knowledge networks and IT-supported interaction to increase intellectual capital and promote innovation (Yeh, 2012).

In 2014, “A multi-criteria method for environmental management system selection: an intellectual capital approach” introduced a decision-making approach that integrates and quantifies financial and non-financial value creation criteria. The goal is to identify the alternative that maximizes the total market value of a company. The evaluation method combines four sources of value creation inherent to profit-oriented firms. It draws upon the tripartite dimensions of intellectual capital value—human, structural, and relational. The objective is to prioritize the array of alternatives within the environmental management system. This prioritization is based on the market value each alternative generates. In this paper, intellectual capital (IC) includes all non-monetary and non-physical resources that are fully or partially controlled by the organization and contribute to its value creation. These intangible assets related to knowledge have a positive impact on competitiveness, business performance, and market value. Because of that, human resources are considered a key component of intellectual capital and are recognized as a crucial indicator for future financial performance (Guerrero-Baena et al., 2014).

The article “Social Investment, Economic Growth, and Labor Market Performance: Case Study—Romania” published in 2015, states that intellectual capital includes three elements: human capital, structural capital, and relational capital. It claims that human capital is a component of intellectual capital, which is defined as “knowledge existing in an organization that can be a competitive advantage” or “knowledge that may be converted into value”. The research also highlights the importance of human resources to production processes and to the success of a company. It emphasizes that modern organizations need to rethink their strategies, make long-term investments, and invest in people. This suggests that success and survival in the market depend heavily on understanding the importance of human resources and that managers should be aware of this. Furthermore, the article mentions that education is considered a means for accumulating human capital, and a

higher level of training can increase the flexibility of the workforce and facilitate better adaptation to the conditions of the labour market (Ștefănescu-Mihăilă, 2015).

Also published in 2015, “Prioritizing (ranking) of indexes for measuring intellectual capital using FAHP and fuzzy TOPSIS techniques” states that human resources are considered strategic competitive resources, invested in similar tangible assets, and an essential component of intellectual capital, covering knowledge, skills, intellect, relationships, attitude, talent, and behavior of employees. Human resources means that human capital is the main body of intellectual capital and includes the knowledge, experience, and special skills of the staff employed in a commercial entity to create economic value. It is also a holistic concept that represents the resources and assets related to the people of a company. In the context of measuring intellectual capital, the paper argues that human resources are categorized into several sub-scales, such as staff competence and communication values and skills. The authors suggest that the priority of human resources is important and that different studies have identified various factors, such as knowledge and competence, experience, teaching, leadership ability, problem-solving ability, and more.

Published in 2016, “Embedding semantics in human resources management automation via SQL” shows that intellectual capital plays a crucial role in human resource management. Human resources management processes deal with a large amount of resources; among them, the peculiarities of intellectual capital require expressive representation languages to convey as many facets as possible. The approach presented in the article combines the representation power of a logical language with the efficiency of a DBMS for information processing to deal with human resources management tasks. With the information available, it can be inferred that intellectual capital is an important asset in human resources management, and the approach proposed by the authors aims to effectively manage and use intellectual capital in human resources processes (Tinelli et al., 2016).

The 2017 “Impact of the Educational Attainment of the Knowledge Management Process in Serbian Textile Enterprises” research paper discusses that intellectual capital, including knowledge and information, is considered crucial for economic development and national progress. In fact, this research defends intellectual capital as more important than tangible assets, such as capital or labour. The authors state that human resources play a significant role in the development and application of knowledge management in Serbian textile companies. Furthermore, they mention that the educational level of employees has a significant impact on dimensions such as organizational culture, knowledge acquisition process, and competitive advantage. It also shows that inadequate knowledge and skills among employees are identified as common problems in the Serbian textile industry. In addition, they emphasize that the proper management of staff characteristics, including their educational level, is important for the development and application of knowledge management, leading to increased productivity and competitiveness. According to the paper, organizational culture is a key factor in supporting cooperative innovation and knowledge sharing. They also suggest that overcoming cultural barriers is essential for effective knowledge management, and organizational culture is considered a significant obstacle to this (Zakin et al., 2017).

In 2018, the article titled “Developing a measurement instrument of knowledge management implementation in the Iranian oil industry” also discussed that intellectual capital is an important component of the implementation of knowledge management, but this paper aimed at Iran’s oil industry instead of the textile market. According to Ghasemi and Valmohammadi (2018), intellectual capital consists of human capital, market capital, structural capital, and social capital for the organization. That is, for the authors, human capital is considered unique in each organization and depends on educational level, experiences, professional skills, attitudes, values, and the ability to learn and adapt to change. The article states that human resource management is identified as one of the critical success factors in implementing knowledge management in the Iranian oil industry, with the success of it depending on the constituent elements of intellectual capital, including human capital. Therefore, the proposed measurement instrument for the implementation of KM in the Iranian oil industry includes factors such as human resource management, indicating the importance of human resources in the context of knowledge management (Ghasemi and Valmohammadi, 2018).

Also published in 2018, “Nexus Between Green Intellectual Capital and Green Human Resource Management” examines the relationship between green intellectual capital and green human resource management. The paper uses a quantitative research approach and a mailing survey to gather information from 112 large manufacturing companies in Malaysia. The results indicate that green human capital and green relational capital have a significant influence on green human resource management. However, green structural capital is not significantly related to green human resource management. The article identifies three dimensions of green intellectual capital: green human capital, green structural capital, and green relational capital. This suggests that these dimensions have an impact on green human resource management. The study uses the Intellectual Capital-Based Vision Theory as a theoretical basis to explore the link between green intellectual capital and green human resource management (Yong et al., 2018).

In 2020, we have another pair of papers. The first, titled “Analyzing the relationship between green innovation and environmental performance in large manufacturing firms”, deals with green intellectual capital and green human resources management. The study suggests that green intellectual capital is described as the total stock of intangible assets, knowledge, capabilities, and relationships associated with environmental protection or green innovation observed at the individual and organizational levels of a company. It is expected to be positively related to green innovation and environmental performance in enterprises. On the matter of green human resources management, the authors state that advanced practices can motivate an organization to develop and leverage its green intellectual capital and enhance its green innovation. Thus, green human resources management includes practices such as post analysis, recruitment, selection, training, rewards, and performance evaluation. Therefore, they conclude that the relationship between the constructs and environmental performance is more complex than previously suggested, with green innovation mediating the relationships between green intellectual knowledge, green human resources management, and ambient performance (Rehman et al., 2020).

The other research published in 2020, “Managing employee engagement in the strategy implementation process: The case from the natural gas industry” states that intellectual capital is a set of non-monetary and intangible resources that directly influence the growth of the value of an organization. It includes elements such as human capital, structural capital, relationship capital, and organizational culture. Chadam and Turkyilmaz (2020) suggest that the development of all intellectual capital elements—including human resources—is strongly associated with a high level of employee engagement in the business of the company. The article emphasizes the importance of employee engagement to the company’s goals, including the effective implementation of a new investment strategy and plan, and that positive changes in employee involvement are translated into excellent financial results and opportunities for further development. The analysis of the results of the survey in the present case concludes that the implementation of innovative projects, such as the company strategy, would not have been possible without a significant increase in employee engagement in the organization. This highlights the crucial role of human resources in achieving organizational goals. Therefore, the article suggests that future projects should consider employee diversity, mainly in terms of age and gender, to identify appropriate human resources practices and further increase employee engagement.

Moving to 2021, the research paper “An inclusive systematic investigation of human resource management practice in harnessing human capital” reports that intellectual capital is identified as one of the main business problems that companies are currently facing, along with technology, globalization, and profitability through expansion and change. It suggests that human resources management is responsible for solving these business problems and collaborating with companies to create new skills. The study states that new human resource management involves bringing together the management of the organization and the workers, merging their knowledge reservoirs for joint success. Thus, it is seen that human resources experts aim to influence the business world and take on a proactive role in addressing globalization challenges. The study aims to understand the role of human resource management in the development of national talents for global success, indicating the importance of human resources in the exploitation of intellectual capital (Rajput et al., 2021).

The study “Green human resource management practices and environmental performance in Malaysian green hotels: The role of green intellectual capital and pro-environmental behavior”, published in 2021, discusses green human resource management practices such as ecological training and development and ecological disciplinary management. According to the authors, these are significant predictors of green intellectual capital and pro-environmental behavior in Malaysian green hotels. The study suggests that ecological training and development are key practices for building intellectual capital and promoting pro-environmental behavior. It also cites that green intellectual capital plays a significant role in mediating the relationship between green discipline management and pro-environmental behavior, as well as between green recruitment and environmental behavior. In addition, it mentions that pro-environmental behaviors are significantly related to hotel environmental performance and also mediate the relationship between green intellectual capital and environmental performance. Overall, the article highlights the importance of

integrating green human resource management practices with green intellectual capital and pro-environmental behaviors to improve hotel environmental performance (Nisar et al., 2021).

The 2021 article is titled “A study on intellectual capital management over cloud computing using analytic hierarchy processes and partial least squares”. Wang (2021) discusses intellectual capital as the overlap of all assets, intangible resources, and non-physical resources of an organization, including processes, innovation capacity, and implicit and explicit knowledge of its members and network of partners, and that is considered a vital resource for the competitive advantage of organizations. The author suggests that human capital is a component of intellectual capital and refers to the organization’s employee knowledge and skills; this includes the competence, attitude, and intelligent thinking of employees. It also states that competence reflects the knowledge, skills, talents, and mastery of employees, while attitude is the value created by the behavior of employees in the workplace, and that intelligent thinking involves personal innovation and adaptability. In conclusion, Wang (2021) proposes human capital as the source of innovation for strategic revitalization of the organization that contributes to the good management of human resources.

Published in 2022, “Impact of Knowledge-Based HRM Practices on Organizational Performance: Mediating Effect of Intellectual Capital” proposes intellectual capital (IC) as a mediator variable between knowledge-based HRM practices and organizational performance in the context of the Indian service sector. This means that HRH practices lead to the creation of intellectual capital, and the relationship between HRH and performance is positively mediated by IC components. Thus, organizational capital is considered the most contributing component of IC, followed by human and relational capital. Gupta (2022) states that knowledge-based HRM practices positively affect human capital, which is a component of intellectual capital, and that HRM practice promotes the implementation of knowledge systems, IT structures, and cultural change strategies, which are linked to the potential of companies to acquire, store, and record knowledge. The study reports that human capital is an important aspect of organizational capital, which includes innovation, advancement, knowledge management, systems, and other processes, and that human resources (HR) are recognized as tangible and intangible assets that can promote organizational performance. The article discusses that organizations use various evaluation techniques and adopt different human resource management practices to motivate employees, increase confidence, engagement, and motivation, as well as that human resource management practices are also associated with high-performance work programs that enhance employees’ knowledge of the organization’s products or services, customers, and workplace culture (Gupta, 2022).

The 2022 article “Relationship Between Enterprise Talent Management and Performance Based on the Structural Equation Model Method” states that intellectual capital has a significant positive effect on the company’s innovation performance, as human capital plays a significant role in driving innovation performance only at the most mature stage of business development. The research also addresses the relationship between talent management and corporate performance, using the structural equation model to quantify the human resource management factors that affect logistical performance. The results highlight the positive impact of intellectual

capital on innovation performance and the economic benefits of staff training and good customer service. In short, the article focuses on the importance of human resources, especially intellectual capital and staff training, to boost performance and innovation in organizations (Liu et al., 2022).

“Connecting information literacy and social capital to better utilize knowledge resources in the workplace” is a 2023 study that discusses the relationship between intellectual capital and human resources within the context of knowledge processes at work. It explores the connection between information literacy and social capital, which represent the individual and social contexts that affect organizational knowledge processes. The results suggest that information literacy supports all three dimensions of social capital in the workplace, indicating that strong information handling skills allow better access to knowledge beyond the resources of an individual, which is social capital. The paper emphasizes that investing in information literacy is an investment in social capital, and managing employee information processing skills is a concrete step towards using organizational social capital and achieving positive results. It is also mentioned that knowledge management, which involves creating, sharing, using, and managing organizational knowledge and information, is closely related to information skills and the development of social capital (Widen et al., 2023).

Also published in 2023, “Investing in green intellectual capital to enhance green corporate image under the Influence of Green Innovation Climate: A Case of Chinese Entrepreneurial SMEs” also discusses green intellectual capital and green human resources. The study states that green intellectual capital is a corporate resource composed of the wisdom, skills, and capabilities of an individual to carry out environmental conservation efforts efficiently, which can be cultivated through training and development programs, organizational knowledge dissemination capacities, etc. The authors propose that green human resources are a component of green intellectual capital and refer to the knowledge, skills, and experiences of employees related to environmental conservation. Employees with simultaneous knowledge of the external environment tend to pay more attention to their contribution to a sustainable business environment, making their wisdom an additional skill in their green intellectual capital. The study concludes that green intellectual capital, measured through green human resources, relations capital, and structural capital, positively influences green central competence, which in turn positively impacts the green corporate image (environmental performance and green innovation practices). The study also found that green central competence mediates the relationship between green intellectual capital and green corporate image. The paper highlights that the innovative green climate moderates the relationship between green central competence and green corporate image. In doing so, the research provides empirical evidence for the multidimensional construction of green intellectual capital and its role in estimating green central competence and green corporate image. The findings suggest that investing in green intellectual capital can be a viable solution for small and medium-sized entrepreneurial enterprises to improve their green corporate image (Khan et al., 2023).

Thus, as a complementary analysis, we can verify that no articles were obtained for the years 2000, 2001, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2013, and 2019. The year 2021 had the most articles, having a total of 3 articles, as shown in **Figure 4**.

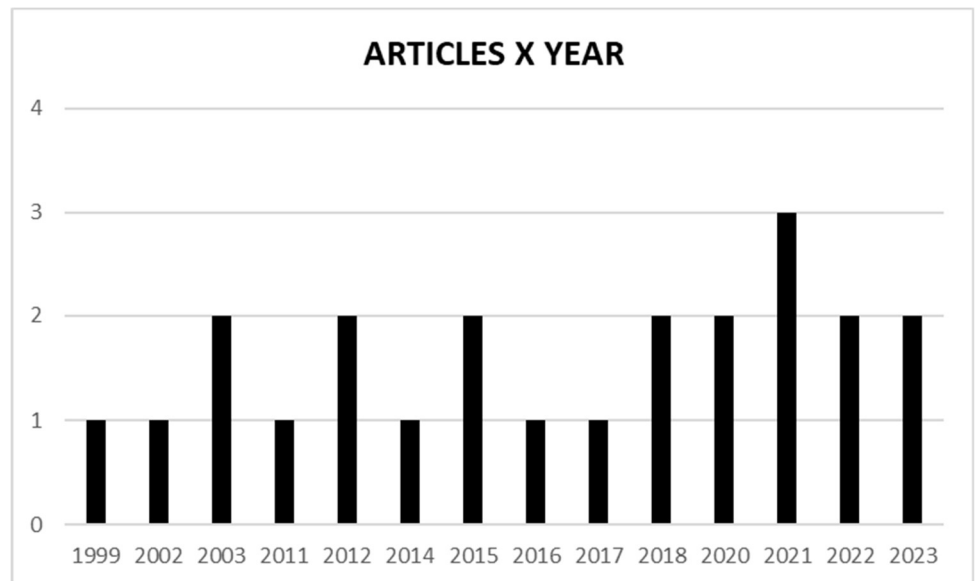


Figure 4. Chart of number of articles per year.

Throughout the years, we have seen the idea of dividing IC into dimensions being adopted and enriched by other studies. An interesting example of this is the relationship between IC dimensions in green HR. We also highlight green human management as a recent innovation, mentioned only after 2018. Another notable point is that elements related to training appear in the initial articles and are then revisited in the articles from the final years, indicating that it is an issue that was used and has returned to prominence in the current scenario; although it is a concept linked to general training, innovative elements emerge from new training practices, which are more current and can also be considered innovative.

4. Conclusion

In the following topics, we organized some contributions to be highlighted through the analysis. We grouped these observations into three domains: (1) innovation; (2) future prospects; and (3) key conclusions.

Innovative content:

- The integration of technological, commercial, organizational, and cultural aspects in intellectual capital and human resources management is an innovative approach to creating value in organizations.
- Investing in long-term strategies and human capital, encompassing education and training, is regarded as an innovative method to enhance the workforce's flexibility and adaptability in response to market conditions.
- Exploring the link between green intellectual capital and green human resources management is an innovative area of research that focuses on the impact of environmental sustainability on human resource management practices.

The future of human resources and intellectual capital:

- The future path of human resources (HR) and intellectual capital involves the integration of technological, commercial, organizational, and cultural aspects to manage and effectively use intellectual capital in HR processes. This approach

recognizes the importance of harnessing highly qualified and experienced employees to create value in organizations.

- Human resources management needs to focus on adding knowledge-rich components to work processes, emphasizing the role of intellectual capital in organizational success. Integrated approaches that consider technological and commercial aspects, as well as organizational and cultural factors, are crucial for effective human resources management.

Key conclusions:

- Intellectual capital plays a crucial role in human resource management (HRM) and knowledge management, significantly contributing to organizational value. It is recognized as a valuable resource in the knowledge economy and can be a competitive advantage for organizations.
- Human resource management needs to consider the integration of technological, commercial, organizational, and cultural aspects to manage intellectual capital and human resources effectively. Integrated approaches that focus on adding knowledge-rich components to work processes are essential to creating value.
- Understanding the dynamics of recruitment, training, and knowledge management is vital for the development of efficient human resources management strategies. Dynamic systems modeling can help organizations formulate effective strategies for managing intellectual capital and human resources.
- Education and training are considered important for accumulating human capital and increasing the flexibility and adaptability of the labour force to market conditions. Investing in long-term strategies and people is crucial to the success and survival of organizations in the market.
- Green intellectual capital, including green human capital and green relational capital, has a significant influence on green human resource management (GRH). The dimensions of green intellectual capital impact green human resource management practices.

According to the analysis, intellectual capital and human resources management are crucial for organizations in the knowledge economy. The recognition of intellectual capital value and the need to use it effectively in HRM processes are emphasized in several sources. The integration of technological, commercial, organizational, and cultural aspects is seen as an innovative approach to creating value and ensuring organizational success. Long-term strategies, investments in education and training, and the development of a flexible and adaptable workforce are considered important for future human resource management. In addition, exploring the link between green intellectual capital and green human resources management is an emerging area of research that focuses on the impact of environmental sustainability on human resource management practices. Overall, the future path of HR and intellectual capital involves a holistic approach that integrates multiple aspects and recognizes the importance of leveraging human capital to drive innovation, competitiveness, and sustainable practices in organizations. As propositions for further research, we suggest investigating the role of artificial intelligence in intellectual capital and in human resource management. Artificial intelligence heralds a new era in the future of work, promising unparalleled efficiency and the

transformation of job landscapes across industries. Because of that, we understand that it is valuable to discuss the relationship between intellectual capital and human resources.

Conflict of interest: The authors declare no conflict of interest.

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