

# Does employee engagement mediate the nexus of job resource and employee turnover intentions?

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## Abstract

**Purpose** – Engaged employees assure organizational competitiveness and sustainability. The purpose of this study is to explore the relationship between job resources and employee turnover intentions, with employee engagement as a mediating variable.

**Design/methodology/approach** – Data were collected from 934 employees of eight wholly-owned pharmaceutical industries. The proposed model and hypotheses were evaluated using structural equation modeling. Construct reliability and validity was established through confirmatory factor analysis.

**Findings** – Data supported the hypothesized relationship. The results show that job autonomy and employee engagement were significantly associated. Supervisory support and employee engagement were significantly associated. However, performance feedback and employee engagement were nonsignificantly associated. Employee engagement had a significant influence on employee turnover intentions. The results further show that employee engagement mediates the association between job resources and employee turnover intentions.

**Research limitations/implications** – The generalizability of the findings will be constrained due to the research's pharmaceutical industry focus and cross-sectional data.

**Practical implications** – The study's findings will serve as valuable pointers for stakeholders and decision-makers in the pharmaceutical industry to develop a proactive and well-articulated employee engagement intervention to ensure organizational effectiveness, innovativeness and competitiveness.

**Originality/value** – By empirically demonstrating that employee engagement mediates the nexus of job resources and employee turnover intentions, the study adds to the corpus of literature.

**Keywords** Job resources, Employee engagement, Employee turnover intentions, Pharmaceutical industry, Healthcare institutions

**Paper type** Research paper

## Introduction

The pharmaceutical industry is one of the most vibrant sectors of the Ghanaian economy (Harper and Gyansa-Lutterodt, 2007; Otoo, 2020; Pourraz, 2019). The industry is highly competitive due to customer expectations and their enormous economic influence (Banda *et al.*, 2021; Boya and Rao Sekhara, 2019; Horner, 2022). Pharmaceuticals are a crucial component of healthcare delivery utilized in the prevention, treatment and curing of diseases as well as the adjustment of lifestyle factors (Baxerres and Cassier, 2022; Chorev, 2019; Defor *et al.*, 2017). Employees are an organization's most valuable and distinctive resource and the unmatched source of its competitive edge (Balogun and Afolabi, 2018; Kakar *et al.*, 2018; Putra and Cho, 2019). Highly engaged employees assure the delivery of top-notch pharmaceutical services (Carter *et al.*, 2018; Demissie *et al.*, 2022; Thabit *et al.*, 2023).

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Organizations are exploring efficient ways to maximize the contributions of their human capital to ensure organizational survival and effectiveness (Aguinis and Burgi-Tian, 2021; Tensay and Singh, 2020). A significant challenge facing many firms is employee retention, which contributes to a shortage of skilled personnel, high employee turnover and slow economic growth (Guerrero and Challiol-Jeanblanc, 2017; Ji-Young and Huang, 2021; Sepahvand and Khodashahri, 2021). Turnover intention, which is an employee's expressed willingness to quit an organization within a specified timeframe, is considered the best indicator of actual employee turnover (Chew and Chan, 2008; Heneman *et al.*, 2018). The loss of a high-performing employee has a negative effect on the organization and the labor market as a whole (Cohen *et al.*, 2016; Wynen *et al.*, 2019).

Retaining competent employees is crucial for organizations as it promotes stability and growth (Hoffman and Tadelis, 2021; Holtom *et al.*, 2008). A work environment that provides job resources lessens job demands and encourages employee retention (Rudolph *et al.*, 2017; Schaufeli and Bakker, 2004). Job resources facilitate psychologically healthy behaviors that are linked to effective employee and organizational outcomes (Allan *et al.*, 2018; Bakker and Demerouti, 2018; Schaufeli, 2018). Employee engagement enables organizations human capital to transit from being strategic tools to being strategic partners (Aman-Ullah *et al.*, 2022; Dixit and Singh, 2020; Rao *et al.*, 2021). Employee engagement improves organizational commitment, citizenship behavior and job performance (Bentley *et al.*, 2019; Nienaber and Martins, 2020; Salas Vallina *et al.*, 2021).

However, despite the evidence indicating a positive relationship between employee engagement and organizational outcomes, the mechanisms by which employee engagement influences employee turnover intentions remain uncertain (Basheer *et al.*, 2019; Sánchez-Cardona *et al.*, 2020; Sandhya and Sulphrey, 2020). Attempting to delve deeper into this relationship, literature has examined the association between employee engagement and employee turnover intentions using different mediating variables (Breevaart and Bakker, 2018; Tsen *et al.*, 2021; Zhu *et al.*, 2023). Gašić and Berber (2023) examined the mediating role of employee engagement in the relationship between flexible work arrangements and turnover intentions. Grubert *et al.* (2022) investigated how employee engagement mediates the effect of public value on job satisfaction, affective commitment, life satisfaction and the intention to quit.

Otoo (2022) examined the mediating role of employee engagement in the relationship between human resource development and employee turnover intentions. Literature suggests the relevance of an environment that promotes employee engagement (Beri and Gulati, 2021; Pirzadeh and Lingard, 2021). However, few empirical studies provide evidence of the role or context that determines employee engagement as a mediator in the association between job resource and employee turnover intentions (e.g. Albrecht *et al.*, 2021; Hameduddin and Lee, 2021; Kundu and Lata, 2017). Research has emphasized the critical role of employee engagement in organizational success and competitiveness (Bakker and de Vries, 2021; Grubert *et al.*, 2022; Tricahyadinata *et al.*, 2020). Employee engagement enhances organizational growth, financial returns and employee turnover intentions (Meswantri and Ilyas, 2018; Sihag, 2021; Ugargol and Patrick, 2018).

Drawing on these arguments, the study endeavors to fill this gap by proposing a model to explore employee engagement as a mediator in the nexus between job resources and employee turnover intentions. The study contributes to the literature in twofold. First, the study theoretically supports the mediating role of employee engagement in the nexus between job resources and employee turnover intentions. Previous studies have shown that, in spite of the widespread belief that employee engagement and job resources may be significant facilitators of employee retention, there does not seem to be a strong consensus in the literature regarding how employee engagement and job resources contribute to enhanced employee commitment and performance (Bakker and Albrecht, 2018; Dinh, 2020; Moletsane *et al.*, 2019). It is imperative to clarify this issue by demonstrating that the adoption of specific

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job resource interventions does not inherently create a competitive advantage, even though it does so indirectly through the cultivation of strategic competencies (Lipson, 2020; Van den Broeck *et al.*, 2017; Schaufeli, 2018).

Employee engagement enhances productivity, customer satisfaction and individual performance (Bharath and Sreedevi, 2021; Al-dalahmeh *et al.*, 2018; Uddin *et al.*, 2019). The current study extends the literature on job resources by examining the mechanisms by which job resources support employee engagement and consequently, influence employee turnover intentions. Second, the study provides empirical evidence of the mediating effect of employee engagement in the job resources–employee turnover intentions relationship using both job quality and satisfaction turnover measures. Previous studies have analyzed the mediating role of employee engagement by using perceptual job quality and satisfaction turnover measures (Gašić and Berber, 2023; Jackson and Fransman, 2018; Kurniawaty *et al.*, 2019; Otoo, 2022).

The study by Okolocha and State (2020) focused on job quality turnover measures. Vermooten *et al.* (2019) used job satisfaction turnover measures. The current study contributes to the literature by providing, on one hand, theoretical arguments that justify that employee engagement positively influences both job quality and satisfaction measures and, on the other hand, empirical evidence that job resources can have a direct effect on specific employee turnover variables and an indirect effect on others. To lay the groundwork for the study, the theoretical underpinnings of job resources, employee engagement and employee turnover intentions are described. The model that links job resources to employee engagement and employee turnover intentions is then used to frame the hypotheses.

Structural equation modeling was applied in evaluating the efficacy of the proposed model and hypotheses and the outcomes were then contrasted with those of prior studies that came to similar conclusions. The study's limitations, implications and suggestions for future investigation are provided.

## Literature review

### *Theory and hypothesis development*

The social exchange theory (Cortez and Johnston, 2020; Gharib *et al.*, 2017; Imam *et al.*, 2023) was espoused in exploring the relationship between employee engagement, job resources and employee turnover intentions. The social exchange theory postulates that people engage in social interactions after weighing the benefits and drawbacks of each interaction from a self-interest perspective (Cooper-Thomas and Morrison, 2019; Cropanzano *et al.*, 2017; Yan *et al.*, 2016). The social exchange theory asserts that employees anticipate their employers engaging in social and material exchanges as part of organizational practices in a working relationship (Chung and Jeon, 2020; Chernyak-Hai and Rabenu, 2018; Hossen *et al.*, 2020). Consequently, if employees perceive positive work practices, they will exhibit positive work attitudes and behaviors. Conversely, employees will exhibit unfavorable organizational behavior and attitudes if they perceive unfavorable and unhealthy work practices. Drawing from social exchange theory, employees who perceive the provision of organizational resources will return the favor with higher levels of engagement.

### *Job resources*

Job resources are the physical, psychological, organizational and social aspects of a job that are beneficial in achieving work goals, lessening psychological costs associated with job obligations or fostering personal development, learning and growth (Bakker and Demerouti, 2017; Jenny *et al.*, 2020; Sánchez-Cardona *et al.*, 2021). Job resources are workplace settings that encourage and promote employee development and role performance (Simbula *et al.*, 2011; Astvik *et al.*, 2020; Cooke *et al.*, 2019). Job resources are favorably correlated with

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positive employee and organizational outcomes and well-being (Bilotta *et al.*, 2021; Ghezzi *et al.*, 2020; Van Veldhoven *et al.*, 2020).

Along the same lines, several studies show a significant association between job resources, employee engagement and employee turnover intentions (Britt *et al.*, 2021; Saks, 2019; Wan *et al.*, 2018). Bakker *et al.* (2004) highlighted job autonomy, supervisory support and performance feedback as job resource attributes. Job autonomy improves employee performance, elevates employee engagement levels and organizational profit (Allan *et al.*, 2019; Fletcher *et al.*, 2018; Xanthopoulou *et al.*, 2009). Supervisory support enhances employee loyalty, the provision of high-quality services and teamwork (Hernaus *et al.*, 2017; Kaur and Randhawa, 2020; Suan and Nasurdin, 2016).

Performance feedback influences employee engagement levels and activeness (Giamos *et al.*, 2023; Sleiman *et al.*, 2020). Job resources improve the levels of employees' intrinsic and extrinsic motivations (Demerouti *et al.*, 2017; Rudolph *et al.*, 2017; Lysova *et al.*, 2019). Similarly, several authors assert that job resources encourage individual development, learning and growth to stimulate employee retention (Bayona *et al.*, 2015; Cregård and Corin, 2019; Jauhari and Yulianti, 2020). Job autonomy, supervisory support and performance feedback were examined as job resource attributes in this study.

### *Employee engagement*

The importance of employee engagement in an organization's performance and competitiveness has drawn a lot of attention (Dhir and Shukla, 2019; Guest, 2014; Pandita and Bedarkar, 2015). However, there is disagreement over what constitutes employee engagement (Gupta and Sharma, 2016; Shrotryia and Dhanda, 2020; Sun and Bunchapattanasakda, 2019). Even though there are various definitions of the concept, Macey and Schneider (2008) point out that they all concur that employee engagement is desirable and has psychological and behavioral components that entail focused effort, enthusiasm and energy as well as organizational purpose.

Harter *et al.* (2002) define employee engagement as an individual's enthusiasm, contentment and involvement with work. Schaufeli *et al.* (2002) referred to engagement as a fruitful mental state characterized by dedication, absorption and vigor. Baumruk (2004) defined engagement as an active experience of participation in personally gratifying tasks that improves an employee's perception of their professional efficacy. Shuck *et al.* (2017a) referred to employee engagement as a favorable, active, work-related psychological state operationalized by the preservation, intensification and direction of cognitive, emotional and behavioral energy.

Kahn (1990) posited that people express themselves physically, cognitively and emotionally when they execute roles. Kahn further argued that a person's physical, cognitive and emotional states are influenced at various levels, including individual, interpersonal, group, intergroup and organizational. Physical engagement entails the intensity of energy and effort expended (Kahn, 1992; Rich *et al.*, 2010; Zaff *et al.*, 2011). Cognitive engagement measures the level of efficacy with which people operate, which results from knowledge of the significance of one's work (Sedeghat *et al.*, 2011; Wang and Holcombe, 2010; Wang and Eccles, 2011). Emotional engagement entails deploying and managing employees' emotions based on emotional interaction between employees and the organization (Pietarinen *et al.*, 2014; Li and Lerner, 2012; Skinner *et al.*, 2008).

Engaged employees take initiative, look for possibilities to solve problems and put in more time and effort (Chiwawa and Wissink, 2021; Rameshkumar, 2020; Satata, 2021). Several authors contend that employee engagement is a significant factor in determining individual performance, behaviors and attitudes as well as employee retention, financial performance, shareholder return, productivity and organizational performance (Anitha, 2014; Bailey *et al.*,

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2017; Mburu *et al.*, 2020). The study examined the physical, cognitive and emotional attributes of employee engagement.

#### *Job resources and employee engagement*

Theoretical and conceptual approaches have been examined to establish a synergy between job resources and employee engagement (Farndale and Murrer, 2015; Halinski and Harrison, 2020; Lesener *et al.*, 2019). Job resources provide purpose and meet employees' basic needs, which increases employee engagement (Crawford *et al.*, 2010; Hobfoll *et al.*, 2018; Nielsen *et al.*, 2017). Job resources promote high employee performance through high engagement and minimal cynicism (Bakker *et al.*, 2007; Herr *et al.*, 2021; Wallace and Buchanan, 2020). Researchers postulate that job resources stimulate employee development, learning and growth, which leads to favorable organizational outcomes and increases employee engagement (Hakanen *et al.*, 2021; Jenny *et al.*, 2020; Latruch and Büttgen, 2020).

Similarly, many scholars contend that job resource attributes such as supervisory support, job autonomy and performance feedback are correlated favorably with employee engagement levels (Chen and Fellenz, 2020; Kotzé and Nel, 2020; Mai and Kim, 2022). Subsequent reviews shed light on the relationship between selected job resources and employee engagement.

#### *Job autonomy and employee engagement*

Literature advances a strong correlation between job autonomy and employee engagement (Lu *et al.*, 2017; Muecke *et al.*, 2020; Saragih, 2011). Job autonomy is the degree of discretion, independence and freedom provided to an employee for scheduling and achieving a task (Hackman and Oldham, 1975; Kwok, 2020; Lin *et al.*, 2011). This is dependent upon the person's desire to exercise discretion at work (Langfred and Rockmann, 2016; Vera *et al.*, 2016; Wang *et al.*, 2022). Job autonomy significantly influences employees' motivation and engagement at work (Othman and Nasurdin, 2019; Johari *et al.*, 2018; Terason, 2018). Numerous academics contend that job autonomy offers the chance to break off from monotonous work and test out fresh, practical work methods that may produce better results (Malinowska *et al.*, 2018; Sisodia and Das, 2013; Zhao *et al.*, 2022).

Similarly, several authors argue that employees with a sense of job autonomy tend to be more content at work, have a tendency to be more proactive and problem-solvers and are therefore, more productive (Burcharth *et al.*, 2017; Saifaddin and Alavi, 2020; Wang and Wang, 2020). This parallels the findings of researchers who posited that job autonomy is a major determinant of employee engagement and positively correlated with employee engagement levels (Ozkoç, 2016; Wan and Duffy, 2022; Zhou, 2020). The following hypothesis is proposed:

H1. Job autonomy is significantly associated with employee engagement.

#### *Supervisory support and employee engagement*

Supervisory support is the degree to which employees perceive that their superiors support, encourage and care for them (Akram *et al.*, 2018; Babin and Boles, 1996; Suan and Nasurdin, 2016). Supervisory support is recognized as having a positive impact on employees' attitudes (Afzal *et al.*, 2019; Lloyd *et al.*, 2015; Somers *et al.*, 2021). Supervisory support can come in the form of emotional support, informational support and material support (Artz *et al.*, 2020; Dysvik and Kuvaas, 2012; Fan *et al.*, 2019). Many scholars postulate that improved supervisory support encourages workers to exhibit high levels of engagement and positive relationships (Arshad *et al.*, 2021; Kang *et al.*, 2015; Zeb *et al.*, 2022).

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In a similar vein, numerous authors contend that supervisory support positively influences employees' engagement and motivation at work (Eisenberger and Stinglhamber, 2011; Park *et al.*, 2018; Reader *et al.*, 2017). This parallels the findings of several authors who maintain that assistance from supervisors' fosters competence, assurance, stability and resiliency (Oentoro *et al.*, 2016; Kizuki and Fujiwara, 2020; Yadav and Rangnekar, 2015). Vastly supported employees experience positive emotions and are highly engaged (Chen and Fellenz, 2020; Ibrahim *et al.*, 2019; Talukder and Galang, 2021). The following hypothesis is advanced.

H2. Supervisory support is significantly associated with employee engagement

#### *Performance feedback and employee engagement*

Performance feedback is the level of direct and explicit information that an employee receives regarding the effectiveness of their performance (Aguinis *et al.*, 2012; Carpentier and Mageau, 2013; Whitaker and Levy, 2012). To ensure efficiency, performance feedback should be meaningful and timely (Anseel *et al.*, 2009; Beaumont *et al.*, 2011; Johnson, 2013). Performance feedback is a vital measure of employee engagement and ensures higher levels of employee engagement (Awan *et al.*, 2020; Lappalainen *et al.*, 2019; Tekian *et al.*, 2017). Performance feedback increases self-efficacy, which leads to enhanced levels of employee engagement (Lee *et al.*, 2019; Smith and Bititci, 2017; Warrilow *et al.*, 2020).

This parallels the findings of eminent authors who found a positive correlation between performance feedback and employee engagement (Lam *et al.*, 2011; Noronha *et al.*, 2018; Saratun, 2016). The following hypothesis is advanced.

H3. Performance feedback is significantly associated with employee engagement.

#### *Employee turnover intentions*

Maintaining skilled and competent personnel determines business competitiveness and success (Deniz, 2020; Hoffman and Tadelis, 2021; Mokoena *et al.*, 2022). Turnover intention is a person's deliberate and conscious decision to quit (Bright, 2020; Kanchana and Jayathilaka, 2023; Poon *et al.*, 2022). Turnover intention is the most significant predictor of actual leaving behavior (Afroz and Haque, 2021; Dogru *et al.*, 2023; Park and Min, 2020). High turnover intention inhibits major business objectives and causes significant organizational losses (Holston Okae, 2018; Lazzari *et al.*, 2022; Refilwe *et al.*, 2024). Eminent scholars accentuate that losing highly skilled and competent employees affects organizational commitment, performance, reputation, profitability and overall vision (Belete, 2018; Kakar *et al.*, 2023; Michael and Fotiadis, 2022). Employee turnover intentions lead to low productivity, decreased employee morale, loss of organizational knowledge and idea accumulation (Dhanpat *et al.*, 2018; Ozkan *et al.*, 2020; Tirtaputra, 2018).

#### *Employee engagement and employee turnover intentions*

Several studies have expressed a positive association between employee engagement and employee turnover intentions (Albrecht and Marty, 2020; Karatepe *et al.*, 2021; Shrotryia and Dhanda, 2018). Employee engagement and turnover intentions are indicators of employees' attitudes, which are important determinants of their future behavior (Bogaert *et al.*, 2019; Krishnan *et al.*, 2023; McCarthy *et al.*, 2020). Employee engagement tends to reduce the likelihood of turnover (Chebet *et al.*, 2019; Maltseva, 2020; Oh *et al.*, 2023). Enhanced levels of employee engagement promote a more optimistic outlook and attitude toward the workplace and reduce turnover intentions (Gupta and Gomathi, 2022; Reissova and Papay, 2021; Saleem *et al.*, 2021).

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Employees who are actively and consistently immersed in their work are so filled with positive energy that they have little time or room for negative ideas, such as leaving the company (Gupta and Shaheen, 2017; Supeli and Creed, 2016; Zhong *et al.*, 2016). The following hypothesis is proposed:

H4. Employee engagement has a significant influence on employee turnover intentions

#### *The mediating role of employee engagement*

Academics have advocated a synergy between employee engagement and organizational outcomes (Etim and Nneji, 2023; Fida *et al.*, 2022; Gede and Huluka, 2024). Employee engagement forecasts well-being, increased life satisfaction, retention and less turnover intention (Boccoli *et al.*, 2023; Li and Chanchai, 2019; Shrestha, 2019). Employee engagement fosters employees' inventiveness, adaptivity and job satisfaction, resulting in higher productivity, profitability, customer satisfaction, reduced absenteeism and attrition (Eldor and Harpaz, 2016; Gupta *et al.*, 2021; Schneider *et al.*, 2018). Employee engagement motivates employees to be enthusiastic, passionate and involved emotionally, physically and psychologically toward positive organizational outcomes (Parker and Griffin, 2011; Shantz *et al.*, 2013; Shiju *et al.*, 2023).

Similarly, numerous authors accentuate that employee engagement enhances the employees' individual in-role performance, general well-being and organizational citizenship behavior (Abdelwahed and Doghan, 2023; Ismail *et al.*, 2019; Seddikin *et al.*, 2023). The following hypothesis is proposed:

H5. Employee engagement mediates the association between job resources and employee turnover intentions.

## **Methods**

### *Research setting and data structure*

An empirical investigation was conducted in accredited pharmaceutical industries. The pharmaceutical industry is actively involved in the formation of policies governing the study, discovery and creation of new drugs (Boya and Rao Sekhara, 2019; Ekeigw, 2019; Ndomondo-Sigonda *et al.*, 2017), making it distinct in addressing job resource-related issues (Nel and Linde, 2019; Otoo *et al.*, 2019; Triantafillidou and Koutroukis, 2022). The Ghana Pharmaceutical Council Directory (2023) served as a primary source of information. Data were obtained from eight wholly owned pharmaceutical industries. A structured questionnaire was utilized in a cross-sectional study design (Kelly *et al.*, 2019; Schmidt and Brown, 2019). The study sample consisted of 1,415 respondents. Pharmaceutical industries were selected using a purposive sampling technique (Campbell *et al.*, 2020; Esfehiani and Albrecht, 2019).

Employees served as the study's primary informants (Coghlan *et al.*, 2019; Hansen and Madsen, 2019). Questionnaires were received from two different types of informants: heads and assistant heads of the different operational departments (e.g. quality control and assurance, production, packaging, stores and warehousing, maintenance, safety and security, sales and marketing), referred to as "supervisors" and workers of the different operational departments (e.g. quality control and assurance, production, packaging, stores and warehousing, maintenance, safety and security, sales and marketing), referred to as "junior staffs." 934 respondents (66.0% response rate) offered comprehensive responses that were considered acceptable. Inference from Table 1, men constituted 57.5% (majority respondents). 42.2% of the respondents were between the ages of 26 and 35. The majority of respondents (31.7%) had between 16 and 20 years' experience in the pharmaceutical industry.

Variables	Frequency (s)	Percentage of totals (%)	Variables	Frequency (s)	Percentage of totals (%)
<i>Gender</i>			<i>Education</i>		
Male	537	57.5	Senior high	124	13.3
Female	397	42.5	Diploma	113	12.1
<i>Age</i>			HND	232	24.8
18–25	172	18.4	Bachelor's degree	371	39.7
26–35	183	19.6	Master's degree	94	10.1
36–45	394	42.2	<i>Experience (years)</i>		
46–55	118	12.6	Less than 1	76	8.1
56–65	67	7.2	1–5	117	12.5
<i>Department</i>			6–10	154	16.5
Human resource	57	6.1	11–15	144	15.4
Quality control and assurance	72	7.7	16–20	296	31.7
Stores and warehousing	84	9.0	20 and above	147	15.8
Packaging	115	12.3			
Sales and marketing	122	13.0			
Finance	78	8.4			
Maintenance	77	8.2			
Safety and security	82	8.8			
Production	247	26.4			

**Table 1.**  
Profile of respondents

**Source(s):** Table by author

## Measures

Measures used in the study were assessed using multiple items from different studies in the extant literature. All measures were scored using a five-point Likert continuum from 1 (“strongly disagree”) to 5 (“strongly agree”). The results of each scale were calculated by summing the responses to the items. [Bae et al. \(2021\)](#) instrument refinement technique was applied in ensuring that items that adequately represent the presumed dimensions of a construct were included. [Hair et al. \(2019\)](#) and [Henseler and Schuberth \(2020\)](#) recommended criteria for construct standards estimates were applied. Therefore, statements of a construct below the recommended criterion of 0.60 were deleted ([Kock and Hadaya, 2018](#); [Sarstedt and Mooi, 2019](#)).

### *Job resource scale*

Job autonomy ([Schaufeli and Bakker, 2004](#)), supervisory support ([Jin and McDonald, 2017](#)) and performance feedback ([Beaumont et al., 2011](#)) were adopted in measuring job resources. Sample items include “I am able to carry out the work using my own initiative or judgment,” “I constantly receive feedback about how well I am performing” and “my supervisor genuinely cares about my well-being.” The reliability of each of the three dimensions of job resources was 0.91, 0.84 and 0.88, respectively. The reliability score for all 12 items was 0.85. The interdimensional correlations, which ranged between 0.57 and 0.79, were high.



### Employee engagement scale

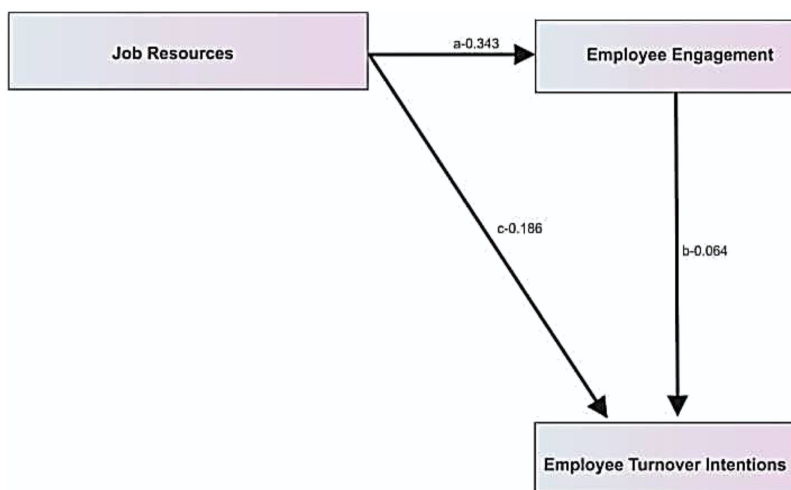
Rich *et al.* (2010) employee engagement scale was adopted to measure physical engagement (five items), emotional engagement (five items) and cognitive engagement (five items). Sample items include “I absolutely dedicate myself to my work,” “I am optimistic about my job” and “At work, I prioritize my tasks.” The reliability of each of the three dimensions of employee engagement was 0.83, 0.85 and 0.81, respectively. The reliability score for all 15 items was 0.82. The interdimensional correlations, which ranged between 0.55 and 0.77, were high.

### Employee turnover intention scale

Holtom *et al.*'s (2008) turnover intention scale was adopted in measuring turnover intentions. Sample items include “I am thinking of quitting my job.” The three-item scale had a reliability of 0.86.

### Analytic approach

For proper representation of the proposed constructs, a confirmatory factor analysis was applied (Kuppelwieser *et al.*, 2019; Schuberth *et al.*, 2018). A two-level hierarchical linear model was developed (Henseler, 2017; Hwang *et al.*, 2020). The proposed model and hypothesis were evaluated using the Statistical Packages for Social Science (SPSS) 21.0 and Analysis of Moment Structure (AMOS) 26.0 (Ringle *et al.*, 2020; Usakli and Kucukergin, 2018). The association between subdimensions as well as the nexus between observable indicators and their latent constructs were examined (Rasoolimanesh *et al.*, 2021; Rhemtulla *et al.*, 2020). Construct reliability, validity and convergent validity were examined (Cheah *et al.*, 2018; Hair *et al.*, 2020). Discriminant validity between constructs was examined (Tay and Jebb, 2018; Zijlmans *et al.*, 2018). The mediation model was tested by employing the Baron and Kenny (1986) classical product approach (Hayes, 2018; Sarstedt *et al.*, 2020a, b). Figure 1 shows a representation of the mediation model.



Source(s): Figure by author

Figure 1.  
Model of mediation  
with path coefficient

*Common method bias*

Several *a priori* measures were applied in addressing the issue of common method bias (Archimi *et al.*, 2018; Baumgartner *et al.*, 2021). During the pre-test study, psychological separation of constructs was ensured, ambiguous questions were clarified and mid-point scales were provided for each survey (Kock *et al.*, 2021; Cruz, 2022). To lessen social desirability bias, respondents' anonymity and confidentiality were assured (Chang *et al.*, 2020; Cooper *et al.*, 2020). As a post hoc evaluation, Harman's one-factor test was conducted (Jordan and Troth, 2020; Cohen and Ehrlich, 2019). The findings show that the established benchmarks were adequate (Aguirre-Urreta and Hu, 2019; Steenkamp and Maydeu-Olivares, 2021). Common method bias consequences remained insignificant, as warranted by these approaches.

**Results**

A three-factor confirmatory factor analysis (CFA) model reflecting job resources, employee engagement and employee turnover intentions established a good model fit (2/degree of freedom (df) = 2.43, root mean square error of approximation (RMSEA) = 0.052, standardized root mean residual (SRMR) = 0.044, Tucker-Lewis index (TLI) = 0.989 and comparative fit index (CFI) = 0.991) (Jing *et al.*, 2022; Savalei, 2021). Estimates of the coefficient ranged from 0.81 to 0.91 (Cepeda-Carrion *et al.*, 2019; Grimm and Wagner, 2020). The standard estimates' range was 0.71–0.89 (Flake and Fried, 2020; Rigdon *et al.*, 2019). The range of estimates for average variance extracted (AVE) was 0.59–0.65, whereas the range of estimates for composite reliability (CR) was 0.77–0.89 (McNeish and Wolf, 2021; Sellbom and Tellegen, 2019). Discriminant validity was achieved (Franke and Sarstedt, 2019; Radomir and Moisescu, 2019). Table 2 presents descriptive statistics and correlation analysis, while Table 3 presents the results of the model test.

Table 4 displays CFA results, while Table 5 presents discriminant validity test results. Table 6 displays the results of the hypothesis test, whereas Table 7 displays the results of the employee engagement effect test. Job autonomy and employee engagement are significantly associated (0.828,  $p < 0.05$ ). Hypothesis 1 is supported. Supervisory support and employee engagement are significantly associated (0.679,  $p < 0.05$ ), thereby supporting Hypothesis 2. Performance feedback and employee engagement are nonsignificantly associated ( $-0.625$ ,  $p > 0.05$ ). Hypothesis 3 is unsupported. Employee engagement had a significant influence on employee turnover intentions (0.660,  $p < 0.05$ ). Hypothesis 4 is supported. Employee engagement mediates the nexus between job resources and employee turnover intentions (0.589,  $p < 0.05$ ),

	Mean	SD	1	2	3	4	5	6	7
1. Job autonomy	5.28	2.86	1						
2. Supervisory support	4.32	2.23	0.301**	1					
3. Performance feedback	4.46	2.28	0.350**	0.713**	1				
4. Physical engagement	3.86	2.08	0.612**	0.422**	0.658**	1			
5. Emotional engagement	3.79	2.03	0.643**	0.519**	0.526**	0.799**	1		
6. Cognitive engagement	3.91	2.14	0.562**	0.681**	0.556*	0.703**	0.729**	1	
8. Employee turnover intentions	3.19	1.76	0.680*	0.702**	0.651**	0.707**	0.712**	0.669**	1

**Table 2.** Descriptive statistics, correlations and scale reliabilities

**Note(s):** \*\*Correlation is significant at the 0.01 level (two-tailed). \*Correlation is significant at the 0.05 level (two-tailed)

**Source(s):** Table by author

Model	$\chi^2$	Df	$\chi^2/df$	$p$	RMSEA	SRMR	TLI	CFI
<i>First order CFA</i>								
Job resources	215.748	67	3.22	0.000	0.053	0.050	0.929	0.936
Employee engagement	225.986	68	3.32	0.000	0.055	0.052	0.937	0.963
Employee turnover intentions	227.967	66	3.45	0.000	0.057	0.054	0.941	0.952
<i>Second order CFA</i>								
Job resources	208.527	67	3.11	0.000	0.051	0.052	0.964	0.971
Employee engagement	213.583	68	3.14	0.000	0.053	0.053	0.949	0.968
Employee turnover intentions	211.534	66	3.20	0.000	0.056	0.055	0.952	0.966
Measurement model – overall model	206.985	64	3.23	0.000	0.054	0.049	0.978	0.981
Structural model – overall model	116.852	48	2.43	0.000	0.052	0.044	0.989	0.991

**Note(s):** RMSEA = Root mean square of approximation; SRMR=Standardized root mean residual; TLI = Tucker–Lewis index and CFI=Comparative fit index; \* $p < 0.05$

**Source(s):** Table by author

**Table 3.**  
Results of the measurement and structural model test

thereby supporting [Hypothesis 5](#). Job resources had a significant indirect (mediated) effect on employee turnover intentions (0.06,  $p < 0.05$ ) ([Memon et al., 2018](#); [Sarstedt et al., 2020a, b](#)).

## Discussion

This study offers important empirical insights into the relationship between job resources and employee turnover intentions via employee engagement as a mediating variable. The results indicate job autonomy and employee engagement are significantly associated. Job autonomy significantly influences employees' motivation and engagement at work ([Naidoo-Chetty and du Plessis, 2021](#); [Pattnaik and Sahoo, 2021](#); [Yong et al., 2013](#)). Prior studies have revealed a significant association between job autonomy and employee engagement (e.g. [Itzchakov et al., 2023](#); [Ning and Alikaj, 2019](#); [Sung et al., 2022](#)). The findings show that job autonomy has a significant impact on emotional engagement ([Kuchinski-Donnelly and Anne, 2020](#); [Levitats and Vigoda-Gadot, 2020](#)) and cognitive engagement ([Barlow et al., 2020](#); [Ghoncheh, 2016](#)). Thus, job autonomy not only facilitates employees' growth and development but also favors the necessary conditions for increasing work engagement and efficiency.

Supervisory support and employee engagement are significantly associated. Supervisory support enhances employee loyalty, the provision of high-quality services and teamwork ([Nguyen and Tran, 2021](#); [Shams et al., 2020](#); [Yang et al., 2018](#)). Earlier studies have found a positive relationship between supervisory support and employee engagement (e.g. [Lee and Shin, 2023](#); [Singh et al., 2022](#); [Tsaour et al., 2019](#)). The findings show that supervisory support has a positive impact on emotional engagement ([Vakira et al., 2022](#); [Rathi and Lee, 2017](#)) and cognitive engagement ([Sun and Yoon, 2022](#); [Zhao and Guo, 2019](#)). Thus, supervisory support not only facilitates the improvement of employee motivation and attitude but also support the prerequisites for instilling confidence, constancy, resilience and confidence in employees. Performance feedback and employee engagement are nonsignificantly associated.

Performance feedback increases self-efficacy, which leads to enhanced levels of employee engagement ([Cappelli and Tavis, 2016](#); [Lechermeier and Fassnacht, 2018](#); [Lee et al., 2019](#)). However, the unavailability of cogent performance feedback results in low levels of employee engagement and self-efficacy. A possible explanation is that, despite the existence of organizational support for performance feedback, employees' perceptions of the absence of concise, meaningful and timely feedback will not promote higher levels of employee

Factor names, factor loadings and Cronbach's alpha				
Factor	Items	( $\lambda$ )	AVE	CR
Job autonomy ( $\alpha = 0.91$ )	It is entirely up to me to decide how and when the task is done in the course of my job	0.893	0.63	0.89
	I am able to carry out the work using my own initiative or judgment	0.842		
	My job offers me a lot of opportunities for independence and creative freedom in my work	0.751		
	In my job, I feel free to voice my thoughts and opinions	0.740		
	The work-related responsibilities I have align with my interests	0.753		
Performance feedback ( $\alpha = 0.88$ )	I constantly receive feedback about how well I am performing	0.851	0.65	0.82
	Performing the tasks necessary for the job gives me numerous opportunities to assess my performance	0.736		
	Very little information regarding my performance is given by my job itself	0.819		
Supervisory support ( $\alpha = 0.84$ )	My supervisor genuinely cares about my well-being	0.739	0.61	0.89
	My supervisor is interested in my viewpoints	0.771		
	My supervisor is supportive in completing the task	0.783		
	My supervisor pays close attention to my values and aspirations	0.818		
Physical engagement ( $\alpha = 0.83$ )	I put a lot of effort into my work	0.787	0.60	0.86
	I absolutely dedicate myself to my work	0.729		
	I work really hard at what I do	0.734		
	My enthusiasm for my work is high	0.749		
Emotional engagement ( $\alpha = 0.85$ )	I put all of my effort into finishing my work	0.856	0.61	0.87
	I am optimistic about my job	0.731		
	I am thrilled with my job	0.705		
	I am pleased with my job	0.727		
	I feel energized at work	0.859		
Cognitive engagement ( $\alpha = 0.81$ )	I am enthusiastic about my work	0.876	0.65	0.89
	At work, I am completely focused on my job	0.696		
	At work, I prioritize my tasks	0.837		
	At work, I focus heavily on my job	0.748		
	At work, I give my job a lot of thought	0.878		
Employee turnover intentions ( $\alpha = 0.86$ )	At work, my attention is entirely on my task	0.848	0.59	0.77
	As soon as I find a better job, I will leave	0.828		
	I am thinking of quitting my job	0.749		
	I am actively looking for a job	0.733		

**Table 4.**  
Confirmatory factor analysis

**Note(s):** AVE represents average variance extracted and CR represents composite reliability. All factor loadings are significant at  $p < 0.0$   
**Source(s):** Table by author

engagement. Employee engagement had a significant influence on employee turnover intentions. Enhanced levels of employee engagement promote a more optimistic outlook and attitude toward the workplace and reduce turnover intentions (Gupta and Shaheen, 2017; Shuck *et al.*, 2017a; Yeh, 2013). Earlier studies have found a positive relationship between employee engagement and employee turnover intentions (e.g. Anyalor *et al.*, 2018; Diko and Saxena, 2023; Rajashekar and Jain, 2024).

The findings show that employee engagement has a positive impact on job quality (Brieger *et al.*, 2020; Wang and Wang, 2020) and job satisfaction (Jia *et al.*, 2019; Meynhardt *et al.*, 2018). Thus, employee engagement not only facilitates the improvement of organizational and

	1	2	3	4	5	6	7
1. Job autonomy	(0.814)						
2. Supervisory support	0.111	(0.852)					
3. Performance feedback	0.156	0.525	(0.744)				
4. Physical engagement	0.603	0.279	0.367	(0.812)			
5. Emotional engagement	0.201	0.432	0.615	0.332	(0.840)		
6. Cognitive engagement	0.082	0.474	0.596	0.279	0.578	(0.813)	
7. Employee turnover intentions	0.255	0.356	0.473	0.416	0.451	0.726	(0.846)

**Note(s):** Values in diagonal represent the squared root estimate of average variance extracted (AVE)  
**Source(s):** Table by author

**Table 5.**  
Discriminant validity

Hypothesis	Beta coefficient	p value	Result
H1: Job autonomy is significantly associated with employee engagement	0.828	0.004	Accepted
H2: Supervisory support is significantly associated with employee engagement	0.679	0.016	Accepted
H3: Performance feedback is significantly associated with employee engagement	-0.625	0.289	Rejected
H4: Employee engagement has a significant influence on employee turnover intentions	0.660	0.016	Accepted
H5: Employee engagement mediates the nexus of job resources and employee turnover intentions	0.589	0.002	Accepted

**Source(s):** Table by author

**Table 6.**  
Inferences drawn on hypotheses

	Employee engagement		Total effect	p value
	Direct	Indirect		
Job resources	0.343		0.343	0.000
Employee turnover intentions	0.186	0.064	0.250	0.000

**Source(s):** Table by author

**Table 7.**  
Standardized direct, indirect and total effects of employee engagement

employee outcomes but also supports the prerequisites for enhanced employee loyalty, increased organizational commitment and a high degree of job satisfaction. Employee engagement mediates the nexus between job resources and employee turnover intentions. Employee engagement fosters employees' inventiveness, adaptivity and job satisfaction, resulting in higher productivity, profitability, customer satisfaction and reduced absenteeism and attrition (Bellamkonda *et al.*, 2021; Knight *et al.*, 2019; Kwon and Kim, 2020).

Previous studies have found a positive relationship between job resources and employee turnover intentions (e.g. Bakker and Albrecht, 2018; Lestari and Margaretha, 2021; Skaalvik and Skaalvik, 2018) and between employee engagement and employee turnover intentions (e.g. Manjaree and Perera, 2021; Nkansah *et al.*, 2023; Wushe and Shenje, 2019). In light of the findings, since employee engagement exerts partial mediation in the association between job resources and employee turnover intentions. It is imperative to take into account both direct and indirect effects while elucidating employee turnover intentions. Therefore, employee

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engagement not only facilitates the improvement of individual and organizational performance but also favors the necessary conditions for higher job performance, increased citizenship behaviors and increased client satisfaction.

The findings show the importance of considering employee engagement as a valuable organizational resource, which contributes to the development of two connected strategic outcomes: employee retention and organizational commitment.

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### *Theoretical implications*

This study supports the supposition for the enhancement of employee engagement and a further investigation into the association between job resources, employee engagement and employee turnover intentions. The study's findings elucidate the ambiguity in the literature on job resources, employee engagement and employee turnover intentions (Davis and Van der Heijden, 2023; Ezaili *et al.*, 2018; Nie *et al.*, 2023). Job autonomy and employee engagement are significantly related. The results support earlier studies that indicate that employees with a sense of job autonomy tend to be more content at work, have a tendency to be more proactive and problem-solvers and are therefore, more productive (Fürstenberg *et al.*, 2021; Halliday *et al.*, 2018; Scrimshire *et al.*, 2022).

They also concur with earlier studies, which indicate that job autonomy offers the chance to break off from monotonous work and test out fresh, practical work methods that may produce better results (Bajaba *et al.*, 2021; Kao *et al.*, 2022; Kim *et al.*, 2020). The findings validate the suppositions of researchers (Lesener *et al.*, 2019; Svendsen *et al.*, 2018). Supervisory support and employee engagement are significantly associated. The results corroborate past studies, which show that improved supervisory support encourages workers to exhibit high levels of engagement and positive relationships (Quansah *et al.*, 2022; Swanberg *et al.*, 2011; Teoh *et al.*, 2016). They also support earlier studies that indicate that supervisory support fosters competence, assurance, stability and resiliency (Kalemci Tuzun and ArzuKalemci, 2012; Shi and Gordon, 2020; Swati and Dutta, 2020).

The findings validate the postulations of researchers (Heyns *et al.*, 2021; Sawasdee *et al.*, 2020). Performance feedback and employee engagement are nonsignificantly associated. The result is not consistent with the findings of several authors who argue that performance feedback is a vital measure of employee engagement, which boosts self-efficacy, job performance and satisfaction (Johnson *et al.*, 2022; Pulakos *et al.*, 2019; Tagliabue *et al.*, 2020). The findings do not support the postulations of researchers (Michalis and Paola, 2022; Schleu and Huffmeier, 2020).

Employee engagement had a significant influence on employee turnover intentions. The results parallel the findings of numerous academics who contend that employees who are actively and consistently immersed in their work are so filled with positive energy that they have little time or room for negative thoughts, like quitting the organization (Ali *et al.*, 2020; Cassim *et al.*, 2024; Margaretha *et al.*, 2018).

They also corroborate earlier studies that indicate that employee engagement boosts employee loyalty through flexible work arrangements, emotional intelligence and spiritual intelligence (Basheer *et al.*, 2019; Rusilowati, 2022; Weideman and Hofmey, 2020). The findings validate the postulations of researchers (Dhir and Shukla, 2019; Shrotryia and Dhandu, 2020). Moreover, the results show employee engagement mediates the association between job resources and employee turnover intentions. The results support previous studies, which indicate that employee engagement motivates employees to be enthusiastic, passionate and involved emotionally, physically and psychologically toward positive organizational outcomes (Chen and Peng, 2021; Shuck *et al.*, 2017a, b; Pincus, 2023). They also concur with earlier studies that show that employee engagement forecasts well-being, increased life satisfaction, retention and less turnover intention (Barrick *et al.*, 2015;

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Blanchard *et al.*, 2019; Verčič, 2021). The findings support the postulations of researchers (Chanana and Sangeeta, 2020; Tiwari and Lenka, 2019).

### *Practical implication*

Job resources facilitate and promote employee development and role performance (Albrecht and Marty, 2020; Cooke *et al.*, 2019; Zhang and Farndale, 2021). Job resources encourage individual development, learning and growth to stimulate employee retention (Ojeleye *et al.*, 2022; Cregård and Corin, 2019; Jauhari and Yulianti, 2020). Job autonomy and employee engagement are significantly related. Job autonomy is a major determinant of employee engagement and is positively correlated with employee engagement levels (Zhang *et al.*, 2017; Kenyi and John, 2020; Ade-Adeniji *et al.*, 2021). The pharmaceutical industry would therefore have a keen interest in (re)evaluating job autonomy interventions where employees are able to carry out the work using their own initiative or judgment and have opportunities for independence and creative freedom (Thisera and Wijesundara, 2020; Tummers *et al.*, 2018).

Job autonomy improves employee performance, elevates employee engagement levels and improves organizational profit (Chen, 2019; Kanten *et al.*, 2019; Novianti and Fuadiputra, 2021). The pharmaceutical industry would have to (re) evaluate job autonomy interventions where work-related responsibilities are aligned with employees' interests (Emre and De Spiegeleare, 2021; Vui-Yee and Yen-Hwa, 2020). Supervisory support and employee engagement are significantly associated. Vastly supported employees experience positive emotions and are highly engaged (Ding and Yu, 2021; Kaur and Randhawa, 2021; Zhao and Guo, 2019). The pharmaceutical industry would have to (re) evaluate supervisory support interventions where supervisors genuinely care about employees' well-being and show interest in the employee's view (Chen and Wu, 2020; Contreras *et al.*, 2020).

Saks (2021) argues that employees reciprocate the support supervisors give them by displaying helping behaviors. The pharmaceutical industry would have to (re) evaluate supervisory support interventions where supervisors pay close attention to employees' values and aspirations (Hauff *et al.*, 2022; Zhang *et al.*, 2023). Employee engagement had a significant influence on employee turnover intentions. Employee engagement predicts well-being, greater life satisfaction and reduced turnover intention (Chen and Peng, 2021; Hameduddin and Lee, 2021). The pharmaceutical industry would have to (re) evaluate employee engagement interventions where employees are absolutely dedicated to their work (Boccoli *et al.*, 2023; Tsaor *et al.*, 2019). Employee engagement reduces employee turnover and enhances organizational growth (Bakker and Oerlemans, 2019; Riyanto and Adhitama, 2020). The pharmaceutical industry would have to (re) evaluate employee engagement interventions where employees are optimistic and highly focused on their work (Gupta *et al.*, 2017; Piyasena and Kottawatta, 2018). Employee engagement mediates the association between job resources and employee turnover intentions. Employee engagement is a significant factor in determining individual performance, behaviors and attitudes as well as employee retention, financial performance, shareholder return, productivity and organizational performance (Kassahun and Raman, 2021; Khodakarami and Dirani, 2020; Swati and Archana, 2019). The study highlights the significance of creating a system for the enhancement of employee engagement since engaged employees take initiative, look for possibilities to solve problems and put in more time and effort (Dan *et al.*, 2020; Sendawula *et al.*, 2018; Simon and Jeromy, 2018).

Enhanced levels of employee engagement promote a more optimistic outlook and attitude toward the workplace and reduce turnover intentions (Karatepe *et al.*, 2021; Soliman and Wahba, 2019; Talavera-Velasco *et al.*, 2021). Numerous academics postulate that highly engaged workers have greater job satisfaction, commitment, less turnover intentions, greater organizational citizenship behavior and improved health (Kim *et al.*, 2022; Li *et al.*, 2021; Otoo

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and Rather, 2024). Consequently, the pharmaceutical industry would have to develop a proactive and well-articulated employee engagement intervention to ensure organizational effectiveness, innovativeness and competitiveness.

### Limitations and suggestions for future study

The study's limitations should be considered when interpreting the findings, notwithstanding its theoretical and practical advancements. Due to the study's cross-sectional nature, it is impossible to completely exclude the potential that the results could be construed as showing a reverse causality or causal relationship (Setia, 2016; Wang and Cheng, 2020). A future longitudinal study is necessary (Carroll, 2019; Kneck and Auduly, 2019). By examining a mediation mechanism, the current study sought to elucidate the effect of job resources on employee turnover intentions using a number of job resource measures. However, in order to conduct an exhaustive and targeted inquiry, further theoretical and practical work is required to have a comprehensive grasp of the nexus between job resources and employee turnover intentions.

Research on the potential mediation role of work engagement in the nexus between organizational commitment and employee turnover intentions is encouraged in the future. The generalizability of the findings will be constrained due to the research's pharmaceutical industry focus. Replicating the model in other industries and areas is encouraged in future studies.

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