Establishing New Links Between HRM Practices and Knowledge Workers’ Retention in Healthcare Sector: Knowledge Sharing Generating Moderating Effects

Riya Gupta¹, Rachna Agrawal¹, and Arti Gupta¹

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ABSTRACT
Knowledge sharing is the fundamental measure through which knowledge workers can significantly contribute to innovation and eventually the competitive advantage of the organization. Drawing upon the knowledge-based view of firms, the present study aims to examine the moderating role of knowledge sharing on the relationship between HRM practices and knowledge workers’ retention in the healthcare sector. After the COVID impact, healthcare knowledge workers have become a point for wide scholarly discussion and appropriate HRM practices should be implemented to amplify their probability of a longer stay in the organization. Hence, this research has incorporated PLS-SEM for empirical investigation which is based on prior discussions with some healthcare experts. The results propagate that knowledge sharing moderates HRM practices-retention linkage except training and development which is found to be statistically insignificant. The empirical evidence generated could be crucial for researchers and practitioners within the healthcare sector, thereby, extending assistance in establishing world-wide recognition.

KEYWORDS
Knowledge Sharing, HRM Practices, Knowledge Workers’ Retention, Healthcare Knowledge Workers, Healthcare Sector, PLS-SEM

INTRODUCTION
Knowledge is a critical organizational resource that offers a sustainable competitive advantage in the contemporary world (Wang and Noe, 2010). For gaining a competitive advantage, reliance on staffing and training systems with a focus on specific skills is not sufficient for hiring employees. After the announcement of COVID-19, organizations must also contemplate ways to transfer expertise and knowledge within an organization (Montani and Staglianò, 2022). Since the pandemic has led to a harsh turn of events, it has also affected the mental ability of people across the country (Gupta and Agrawal, 2021). This, in turn, has instigated the need for imparting knowledge among the employees on a more urgent basis as the employees tend to lose commitment and satisfaction during the adverse times (Gupta and Agrawal, 2023; Camelo-Ordaz et al., 2011). Knowledge is considered as a powerful and significant strategic asset that offers a competitive advantage to the employees in the organization (Shamim et al., 2019). Hence, most of the employees do not share their ideas and knowledge with others due to the fear of delayed promotion and personal development at the organization’s end (Shariq et al., 2019). Knowledge sharing is one of the most significant elements of knowledge management, and as a knowledge-focused activity, knowledge sharing facilitates innovation and generates a greater scope for competitive advantage (Jackson et al., 2006). When

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employees share knowledge with their co-workers, their personal knowledge gets transferred to the organization and can be termed organizational knowledge. Since the fear of losing competitive advantage triggers them to conceal their knowledge, this view should be promoted through the implementation of adequate HRM practices to promote a knowledge-sharing perspective in the organization (Heisig et al., 2016; Shamim et al., 2016; Sammarra et al., 2017).

Since knowledge-intensive organizations are on the rise, the requirement for expert knowledge workers is also intensifying (Gope et al., 2018). In 1959, in The Landmarks of Tomorrow, Peter Drucker first introduced the term ‘knowledge workers’ as “highly educated workers, employees, and managers; they rely more on their brainpower than manual labor.” Over time, the definition of a knowledge worker has evolved, and formal education, an intense work schedule and critical knowledge have been the common characteristics of knowledge workers (Darr and Warhurst, 2008). Adding to the ongoing shortages of knowledge workers, the COVID-19 pandemic has further extended the need for consistently working professionals, especially in the healthcare sector. Henceforth, retaining knowledge workers in the healthcare sector is more crucial owing to their role as ‘saviours’ since the pandemic has been in existence. In line with the argument, the present research has quoted ‘doctors’ as knowledge workers as they are highly professional in their conduct.

Although the literature discusses widely the significance of retention of employees in multiple sectors (Bharadwaj et al., 2022; Srivastava and Eachempati, 2021; Zhang et al., 2019), it is nonetheless challenging to control. This is specifically true for the healthcare sector, where knowledge workers are extremely skilled and professional individuals, and their retention can be enhanced through optimal HRM practices. However, contrary to the presence of expert professionals, there is resistance towards knowledge sharing in healthcare organizations (Kim et al., 2012; Zhou and Nunes, 2016), which is considered a facilitator of retention (Zayed et al., 2022). Henceforth, the primary aim of the research is to examine the moderating role of knowledge sharing in the relationship between HRM practices and knowledge workers’ retention in the Indian healthcare sector.

Drawing upon the knowledge-based view (KBV), which is an extension of the resource-based view (RBV), the authors tend to purposefully achieve the objective of the study. KBV guides organizations with adequate policies and practices to achieve competitive advantage by utilizing the talent of their knowledge workers to accomplish organizational goals (Singh et al., 2021). The focal point of this theory is knowledge, which is treated as a unique strategic resource and considers the organization as an entity that continuously advances through knowledge generation and utilization (Spender, 1996). Hence, it becomes imperative for management to value, generate, and endure knowledge-sharing practices that encourage desired levels of organizational outcomes. This study posits that the healthcare sector’s growth relies upon knowledge workers’ ability to create and disseminate knowledge. Though the implementation of knowledge-sharing practices in the healthcare sector can be challenging, the top management’s perception of knowledge sharing will drive retention levels in the organization.

The present study offers unique inputs to the existing literature through the address of the research gaps. First, to the best knowledge of the authors, no study has investigated the differential impact of HRM practices on knowledge workers’ retention based on knowledge sharing. Second, this empirical search extends the limited literature on healthcare knowledge workers (HKWs), HRM practices, and their retention collectively. Third, HRM practices crucial for the retention of knowledge workers are identified, which are still under-explored, especially in the healthcare sector.

LITERATURE REVIEW AND RESEARCH HYPOTHESES

The authors have invested a reasonable amount of time investigating the relationship between HRM practices and knowledge workers’ retention. It has been discovered that there is a well-established
relationship between the two variables. The existing studies are related to different sectors, and indirect evidence can be captured in terms of healthcare (Longmore and Ronnie, 2014; Adisa et al., 2017). However, there is an ongoing debate over HRM practices, which may vary in different contexts. Thus, after exploring the existing instances, some of the HRM dimensions followed by Rubel et al., (2021) along with a dimension proposed by the authors, are considered for the present research. The dimensions are inclusive of rewards and recognition, training and development, performance appraisal, participation, and promotion opportunity. Rubel et al., (2021) present the data of five-star hotels employees who possess expertise in their relevant field. Henceforth, it is felt appropriate to incorporate this fresh study, which can assist in examining the healthcare knowledge workers in the current scenario, which is governed by COVID policies. This view is also supported by some healthcare experts who have also assisted in the process of selecting the HRM dimensions.

**KNOWLEDGE SHARING: AN OVERVIEW**

Knowledge is described as a piece of codified information inclusive of experience, vision, explanation, context, and so on (Davenport and Völpel, 2001) which facilitates the enhancement of an organization’s worth and growth prospects. From an organization’s perspective, job-related knowledge acts as an essential element in influencing career opportunities, accompanied by the required skills. Knowledge can be wide and is produced by the mind. But, in the absence of its dissemination, it is of little use to the organization (Fong et al., 2011). Hence, it is more destructive if the knowledge is concentrated and least shared by a knowledgeable employee, as he may leave the firm for better opportunities.

Knowledge can be conceptualized in two parts: explicit knowledge and tacit knowledge, which describe different propensities for sharing (Koskinen et al., 2003). Explicit knowledge represents the voluntary sharing and communication of information by employees, while tacit knowledge is shared reluctantly. Hence, it facilitates the emanation of the term ‘knowledge sharing’ which is delineated as the dissemination of information and generated knowledge within the department or the whole organization (Yang, 2004). Knowledge sharing should be promoted within organizations to cherish the synergetic impact of collective wisdom via idea exchange. Accordingly, the ability to frame better ideas will allow the firm to maintain a competitive advantage in the long run, which facilitates ideas regarding processes, services, and product innovation (Lin, 2007). Thus, knowledge sharing is a mechanism that urges the generation of new knowledge in the future and the alteration of the existing one, which is required to combat the changing dynamics after the pandemic.

Keeping in mind the contemporary healthcare scenario, an explanation of knowledge sharing is proposed by the authors as a multi-directional process to collaborate with others to exchange the job-related experience and skills, increase the organization’s overall knowledge through two-way exchange and feedback that ultimately build competitive advantage to the organization and assist in achieving personal goals of the employees as well.

**POINT OF VIEW: ARGUMENTS OF THE PANEL REGARDING INCLUSION OF KNOWLEDGE SHARING**

The widely discussed relationship between knowledge workers’ retention and their HRM practices has instigated the need to figure out the variables that are affecting the relationship. During the COVID scenario, it was reckoned that now there are more complexities to this relationship and many variables work towards the successful linkage of HRM practices-retention. However, through a discussion panel of healthcare experts, it is ascertained that the pandemic has contributed to the growing knowledge economy. With more feasibility, it is possible to increase the flow of knowledge from one economy to the other. Henceforth, knowledge sharing has been recommended as a moderating variable working
and affecting the relationship. According to the panel’s arguments, the HKWs have discussed and shared knowledge and equipment for the safety of the community. There were several sessions, workshops and expertise involved in the process of developing a vaccine for the deadly virus. Knowledge sharing is the ultimate tool that facilitated the introduction of vaccines in India and all over the world. Thus, justifying their thoughts with such arguments, the panel members feel that knowledge sharing plays a significant role in the functioning of HRM practices and retention.

**LITERATURE- BASED JUSTIFICATION TO INVESTIGATE THE MODERATING EFFECTS**

It is evident that HRM practices are related to the knowledge sharing of essential information, however, only selective HRM practices augment knowledge sharing (Currie and Kerrin, 2003). Hence, it is necessary to select adequate HRM practices that enable the dissemination of knowledge (Santhanam et al., 2017). According to Abdul-Jalal et al., (2013), a knowledge-focused perspective of organizational behaviour accentuates the significance of knowledge in the retention of employees. Successful knowledge sharing amounts to shared intellectual capital and the importance is enhanced when the sharing behaviour is initiated through adequate HRM practices. Thus, knowledge-sharing capability is considered a crucial element while designing HRM practices.

There exists reasonable literature on the implications of knowledge sharing on employee attitudes and behaviour (Lee and Song, 2020). Knowledge sharing among employees generates multiple organizational outcomes such as improved performance (Du et al., 2007; Eldor, 2017), employee satisfaction (Nayak et al., 2021) and productivity (Aboelmaged, 2018). Similarly, knowledge sharing has been associated with employees’ intention to stay (Naim and Lenkla, 2016) and employee retention (Nayak et al., 2021). However, the existing literature has observed no evidence to exhibit the moderating effect of knowledge sharing between HRM practices and knowledge workers’ retention. Therefore, it is logical to examine the collective impact of human resource practices and knowledge sharing on knowledge workers’ retention.

**CONFLICTING ARGUMENTS: QUESTIONING THE ROLE OF KNOWLEDGE SHARING AS A MEDIATOR**

In the present study, knowledge sharing has been examined as a moderator and not a mediator. After carrying out conversations with the experts who have themselves suggested knowledge sharing for the research, it is figured out that they have certain arguments for approving knowledge sharing as the moderator.

“Though knowledge sharing can be categorized as a mediator as well, but the present situation and the healthcare sector should see it as the moderator. There are reasons behind these words of mine. In other sectors, we may say that knowledge sharing is a necessity and the process of retention comes through knowledge sharing, i.e., it is included in the process. However, medical professionals are highly skilled and carry expertise (with a pause), even those who have just completed graduation. Knowledge sharing is not a compulsory element to stay. It improves their intention to stay, however.”

Adding to the above argument another expert suggested, “Medical professionals are the experts themselves... they can also create and acquire knowledge themselves. They strive to work harder for it as compared to employees in other areas. In that sense, knowledge sharing enhances their prospects of retention, but it may not directly be a part of the HR practices-retention relationship.”

Further argument recommends not to treat knowledge sharing as a mediator and it is said, “Finding a position in a medical institute in India is very difficult and cumbersome. An applicant who has been selected to pursue further degrees in the field is not discouraged to leave the organization in most of the cases. Knowledge comes in handy with a rising portion of medical seminars and conferences all over the world. There are opportunities to gain and update your knowledge through online means,
especially after this corona attack. Thus, knowledge sharing should be appreciated for more and enhanced treatment of the patients and successful careers in the medical field. It should be encouraged, especially in the COVID era, but the absence does not directly relate to the retention of employees. However, it is the need of the hour as every health organization should become knowledge-intensive to completely eradicate this virus.”

**RESEARCH GAPS AND HYPOTHESES DEVELOPMENT**

After an extensive literature search, it was discovered that certain gaps need to be acknowledged. Table 1 has precisely mentioned the types of gaps identified in the existing literature along with the efforts initiated by the authors to compensate for gaps and contribute to the HRM literature.

Addressing the research gaps and the objective, the following five hypotheses are proposed which are also depicted through the conceptual model in figure 1.

- **H1:** Knowledge sharing moderates the relationship between rewards and recognition and retention of knowledge workers in the Indian healthcare sector
- **H2:** Knowledge sharing moderates the relationship between training and development and retention of knowledge workers in the Indian healthcare sector
- **H3:** Knowledge sharing moderates the relationship between performance appraisal and retention of knowledge workers in the Indian healthcare sector
- **H4:** Knowledge sharing moderates the relationship between participation and retention in the Indian healthcare sector
- **H5:** Knowledge sharing moderates the relationship between promotion opportunity and retention in the Indian healthcare sector

Here, knowledge sharing works as a mechanism that augments the effects of HRM practices on retention. The model is adapted from the basic conceptual framework proposed by Hayes (2012) which incorporates statistical application of moderation analysis.

**METHODOLOGY**

The present study exhibits a cross-sectional research design. It deals with the data extracted in a small time-frame which eliminates the possibility of fluctuation in the data. Over time, the views of the respondents may change. They may shift to a different workplace with more adequate HRM practices drafted for the HKWs. Besides, the over-occupied HKWs did not have sufficient time to provide their views in multiple phases. Thus, the data is collected in a single go after being informed about their availability. Along with the primary data, secondary research is also initiated which incorporates journal articles, newspaper articles and conference proceedings, considering them as the most reliable data sources. The data for the primary research has been collected from the most prominent northern area of India signifying the capital ‘Delhi’ and the National Capital Region (NCR) effectively from September 2021 to January 2022. Purposive sampling has been employed for the selection of hospitals as only private hospitals have been considered for this research. The main motive behind considering the private sector has been the over-crowdedness and often lack of sanitization in public facilities in almost every region of the country. Additionally, the active participation of the private sector in extending quality services during the most turbulent times experienced due to the pandemic has been a source of encouragement (Davalbhakta et al., 2020). Medical facilities like nursing homes and private clinics are ignored as HRM practices can be ascertained only in organizations with proper management functioning.
Table 1. Gap Identification Table with Adequate Explanation and Addressal of the Categorized Gaps

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Major Studies</th>
<th>Explanation of the Gap</th>
<th>Gap Addressal Initiative</th>
<th>Research Gap Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bibi et al., (2018); Renaud et al., (2015); Lam et al., (2013)</td>
<td>Based on the prior research, it is found that the concerns of Indian healthcare knowledge workers are under-researched. In the context of HRM practices and retention, this population is ignored. Previous studies have majorly focused on employees working in other sectors of India.</td>
<td>Present study has incorporated the Indian healthcare knowledge workers who have at least completed their graduation degree. Those with further specializations are also a part of the population sample.</td>
<td>Population gap*</td>
</tr>
<tr>
<td>2</td>
<td>Tangthong (2014); Presbitero et al., (2015)</td>
<td>The authors have recognized an apparent gap in the prior studies concerning the limited moderators employed between HRM practices and retention. Additionally, the prior literature does not include any knowledge dimension as the potential moderator in any of the studies testing the relationship.</td>
<td>The authors have introduced knowledge sharing as the moderator which was not earlier evident in a research study associating HRM practices with knowledge workers' retention. Knowledge sharing is further categorized into five parts by the authors. Hypotheses are formulated to test the possible impact of knowledge sharing along with each of the five selected dimensions of HRM practices.</td>
<td>Knowledge gap*</td>
</tr>
<tr>
<td>3</td>
<td>Ashton (2018); Presbitero et al., (2015); Bibi et al., (2018)</td>
<td>Existing literature is limited in generating empirical evidence of the relationship between knowledge workers' retention and HRM practices. Majorly, the prior studies are concerned with the retention of employees, in general, and not specifically, knowledge workers.</td>
<td>Partial Least Square modelling has been adopted to get empirical evidence consisting of the impact of HRM practices and retention of knowledge workers in the healthcare sector. The moderation effect of knowledge sharing which has been tested earlier has also been carried through Smart PLS 4.</td>
<td>Empirical gap*</td>
</tr>
<tr>
<td>4</td>
<td>Tej et al., (2021); Bibi et al., (2018); Presbitero et al., (2015)</td>
<td>There is a lack of rigorous investigation in the prior studies and the literature is limited in the field of the healthcare sector. This sector has scope for empirical investigation of the HRM practices-knowledge workers’ relationship.</td>
<td>The present study has employed a thorough analysis of the healthcare sector. Past studies have evidently investigated manufacturing company employees, the hospitality sector, Business process outsourcing firms etc.</td>
<td>Sectoral gap**</td>
</tr>
<tr>
<td>5</td>
<td>Renaud et al., (2015); Islam et al., (2022); Rubel et al., (2021)</td>
<td>Generally, resource-based view theory and social exchange theory are utilized with reference to HRM practices and retention.</td>
<td>Authors have implemented knowledge-based view theory promoted by Barney (1991) which is also an innovative concept to be introduced in the healthcare sector in present context.</td>
<td>Theoretical gap*</td>
</tr>
</tbody>
</table>

Note: * incorporates the gaps according to the classification of Miles (2017) while ** refers to the gap categorization introduced by the authors with reference to present research.
According to the Central Government Health Scheme (CGHS), a total of 213 hospitals exist in the major cities of NCR along with the national capital. Eighteen hospitals are shortlisted out of these through the assessment of geographical proximity, availability of HKWs at a given time and inclination towards participation in the research. In each hospital, 6-8 HKWs are chosen via convenience and snowball sampling from the selected hospitals. An online questionnaire was established and pretested prior to delivering it to 520 knowledge workers as the authors intended for a wide distribution in the healthcare sector. Even after repeated attempts, only 24% of the responses are found as complete and reliable. The number of responses is found to be accurate according to Gorsuch (1983) and Hatcher (1994). However, 144 questionnaires were gathered in total; out of which the ambiguous and incomplete records are eliminated. There is no bias on the part of the authors and maximum efforts have been made to ensure genuine research (refer sampling framework from Figure 2).
It was very difficult to extract data from the HKWs due to their hectic schedules and odd working hours. Therefore, the majority of the sample comprises HKWs with little work experience as the senior ones have to bear more responsibilities that come with a higher position. Thus, those with more than 10 years were difficult to reach and convince for data collection. Suggestions are taken from the respondents to add more HKWs to the respondent list as in the case of snowball sampling. The population for the survey includes only those who have at least completed their graduation degree in MBBS (Bachelor of Medicine and Bachelor of Surgery).

From Table 2, it is evident that the demographic profile of the selected population is diverse and cross-sectional. For a supporting view, the experts (who have assisted in identifying the moderating role of knowledge sharing) have extended a generous support in cross-checking the questionnaire for validity.

**MEASUREMENTS AND SCALING**

To extract the information, a structured questionnaire is formulated to record the views and opinions of the knowledge workers in the Indian healthcare sector regarding HRM practices. A total of twenty-six statements have been included in the questionnaire to capture the responses in depth where the questions are guided by the literature search and thought process of researchers and an expert group. The response format is equipped with a seven-point Likert scale where 1 stands for ‘strongly disagree’ and 7 stands for ‘strongly agree’. Before filling out the responses, the participants are explained the objectives of the study and a consent form is acquired. Additionally, the participation is informed to
be voluntary. Out of the 520 questionnaires distributed, only 144 responses have been received and only 116 are accurate and complete. The final data is analysed using SmartPLS4 which has been used widely in the field of management (Agrawal and Gupta, 2022). Partial least square (PLS) modelling has been used for generating empirical evidence as it facilitates the analysis of asymmetrical responses (Hair et al., 2017; Shiau et al., 2019). PLS unambiguously defines the connections among different constructs and serves the challenges presented due to a diverse population such as that of India (Agrawal and Gupta, 2022).

Table 2. Sample Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>N(116)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>70</td>
<td>60.3</td>
</tr>
<tr>
<td>Female</td>
<td>46</td>
<td>39.7</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-30</td>
<td>44</td>
<td>37.9</td>
</tr>
<tr>
<td>31-40</td>
<td>34</td>
<td>29.3</td>
</tr>
<tr>
<td>41-50</td>
<td>26</td>
<td>22.4</td>
</tr>
<tr>
<td>More than 50 Years</td>
<td>12</td>
<td>10.7</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MBBS</td>
<td>77</td>
<td>66.4</td>
</tr>
<tr>
<td>PG Specialization</td>
<td>39</td>
<td>33.6</td>
</tr>
<tr>
<td>Working Experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 5 Years</td>
<td>52</td>
<td>44.8</td>
</tr>
<tr>
<td>5-10 Years</td>
<td>39</td>
<td>33.6</td>
</tr>
<tr>
<td>11-15 Years</td>
<td>14</td>
<td>12.1</td>
</tr>
<tr>
<td>More than 15 Years</td>
<td>11</td>
<td>9.5</td>
</tr>
</tbody>
</table>

Note: *PG specialization includes MS (Master of Surgery) and MD (Doctor of Medicine). Total number of responses displayed in the table does not account for the incomplete questionnaires.

RESULTS AND ANALYSIS

PLS-SEM, also referred to as component-based structural equation modelling ensures less complexity (Ramayah et al., 2017; Islam et al., 2022). Through PLS-SEM with a path weighing measurement for the inside approximation, limitations can be avoided generated by covariance-based SEM (Akter et al., 2017; Memon et al., 2017). Additionally, bootstrapping is used to analyze the standard errors of the estimates which is a non-parametric measure of PLS-SEM (Ramayah et al., 2017). It is followed by discriminant validity and convergent reliability (Henseler et al., 2015). Besides, to ensure the validity of each item, a threshold of 0.70 has been approved and all the outer loadings should be at a higher value (Mendy et al., 2020). Also, based on the recommendations of Podsakoff et al., (2003), this study has utilized the Harman 1 factor test which confirms that there is no concern over the common method variance (CMV) values in the present study. Additionally, further biases are also investigated such as t test, pre notifications and multiple notifications among others.
Table 3. Fornell and Larcker Criteria

<table>
<thead>
<tr>
<th></th>
<th>KWR</th>
<th>RR</th>
<th>T&amp;D</th>
<th>PA</th>
<th>EP</th>
<th>PO</th>
<th>KS</th>
</tr>
</thead>
<tbody>
<tr>
<td>KWR</td>
<td>0.932</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RR</td>
<td>0.512</td>
<td>0.954</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T&amp;D</td>
<td>-0.025</td>
<td>-0.058</td>
<td>0.923</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PA</td>
<td>0.716</td>
<td>0.717</td>
<td>0.523</td>
<td>0.641</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EP</td>
<td>0.057</td>
<td>0.825</td>
<td>0.684</td>
<td>0.493</td>
<td>0.887</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PO</td>
<td>0.042</td>
<td>0.767</td>
<td>0.954</td>
<td>0.813</td>
<td>0.642</td>
<td>0.863</td>
<td></td>
</tr>
<tr>
<td>KS</td>
<td>0.782</td>
<td>0.678</td>
<td>0.896</td>
<td>0.633</td>
<td>0.849</td>
<td>0.798</td>
<td>0.953</td>
</tr>
</tbody>
</table>

Note: 1. The table displays Fornell-Larcker method of discriminant validity that computes the correlation coefficients of constructs.
2. KWR stands for knowledge worker retention, RR for rewards and recognition, T&D for training and development, PA for performance appraisal, EP for participation, PO for promotion opportunity and KS for knowledge sharing.
Source: Compiled and elaborated by the authors

Table 4. HTMT Results

<table>
<thead>
<tr>
<th></th>
<th>KWR</th>
<th>RR</th>
<th>T&amp;D</th>
<th>PA</th>
<th>EP</th>
<th>PO</th>
<th>KS</th>
</tr>
</thead>
<tbody>
<tr>
<td>KWR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RR</td>
<td>0.564</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T&amp;D</td>
<td>0.028</td>
<td>0.069</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PA</td>
<td>0.765</td>
<td>0.767</td>
<td>0.034</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EP</td>
<td>0.054</td>
<td>0.108</td>
<td>0.058</td>
<td>0.015</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PO</td>
<td>0.046</td>
<td>0.260</td>
<td>0.174</td>
<td>0.251</td>
<td>0.105</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KS</td>
<td>0.703</td>
<td>0.643</td>
<td>0.131</td>
<td>0.802</td>
<td>0.066</td>
<td>0.242</td>
<td></td>
</tr>
</tbody>
</table>

Note: The examination of Heterotrait-Monotrait Ratio (HTMT) reveals that no value surpasses the cut-off criterion of 0.85 eradicating the possible concerns due to multi-collinearity.
Source: Compiled and elaborated by the authors

Table 5. Structural Model

<table>
<thead>
<tr>
<th></th>
<th>Original Sample Mean</th>
<th>Standard Deviation</th>
<th>T statistics</th>
<th>p-Values</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>RR- KWR</td>
<td>0.558</td>
<td>0.541</td>
<td>0.068</td>
<td>6.844</td>
<td>0.000</td>
</tr>
<tr>
<td>T&amp;D- KWR</td>
<td>-0.034</td>
<td>-0.039</td>
<td>0.053</td>
<td>0.674</td>
<td>0.419</td>
</tr>
<tr>
<td>PA- KWR</td>
<td>0.439</td>
<td>0.428</td>
<td>0.053</td>
<td>5.467</td>
<td>0.004</td>
</tr>
<tr>
<td>EP- KWR</td>
<td>0.162</td>
<td>0.156</td>
<td>0.035</td>
<td>4.113</td>
<td>0.000</td>
</tr>
<tr>
<td>PO- KWR</td>
<td>0.375</td>
<td>0.346</td>
<td>0.085</td>
<td>4.269</td>
<td>0.000</td>
</tr>
<tr>
<td>KS- KWR</td>
<td>0.232</td>
<td>0.198</td>
<td>0.080</td>
<td>2.678</td>
<td>0.009</td>
</tr>
</tbody>
</table>

Source: Compiled and elaborated by the authors

MEASUREMENT MODEL

The measurement model in the present research has utilized convergent validity and discriminant validity. There are certain thresholds for convergent validity, composite reliability and average variance extracted which are anticipated at more than 0.5, more than 0.7 and more than 0.5 respectively (Henseler et al., 2015). One item from knowledge workers’ retention has been eliminated due to poor outer load where the value recorded was less than 0.70. It is evident that AVE is recorded at the defined parameters, hence, convergent validity is confirmed (Hair et al., 2014) where the AVE values of RR, T&D, PA, EP, PO, KS and KWR are 0.882, 0.962, 0.857, 0.875, 0.892, 0.947 and 0.962.
respectively. Furthermore, composite reliability has also assured the internal consistency of the variables (RR = 0.976; T&D = 0.989; PA = 0.964; EP = 0.969; PO = 0.976; KS = 0.981; KWR = 0.995).

Discriminant validity is ascertained by estimating the square root of AVE through the Fornell and Larcker criteria and the Heterotrait Monotrait (HTMT) ratio of correlations (Henseler et al., 2015). Testing the discriminant validity is crucial as it facilitates the observational difference among the variables (Agrawal and Gupta, 2022). Table 3 has highlighted that the square root of AVE has exceeded the correlation of each construct. It implies that the discriminant validity of the variables has displayed satisfactory outcomes (Hair et al., 2017). Furthermore, the results of the HTMT ratio confirm that there is no discriminant validity recorded.

**ASSESSMENT OF THE STRUCTURE MODEL**

The reliability and validity of the measurement model are intact and this has persuaded the authors to analyze the structural model. As a result, it is observed that four hypotheses are supported while one of them is rejected (refer table 5). Therefore, rewards and recognition (beta-value = 0.158, p value = .000), participation (beta value = 0.521, p value = .000), promotion opportunity (beta value = 0.324, p value = .000) and performance appraisal (beta value = 0.126, p value = 0.000) are positively and significantly related to the knowledge workers’ retention. Furthermore, knowledge sharing is also observed to affect the knowledge workers’ retention in a statistically significant manner (refer table 5).

**MODERATION EFFECT OF KNOWLEDGE SHARING**

To investigate the moderating impact of knowledge sharing on the relationship between HRM practices and knowledge workers’ retention, the present study has utilised a product-indicator approach via PLS-SEM. Since the moderating variable is continuous, the product-indicator approach is found to be appropriate for the reason that the approach generates better results as compared to multi-group method in case of the continuous variables (Henseler and Fassott, 2010) (refer table 6, figures 4 and 5).

**Table 6. Moderation Effect**

<table>
<thead>
<tr>
<th>Original Sample</th>
<th>Sample Mean</th>
<th>Standard Deviation</th>
<th>T Statistics</th>
<th>p-Values</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>RR*KS → KWR</td>
<td>0.034</td>
<td>0.33</td>
<td>0.042</td>
<td>1.615</td>
<td>0.009</td>
</tr>
<tr>
<td>T&amp;D*KS → KWR</td>
<td>0.046</td>
<td>0.041</td>
<td>0.048</td>
<td>0.809</td>
<td>0.505</td>
</tr>
<tr>
<td>PA*KS → KWR</td>
<td>0.158</td>
<td>0.160</td>
<td>0.065</td>
<td>2.514</td>
<td>0.000</td>
</tr>
<tr>
<td>EE*KS → KWR</td>
<td>0.203</td>
<td>0.196</td>
<td>0.078</td>
<td>2.874</td>
<td>0.004</td>
</tr>
<tr>
<td>PO*KS → KWR</td>
<td>0.190</td>
<td>0.193</td>
<td>0.046</td>
<td>3.990</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Note: Training and development has been the only dimension that does not support the analysis examining the moderating effect. It indicates that training and development does not moderate the relationship between HRMP and knowledge workers’ retention.

Source: Compiled and elaborated by the authors

The results in figure 4 (Part A) represent that knowledge sharing moderates the relationship between rewards and recognition (RR) and knowledge workers’ retention with the beta value = 0.180, t = 3.992 and p < 0.000. Similarly, the relationship between performance appraisal and knowledge workers’ retention is moderated by knowledge sharing which is statistically significant in terms of beta
value = 0.151, t = 0.008, p = 0.009 (refer figure 3 – Part B). This proves that the relationship of RR and PA respectively with knowledge workers’ retention strengthen in the presence of knowledge sharing.

The outcomes derived from figure 5 (Part C and D) have disclosed that knowledge sharing moderates the participation-retention relationship and promotion opportunity-retention association. The figures are the representation of a positive moderating impact of knowledge sharing with statistical evidence in table 6.
DISCUSSION

The PLS model depicts a significant relationship between rewards and recognition and knowledge workers’ retention. Moreover, a positive relationship is also noted between performance appraisal and knowledge workers’ retention which is consistent with Cabrera and Cabrera (2005). Similar results have been recorded for participation and promotion opportunity. The outcomes are consistent with the studies of Rasouli et al., (2013), Presbitero et al., (2015) and Santhanam et al., (2017). Since the healthcare sector includes knowledge workers who are highly skilled professionals, their suggestions
in critical cases and establishing the authority-responsibility relationship can enhance the retention several fold. Likely, the HKWs expect that there should be enough promotion opportunities in the organization. The visibility of a prospective chance to boost their career persuades them to stay for longer. Contrarily, training and development is not significantly related to the knowledge workers’ retention. As per the values of the structural model, the mean is identified as -0.039, standard deviation= 0.053 but with T statistics as 0.674 and p-value as 0.419 which is not the appropriate criteria for a positive decision. The results derived from the analysis are inconsistent with the findings of Bibi et al., (2018) and Presbitero et al., (2015).

This study revealed that knowledge sharing exercises a moderation effect on the relationship between RR, PA, EP, PO and knowledge workers’ retention, thus, accepting H1, H3, H4 and H5. The authors have several explanations to offer for the acceptance of these hypotheses. For example, a decent reward and recognition policy is more effective for retention when it is complemented by knowledge sharing as rewards may be multiplied and more recognition can be garnered when the efforts are shared and augmented. Similarly, when the knowledge is shared among the HKWs, there are low chances of deviations in their performance outcomes which encourages them to stay for longer. Employee participation integrated with knowledge sharing in the healthcare organization adds to the generation of more knowledge and scope for retention as the authority and granted responsibility facilitate better decision-making when accurate and experience-based information is shared. Furthermore, promotional opportunities are enhanced when there is a knowledge sharing in the organization as every employee has learnt something valuable from the shared thoughts and skills which eventually increases their retention prospects. On the other hand, H2 is rejected which shows that knowledge sharing does not moderate the relationship between training and development and retention. There could be a possible explanation that the HKWs are well-trained in advance and the organization’s initiative towards training and development may not be enough to retain them for longer (Renaud et al., 2015). The introduction of new technology requires certain training sessions at a time. However, there may not be a requirement of indulging in regular training activities otherwise. Adding to the already inverse relationship between training and development and retention, knowledge sharing does not contribute to the extent to make it worth considering. Since knowledge sharing has not been used earlier as a moderator in this context, the results are presenting a novel perspective. In a sector where the surfacing of new technological developments is rapid, knowledge sharing plays a significant role in inculcating the required skills. It facilitates the development of new knowledge within individuals, especially within healthcare as this sector deals with saving human life.

CONCLUSION

Knowledge sharing is a fundamental practice in the healthcare sector. Imparting knowledge to the juniors is very crucial to utilize their assistance in treating the patients. This knowledge sharing will prepare the HKWs for the times when their seniors are not available or have left the job in certain cases. Critical knowledge is required to deal with complicated cases in medical organizations and the long-term welfare of the patients is not possible without the sharing of knowledge in the organization. This knowledge makes the HKWs more comfortable and confident while working in the absence of their seniors as they become ready to acquire the leadership roles in the future which assist the employees in retaining their positions for a longer time. The colleagues can work as a replacement while one of them is busy with another treatment. Hence, HRM practices targeted at the HKWs that encourage knowledge sharing among them should be promoted. When each employee benefits through the shared knowledge, they feel a sense of pride being associated with the organization which reduces employee turnover. Thus, knowledge sharing acts as a mechanism for strengthening the relationship between HRM practices and the retention of knowledge workers in healthcare.
IMPLICATIONS

The study contributes to the HRM literature and grounds noteworthy implications for management in the healthcare industry in India. This study upgrades the empirical evidence about the relationship between the mentioned HRM practices and knowledge workers' retention which could be crucial for researchers and practitioners within the Asian healthcare sector. First, the most significant contribution of the present study is the introduction of knowledge sharing as a moderating variable between HRM practices and knowledge workers' retention. This study contributes to the KBV theory as it connects HRM practices and KBV theory in the prediction of knowledge workers' retention in Indian hospitals. Drawing on KBV theory, this study extends HRM research by recommending and validating a structural model that can be utilized for analogous searches. Furthermore, the findings have applicability to other countries having similar structures for the healthcare sector.

Figure 6. A Detailed Summary of the Concluding Remarks and Further Implications

The study has significant implications for hospital administration staff as they are the key personnel in resource allocation and advancement of HRM strategies. HR managers should acknowledge that the compatibility between the knowledge workers and the organization's value is necessary for framing retention-oriented HR policies. Additionally, the training need analysis (TNA) should be done
in order to facilitate the training sessions, only when required. The results in the case of moderating variable, i.e., knowledge sharing suggest that the presence of knowledge sharing behaviour in the organization expedites retention of knowledge workers. Hence, it is easily understandable for HR managers the need to promote knowledge-sharing activities in the organization.

The inclusion of knowledge-sharing practices has several implications for the retention of HKWs. The confidence and skills of the HKWs will increase when they have expertise built on the experiences and knowledge provided by others in the organization. With enhanced knowledge, the patients’ treatment will get more effective and technology-oriented. The management of the healthcare organization will have a pool of sophisticated and talented HKWs gaining a competitive advantage over other firms. Thus, the investors and other shareholders will have a higher chance of earning profits as the organization’s human assets are highly efficient and valued. Society will have a skilled and united healthcare workforce which can provide better treatments to the affected population or those requiring surgeries. Knowledge sharing enhances the overall knowledge base of the organization which may assist in establishing a decent spot and recognition on the international platform also.

LIMITATIONS AND DIRECTIONS FOR FUTURE STUDIES

Like every other research, the present study has certain limitations. Firstly, the results are unique to the healthcare sector as there are different dynamics experienced in other knowledge-intensive industries. The intensity of emergency situations is different in healthcare sector as it deals with the situation of life and death whereas technical emergency in other knowledge-intensive may not be that serious. Adding to the concerns, every patient is dealt with differently as along with the surgeries and treatments, they require mental therapy also. HKWs acquire the traits of dealing with both the physical and mental well-being through experience and they get better with years; however, in other industries, the young talented professionals may know more and latest technology as in case of IT sector. For instance, the software developer may not share his knowledge with colleagues to avoid losing the competitive advantage over other professionals. However, in the healthcare sector, an experienced doctor always need a team to work with and share his/her medical procedures.

Second, around 45% of the data is gathered from HKWs with an experience of less than five years as the senior ones are mostly pre-occupied with their work. Nevertheless, after collecting all the responses, it was concluded that the views of senior doctors are not much different from those with less experience. They were on similar lines; however, future studies can examine the HRM practices-retention relationship through a thorough consideration of their experience for a more specific outlook and possible differences between the viewpoints. Third, the data is gathered from the hospitals in the northern region of India. However, Delhi is the representation of India as the capital attracts talent from all over the country. People are settled in Delhi and NCR (National Capital Region) from various parts with different socio-economic conditions owing to the multiple employment opportunities. Future studies may incorporate a wider region in India. In every part of the world, the healthcare professionals share knowledge to enhance their skills towards the profession irrespective of the nature of healthcare systems. However, the findings can be generalized only to the countries sharing similar cultural, regulatory and economic contexts. Therefore, the data can be considered from multiple countries and a cross-country analysis can also be exercised while analysing these factors. This section has provided a summarized view of the research with the deficiencies and further scope for future research.
REFERENCES


