

SLEEP TO SUCCEED: THE HIDDEN POWER OF REST IN UNLOCKING LEADERSHIP AND EMPLOYEE EXCELLENCE

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Abstract

Empowerment strategies are highly recognized for increasing employee output and enhancing creative performance. Research on the impact of Empowering Leadership (EL) on Employee Ambidexterity (EA) remains limited, particularly under significant organizational pressure, especially in healthcare settings. The connection between Employee Sleep Quality (ESQ) and the moderation of this relationship requires further investigation. This research investigates the link between EL and EA while ESQ is taken as a moderating variable based on Social Exchange Theory. The structure Equation Model was used to analyze data from 550 Pakistan-based healthcare professionals in southern Punjab through survey methods. The research demonstrates that EL strengthens employee-moderated attachments through psychological empowerment thus leading to increased EA. The positive impact on ambidextrous capabilities becomes weaker when employees suffer from poor sleep quality despite ESQ acting as a moderator in this relationship. This study expands leadership research by demonstrating how leadership actions interact with worker well-being for improving organization output. Healthcare managers must implement leadership strategies which enable empowerment and healthcare of their workers to maximize workplace effectiveness.

Keywords: Empowering Leadership (EL), Employee Ambidexterity (EA), Employee Sleep Quality (ESQ), Employee Wellbeing

INTRODUCTION

Leadership is a critical determinant of employee work outcomes in organizations (Roberson & Perry, 2022; Singh et al., 2023; Wu et al., 2024). Leach et al. (2003) define EL as “a practice, or set of practices, involving the delegation of the responsibility down the hierarchy to give employees increased decision-making authority concerning the executing of their primary work tasks” EL is characterized by its focus on power distribution and delegation of authority, is different from other styles of leadership (Kim & Beehr, 2023b). EL theory states that leaders constantly grant staff full liberty and encourage power-sharing (Mitchell, 2023). These empowering behaviors, as identified by (Kim et al., 2018) have a positive impact on employees' sense of recognition from their leaders and enhance their motivation to actively participate in workplace interactions. This eventually contributes to the alleviation of workplace loneliness, as demonstrated by the studies conducted by (Basit & Nauman, 2023; Ozcelik & Barsade, 2018). Hence, we suggest that

implementing EL is a highly successful supervisory strategy for improving employees' feelings of autonomy in the workplace. EL includes behaviors such as stressing the importance of work to be performed, encouraging participation in decision-making, instilling confidence that subordinates can perform well, and eliminating bureaucratic obstacles (Ahearne et al., 2005; Tripathi & Bharadwaja, 2020). EL makes workers feel good about themselves, which boosts trust in their skills and makes them more willing to take risks (Lin et al., 2020). EL is different from other established styles, both in theory and in practice (Arshad et al., 2022). The beauty of EL is the distribution of authority and the promotion of subordinates' sense of autonomy within the organization (Young et al., 2021). EL is another leadership style that is related to creativity and innovation and has characteristics in common with participative leadership.

Theoretically, different leadership styles produce positive and negative effects on employee ambidexterity (EA). Thus, it is important to identify and review the leadership style that best promotes ambidexterity as earlier evidence has been mixed. The ideal leadership style therefore depends on achieving organizational goals, in which the successful conduct of both individual employees and employees of the whole organization plays a role. This is especially important considering research on the connection between EL and EA. Research suggested that while exploring the positive effects of EL on employees yet investigating the impact of EL on EA is important. EA has not received much attention from researchers from both an empirical and conceptual standpoint (Guisado-González et al., 2017). EA includes two dimensions: exploitation and exploration (Ijigu et al., 2023). The demand of exploitation vs. exploration is a linkage between the organization theory, strategic management, and managerial economics (Almahendra & Ambos, 2015; Rhee & Kim, 2019). He and Wong (2004) stated, "*Exploration is associated with organic structures, loosely coupled systems, path-breaking, improvisation, autonomy and chaos, and emerging markets and technologies*" Companies' exploration entails searching, discovering, experimenting, taking risks, and innovating (Cheng & Van de Ven, 1996). March (1991) explained, "*Adaptive systems that engage in exploration to the exclusion of exploitation are likely to find that they suffer the costs of experimentation without gaining many of its benefits.*" We elaborate that empowering leadership results in autonomy, power satisfaction, and the development of employee ambidextrous behavior. Additionally, good sleep quality further enhances this relationship between empowering leadership and employee ambidexterity. We aim to address important research questions (RQs), which include

RQ1: Whether there is a relationship between EL and EA?

RQ2: When does ESQ moderate the relationship between EL and EA?

Building on this research gap, we create our theoretical model and investigate the impact of EL on EA in organizations. We argue that EL positively influences EA. Our research does not only investigate the impact of EL on EA but also explores significant boundary characteristics of Employee Sleep Quality which impact on the relationship of our proposed relationship. Poor sleep quality is also related to low levels of physical activity (McClain et al., 2014), possibly because people are less motivated to exercise due to fatigue and daytime sleepiness brought on by insufficient sleep (Patel & Hu, 2008). Particularly, insufficient sleep of employees has frequently resulted in many negative consequences, including a decline in in-role performance, poor interpersonal relationships at work, a decline in organizational citizenship behaviors, and an increase in unethical workshop behaviors. Recent

literature concluded that sleep quality is particularly important in the healthcare sector where job hours are divided into night, afternoon, and morning shifts and the effect of shift work on sleep mainly concerns acute sleep loss in connection with night shifts and early morning shifts (Kecklund & Axelsson, 2016). We expect that Employee Sleep Quality can affect the relationship between EL and EA such that the relationship is weak when employees report poor sleep quality. Figure 1 outlines our research model.

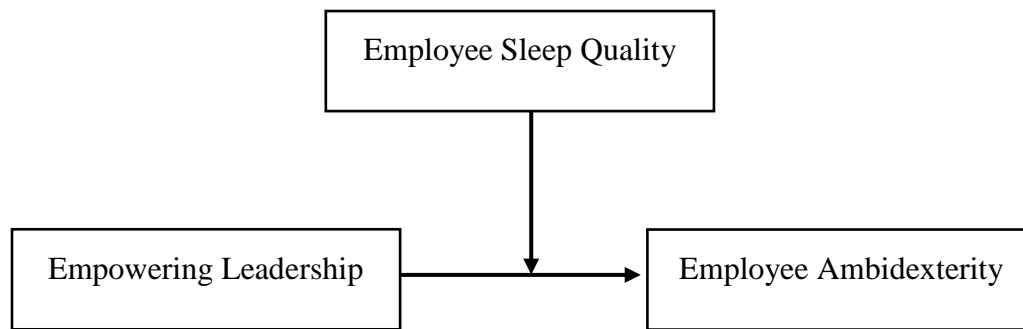


Figure-I: Conceptual Model

Our study makes quite several research contributions. For instance, we fill the research gap by establishing the link between EL and EA. In this way, the study contributes to the existing literature by explaining and providing the answers to the pertinent research questions such as why and how EL is related to EA. Third, our study presents Employee Sleep Quality as an emerging important moderator in the proposed relationships. In this case, the importance of Employee Sleep Quality and its effects on the organization is further emphasized. Lastly, we put our hypothesized research model to an empirical test within the context of the healthcare sector located within the collectivistic culture of Pakistan. Thus, previous research studies have also devoted themselves to explaining how the culture and the industry context can affect the relationships between the variables of leadership and organizational behavior (Cherian et al., 2021; Purnomo et al., 2020).

Theory and Hypothesis Development

Social Exchange Theory

The social exchange theory (SET), one of the most influential theories used to explain workplace behaviors, is practically applied in various fields, such as sociological and psychological contexts (Arsawan et al., 2020; Liu et al., 2024). Interpersonal interactions are a value-exchange process where exchanges between employees and leaders rear around mutual attraction and are carried by rational choice, leading to voluntary reciprocation (Homans, 1958). (Blau, 1964) concluded that "Social exchange refers to voluntary actions of individuals that are motivated by the returns they are expected to bring and typically do in fact bring from others". SET described how an organization's treatment of its employees is related to job performance because employees have an opinion about how they should be treated and modify their behavior to maximize positive results. Therefore, trust and commitment are of the highest importance in the exchange expectations for applying SET (Arsawan et al., 2020; Colquitt et al., 2013; Ferro et al., 2016; Helfers et al., 2019). The social exchange association between the leaders and the employees signifies the reciprocity such that "one individual voluntarily provides a benefit to another, invoking an obligation of

the other party to reciprocate by providing some benefit in return” (Whitener et al., 1998). When leaders support the employees and subordinates, employees tend to reciprocate excellent performance and behavior, however, if leaders tend to intimate the employees, the employees show negative behavior and reaction (Jiang et al., 2017). The employees also established a positive relationship with the leader and mainly reciprocated by showing a positive attitude and behavior toward the assignments (DirksK & Ferrin, 2002). According to the SET point of view, the positive behavior of leaders with their employees provides a high-quality exchange relationship between both parties (Cropanzano & Mitchell, 2005).

SET proposed that the leaders develop exchange relationships with their workers by first providing advantages to them, like autonomy, support, and fair treatment (Blau, 1964; Colquitt et al., 2014; Lorinkova & Perry, 2017). As time passed, the exchange relationship became stronger among the leaders and subordinates depending on the level of trust and respect (Lorinkova & Perry, 2017). Resultantly, the quality of change of relationships and thoughts adjusted the behaviors and attitude of the workers in line with the conduct perceived by the leadership (Colquitt et al., 2014). Grounded in social exchange theory, this paper posits that if leadership provide empowerment and autonomy, the employees will respond to positive attitudes such as EA and if the sleep quality of an employee is good then the EL can achieve its goal.

Empowering Leadership and Employee Ambidexterity

EL is described as “*a leadership style which shares ‘powers’ with followers that increase employees ‘intrinsic motivation’*”(Tekleab et al., 2008). Further, Leach et al. (2003) define EL as “*a practice, or set of practices, involving the delegation of the responsibility down the hierarchy to give employees increased decision-making authority concerning the executing of their primary work tasks*”. EL, characterized by its focus on power distribution and delegation of authority, is different from other styles of leadership (Kim & Beehr, 2023b). EL theory states that leaders constantly grant staff full liberty and encourage power-sharing (Mitchell, 2023). These empowering behaviors, as identified by (Kim et al., 2018) have a positive impact on employees' sense of recognition from their leaders and enhance their motivation to actively participate in workplace interactions. This eventually contributes to the alleviation of workplace loneliness, as demonstrated by the studies conducted by (Basit & Nauman, 2023; Ozelik & Barsade, 2018). Hence, we suggest that implementing EL is a highly successful supervisory strategy for improving employees' feelings of autonomy in the workplace. Leaders who empower their staff have the potential to exceed hierarchical boundaries inside the organization, and they can provide people with both job support and emotional care through their empowering behaviors (Kummelstedt, 2023). Leaders use these behaviors to express gratitude and validation for their employees' efforts (Hou & Cai, 2024), fostering a favorable perception of the leader-employee relationship and promoting more engagement. Implementing this strategy can mitigate workplace loneliness experienced by employees (Ncube, 2021). The Leaders should empower the workers to choose their priorities, methods, and schedules (O'Donoghue & Van Der Werff, 2022). Leaders who use this type of leadership give their employees full control over their jobs and let them choose when and how to do their work (Ciulla & Ciulla, 2020). EL gives workers a sense of increased cognitive resources, such as

possibilities for autonomy and access to useful knowledge, which gives them greater freedom to act independently on the job (Singh & Rangnekar, 2020).

Further, Caniels and Veld (2019) EA is defined as the capability of employees to both exploit current knowledge capabilities and explore new ones in maintaining competitive performance. Mom et al. (2009) also focused on the concept of individual ambidexterity and operationalized it as “the manager’s behavioral orientation to combine exploration with exploitation activities within a certain period.” Mu et al. (2022) defined individual ambidexterity as a “self-regulated activity that combines individual exploration and exploitation”. Joseph et al. (2023) stated that “Ambidexterity refers to the capacity to exploit and explore organizational resources simultaneously”. Ambidexterity refers to individuals or groups who engage in the simultaneous pursuit of new ideas and breakthroughs via both exploratory and exploitative pathways (Fortunisa et al., 2023). Staff member Ambidexterity in the workplace refers to an individual's capacity to effectively contribute to their company by embracing and internalizing its norms and value system, while also being able to coach others and continuously learn new things (Gibson & Birkinshaw, 2004) Ambidexterity is the concept of dualism, which involves the utilization of current knowledge resources to encourage innovation and the discovery of new information to facilitate development concepts or innovations (Gupta et al., 2006).

The exploratory ambidexterity strategy implies the firms make strategic decisions regarding resources investment on new products (Mavroudi et al., 2023). The scope of innovativeness ranges from the creation of new products and technologies to newer processes; also in identifying novel markets as well as economic aids (Benner & Tushman, 2003; Kaletnik & Lutkovska, 2020). The exploitation and exploration ambidexterity strategy aims to comprehensively satisfy the needs of actual customers as well as predict potential changes in the business environment based on current technologies or knowledge. Focusing on present capabilities allows companies to develop their knowledge and skills, strengthening the advantages they currently have (Bresciani et al., 2018).

The demand of exploitation vs. exploration is a linkage between the organization theory, strategic management, and managerial economics (Almahendra & Ambos, 2015; Rhee & Kim, 2019). Levinthal and March (Levinthal & March, 1993) expressed that “an organization that engages exclusively in exploitation will ordinarily suffer from obsolescence”. He and Wong (2004) “exploitation is associated with mechanistic structures tightly coupled with systems, path dependency, routinization, control, and bureaucracy”. Processes of exploitation entail refining, implementing, optimizing, producing, and selecting (Cheng & Van de Ven, 1996). He and Wong (2004) stated, “exploration is associated with organic structures, loosely coupled systems, path-breaking, improvisation, autonomy and chaos, and emerging markets and technologies” Companies’ exploration entails searching, discovering, experimenting, taking risks, and innovating (Cheng & Van de Ven, 1996). March (1991) explained, “adaptive systems that engage in exploration to the exclusion of exploitation are likely to find that they suffer the costs of experimentation without gaining many of its benefits.”

An analysis of the technology industry confirmed the relationship between EA and EL (Yu et al., 2020). Thus, their type of leadership behavior had the most impact on self-confidence related to working in specific organizational structures; employees displayed skills and exemplary behavior. In addition to personal loyalty

and group membership, a strong manager's selfless achieved the desired result and created a system of balanced attitudes to undertake ambidextrous behaviors. Thus, despite the recognition of some earlier discoveries, such as the role of leadership in creating individual Ambidextrous (Prieto-Pastor & Martin-Perez, 2015; Rosing et al., 2011). Ambidexterity is the ability of an individual or an organization's employees to develop original solutions by focusing on the ambidextrous view of innovation, which includes both exploitation and exploration (Gupta et al., 2006). Employee empowerment is a motivational strategy that helps to develop the employees' job satisfaction and organizational commitment through their training, self-development programs, possibilities for participation, and consideration of their ideas and opinions, and this approach is reported to impact employee performance positively (Vu, 2020). Contemporary organizations require leaders who promote participatory decision-making and motivate subordinates to achieve predefined goals and objectives (Dennerlein & Kirkman, 2022). These empowering leaders can foster relationships and unlock the potential of their subordinates by applying principles that align with the social cognitive theory (Kim & Beehr, 2023a). By persistently pursuing their initiatives, leaders can influence the behaviors, conduct, and attitudes of their followers (Arshad et al., 2022). it is crucial to have a thorough understanding of its benefits and implications to harness the potential of EL, a positive correlation between EL and favorable outcomes, as well as a negative correlation with unfavorable outcomes (Hoang et al., 2021).

EL involves sharing power and motivating employees, leads to superior performance, and focuses on improving work meaningfulness, encouraging employee participation in decision-making, demonstrating confidence in high performance, and promoting autonomy from bureaucratic barriers (Zhang & Bartol, 2010). Service quality and sales performance are crucial for achieving the highest level of ambidexterity in the service sector (Gabler et al., 2017). The researchers have consistently found that involving employees in decision-making or delegating tasks to them can significantly improve their performance and job satisfaction (Lamaro & Okello, 2024). However, some scholars argue that true empowerment involves more than just participation and delegation (Polverari et al., 2024). In this regard, the importance of task characteristics should not be overlooked, as assigning trivial tasks to employees will not enhance their sense of self-worth in the workplace (Li & Lin, 2024). EL has gained considerable attention from researchers and practitioners due to its extensive scope of narrative, as compared to traditional leadership styles that focus on exerting influence over subordinates or employees (Rajamohan, 2020; Wei et al., 2023). This contemporary style of leadership has emerged as a popular alternative, generating interest among both scholars and practitioners (Souza, 2023; Townsend & Romme, 2024). EL has generated considerable interest as a new leadership style in recent years because it allows utilizing the human capital represented by employees with higher educational qualifications (Hai & Park, 2024; Kim & Beehr, 2023b). The difference between classic approaches to leading a team and EL is that more resources and support are provided to employees integrated within organizations (Athanasios, 2024). Furthermore, an increase in staff performance is also possible if the employees are empowered to pay more attention to delivering better service quality (Baird et al., 2020). EL and a humorous work climate significantly positively affect service employees' creativity and innovative work behavior (Ali et al., 2021; Slatten & Mehmetoglu, 2011).

EL is a process that makes employees feel recognized and confident, eliminates boundaries to decision-making and eventually improves their performance (Dennerlein & Kirkman, 2022). It also involves improving motivation by handing over job responsibility and authority to all organizational levels, down to the lowest levels where competent decisions can be made (Ugoani, 2020). EL is a process that involves staff in a service organization, both responsibility and authority (Khoshnaw & Alavi, 2020). This form of leadership involves delegating responsibility and authority to all organizational levels and has been shown to enhance employee confidence and work satisfaction (Mathebula & Barnard, 2020). EL is characterized by 'start-up activities among junior workers. It is distinguished by granting employees autonomy and decision-making power, leading to a culture of innovation (Okochi & Ateke, 2020). Innovation theory focuses on our capacity to imagine what has not yet been and challenge the norm. This includes not just building new things but enhancing the ones already built. An example of such hybridization is when capabilities for exploration and exploitation can realize ambidexterity, which means that we use old knowledge to create innovations at the same time as satisfaction in novelty generates understandings afresh (Mariani et al., 2023). The term ambidexterity refers to the ability of individuals or employees to achieve innovative solutions through a balanced approach that involves exploration that is often used of employees in team and transformational (Azizi et al., 2021).

There is a strong significant positive relationship between EL and EA. EL is considered to be a type of leadership where individuals are granted independence by delegating authority and supporting their decision-making competence. Leaders who choose to empower as their technique of leading the staff gives them a certain amount of autonomy and ability to make decisions that do not go beyond a specific range. This is why they conditions when they can come up with fresh concepts, use the initiative, and build autonomous judgments about their work duties occur. An effective leader is characterized by the tendency to empower its staff by equipping them with autonomy because ambidexterity enables employees to implement both types of activities. At the same time, exploration and exploration enabled staff to search for new concepts that improve their work performance and also enabled them to exploit currently attainable concepts. Thus, we proposed the following hypothesis:
H1: Empowering Leadership has a positive relationship with Employee Ambidexterity.

Moderating role of ESQ

We have proposed multiple mechanisms to explain how EL impacts EA outcomes in PSIB. Previous literature showed that sleep and leadership both have positive relationships. (Schilpzand et al., 2018) A study involving 164 business school graduates revealed that poor sleep quality among employees compromised the association between the EL demonstrated by their managers and their proactive goals the next day. Therefore, a good night's sleep improves the advantages of empowered leadership. Transformative leadership moderated the relationship between sleep quality and performance in a study of 78 Naval cadets (Nordmo et al., 2019). However, leaders can also help their staff members for better sleep quality. Experiments involving army personnel demonstrated that leaders who prioritize their subordinates' sleep are more likely to have subordinates who sleep longer (Gunia et al., 2015).

The researcher incorporated the self-regulatory resources theory and Parker et al.'s theory of proactivity to examine the relationship between sleep quality and its

indicators, including trouble falling asleep, difficulty maintaining sleep, and frequency of waking up at night (Barnes, 2012; Harvey et al., 2008; Scott & Judge, 2006). Organizational research shows that individuals experience variations in sleep quality, resulting in instances of both good and poor sleep on different nights. This causes conditions where their self-regulatory resources are more or less drained (Barnes et al., 2015; Barnes et al., 2011; Lanaj et al., 2014).

The current view of sleep regulation suggests that two primary factors are essential in controlling sleep; Sleep-dependent and sleep-independent processes. (Borbély, 1982, 2009). Sleep-dependent regulatory processes are homeostatic and involve an increase of sleep need during wakefulness, which is fulfilled during sleep (Borbély, 1982, 2009). Studies on the impact of sleep on organizations typically centre on three factors: sleep quality, duration, and work-related fatigue. Sleepiness that people experience at work is referred to as work-related drowsiness (DeArmond & Chen, 2009). In many cases, fatigue is used as a measure for workplace sleepiness. Fatigue represents the physiological urge for restorative rest, which can manifest as subjective sensations of sleepiness (Williamson et al., 2011)

Sleep is a vital process that involves substantial physiological brain activity and serves as a daily resource-restorative mechanism, as per research findings (Hobson, 2005). During sleep, the brain refuels the glucose that serves as fuel during waking hours to activate and process information upon waking (Fairclough & Houston, 2004). Empirical research indicates that opting for easier tasks is linked to lower sleep quality. (Engle-Friedman et al., 2003), emphasizing the prospect that exhausted, resource-strapped employees may be opposed to set proactive goals to complete the resource-intensive, challenging daily tasks they have been authorized to perform. In addition, research shows that tired people have difficulty resisting cyberloafing during work hours and focusing on job duties (Wagner et al., 2012), which may reduce their efficacy in daily goal-setting activities.

The phenomenon of sleep deprivation, which is defined by insufficient sleep duration and low sleep quality, has been thoroughly examined due to its detrimental effects on alertness and workplace safety (Barnes & Wagner, 2009). The correlation between sleep and exercise is significant for cognitive functions, including memory encoding and executive functioning (Mueller et al., 2024). Sleep deprivation hurts different cognitive domains, emphasizing the connection between sleep and executive function (Zimmerman et al., 2024). Physical activity is a set of intentional, organized, and repetitive motions of the body. There is a positive and direct relationship between sleep and physical activity in terms of sleep efficiency (Lai et al., 2022). it may be important to understand the cause-and-effect relationship between immunological dysregulation and sleep quality to detect people at risk of diseases and prevent negative health consequences (Wang et al., 2023). Our body, psychological state, and emotional well-being, completely depend on sleep, which is also a basic physiological function and takes more than one-third of our life (Wang et al., 2023).

Poor sleep quality is associated with an increased likelihood of negative health outcomes and elevated mortality rates. As a health concern associated with fatigue, sleepiness, and decrements in cognitive and safety performance, it has been a significant consideration for individuals of different ages and backgrounds (Huang et al., 2022). Thus, based on its importance and relevance to significant populations, the recommendation for the research focus is high (Phillips, 2014). Research by both epidemiological experts and experimental practitioners shows that sleep quality

creates a robust connection to metabolic problems and diseases which involve obesity and type 2 diabetes together with cardiovascular diseases such as hypertension and coronary artery disease (McNeil et al., 2013). The leading fifteen causes of death in the United States have a connection with poor sleep quality as illustrated by five of these deaths including heart diseases and strokes alongside accidents and hypertension and type 2 diabetes (Fernandez-Mendoza et al., 2019). The literature indicates that an ESQ is a significant factor that can affect their overall well-being, productivity, and job performance. Inadequate sleep among employees can result in negative consequences for both the individuals and their respective organizations. Adequate sleep enhances cognitive functions such as attention, focus, problem-solving, decision-making, and memory. Sleep deprivation can significantly affect productivity. Sleep-deprived employees may experience reduced motivation, impaired concentration, and slower information processing. This may result in less productivity and efficiency at work.

Thus, we proposed the following hypothesis:

H2: ESQ moderates the relationship between EL and EA.

3. METHOD

3.1. Participants and procedure

The purpose of this study was to investigate the associations between supervisors' EL and public health workers outcomes in organizations. For testing our proposed research model, we collected data from the workers in the health sector of south Punjab Pakistan. The healthcare facilities of Southern Punjab demonstrate substantial structural inequalities compared to those of Upper Punjab because they possess limited resources and insufficient infrastructure coupled with restricted service availability. Public hospitals operating in Southern Punjab experience restricted funding that leads to scarce medical equipment and insufficient medical personnel which degrades their healthcare quality. The healthcare landscape of Upper Punjab offers both strong public hospital facilities and an advanced private medical sector with better quality healthcare at reduced prices. Southern Punjab has poor private healthcare infrastructure that either has inadequate development or excessive healthcare costs that block medical service access for many residents. The systemic problems in the region demand a thorough investigation of public health services across Southern Punjab. This research investigates current health service gaps to determine necessary improvement zones that would boost regional medical access and quality standards.

We distributed 570 questionnaires to our participants, which consisted of questions related to EL, sleep quality, EA and demographic information (including gender, age, education, experience and profession in the health sector), and received 550 valid filled-in questionnaires. Of 550 respondents, 70.4% were female, 55.8% were in the age group of 20 to 30 years, 47.8% have BS Nursing education, and 51.1% have a working experience of 1 to 5 years in the health sector. Detailed demographics of participants is presented in Table 1.

Demographic Information				
Descriptive	Label	Frequency	%	Mean
Gender	Male	163	29.6%	1.70
	Female	387	70.4%	
Age Groups	20-30 years	307	55.8%	1.56
	31-40 years	189	34.4%	

	41-50 years	45	8.2%	
	51-60 years	9	1.6%	
Education	MBBS/Equivalent	180	32.7%	2.33
	FCPS/Equivalent	60	10.9%	
	BSN/BS Nursing/Equivalent	263	47.8%	
	MPhil/MS	41	7.5%	
	PhD/Equivalent	6	1.1%	
Experience	1-5 years	281	51.1%	1.78
	6-10 years	175	31.8%	
	11-15 years	50	9.1%	
	16-20 years	20	3.6%	
	21-25 years	24	4.4%	
Profession	Doctor	250	45.5%	1.55
	Nurse	295	53.6%	
	Midwife	5	0.9%	
Table 1: Demographics				

3.2. Measures

EL was measured using the (Vecchio et al., 2010). This scale consists of 10 items. EA was measured using Mom et al. (2009) twelve-item scale. *Employee Sleep Quality* was measured using the Schilpzand et al. (2018); Yi et al. (2006) scales, which consist of thirteen items. All the questions were designed on a five-point Likert scale (*where 1 = strongly disagree and 5 = strongly agree*). The theoretical framework of the existing literature and review sample shapes our rationale to emphasize sleep quality over sleep quantity. Studies show that medical staff that work on a shifting basis, doing night shifts often have low-quality sleep even in the instances where their total amount of sleep is right. We further controlled for the gender of the respondent, age, level of education, and years of experience of the respondent in the healthcare sector since these factors have been shown to have a significant influence on our variables of interest in past studies eg, (Peng et al., 2024; Yousaf et al., 2022).

4. Analyses and results

The researcher used two methods within PLS-SEM for analyzing the data. The research utilized two methods in PLS-SEM to analyze the measurement model (outer model) independently from the structural model (inner model) (F. Hair Jr et al., 2014). The measurement model assessment of PLS-SEM occurs through outer loading and outer weight evaluation. The reflective components translate to outer loadings while formative characteristics correspond to outer weights in PLS-SEM (F. Hair Jr et al., 2014). Each item in the study needs outer loading values above 0.70 for all constructs. Items with values within the range of 0.4 to 0.7 should remain in place if removing them would enhance composite reliability. The construct requires elimination of items whose outer load measures fail to reach 0.4 criteria (Peng et al., 2024). In this study, all construct measurements were conducted without assessing the formative measurement model, as all construct items were determined to be well-aligned and interconnected. As illustrated in Table 2, 35 items across the three variables exhibit reliable external loadings of 0.70 or greater. The Cronbach's alpha is used as a measure of internal consistency reliability of a construct (F. Hair Jr

et al., 2014) . It's a measure of the degree of which items on a construct consistently measure the same latent variable. The sensitivity of this test focuses on individual items included in the constructs since it utilizes outer loading values from indicator measurements. A Cronbach's alpha value of 0.7 or higher is considered satisfactory and provides a benchmark for good internal consistency and for the fact that the items measure the intended construct reliability. **Table 2** represents the internal reliability and validity of constructs. Factor Loading values (FLVs), composite reliability (CR), Cronbach's Alpha (α) and Average variance Extracted (AVE) values of all constructs are presented below. In the measurement model, all values of the construct are meeting with the requirements. Further, to conduct a full collinearity test, we calculated VIF values for all of our constructs used in this research. The VIF values as reported in Table 2 reveal that all the values are closer to 1 thus indicating that there is no issue of multicollinearity among the variables of our study. Moreover, these values of VIF represent that there is no issue of common method variance (CMV). Another way used to test the discriminant validity is cross-loading, which requires that each item have a higher outer loading on its own variable than on any other construct. (F. Hair Jr et al., 2014). Table 3 indicates that all cross-loadings are according to the required thresholds. Figure 2 depicts HTMT analysis chart and results shows that all the HTMT values are below 0.85. A score below 0.90 confirms that variables demonstrate discriminant validity in their relationship. SRMR values below 0.10 indicate model fit according to the research standards where SRMR equal to zero represents a perfect model fit.

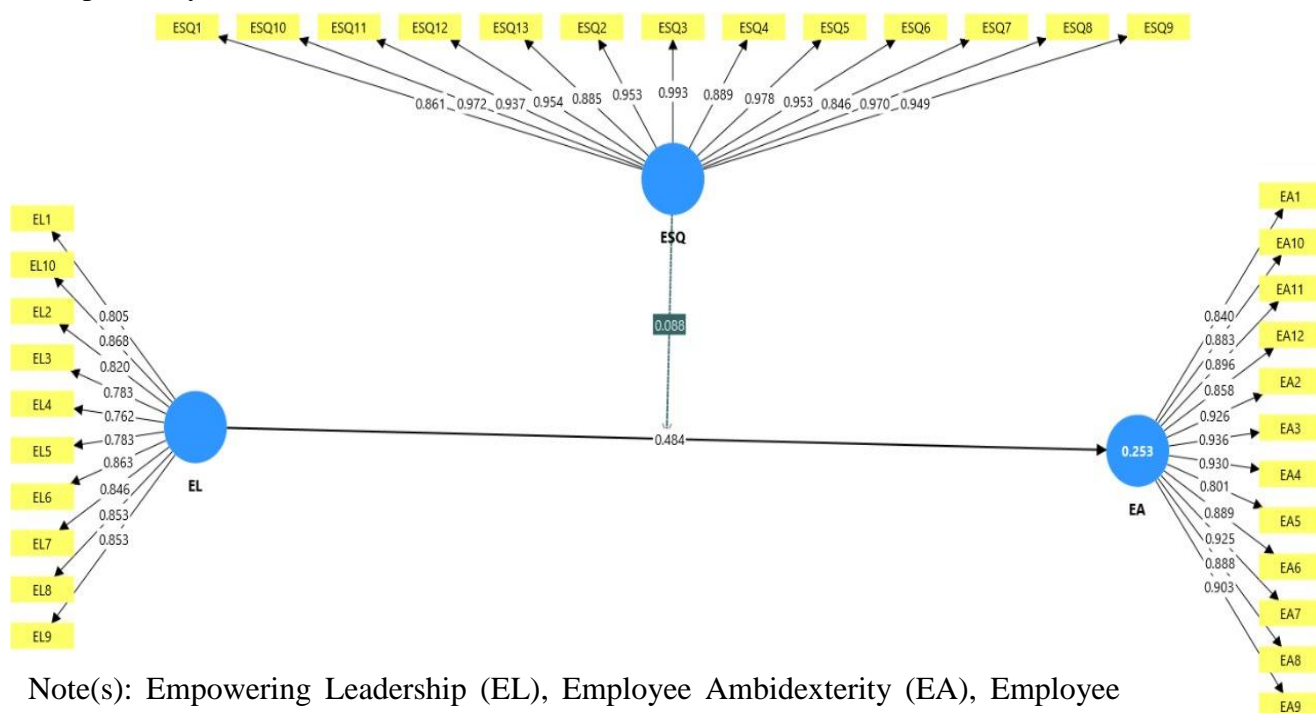
Variable	Loading	Cronbach's alpha (CA)	Composite reliability (CR)	Average variance extracted (AVE)	VIF
EA	0.801-0.936	0.976	0.979	0.793	1.15
EL	0.762-0.868	0.947	0.955	0.680	1.64
ESQ	0.846-0.993	0.988	0.989	0.874	1.08
Note(s): Empowering Leadership (EL), Employee Ambidexterity (EA), Employee Sleep Quality (ESQ)					
Table 2: Reliability and Validity					

Item	EA	EL	ESQ
EL1	0.365	0.805	-0.141
EL2	0.363	0.820	-0.135
EL3	0.407	0.783	-0.168
EL4	0.369	0.762	-0.127
EL5	0.350	0.783	-0.141
EL6	0.465	0.863	-0.117
EL7	0.430	0.846	-0.115
EL8	0.447	0.853	-0.126
EL9	0.407	0.853	-0.127
EL10	0.442	0.868	-0.109
EA1	0.840	0.414	-0.073
EA2	0.926	0.446	-0.081
EA3	0.936	0.464	-0.059
EA4	0.930	0.441	-0.107

EA5	0.801	0.424	-0.054
EA6	0.889	0.449	-0.063
EA7	0.925	0.473	-0.116
EA8	0.888	0.420	-0.056
EA9	0.903	0.433	-0.087
EA10	0.883	0.449	-0.089
EA11	0.896	0.446	-0.106
EA12	0.858	0.413	-0.048
ESQ1	-0.066	-0.115	0.861
ESQ2	-0.095	-0.181	0.953
ESQ3	-0.086	-0.152	0.993
ESQ4	-0.084	-0.150	0.889
ESQ5	-0.087	-0.158	0.978
ESQ6	-0.078	-0.143	0.953
ESQ7	-0.057	-0.124	0.846
ESQ8	-0.078	-0.131	0.970
ESQ9	-0.071	-0.133	0.949
ESQ10	-0.092	-0.137	0.972
ESQ11	-0.086	-0.162	0.937
ESQ12	-0.087	-0.169	0.954
ESQ13	-0.093	-0.137	0.885

Table 3: Cross Loading Values

Note(s): Empowering Leadership (EL), Employee Ambidexterity (EA), Employee Sleep Quality (ESQ).



Note(s): Empowering Leadership (EL), Employee Ambidexterity (EA), Employee Sleep Quality (ESQ)

Figure 2: Structural Model

The results of this study, in order to show the table, the Saturated Model values of the SRMR of 0.033 while the SRMR value is also 0.033 for the Estimated Model. Those values validate that this model is well-fitting. For structural model validation, the bootstrapping technique recommended in this study will have an estimate of 5,000 samples with replacements, at 95% of the confidence interval. In bootstrapping approach, very large number of samples is selected by sampling with replacement from the original sample data.

Path coefficient shows both the direction and degree of construct relationship strength. Standardized path coefficients possess values between -1 and +1 where numbers near +1 indicate strong connections between variables. The paths with estimated coefficients close to zero show minimal or no meaningful link between variables according to their findings (Hair et al., 2016). Path coefficient measurements help explain the scale and direction between variables within the research model. Table 4 shows path coefficients which provide understanding about variable relationships in the model structure. To assess the structural model and evaluate the accuracy of model predictions, R values are employed. The R^2 values indicate the extent to which the variance in endogenous variables is explained by the model. They provide insight into the proportion of the change in dependent variables that can be attributed to the independent variables. Researchers determine R^2 value appropriateness through a specific scale where 0.75 indicates good prediction power, 0.50 shows moderate predictive abilities and below 0.25 signifies weak prediction capabilities (F. Hair Jr et al., 2014). The presented intervals enable researchers to assess how much variation each independent variable explains in the model. The presented table displays R^2 or adjusted R^2 values to provide complete information about the model's ability to explain dependent variable variations. The results in Table 5 show EA R^2 has a value of 0.253 which indicates weak to moderate variance explanation. The adjusted R^2 value for EA variable reaches 0.249 which signifies the extent to which independent variables explain the dependent variable even after adjusting for model complexity. Each independent variable gets evaluated through the effect size calculation f^2 . The R^2 variation resulting from independent factor removal helps determine significant variables involved in affecting dependent constructs. The existing R^2 value operates as a basis for determining how much an independent variable affects it through the f value. Research suggests that little impact is shown by an f^2 measure of 0.02 while 0.15 represents a medium effect size and 0.35 shows a high effect (Hair et al., 2016) The f^2 value demonstrates insignificant relationships between variables when it stays below 0.02. The effect size f^2 analysis in Table 6 demonstrates the complete assessment about each independent variable's influence on the R^2 value within the model.

	Path coefficients
EL -> EA	0.484
ESQ -> EA	-0.006
ESQ x EL -> EA	0.088

Table 4: Path Coefficients

	R-square	R-square adjusted
EA	0.253	0.249

Table 5: R square values of Model

	EL
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EA	0.304
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Table 6: Effect size of f^2

Table 7 presents the research results that establish direct associations between independent and dependent construct variables. EA demonstrates a positive correlation with EL, according to the findings in Table 7 ($\beta = 0.484$, $p > 0.05$). This result supports our hypothesis H1. The research demonstrates that Employee Sleep Quality functions as a critical modifying variable between EL and EA, supporting hypothesis H2. Table 8 provides important results that demonstrate how Employee Sleep Quality strengthens the connection between EL and EA. Employee Sleep Quality effectively influences the connection between EL and EA in favorable ways ($\beta = 0.084$, $p < 0.05$), thus proving our hypothesis H2.

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
EL -> EA	0.484	0.485	0.046	10.568	0.000

Table 7: Direct Relationship

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
ESQ x EL -> EA	0.088	0.088	0.040	2.191	0.028

Table 8: Mediating Effect

5. Discussion and conclusion

The foremost objective of this study was to examine the role of EL and employee sleep quality on EA. Several theoretical contributions presented in our research enhance the current literature on leadership, EA, and well-being within the organizational domain. Furthermore, this study extends leadership literature by examining the relationship between EL and EA otherwise by showing that empowering style is essential for Employees ability to perform exploratory and exploitative actions simultaneously. Although the effects of leadership style on employee outcomes have been widely studied, the distinct impact of EL on EA has been investigated relatively little, especially in high-pressure settings like healthcare. Therefore, this study contributes to the literature by showing that EL is crucial for fostering ambidextrous behaviors among followers. This study presents a new contribution by introducing Employee Sleep Quality (ESQ) as a moderator in the association between EL and EA. In this way, we address growing efforts to consider well-being variables in leadership and organizational behavior research. Although transformational leadership, such as EL, has interaction benefits in workplaces, our findings indicate that employees' sleep quality heavily determines those benefits. In particular, when employees have low sleep quality, the positive effect of EL on ambidextrous behavior is reduced. This research thereby substantiates that leadership effectiveness is dependent on employee well-being, providing a complete understanding of how employees' physiological and psychological states influence the enactment of leadership behaviors in work outcomes. This study offers a fresh insight from introducing Employee Sleep Quality (ESQ) as a key limitation in the relation among EL and EA. We respond to growing efforts to embed well-being constructs into views of leadership and employee behavior by so doing. While projected leadership approaches like EL are found to enhance job performance outcomes, we demonstrate that these positive effects are substantially qualified by workers' sleep quality. More specifically, when sleep quality of employees is poor,

the favorable effect on ambidextrous behavior of EL is weakened. This research, in this sense, elucidates that leadership effectiveness depends on employee well-being by supplying a more nuanced comprehension of how employee physical and psychological condition integrates the translation of behaviors of leadership to outcomes at work.

The contextual meaning of this investigation centers around the Pakistani healthcare field because this sector operates in a collectivist culture that diverges from Western leadership styles. The analysis of EL and EA in this Pakistani healthcare sector fills a crucial hole in cross-cultural leadership research. The study broadens the research area of ambidexterity beyond its traditional boundaries in manufacturing and technology to cover healthcare institutions that are adopting adaptive measures from their workforce. The study develops a moderated framework of EL combined with EA that utilizes research on employee well-being and behavior flexibility to create advanced theoretical constructs. The research sheds light on how leadership behavior shifts in conjunction with employee sleep quality dynamics ultimately create fundamental organizational behaviors needed for innovation along with responsive activities. This detailed research methodology establishes multiple new possibilities for investigating alternative variables that affect the relationship between EL and EA in subsequent studies. The research extends knowledge in leadership, ambidexterity, and employee well-being by revealing multiple ways in which EL produces ambidextrous behaviors among staff members with clear conditions determining the strength of these relationships. The findings describe employee innovation trends in public service organizations that operate within demanding healthcare conditions limited in resources.

5.2 Practical Implications

The research findings provide operational implications for managers, policymakers, and organizations in healthcare settings. According to our study results, EL is a vital component that advances EA, which is essential for organizations workers to perform exploratory and exploitative tasks. Healthcare organizations should train managers and supervisors to empower leadership through delegation of authority participatory. The proper implementation of enabling leadership requires healthcare organizations to train their managerial staff for effective delegation along with promoting decentralized choices and staff independence. Organizations delivering leadership development programs should teach leaders how to maintain psychological safety because it enables employee initiative and idea contribution while operational efficiency still remains essential. Employee Sleep Quality should be considered as an important factor in EL effectiveness. The combination of good sleep quality and supportively empowered leadership fails to produce full ambidextrous engagement among employees. Organizations should create strategies that support employee healthy sleep habits since it will benefit their operations. Workplace wellness programs with education about sleep duration alongside stress management and flexible shift schedules should be implemented by healthcare institutions to promote employee rest. The improvement of employee sleep quality leads to better well-being and increased effectiveness of leadership approach implementations.

The study results demonstrate that sleep quality operates as an important moderating variable, which indicates that leadership actions separate from employee welfare and cannot create peak work results. Consequently, organizations need to implement whole-system leadership approaches with human resource management

techniques. Leaders should incorporate employee fatigue evaluation programs that enable them to modify job assignments or arrange recovery protocols for affected personnel. Organizations in healthcare and similar demanding industries should incorporate sleep quality surveys into their standard organizational health evaluations. Our investigation provides useful insights to healthcare organizations that work in collectivist cultures like Pakistan since hierarchy plays an important role in their organizational structure. Our results indicate healthcare managers operating in collectivist cultural conditions should replace traditional leadership models with empowerment since it produces positive effects on adapting employee behaviors. Managers need to receive enabling leadership education through training sessions to develop more engaged and supportive leadership methods. Organizations must understand how ambidextrous employees function as drivers for innovation and service quality enhancement. When healthcare workers are motivated to perform both routine activities and innovative behaviors, their organizations gain significant improvements in service quality delivery. Leaders should evaluate ambidextrous employee work styles and then recognize them properly while providing the needed tools for them to succeed at routine and innovative assignments. Employee development occurs by combining cross-training approaches with participation in improvement activities to foster ambidextrous abilities. Healthcare organizations that empower their leaders to enhance employee sleep quality through their practices will create a resilient workforce capable of adapting to public health service delivery challenges along with innovative and adaptive capabilities.

5.3 Limitations and Future Directions

Our research contains theoretical and practical merits yet it has some boundaries that researchers can use for further investigation. Our research design uses cross-sectional survey methods to study the relationships which obstruct our ability to prove why EL and EA influence employee sleep quality. Future research needs to use longitudinal or experiment-based methods to determine the sequential relationship between EL and EA. The research was performed in Pakistan's healthcare sector within a collectivist cultural framework demonstrating unique differences compared to Western individualistic workplaces. The model needs empirical validation in different cultural settings across various industries, such as technology, education, and manufacturing, beyond Pakistani healthcare. Comparisons across cultures would provide enhanced knowledge about which societal traditions, together with organizational standards, influence the effectiveness of EL when promoting ambidextrous behavior from employees. This study examined employee sleep quality as it affects the connection between EL styles and EA. The quality of sleep is vital for employee welfare, but other personal elements, together with environmental influences, contribute substantially to their well-being. Additional research should study various boundary conditions, which include work stress, job autonomy, psychological resilience, and organizational climate, to discover their impact on the connection between leadership and EA. The research analyzed EA as a behavioral outcome but did not study its chain reactions on organizational results including innovation performance, service quality and adaptability. Research should focus on identifying the specific organizational advantages that stem from EA to understand its complete impact on long-term organizational success. The research analyzed EA as a behavioral outcome but did not study its chain reactions on organizational results including innovation performance, service quality and adaptability. Research should focus on identifying

the specific organizational advantages that stem from EA to understand its complete impact on long-term organizational success. The current study extends knowledge about EL as well as EA and sleep quality. Still, it may expand these concepts by better supporting cause-and-effect relationships and investigating supplementary psychological contexts. Research in these fields will enhance our complete understanding of adaptive leadership dynamics, along with employee adaptation processes in modern business environments.

5.4 Conclusion

The study highlights the association between EL and employee sleep quality to develop EA in healthcare organizations. The research shows EL leads employees toward exploratory and exploitative conduct thus enabling their organizations to be adaptable and innovative. This study establishes employee sleep quality as an essential moderating variable that indicates that employees with good sleep quality receive maximal benefits from EL positive impact on ambidextrous behaviors. Focusing on empowering leader behaviors and sleep-supportive worker welfare initiatives presents itself as essential for organizations, especially within the healthcare industry. Organizations achieving better employee performance in complex work environments should create environments that provide autonomy and promote recovery. This study suggested that managers should not only focus on EL but also manage well-being and health issues, particularly employee sleep quality, to increase performance at the workplace. Through implementation of well-being practice like flexible working hours, sleep hygiene, fatigue management strategies could improve the performance of the healthcare works.

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