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Linking quality supervisory support to turnover intentions among rural healthcare professionals: The mediating role of performance appraisal satisfaction and moderating role of perceived organizational support

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ABSTRACT

This study examines the relationships among quality supervision, performance appraisal satisfaction, and employee turnover. It explores the moderating role of perceived organizational support in these relationships within the context of rural healthcare. Data for this study were obtained from an online survey of employees from a large rural health facility in the Southeastern United States. Hypothesized relationships were examined using regression-based moderated mediation analysis. The empirical results suggest a negative relationship between the quality of supervisory support and turnover intentions, mediated partially by employees' performance appraisal satisfaction. The indirect effect of quality supervisory support on turnover intention and the direct effect of performance appraisal satisfaction on turnover were also found to be moderated by perceived organizational support. Understanding factors that drive employee retention can help inform effective managerial practices and interventions for reducing turnover. Our study contributes to practice and the existing literature by examining the boundary conditions of perceived organizational support on the direct and indirect association between quality supervisory support and turnover intentions *via* performance appraisal satisfaction.

Introduction

As rural hospitals continue to grapple with workforce shortages (Cosgrave 2020), high staff turnover, and recruitment costs (Wakerman et al. 2019), a focus on staff retention becomes a strategic imperative. Understanding factors that drive employee retention can help inform effective managerial practices and interventions for reducing turnover. The existing literature has identified the work environment as an important contextual determinant of turnover through its role in shaping job satisfaction (Currie and Hill 2012; Janakiraman, Parish, and Berry 2011). Within rural healthcare organizations, resource limitations often characterize the work environment (Marshall et al. 2018; Nottingham, Johnson, and Russell 2018). Under such conditions, supportive organizational structures can help minimize worker stress and improve adaptivity, thereby reducing turnover and other adverse employee outcomes.

Quality supervision and human resource management processes are important tools for creating a supportive work environment, improving employee job satisfaction, and reducing turnover among healthcare professionals (Al Sabei et al. 2020). For example, satisfaction with organizational performance appraisal systems and processes has been negatively associated with adverse outcomes such as turnover (Santhanam et al. 2015). Similarly, the literature identifies effective supervision and management competency as protective factors against turnover among health professionals (Medas et al. 2015).

Supervisors and managers are responsible for leading organizational members in achieving organizational goals. Leadership, one of the pillars of quality management, forms the backbone of any organizational improvement strategy (Albacete-Sáez, Mar Fuentes-Fuentes, and Bojica 2011). As organizational leaders, supervisors inspire, motivate, recognize contributions, and foster open and honest communications at all levels of the organization.

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More importantly, they equip employees with the needed resources and freedom to strive for duty and accountability. Thus, the lack of quality supervisory support may create a working environment that prevents employees from fully embedding themselves into the job (Ramaite, Rothmann, and van der Vaart 2022).

Organizational characteristics, including climate and culture, influence the structure, process, and staff-perceived outcomes of supervisory and performance management processes (Levy and Williams 2004), and could represent pathways and boundary conditions that lead to or alter employee outcomes. Here, we examine the relationships among quality supervision, performance appraisal satisfaction, and employee turnover. We also evaluate the moderating role of perceived organizational support in these relationships. Our study is particularly responsive to specific calls for additional research on the mechanisms and interacting factors shaping the relationship between performance management and employee outcomes (Bano 2018), especially within the context of rural health care, an area within which these mechanisms have not been previously explored. The findings of this study, thus, have implications for not only advancing research on employee turnover mechanisms but also for rural healthcare management. Arguably, the increasing rates of turnover among healthcare personnel remain a source of concern to healthcare administrators, especially within the context of the ongoing COVID-19 pandemic that has worsened the turnover trend among healthcare employees globally (Falatah 2021; Poon et al. 2022).

Literature review and hypotheses development

Organizational structures and process and employee outcomes

Achieving the highest level of performance requires a well-executed approach to continuous organizational improvement. The success of any organization depends on the quality and characteristics of its employees. The employees, the organization's internal customers, are the bedrock and link between the external customers and/or end users and the organization. As such, employee motivation, engagement, and commitment continue to be key to organizational performance and success, as employee performance outcomes are related to employees' relationship with the organizational management and structures within the said organization (Al Sabei et al. 2020).

Employee management is crucial to organizational outcomes in "high contact" services, such as in the healthcare industry (Byrne, Miller, and Pitts 2010; Yee, Yeung, and Cheng 2008). Workplace environment influences employee service quality perceptions and behavior (Janakiraman, Parish, and Berry 2011; Patterson, Warr, and West 2004). That is, employees produce favorable responses when they perceive a positive and quality workplace environment. Thus, the creation of a healthier workplace environment by management supports employee health and facilitates the delivery of high-quality care. In their study, Eisenberg et al. (2001) established that both workers' health and ability to deliver high-quality care go in tandem. To deliver success, quality work environments must be designed in ways that enable the development and utilization of people's capacity (Lowe 2012). Employees want to experience a quality workplace culture that values their presence and input and provides them with support systems to excel in their job. Furthermore, employees value organizations whose leadership exhibits support and commitment toward the organization's people–development goals. Such employees are more likely to exhibit satisfaction, high productivity levels, and reduced turnover intentions (Mone et al. 2011; Lowe 2012).

The existing literature suggests that employee satisfaction is attributed to organizational structures in terms of accessibility to leadership, frequent communication, and employee empowerment (Fassel 2003). Moreover, prior research in the management literature establishes the relationship between employee satisfaction and turnover intention (Bansal et al. 2004; Hausman 2003). Evidently, healthcare employees perceive their supervisor's role, support, and exchanges between the employee and the supervisor as a catalyst to employee happiness, satisfaction, and intention to leave. Blizzard (2005) asserts that healthcare employees, in particular, are very positive about what they do but are negative about whom they do it for. Therefore, healthcare organizations must engage and empower their employees to demonstrate feelings of commitment, involvement, and passion for their jobs and provide good quality care. To achieve such positive employee behaviors, healthcare organizations must develop robust performance management and supervision strategies such as communication, goal setting, development, learning, and building performance appraisal systems for recognition and feedback.

Supervision and turnover

Healthcare professionals work in a physically arduous and complex demanding environment that requires critical management skills from supervisors. These

supervisor management skills are important since they affect employee outcomes in terms of attitude and behavior. On a daily basis, supervisors are viewed as crucial in developing employee commitment to management goals and organizational performance (Alfes et al. 2013; Holland et al. 2017). Deconinck and Johnson (2009) found that ineffective supervision could be the biggest barrier to the achievement of organizational objectives and goals. Employees also interpret managers' behaviors as representing their organization (Stinglhamber and Vandenberghe 2003). As a result, supervisors serve as the voice of management and become drivers of employee engagement (Therkelsen and Fiebich 2004).

Numerous studies have outlined positive and significant employee outcomes with supervisor support (Janakiraman, Parish, and Berry 2011; Yang and Caughlin 2017). Investments in cultivating and fostering these high-quality dyadic supervisor-employee relationships have been associated with lower turnover, job satisfaction, organizational commitment, satisfaction with performance appraisal, and improved work performance, among others (McFadden et al. 2014; Luria 2008; Graen and Uhl-Bien 1995). In their study, Zohar and Polachek (2014) found that frequent interaction and feedback, specifically daily messaging in supervisor-member communications, improved employee work performance levels over an environment with little to no supervisor-member communications. Catteeuw, Flynn, and Vonderhorst (2007) reported the link between higher employee engagement and the need to provide open and honest feedback that ensures workers are aware of their performance strengths and development areas. Smither and London (2009) found that employees considered quality feedback from supervisors to be a positive and motivational work experience that enhances satisfaction, morale, and engagement while decreasing turnover intention. Payne and Huffman (2005) found a direct significant relationship between supervisor support and turnover intention.

Evidence suggests that employees need more motivational support and resources than learning opportunities alone to accomplish their development goals (Bakker and Schaufeli 2008). Thus, while developmental activities may be favorably rated, employee outcomes may not increase if employees feel a lack of supervisor support for their efforts. Ito and Brotheridge (2005) found that employees who received career and developmental support from their supervisors reported higher commitment to their work and organization and had little to no turnover intent. The quality of support the supervisor provides also helps provide

work knowledge and overcome job demands (Buch et al. 2015; Schaufeli and Bakker 2004). Basuil, Manegold, and Casper (2016) posited that supervisors adopting strategies that lead to a supportive environment improve organizational performance *via* employee commitment to the organization. For example, empathetic supervisors minimize negative work behaviors and absenteeism while enhancing productivity and performance levels (Dasgupta, Suar, and Singh 2012).

A leader's behavior accounts for an estimated 25% of why people feel productive, motivated, energized, effective, and committed to their work (Kouzes and Posner 2010) Thus, support from immediate supervisors offers great strategic benefits to employees, particularly in the achievement of work goals and organizational objectives (Rofcanin et al. 2018; Quade, McLarty, and Bonner 2020). Good employee relationships between supervisor and employee present avenues for trust, socio-emotional resources, and developmental programs. As a result, employees are more likely to reciprocate the gesture to the organization, resulting in less turnover intention. In the absence of such a high-quality relationship between supervisor and employees, Pierce et al. (2009) report that employees are less psychologically attached to the organization, increasing their turnover intentions. Thus, in light of a myriad of studies across sectors (e.g., Rofcanin et al. 2018; Maertz et al. 2007) that link quality supervision to positive employee behaviors and outcomes, including retention, we hypothesize that quality supervisory support will be protective against employee turnover:

Hypothesis 1: Quality supervisory support is negatively associated with turnover intentions.

Performance appraisal and turnover

Performance appraisal is one of the most important quality management and human resource management processes that help assess and develop performance evaluation, coaching and staff development, and rewards and recognition systems within an organization (Fletcher 2001). The literature is inundated with various definitions and conceptualizations of performance appraisal. Spicer and Ahmad (2006, 214) defined it as a "tool for managing the effectiveness and efficiency of employees." According to Arbaiy and Suradi (2007, 195), performance appraisal is "a structured formal interaction between a subordinate and his/her superior." Ubeda and Santos (2007, 110) also defined PA as "a tool to identify and monitor staff's competencies, as well as taking into account a company's core competence and external

demands". In this study, we conceptualize performance appraisal as a process in which employee performance is evaluated against set standards over a period. As a quality process tool, performance appraisal seeks to help organizations identify areas of weakness within their workforce that may require training and development. Therefore, this process tool espouses employee continuous improvement as one of the tenets of quality management.

Research posits that the development of appraisal systems within an organization must elicit positive appraisal reactions from its employees in order to positively influence attitude, behavior, and performance levels (Keeping and Levy 2000). A key appraisal reaction in the literature is satisfaction (Levy and Williams 2004). Performance appraisal satisfaction positively relates to work performance outcomes (Dusterhoff, Cunningham, and MacGregor 2014; Kuvaas 2006). Employees who are satisfied with performance appraisal processes feel motivated to sustain and/or increase their productivity and performance levels. They are also more likely to display higher engagement levels and lower turnover intentions (Mone and London, 2009).

In contrast, dissatisfaction with performance appraisal systems begets negative employee outcomes. Because performance appraisal often informs merit-based outcomes, including decisions related to salary increases and promotions, employee-perceived biases about the process may directly shape employee behaviors and outcomes in a reciprocal manner (Santhanam et al. 2015). Employees who perceive the performance appraisal process and outcome as unfair become disengaged and less motivated, increasing turnover intentions (Maslach and Leiter 2008). Poon (2004) found that dissatisfaction with performance appraisals positively affected employee turnover intentions. In line with Poon (2004) and other studies that have found perceived fairness of performance appraisal (Rubel and Kee 2015) and satisfaction with the process (Brown, Hyatt, and Benson 2010; Jawahar 2006; Kuvaas 2006) to be negatively associated with turnover intentions (Rubel and Kee 2015), we hypothesize the following:

Hypothesis 2: Performance appraisal satisfaction is negatively associated with turnover intentions.

Performance appraisal as a mediator in the supervision-turnover relationship

Some performance appraisal strategies and practices, such as (1) providing feedback and concerns,

(2) giving the opportunity to communicate opinions and influence managerial thinking, (3) providing training and development, (4) providing job security, (5) providing a competitive salary package, (6) recognizing and rewarding good performance, are associated with employee turnover decisions (Dundon and Gollan 2007; Tzafrir et al. 2004). In their study, Allen, Shore, and Griffeth (2003) show that satisfactory reactions to performance appraisal lower turnover intentions.

Of note, performance appraisals are often conducted by supervisors and represent another point of interaction between supervisors and their subordinates. Thus, employees' evaluation of the appraisal process may be shaped by their interactions with their supervisors. As key actors, supervisors must communicate with clarity on expectations to subordinates. In addition, supervisors can address the needs of employees by implementing performance appraisal strategies and practices that are geared toward employee growth and engagement. These performance appraisal strategies and practices serve as facilitating mechanisms through which supervisors provide support to employees.

As suggested by the extant literature, employee satisfactory reactions to performance appraisals occur within a social context, with the quality of the rater-ratee relationship being a significant determinant (Elicker, Levy, and Hall 2006; Pichler 2012). That is, employee assessment of the quality of the performance appraisal process, and consequently, their satisfaction, tends to be shaped by the supervisor (Jawahar 2006), as variations in the appraisal process are largely attributed to supervisors (Brown, Hyatt, and Benson 2010). For example, Duarte, Goodson, and Klich (1994) reported that performance appraisals for individuals in high-quality supervisor-subordinate relationships tend to be more favorable regardless of objective performance measures.

While previous research has found that supervision is an antecedent for performance appraisal reactions and that both supervision and performance appraisal satisfaction are independently associated with turnover, very few studies, and none in the rural healthcare literature, have examined performance appraisal as a mediator in the supervision to turnover relationship. We hypothesize that performance appraisal satisfaction mediates the relationship between quality supervisory support and intention to leave.

Hypothesis 3: Performance appraisal satisfaction mediates the relationship between quality supervisory support and turnover intentions.

The moderating role of perceived organizational support

The context and conditions under which performance appraisal shapes employee outcomes have traditionally received little attention (Bano 2018). In particular, few studies have examined potential moderators in the performance appraisal to employee outcomes relationship. In one such study, Kuvaas (2006) reported a moderating effect of work motivation on the performance appraisal to work performance relationship. In this present study, we heed the call for additional research on the mechanisms and interacting factors shaping the relationship between performance appraisal systems and employee outcomes by examining a construct identified as an important moderating factor in the work environment: perceived organizational support.

Perceived organizational support (POS) refers to employees' general perceptions of how much their employers regard their contributions and are concerned about their welfare (Eisenberger et al. 2001). It is a concept that qualifies the interactions between employees and the organization's agents. Numerous studies have found significant associations between POS and employee outcomes (Farh, Hackett, and Liang 2007; Rich, Lepine, and Crawford 2010; Yu et al. 2019). Employees who perceive greater POS engage in more work-related activities that improve their performance. As a self-enhancement process, POS provides fulfillment of employee socio-emotional needs, leading to a commitment to organizational values (Kurtessis et al. 2017). Meyer, Becker, and Van Dick (2006) found that POS promotes stronger relational bonds between employees and management. POS has also been shown to inspire and enhance creativity among employees (Zhou and George 2001). Further, drawing on the reciprocity norm, Tekleab, Takeuchi, and Taylor (2005) found that POS could engender a sense of obligation to the organization among employees.

High POS has been shown to lower employee turnover by enhancing employee motivation and work commitment (Choi et al. 2016). On the other hand, employees who experience low POS do not feel a sense of belonging, care, or value from the organization. Because they are unsure of their personal engagement, such employees choose to protect themselves by leaving their roles when there is little perceived organizational support (Kahn 1990). Indeed, such employees do not feel obliged to commit to a working or exchange relationship with the organization, increasing their turnover intentions.

Earlier research by Lynch, Eisenberger, and Armeli (1999) identified a moderating role of perceived organizational support in the relationship between exchange relationship contexts and employee performance. Supportive organizations may more effectively align employee evaluation systems with reward systems. They may also be more intentional in pursuing equity and fairness. Such circumstances may elicit higher employee reciprocity, resulting in fewer intentions to leave. Thus, under conditions of high POS, where there is the belief that the organization provides support and recognition to facilitate performance, turnover intentions among employees with high levels of performance appraisal satisfaction are expected to diminish significantly. Similarly, high levels of organizational support may augment supervisory support, particularly for those in high-quality supervisor-subordinate relationships, resulting in improved positive outcomes and decreased negative outcomes (Figure 1). Thus, we hypothesize the following:

Hypothesis 4: Perceived organizational support moderates the negative relationship between performance appraisal satisfaction and turnover intention, such that the relationship is stronger for those experiencing high perceived organizational support than for those experiencing low perceived organizational support.

Hypothesis 5: Perceived organizational support moderates the negative and indirect relationship between the quality of supervisory support and turnover intention through performance appraisal satisfaction, such that the indirect relationship is stronger for high
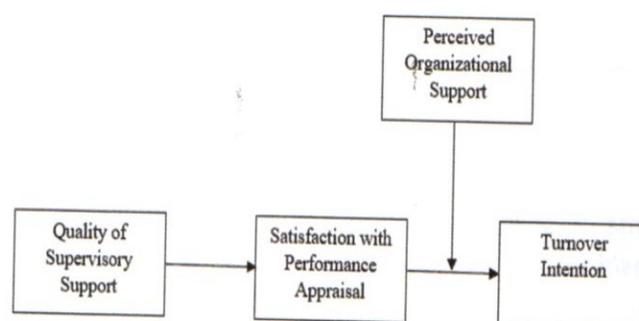

Figure 1. The research model.

perceived organizational support than low perceived organizational support.

Methodology

Sample and data collection procedures

A large rural hospital in the Southeastern United States provided the sampling frame for this study as part of an annual employee survey facilitated by the research team. An online survey link was disseminated to all employees of the organization by the human resource manager. The online survey was administered *via* Qualtrics. Employees were assured of the confidentiality of their responses, and the hospital had no access to the raw data. Based on power analysis conducted using G*Power version 3.1.9.7, a sample size of 191 was determined to be adequate and sufficient in achieving 80% power for detecting small to medium effects at a significance criterion of α = .05, using two-tailed tests. Data collection occurred over a two-month period between June and July 2018. After the first month, the human resources manager followed up with biweekly reminders in July, imploring employees to complete the survey.

The final sample consisted of 356 healthcare employees (i.e., a 48% response rate), which was higher than the sample size required for this study. This sample included 289 females (81.2%), 174 individuals (48.9%) below the age of 40, 181 (50.8%) clinical staff, and 325 (91.3%) full-time employees. While 135 (37.9%) had worked less than five years at the facility, 64 (18%) had over 15 years of work experience at the hospital.

Measures

For the current research, we used previously validated scales to measure the study's key variables. We used three items developed by Scarpello and Vandenberg (1987) to measure quality supervisory support. Three items were adapted from Keeping and Levy (2000) and used to measure performance appraisal satisfaction. We used the four items developed by Rhoades, Eisenberger, and Armeli (2001) to assess perceived organizational support, while three items from Rosin and Korabik (1991) were used to measure turnover intentions. All responses were on a five-point Likert scale, where 1 = strongly disagree and 5 = strongly agree. We also controlled for gender, age, race (white or other), employee type (full or part-time), education, employee position (clinical or administrative), and tenure in the organization.

Results

Measurement model estimation

We used confirmatory factor analysis (CFA) to evaluate the psychometric properties of the measures of the conceptual model (Anderson and Gerbing 1988). The measurement model included four factors and provided a satisfactory fit to the data. The fit indices were as follows: χ^2 (df) = 141.04 (59), $p < .001$, RMSEA = 0.062, TLI = 0.978, CFI = 0.971, SRMR = 0.03, χ^2/df = 2.39. The associated parameters in Table 1 show all indicators exceeding the threshold established at 0.7 (Carmines and Zeller 1979), indicating adequate convergent validity. The composite reliability of the four constructs ranged from 0.88 to 0.93, which were both >0.70 and thus acceptable (see Nunnally 1978), indicating good reliability. Moreover, the results in Table 2 showed that the square root of AVE by the measure of each factor was larger than the correlation of that factor's measure with the measures of all other factors in the model. This result confirmed adequate discriminant validity (Fornell and Larcker 1981).

Evaluation of common method bias

Since our data were self-reported and collected in a single sitting, we had to be sure our results would not be influenced by common method bias. Thus, we followed the procedures recommended by Podsakoff et al. (2003). First, Harman's single-factor test was

Table 1. Measurement model statistics ($N = 356$).

Construct and items	Loading
Quality of supervisory support (AVE = 0.82; CR = 0.93)	
QSS1: I feel comfortable talking with my supervisor about issues I face when doing my work.	0.908
QSS2: My supervisor gives me clear instructions and objectives.	0.915
QSS3: My supervisor treats me with respect and dignity.	0.898
Performance appraisal satisfaction (AVE = 0.71; CR = 0.88)	
PAS1: My performance was accurately evaluated	0.861
PAS2: The appraisal helped me learn how I can do my job better	0.882
PAS3: I felt quite satisfied with my last performance review discussion	0.776
Perceived organizational support (AVE = 0.74; CR = 0.92)	
POS1: I feel this organization appreciates the work I do here	0.887
POS 2: I am treated with respect in this organization	0.882
POS 3: My opinions matter in this organization	0.839
POS 4: This organization cares about its employees	0.836
Turnover intentions (AVE = 0.78; CR = 0.91)	
TOI1: I am planning on leaving this job within the next 12 months	0.858
TOI2: I am actively searching for another job now	0.924
TOI3: I think about leaving this organization	0.865

AVE: Average variance extracted; CR: composite reliability.

used to estimate common-method variance bias (Harman 1967). Four factors with eigenvalues above 1.0, explaining 76.60% of the total variance, and the largest single factor, explaining 21.87% of the variance, were revealed. Therefore, no single factor was responsible for most of the variance (Christmann 2000). In our second procedure, we performed the conservative version of Harman's (1967) single factor test, as suggested by Malhotra, Kim, and Patil (2006). This test examines whether a significant amount of variance is common across all items. The results concluded that the single-factor model did not fit the data well: χ^2 (df) = 1566.74 (65), $p < .001$, RMSEA = 0.255, TLI = 0.516, CFI = 0.596, χ^2/df = 24.13, and it was significantly worse than the fit of the measurement model identified earlier. Thus, there was no serious common method bias.

Hypothesis testing

The main effect, indirect effect, and conditional indirect effect models were estimated using PROCESS v3.2.01 macro (Hayes 2013) along with SPSS version 25. We used this analytical technique mainly because it integrates both moderation and mediation analyses into a unified statistical model rather than performing each analysis separately (Hayes and Rockwood 2020). Because hypotheses 1, 2, and 3 are interlinked, we tested a mediation model using PROCESS model 4 using a bias-corrected bootstrapping procedure (Preacher and Hayes 2008). Bootstrapping is ideal for indirect effect testing because the sampling distribution of the indirect effect tends to be non-normal (Koopman et al. 2015). Bootstrapping analyses (5000 resamples) revealed that both the quality of supervisory support ($b = -0.32$, $p < .01$) and performance appraisal satisfaction ($b = -0.21$, $p < .01$) are negatively related to turnover intention. Hence, hypotheses 1 and 2 are supported.

In addition, the results show the indirect effect of quality of supervisory support on turnover intention *via* performance appraisal satisfaction was significant (indirect effect = -0.11 $p < .05$), and the bias-corrected 95% confidence interval (CI) did not include zero (95% CI [-0.18, -0.05]), supporting hypothesis 3.

Moreover, we found performance appraisal satisfaction, as a mediator, to have a medium effect size ($f^2 = 0.056$) on the structural model (Cohen 1988; Hair et al. 2021). Table 3 shows support for hypotheses 1, 2, and 3.

To test the second-stage moderation (i.e., whether the relationship between performance appraisal satisfaction and turnover intentions depends on perceived organizational support), we implemented Hayes's model 14 PROCESS macro. We mean-centered our variables before performing the analysis (Aiken and West 1991). We found that performance appraisal satisfaction interacted with perceived organizational support in predicting turnover intentions ($b = -0.12$, $p < 0.05$) (see Table 4). We closely examined this interaction effect by applying conventional simple slope tests and plotting the interactions. Simple slope analysis showed that when individuals experienced low organizational support, performance appraisal satisfaction did not influence turnover intentions ($b = -0.04$; $t = -0.47$; $p > 0.05$). On the other hand, when individuals experienced high organizational support, performance appraisal satisfaction significantly predicted turnover intentions ($b = -0.25$; $t = -3.27$; $p < 0.01$).

Figure 2 shows the visual display of perceived organizational support moderating the relationship between performance appraisal satisfaction and turnover intention. To further illustrate the nature of this moderation effect, we applied the Johnson-Neyman technique to explore the regions of significance (Carden, Holtzman, and Strube 2017). In Figure 3, we show that the negative relationship between performance appraisal satisfaction and turnover intentions was significant for perceived organizational values greater than or equal to 3.39, for which the confidence bands do not contain zero, but not significantly different from zero for perceived organizational support values less than 3.39 whose confidence bands include zero. Thus, hypothesis 4 is supported.

The moderated mediation analysis yielded a significant and negative index of moderated mediation ($b = -0.05$, 95% CI = [-0.104, -0.003]. This moderated mediated index indicates that the conditional indirect effects estimated at different values of the moderation are significantly different. As such, the indirect effect

Table 2. Descriptive statistics, and discriminant validity – AVE comparison ($N = 356$).

Construct	Mean	Std	1	2	3	4
Quality of supervisory support (QSS)	4.12	0.92	**0.91**			
Performance appraisal satisfaction (PAS)	3.47	0.93	0.67	**0.84**		
Perceived organizational support (POS)	3.72	0.88	0.52	0.61	**0.86**	
Turnover intentions (TOI)	2.07	1.05	0.48	0.37	0.48	**0.88**

Values on the diagonal (**bold**) represent the square root of the average variance extracted while the off-diagonals are correlations.

Table 3. Regression results for mediation using PROCESS.

Dependent variable	PAS			TOI			Hypotheses
	Coeff.	SE	p	Coeff.	SE	p	
Constant	1.78	0.29	<0.01	4.72	0.33	<0.01	
Gender (F=1)	−0.05	0.11	0.66	−0.16	0.12	0.20	
Age (Y=1)	0.06	0.09	0.49	0.38	0.10	<0.01	
Race (W=1)	−0.14	0.10	0.17	−0.23	0.11	0.03	
Full time	−0.15	0.16	0.32	−0.07	0.17	0.67	
College graduate	−0.04	0.11	0.75	0.14	0.12	0.24	
Clinical staff	0.07	0.09	0.41	−0.14	0.10	0.14	
Tenure	0.01	0.01	0.80	−0.01	0.01	0.09	
QSS	0.46	0.05	<0.01	−0.37	0.06	<0.01	**H1 supported**
PAS				−0.24	0.06	<0.01	**H2 supported**
R-sq.	0.23			0.29			
F(df1,df2)	12.69 (8,347)			15.67 (9,346)			
	Bootstrapping effect	SE		95% CI (LL, UL)			
Indirect effect	−0.11	0.30		−0.18, −0.05			**H3: supported**

Note. Unstandardized regression coefficients are reported. Bootstrap sample size = 5,000. PAS=performance appraisal satisfaction; QSS=quality of supervisory support; TOI=turnover intentions; CI=confidence interval; LL=lower limit; UL=upper limit.

Table 4. OLS regression coefficient estimating satisfaction with performance appraisal and turnover intentions.

Dependent variable	PAS			TOI			Hypotheses
	Coeff.	SE	p	Coeff.	SE	p	
Constant	1.78	0.29	<0.01	3.55	0.35	<0.01	
Gender (F=1)	−0.05	0.11	0.66	−0.19	0.12	0.09	
Age (Y=1)	0.06	0.09	0.49	0.39	0.10	<0.01	
Race (W=1)	−0.14	0.10	0.17	−0.23	0.11	0.03	
Full time	−0.15	0.16	0.32	−0.09	0.17	0.56	
College graduate	−0.04	0.11	0.75	0.16	0.12	0.16	
Clinical staff	0.07	0.09	0.41	−0.15	0.09	0.11	
Tenure	0.01	0.01	0.80	−0.01	0.01	0.07	
QSS	0.46	0.05	<0.01	−0.26	0.07	<0.01	
PAS				−0.14	0.06	0.02	
POS				−0.31	0.07	<0.01	
PAS * POS				−0.12	0.05	0.01	**H4 supported**
R-sq.	0.23			0.33			
F(df1,df2)	12.69 (8,347)			15.49(11,344)			

Note: PAS=performance appraisal satisfaction; QSS=quality of supervisory support; TOI=turnover intentions
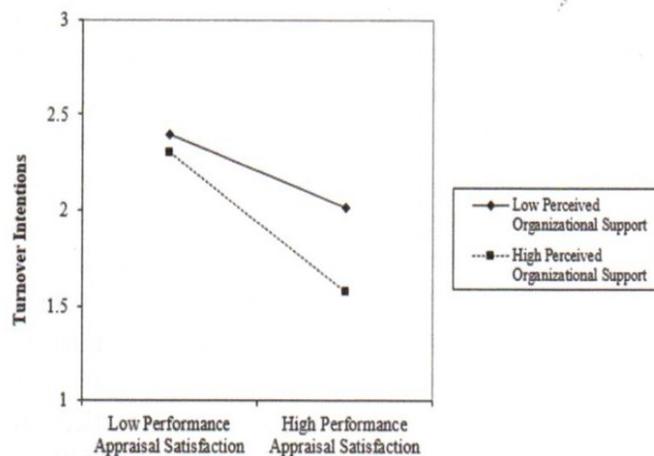

Figure 2. The moderating role of perceived organizational support.

of the quality of supervisory support on turnover intentions *via* performance appraisal satisfaction is significant when perceived organizational support is high (conditional indirect effect=−0.11, 95% CI = [−0.19, −0.03]). However, the indirect effect of the quality of supervisory support on turnover intentions *via* performance appraisal satisfaction was not significant with low perceived organizational support (conditional indirect effect=−0.02, 95% CI = [−0.09, 0.06]). These results provide support for hypothesis 5. Finally, using the same parameters of a two tailed test at a significance criterion of $\alpha = .05$ and a sample size of 356, our research model produced a post hoc power of 0.97.
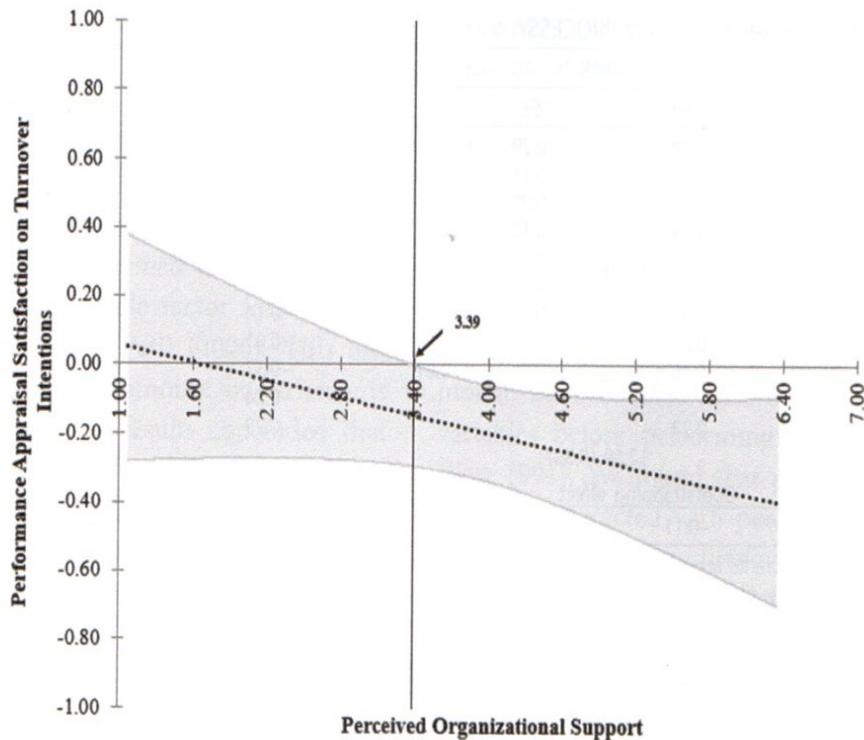
Figure 3. The conditional association between Performance Appraisal Satisfaction as a function of Perceived Organizational Support. At a 95% confidence level, the area to the right of the solid vertical line (at 3.39) represents the regions of significance for the conditional association.

Discussion

With a rapidly changing and uncertain healthcare environment, there is a growing need for healthcare organizations to adapt and evolve. Hence, there is a strong case for focusing on how management practices such as quality supervisory support impact employee well-being (Lloyd et al. 2015; Sguera et al. 2018), particularly in rural environments. The main purpose of this article was to examine how organizational and operational practices can be employed to reduce turnover intentions among healthcare workers. We also investigated the boundary conditions of perceived organizational support on the direct and indirect association between quality supervisory support and turnover intentions *via* performance appraisal satisfaction. By our assessment, this study offers insights into management policies and strategies that may be used to reduce employee turnover in healthcare facilities located in rural environments.

The results from this study provide additional empirical support to the body of knowledge on retention among healthcare professionals. This study found a negative relationship between the quality of supervisory support and turnover intentions. This finding is consistent with previous studies that establish supervisors' critical role in organizations. It also highlights how their actions and inactions influence the effectiveness and performance behavior of their subordinates (Eisenberger et al. 2002). As employees in

the healthcare sector, and especially in rural areas, already work under stressful conditions, support from supervisors may motivate employee involvement and engagement. For example, employees may perceive quality support from supervisors as an indicator that their supervisors and the organization value and care about their well-being. Employees who believe they can rely on and depend on their supervisors' support may feel obligated to reciprocate this positive goodwill gesture from the organization. For that reason, employees may become more engaged and involved in the organization's mission, thereby reducing turnover (Richer, Blanchard, and Vallerand 2002). Conversely, the relative lack of care, guidance and appreciation from supervisors decreases employee satisfaction, thereby increasing employee turnover (De Hoogh and Den Hartog 2009). Thus, we contribute to the literature by providing more evidence that management practices such as quality supervisory support promote positive employee behavior outcomes.

Regarding performance appraisal satisfaction, we augment the limited research by demonstrating its mediating impact on the relationship between quality supervisory support and turnover intention. Interestingly, the findings suggest that performance appraisal satisfaction may be both a direct predictor and an intervening mechanism in a healthcare worker's intention to turnover. Research scholars have indicated that employee dissatisfaction with an organization is a function of dissatisfaction with performance

appraisal systems, organizational processes, and climate (Cook and Crossman 2004). Indeed, our results suggest that performance appraisal satisfaction reduces employee turnover. Performance appraisal satisfaction improves and enriches employee effectiveness. Among our study participants, healthcare workers with quality supervisory support had higher performance appraisal satisfaction and were less likely to exhibit turnover intentions. Therefore, management may need to develop and implement fair and responsive performance appraisal systems and processes. In order for healthcare organizations to engender positive employee outcomes, performance appraisal processes and practices should be accommodating and flexible. Thus, a second contribution of this study is the finding that performance appraisal satisfaction serves as an intervening mechanism (i.e., a mediator) in the relationship between the quality of supervisory support and turnover intention.

Third, by examining the moderating role of perceived organizational support in (1) the relationship between performance appraisal satisfaction and turnover intention and (2) the indirect relationship between quality supervisory support and turnover intention, we contribute to both the quality management and human resource literature in relation to strategies and practices that can be deployed to increase employee retention. Collectively, our findings imply that an organization's ability and readiness to support its employees may lead to positive employee attitude and behavior, mitigating the desirability to leave the organization. As illustrated in Figure 2, the interaction figure demonstrates that the relationship between performance appraisal satisfaction and turnover intention decreases at an increasing rate for individuals with high-perceived organizational support than for those with low perceived organizational support. Indeed, when performance appraisal experiences are satisfactory, it creates an encouraging and conducive working environment that promotes respect, care, justice, a sense of care, and appreciation for the employees, reducing the rate at which employees intend to leave their jobs. In other words, high-perceived organizational support further strengthens the protective effect of robust performance appraisal processes on employee turnover intentions.

While we found an indirect effect of quality supervisory support on turnover intention for workers reporting high-perceived organizational support, we did not find support for this indirect effect at low levels of organizational support. This result suggests that organizations can retain their employees when they provide the necessary organizational support that

employees need to be engaged, excited, motivated, and committed to the organization. Management should therefore implement structures and provide avenues where (1) employee opinions are solicited and respected, (2) employee well-being (emotional, psychological, physical, financial, etc.) is catered for, and (3) employee work is recognized, appreciated, and rewarded.

When taken together, our study's findings suggest that rural organizations could benefit from quality supervisory practices that create a supportive workplace environment for employee well-being and professional growth. Supervisors who effectively harness the performance appraisal process for employee coaching, feedback, and recognition may be more successful in retaining employees. Our findings also suggest that these benefits are optimized when employees perceive their organization as supportive and nurturing.

Limitations and future research

As with any study, the findings of this study must be viewed in light of its scope and limitations. The data reported in this study were gathered at one point in time, making it impossible to draw inferences of causality or rule out the possibility of reverse causality. It will be worthwhile to use a time lag or experimental designs to collect data on turnover intentions and the other variables of interest in the study to draw causal inferences. Another potential problem with gathering data at a given point in time is the possible influence of common method bias (Podsakoff et al. 2003). To minimize the impact of this bias, one should follow the recommended procedural strategies of Podsakoff et al. (2003). Although the method's factor (Malhotra, Kim, and Patil 2006) and Harman's one-factor test (Harman 1967) in our study indicated that common method bias is not a major problem in this study, the interpretation of the findings must be viewed in light of this limitation.

Second, the results from this study are based on data from one organization in one specific sector, healthcare, and thus, the study's findings may not be generalizable beyond the study population. Notably, we must be cautious when extrapolating our findings across sectors and/or industries. Our results may be derived from the inherent characteristics of the healthcare sector, thus the need to be cautious when generalizing the results. Third, we did not capture group-level data about employees' supervisory support since supervisors' support may differ from department to department. Therefore, by treating all of our respondents as independent from one another, we

could not capture the unique aspects of supervisory support on an organizational level. In addition, additional management style constructs and compensation should be considered in future research. Fourth, given the significant impact the pandemic has had on healthcare, caution must be taken in generalizing our results since our data predate the pandemic period. With this limitation, we call for further research to examine the hypothesized relationships in our research model in the post-pandemic or current environment to evaluate if the study's results from the pre-pandemic environment still hold.

Despite these limitations, this study contributes to the existing rural healthcare management and human resource literature by characterizing at least one mechanism and boundary constraint under which supervisory support impacts employee turnover. Additional research is needed to confirm the broad applicability of the study's findings within healthcare and across other sectors and industries. Whiles additional studies in the post-pandemic period are warranted, our findings have general implications for human resource management, as workforce development and retention are central to the financial sustainability of rural hospitals even in the post-COVID landscape.

Disclosure statement

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