Murat Baş
Erzincan Binali Yıldırım University
Faculty of Economics
and Administrative Sciences
24050 Erzincan, Türkiye
murat.bas@erzincan.edu.tr

Kaya Ağin
Erzincan Binali Yildirim University
Vocational School of
Higher Education
24050 Erzincan, Türkiye
kagin@erzincan.edu.tr

Moh. Qasim Ayaz
Salam University
Management Sciences Department
1007 Kabul, Afghanistan
Qasim.ayaz@salam.edu.af

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THE MEDIATING ROLE OF KNOWLEDGE SHARING IN THE RELATIONSHIP BETWEEN LEADER-MEMBER EXCHANGE AND WORK INTEGRATION

Abstract

Purpose: The purpose of this study is to explain the mediating effect of knowledge sharing (KS) between leader-member exchange (LMX) and work integration (WI) on healthcare workers. The study also examines the direct effects of LMX on WI among selected healthcare workers in Türkiye.

Methodology: The study targeted a sample of N = 295 to provide relevant information. The data were collected using an adopted questionnaire, including LMX (Baş et al., 2010), KS (Chennamaneni et al., 2012), and WI (Schaufeli et al., 2002). A purposive stratified sampling method was used since the participants were considered based on predefined criteria. The study used a 5-point Likert scale ranging from 1= strongly disagree to 5= strongly agree. SPSS 22.0 and AMOS 17.0 packages were used for data analysis and interpretation of statistical outputs.

Results: The study revealed a significant positive relationship between variables. Goodness of fit values of the scales were also checked. First, the mediating variable (knowledge sharing) between LMX and WI was investigated. Second, the effect of LMX on WI was explored. Based on the findings, a significant positive relationship was found between the variables of the study.

Conclusion: According to the research results, significant relationships were found between LMX and WI, between LMX and KS, and between KS and WI. In addition, it was determined that knowledge sharing had a mediating role in the effect of LMX on WI, which was the main purpose of the research. According to the research results, high-quality LMX relationships enable employees to be more open to KS and to integrate more into their work. In this case, KS acts as a bridge that strengthens the link between LMX and WI. Employees find greater meaning in their work by sharing their knowledge, which in turn increases their commitment to it. As a result, leaders creating a culture that supports knowledge sharing can be seen as an effective way to increase work integration and improve organizational performance.

Keywords: Leader-member exchange, knowledge sharing, work integration, healthcare professionals

1. Introduction

Today, the number of studies on work integration and leader-member exchange is increasing. Theorists and organizational practitioners are highly motivated to find better ways to improve individual performance, enhance work integration, and increase job satisfaction (Podsakoff et al., 2007; Chan & Mak, 2012; Örtqvist & Wincent, 2006). Based on the studies in the literature, it was found that employee attitudes toward innovative participation are mainly triggered by their sense due to the relationships that different teams have within the working environment, departments, or with their leaders (Tierney et al., 1999). It was also concluded that LMX has an impact on interpersonal relationships by fostering constructive collaboration among employees to achieve greater outcomes (Bae et al., 1997; Gerstner & Day, 1997). It was shown in our study that LMX has the potential to reduce and limit or even improve employees' work integration. Furthermore, it causes a wide range of strategic and operational outcomes, and organizational short and long-term goals can be met on time (Adil & Awais, 2016).

It is believed that human exchanges and communication are the primary sources of knowledge sharing; knowledge sharing can be characterized as the interpersonal relation and interaction level that facilitates transmitting and receiving information from one employee to another (Argote & Ingram, 2000). According to Widen-Wulff and Suomi (2007), knowledge sharing occurs in individual minds and can only exist if individual minds agree to transform what they know. Du et al. (2007) believe in knowledge sharing via deliberate and resource-intensive efforts. Nooteboom (1999) suggests three different dimensions of knowledge: (1) breadth, (2) depth, and (3) tastiness.

Based on the above argument, it is perceived and identified that studies on the impact of LMX on business integration have not fully addressed the issue. Michel and Tews (2016) found that the investigation of LMX requires further elaboration. The majority of previous studies, for instance Hong et al., 2004; Kenney & Gudergan, 2006; Zahra et al., 2020, focused on either organizational integration or knowledge integration (knowledge sharing). However, many studies related to incorporation in the literature do not adequately address the complexities of today's globalized business environment. In the current study, we propose an integrated work frame that involves leader-member exchange, knowledge sharing, and work integration with experiential statistics from healthcare organizations, aiming to develop a more comprehensive viewpoint of the relationship between the selected scales. In line with this purpose, the study seeks answers to the following questions.

RQ1: To what extent does leader-member exchange affect work integration among healthcare workers?

RQ2: What is the relation between leader-member exchange and knowledge sharing?

RQ3: To what extent does knowledge sharing affect work integration among healthcare workers in Türkiye?

RQ4: Does knowledge sharing mediate the relation between leader-member exchange and work integration?

According to previous studies, the leader-member exchange affects employee performance and strengthens the relation between employees and leaders. This is proven by several experts, for example, according to Rugian et al. (2017), employee performance significantly contributes to leader-member exchange. Further, according to Arsintadiani and Harsono (2002), LMX positively affects employee work integration. Meanwhile, Sa'adah et al. (2022) suggest further investigation into LMX and work integration, particularly regarding service organizations. To support these arguments, we propose the following specific objectives for this study:

RO1: Examine the influence of leader-member exchange on the work integration of healthcare workers.

RO2: Investigate the relationship between leader-member exchange and knowledge sharing among healthcare workers in Türkiye.

RO3: Explore the effect of knowledge sharing on work integration among healthcare workers.

RO4: Understand the mediating effect of knowledge sharing between leader-member exchange and work integration.

2. Literature review and hypothesis development

2.1 Leader-member exchange and work integration

The concept of leadership theory has become a significant focus of scientific investigation. It has established many experimental research considerations in managerial and organizational contexts. LMX theory was revolutionary and for two main

reasons. First, leader-member exchange, or LMX, focuses on the unique dyadic relationship that exists between leaders and their followers. Second, leaders do not form the same type of affiliation or connection with each of their followers (Gerstner & Day, 1997). According to LMX theory, leaders vary their interactions with individuals and, as a result, start different relationships with their followers. Two issued meta-analyses on LMX supported various relations between LMX and a variety of attitudinal and behavioral outcomes. The initial studies on LMX theory were predominantly focused on individual relationships and behavioral outcomes within organizations (Gerstner & Day, 1997; Ilies et al., 2007). Workers looking for new opportunities and striving to advance their workplace are required since today's global businesses are constantly changing (Oldham & Cummings, 1996; Rank et al., 2004; Unsworth, 2001). There are various studies on leadership; Tierney et al., 1999; Zhou and George, 2003 explained the ideas of leadership, Jaussi and Dionne, 2003; Jung et al., 2003; Sosik et al., 1998 examined the character of transformational leadership, Wang and Noe, 2010 focused on motivational leadership, and Zhang and Bartol, 2010 studied how to empower leadership. Other researchers have begun to investigate the link between a relational concept of leadership, namely LMX, and innovation (Atwater & Carmeli, 2009; Scott & Bruce, 1994; Tierney et al., 1999). LMX theory is distinguished from other leadership approaches by its explicit emphasis on special, dyadic relationships and the notion that leaders and followers negotiate their relationship over time (Dansereau et al., 1973; Graen & Schiemann, 1978). Therefore, our study suggests the first hypothesis as follows:

H1*: Leader-member exchange has a positive relationship with work integration.*

2.2 Leader-member exchange and knowledge sharing

In today's knowledge-based economy, knowledge is the most important foundation for organizational existence (Nonaka & Takeuchi, 1995; Nonaka et al., 1994). Individual knowledge sharing is one of the most important practices for achieving organizational effectiveness since it is the basis for creativity and innovative knowledge creation (Nonaka & Takeuchi, 1995; Nonaka et al., 1994; Quigley et al., 2007). However, encouraging individuals to do so in a competitive workplace is difficult due to the unique characteristics of knowledge sharing. For example, each individual's awareness is considered a valued resource (French & Raven, 1959; Jang et al., 2002; Cabrera & Cabrera, 2005). Furthermore, shared knowledge is accessible to all, and individuals can exacerbate free rider issues (Cabrera & Cabrera, 2002). It is indicated in some studies that individuals may lose their competitive advantage because of their knowledge sharing, which comes at a high cost and carries significant risk.

As a result, employees cannot share their knowledge unless there is a clear motivator, such as reciprocity (Chiu et al., 2006; Ipe, 2003). The current study aims to use social exchange theory to better understand how employees share their knowledge. Researchers (Cropanzano & Mitchell, 2005; Huang et al., 2008) argue that social exchange theory emphasizes reciprocity prospects or standards and can provide valuable insight into why people choose to share or not to share their information and knowledge with others. For instance, social exchange theory is utilized to analyze how trust, fairness, and management support are all connected to information or knowledge sharing (Mooradain et al., 2006; Wu et al., 2007).

Individuals with poor exchange ideology, on the other hand, do not easily change their attitudes or actions based on how other workers perceive them (Pazy & Ganzach, 2010). Many researchers (Chiaburu & Byrne, 2009; Coyle-Shapiro & Neuman, 2004; Pazy & Ganzach, 2010; Redman & Snape, 2005; Scott & Colquitt, 2007; Takeuchi et al., 2011) claim that exchange philosophies have a negative direct effect on attitudes and behaviors of employees. Individuals with a durable exchange philosophy prefer to keep score and are open to social exchange. In the absence of favorable care or rewards, they are more likely to exhibit negative attitudes and poor performance (Chiaburu & Byrne, 2009). Thus, based on previous literature, the current study suggests the following hypothesis:

H2*: LMX has a positive relationship with knowledge sharing.*

2.3 Knowledge sharing and work integration

Knowledge sharing is a common theme in knowledge integration, and it will be used to illustrate the implications that arise from the path-dependent nature of knowledge by farming the task of knowledge integration as a cycle (Carlile & Rebentisch, 2003). In line with the belief that individuals' com-

munications are the primary source of knowledge sharing, the term can be broadly defined as interpersonal exchanges that involve transmitting and receiving knowledge, information, or ideas from others (Argote & Ingram, 2000). A link between tacit and explicit knowledge and performance efficiency, especially in hostile environments, was discovered (Akgün et al., 2005). Since tacit knowledge is hidden, unspoken, and explicit, it can be expressed through individuals' social networks (Horváth, 2007). Knowledge must circulate and move continuously throughout the organization because it is considered valuable for work integration.

Furthermore, there is work integration and organizational performance as long as there is a flow of information, knowledge, and ideas (Stewart et al., 2000). Knowledge sharing is the transmission or distribution of knowledge from one person or community to another (Chieu Hsu, 2008). Knowledge sharing is a force that promotes knowledge development, exchange, and high performance, as well as job-related intellectual capital efficiency, which leads to work integration (Liebowitz, 2001). Considering the earlier literature, our third hypothesis is proposed as follows.

H3: *There is a positive relationship between knowledge sharing and work integration.*

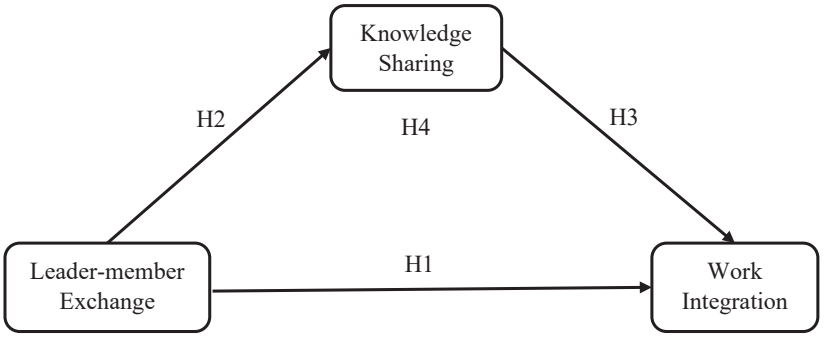
2.4 Leader-member exchange, knowledge sharing and work integration

According to Dinh et al. (2014), LMX is the archetypal social exchange approach in leader-follower dyadic relationships. LMX is concerned with several characteristics that reflect the relationship between the leader and the members, such as respect, constancy, and fairness (Liden & Maslyn, 1998). The importance of LMX in an organization is ultimately enhanced by a leader's fairness toward employees and other members of the organization (Colquitt et al., 2001). Wang & Noe (2010), on the other hand, discovered that the function of LMX affects people's job performance both directly and indirectly. Individuals provide a wide range of services in exchange for a desired outcome, such as pay and self-esteem (Wang & Noe, 2010). Employees with a high level of LMX affiliation are more operative in achieving high work integration (Gerstner & Day, 1997).

Why do employees not share their knowledge? Why do they share knowledge both on and off the internet? Why do they share knowledge through knowledge networks, teams, programs, and divisions? What exactly do they share, and how does it work in the real world? Many research scholars have been captivated by all these questions recently (Foss et al., 2010). Knowledge sharing can be defined as interpersonal communication linking the transmission and reception of knowledge from one person to another (Argote & Ingram, 2000). According to social exchange theory and the norms of mutuality, individuals who expect advantages or favorable treatment feel compelled to respond positively, even though the timing and form of their return may be uncertain (Blau, 1964; Gouldner, 1960). Moreover, negative returns could also be possible when exchange partners are out of control (Shore & Barksdale, 1998; Cropanzano & Mitchell, 2005). Based on these arguments, the fourth hypothesis is suggested as follows:

H4: *Knowledge sharing has a mediating effect on the relationship between LMX and WI.*

Figure 1 Research model



Source: Authors

3. Methodology

In the current study, we examined the relationship between LMX and work integration in the presence of an intervening variable (Knowledge Sharing). The data of this study was collected using the survey method from healthcare workers working in the hospital in Erzincan province in August and November during the COVID-19 period in 2021. The population consists of 895 healthcare workers working in public hospitals in Erzincan province. Using the convenience sampling method, data was obtained through a survey from the healthcare professionals participating in the study. The sample size required to represent the population in the study was determined to be 269 at a 95% confidence level (Ural & Kılıç, 2005, p. 43). Five hundred surveys were distributed to healthcare workers, and after removing incomplete and incorrectly filled surveys, 295 completed surveys were analyzed. The study was conducted during the COVID-19 pandemic to explore the perceptions of dedicated healthcare workers who risked their lives for their profession and see how they view the challenges posed by the pandemic. The aim was to examine leader-member interaction, knowledge sharing, and interactions of healthcare workers during the pandemic, who serve people especially during this difficult period and under hard conditions, and their interactions in the work integration process. Especially during the COVID-19 pandemic, effective communication between employees and their managers, along with knowledge sharing and work integration, was crucial for controlling the spread of the disease and preventing infections.

A purposive stratified sampling technique was used for data collection through the distribution of questionnaires designed on a Likert scale, ranging from (1) strongly disagree to (5) strongly agree. Additionally, the research questionnaire consisted of two different parts. First, the participants' sociodemographic characteristics such as gender, age, education, and experience were investigated, while in the second part, scales related to the variables of the current study, such as leader-member exchange, work integration and knowledge sharing, were included. Reliability analysis, factor analysis, regression, correlation, and mediation analysis were also employed. Moreover, AMOS version 17 and SPSS version 22 were used. Specifically, the PROCESS macro in SPSS was employed to examine the role of the mediation variable between the independent variable (LMX) and the dependent variable (Work Integration).

To provide further details about the measurement, our study utilized 12 items related to leader-member exchange, initially developed by Liden and Maslyn (1998) and later adopted by Turkish researcher Baş et al. (2010). The study included 4 items on knowledge sharing, developed by Chennamaneni (2012), and 17 items on work integration, developed by Schaufeli et al. (2002). Moreover, Cronbach's alpha value for the selected items was .8, which was reliable for data collection. The participants were instructed to respond using the designed Likert scale, ranging from (1) strongly disagree to (5) strongly agree, for each item in this study.

4. Results

4.1 Sociodemographic aspects of the study

Participants' characteristics were categorized by age, gender, educational level, experience, and marital status to understand the sociodemographic aspects of the study. Out of a total of 295 healthcare workers, 54.9% were female and 45.1% were male. Among them, 77.3% were married and 22.7% were single. The age distribution of the participants was as follows: 10.2% were aged 18-26, 28.5% were aged 27-35, 28.8% were aged 36-44, and 32.3% were aged 45 and above. It was essential to know the qualification level of the participants. The statistical results explained that 12.2% were high school graduates, 36.6% were undergraduates, and 51.2% were graduates. Furthermore, the participants' tenure was also explored in the study; 26.4% reported having 0-10 years of experience, 38.6% reported 11-21 years of experience, and 34.9% reported 22 or more years of experience in the healthcare sector.

4.2 Reliability and factor analysis results of the scales

Table 1 Mean for variables, Cronbach's alpha, Kaiser-Meyer-Olkin, standard deviation and correlation coefficients between variables

Variables	α	KMO	Mean.	SD.	1	2	3
Leader-Member Exchange	.933	.817	3.92	0.86	-		
Work Integration	.937	.842	3.95	0.75	.555**	-	
Knowledge Sharing	.920	.761	4.15	1.03	.213**	.484**	-

** = p<0.01 * = p<0.05

Source: Authors

Table 1 presents the mean, standard deviation, Cronbach's alpha, Kaiser-Meyer-Olkin, and correlation coefficients between the study variables. The statistics revealed that the Cronbach's alpha value for LMX, WI and KS is .70. The results also showed a positive correlation between the variables. LMX and WI were found at a 99% significant level (r = .555; P = .000). The study also revealed a positive relationship between LMX and KS (r = .213; P = .000) at a 99% significant level. Meanwhile, a positive correlation (r = .484; p = .000) at a 99% significance level was also found. Moreover, the KMO values and sphericity values of the scales met the reference values (KMO > 0.60 and sphericity value < 0.05) (Büyüköztürk, 2006).

Table 2 Goodness of fit values of the scales

Variables	χ2/df	RMSEA	CFI	GFI	NFI	TLI
Leader-Member Exchange	3.945	0.077	0.986	0.968	0.978	0.974
Work Integration	4.986	0.079	0.993	0.992	0.991	0.957
Knowledge Sharing	3.829	0.072	0.958	0.922	0.956	0.973

Source: Authors

The goodness of fit values of the variables in Table 2 show that they provide the referenced goodness of fit values (Hooper et al., 2008).

Table 3 Regression analysis results related to the mediation test (N=295)

Model summary	R	R^2	F	P	df1	df2
	0.431	0.186	48.93	0.000	2.00	427.00
Knowledge Sharing						
Variables	B	SH	t	P	LLCI	ULCI
Constant	3.12	0.275	11.34	0.000	2.582	3.666
LMX	0.256	0.068	3.733	0.000	0.121	0.391
Work integration						
Variables	B	SH	t	P	LLCI	ULCI
Constant	1.196	0.182	6.572	0.000	0.837	1.554
Knowledge Sharing	0.382	0.032	8.599	0.000	0.213	0.339
LMX **(Direct Effect)**	0.412	0.038	10.638	0.000	0.335	0.488
LMX **(Total Effect)**	0.483	0.042	11.421	0.000	0.399	0.566
			Effect	SH	LLCI	ULCI
Mediator **(Knowledge Sharing)** Effect			0.071	0.031	0.024	0.144

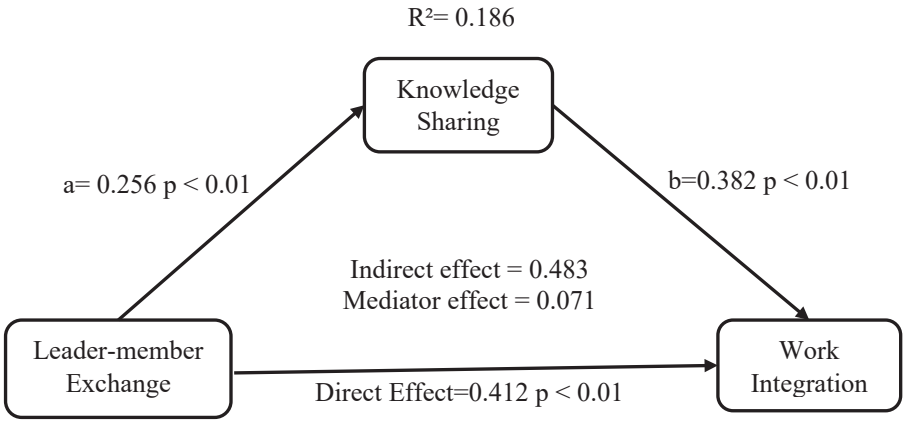
Note: Standardized regression coefficients are specified.
Source: Authors

It was decided that regression analysis based on the bootstrap method should be applied to analyze whether knowledge sharing mediates the relationship between healthcare professionals' leader-member interaction and work integration. It was suggested that the bootstrap method gives more consistent results than the method used by Baron and Kenny (1986) and the Sobel test (Gürbüz, 2019; Hayes, 2018). The PROCESS macro application developed by Hayes (2018) was used to analyze the scales in Table 3. Model 4 was chosen in the analysis application, and the 5000 resampling option was

selected by the bootstrap technique. In mediation effect analysis performed by bootstrap, CI (confidence interval) values were at 95%. The confidence interval should not be zero (0) to support the hypotheses (Gürbüz, 2019). Table 3 shows the coefficients of the multiple regression model. According to this table, it was questioned whether there is a significant and positive relationship between leader-member interaction and work integration in the H1 hypothesis.

The statistical results showed a significant positive relationship between LMX and work integration (b = 0.412; p = 0.000). Therefore, the H1 hypothesis was accepted. In the H2 hypothesis, a significant positive relationship exists between leader-member interaction and knowledge sharing. Accordingly, when examining the H2 hypothesis, it is shown that leader-member interaction accounts for 25.6% of knowledge sharing. According to this finding, the H2 hypothesis was accepted. The H3 hypothesis questioned a significant positive relationship between knowledge sharing and work integration. The statistical results revealed that knowledge sharing explains 38.2% of work integration. Accordingly, the H3 hypothesis was accepted. The significance of the relationships between variables allowed us to question whether there is a mediating effect. The fourth hypothesis examined whether knowledge sharing had a partial mediating effect on the relationship between leader-member interaction and work integration. When it is added to the model as a means of knowledge sharing, it is seen that knowledge sharing has a mediating effect on the relationship between LMX and work integration (b = .071, 95% BCA CI [.024, .144]). In this context, the H4 hypothesis was also accepted.

Figure 2 Research model



Note: Standardized beta coefficients are reported. The R^2 value shows the variance explained.
Source: Authors

5. Discussion

The current study explored the mediating role of knowledge sharing between LMX and WI of the selected healthcare employees in Türkiye. Our findings indicate that LMX as a leadership theory focuses on the relationship between leaders and employees within the organization and has a positive effect on work integration. Importantly, our study revealed that knowledge sharing plays a significant mediating role between LMX and WI. A close examination of the data showed that LMX is positively related to knowledge sharing, particularly at high levels of WI. As a result, leaders' interactions with employees can have a significant impact on factors such as cooperation, trust, and commitment. In this context, knowledge sharing can strengthen the impact of LMX on WI. Leaders can increase the flow of information by encouraging open communication with employees. This can enable employees to better understand each other, exchange ideas and find solutions together. Sharing knowledge can also build trust among employees and foster team spirit.

Leaders can also create appropriate environments to encourage knowledge sharing among employees. For example, tools such as regular meetings, team workshops or digital platforms for knowledge sharing can be used. This increases the flow of information between team members and strengthens work integration.

To extend our knowledge, this is the first study that has verified the mediating role of knowledge sharing between LMX and WI in Türkiye's healthcare sector. For this reason, we integrated WI related literature with LMX theory. The study's findings further suggest that implementing better and higher-quality LMX can enhance creativity and WI. Our study also revisited earlier studies that focused on affirmative interpersonal relationships at workplaces to empower organizations (Dutton, 2003; Heaphy & Dutton, 2008), which may add new insight and importance to organizational studies. Further, this study suggests that individuals who possess positive social connections with their line managers and supervisors, with mutual attentiveness, trust, and high work integration, are more innovatively involved in their assigned tasks and responsibilities (Macey & Schneider, 2008; Kanungo, 1982) and lead toward job commitment (Golden & Veiga, 2008; Allen & Meyer, 1990). Finally, the practical implication of our findings suggests that LMX positively affects WI. Knowledge sharing also has a positive role in LMX and WI.

6. Limitation and future direction

This study has some limitations that must be addressed in future studies. We adopted a subordinate-centered perspective to explain the employees' views on the quality of the relationship between leaders and members. Future studies should incorporate the leaders' perspectives as well (Graen & Uhl-Bien, 1995; Gerstner & Day, 1997; Scandura & Schriesheim, 1994; Howard-Schwind, 2010) to provide a more detailed understanding of the relationship between LMX and WI. Second, our findings were based on self-reported data, so standard method bias cannot be completely ruled out (Podsakoff et al., 2003). Third, we were interested in evaluating the role of knowledge sharing between LMX and WI; our findings captured employees' subjective perception of WI (Atwater & Carmeli, 2009). Future researchers should examine the relationship between LMX and other variables, such as work involvement, work autonomy, and creative work behavior. Finally, the fourth direction toward future studies might be exploring the moderating relationship between variables, as we only explored the mediating role of knowledge sharing with LMX and WI.

7. Conclusion

To sum up, this study has explored the crucial problem of promoting WI among Turkish healthcare professionals, particularly elucidating the critical function that knowledge sharing plays as a mediator in the context of LMX. The study's conclusions provide valuable insights into how interpersonal connections, leadership, and knowledge sharing function in the healthcare industry. The need to encourage seamless work integration is becoming more apparent as healthcare organizations adapt to the demands of a constantly changing environment. The results highlight the beneficial effects of LMX on WI and the significant role of leaders in fostering a diverse and cooperative work environment. Furthermore, a mediating effect of knowledge sharing highlights its function as a catalyst for converting the constructive exchanges between leaders and healthcare professionals into concrete results, promoting solidarity, cooperation, and shared knowledge.

Moreover, our study provided critical answers to the following questions: (1) It was discovered that LMX significantly improved the extent to which Turkish healthcare personnel integrated into their workplaces. The positive dynamics between leaders and members are crucial, as evidenced by the correlation between higher-quality relationships and greater levels of work integration. (2) The study found a substantial correlation between knowledge sharing and LMX among Turkish healthcare professionals. Health professionals were more likely to participate in knowledge sharing activities and promote a cooperative knowledge sharing culture if they reported higher-quality interactions with their bosses. (3) Knowledge sharing was a significant predictor of job integration among Turkish healthcare workers. A culture of knowledge sharing favors the overall integration of healthcare teams, as evidenced by the positive correlation between increased knowledge sharing and improved work integration. (4) The study verified that knowledge sharing is a mediator between WI and LMX among

healthcare workers. The positive relationship between WI and LMX was mediated by knowledge sharing, indicating the mediating role that knowledge sharing plays in promoting cohesive and integrated healthcare staff.

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