

**IMPACT OF SELF-LEADERSHIP STRATEGIES OF HEALTH CARE EMPLOYEES  
ON WORK ENGAGEMENT AND PERFORMANCE**

BY

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**NATIONAL UNIVERSITY OF MODERN LANGUAGES, ISLAMABAD**

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NATIONAL UNIVERSITY OF MODERN LANGUAGES

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The undersigned certify that they have read the following thesis, examined the defense, are satisfied with the overall exam performance, and recommended the thesis to the Faculty of Social Sciences for acceptance.

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## Abstract

The research primarily aimed to measure the influence of self-leadership strategies utilized by health care employees' performance and work engagement. The study investigated and explained the indirect and direct relationship between work engagement and self-leadership strategies. Mean differences across gender on study variables as well as differences based on age groups, position, experience in the organization(present), total experience, educational levels and status of organization respectively were also explored. A sample of 290 (Male=107, Female=183) health care employees was selected from various government and private hospitals within Islamabad and Rawalpindi, using a cross-sectional research design. The ages varied between 18 years to 65 years ( $M=23.5$ ,  $SD=.62$ ). Revised Self-Leadership Questionnaire, Work Engagement Scale, Job performance scale and Job Performance Supervisor Rating Scale were used for data collection. Mediation analysis suggested significant partial mediation. The direct and indirect effects of self-leadership techniques, namely behavior focused strategy, natural reward strategy and cognitive thought pattern on job performance were positive and significant. Mean differences indicated significant gender-based differences among health care employees only on vigor sub-domain of work engagement. One-Way Analysis displayed that nurses showed more vigor and absorption; graduates did better on vigor, work engagement, self-leadership and cognitive thought pattern respectively; whereas, paramedical staff did better on job performance; age group of 46-65years used more of vigor, dedication, behavior focused and natural reward strategy; employees with the greater work experience showed more of vigor; whereas those in the current organization did better on work engagement and job performance along with vigor. As additional findings, the hierarchical regression analysis of dimensions of work engagement was performed. Findings revealed significant positive associations between sub domains of work engagement and job performance including their significant impact on the latter.

## CONTENTS

Abstract.....	iv
List of Tables .....	vii
Acknowledgements.....	xii
Introduction.....	1
Rationale of the study .....	2
Problem formulation .....	4
Conceptual Framework.....	5
Significance of the study.....	6
Delimitations.....	7
Chapter 2.....	8
Literature Review.....	8
Self-leadership .....	8
Self-leadership perspectives/theories.....	10
Self-regulation process.....	10
Social Learning Theory/Social Cognitive Theory.....	11
Self-leadership and Self-Control theory.....	12
Self-leadership and intrinsic motivation theory.....	13
Self-leadership and Self-determination theory.....	14
A comprehensive self-leadership model.....	15
Constructive Thought Pattern Strategies .....	16
Self-leadership strategies .....	17
Behaviour focused self-leadership strategies .....	18
Constructive thought pattern strategies .....	21
Self-leadership and health care profession .....	25
Performance .....	28
Work Role Performance .....	32
Role-based Performance.....	36
Self-leadership and Job Performance .....	37
Role of Work engagement .....	49
Dimensions of work engagement .....	50
Theories of work engagement .....	53
Trends in work engagement .....	62
Chapter 3.....	77
Research method.....	77

Research Objectives.....	77
Hypotheses.....	77
Operational definition of variables .....	78
Work Engagement .....	79
Job performance .....	79
Research Design.....	79
Research instruments .....	79
Utrecht Work Engagement Scale (UWES) .....	79
Revised Self-Leadership Questionnaire (RSLQ) .....	81
Sample.....	82
Inclusion criteria .....	82
Data collection/Procedure.....	84
Data Analysis.....	84
Research Ethics.....	85
Delimitations of Research Study .....	85
Discussion.....	94
Chapter 4.....	95
Results.....	95
Multiple Regression Analysis .....	95
Mediation Analysis .....	96
Mean Difference .....	104
Additional findings .....	119
Chapter 5.....	127
Discussion.....	127
Chapter 6.....	139
Conclusion, recommendations and implications .....	139
Recommendations.....	140
Theoretical implications .....	142
Practical implications .....	143
REFERENCES .....	146

## List of Tables

		<b>Page#</b>
<b>Table 1</b>	Socio demographic characteristics of the participants (N=290)	83
<b>Table 2</b>	Descriptive statistics, Cronbach's alpha and univariate normality of the study variables (N=290)	86
<b>Table 3</b>	Item-total correlation of <i>Work Engagement Scale (UWES)</i> (N=290)	87
<b>Table 4</b>	Item-total correlation of Vigor subscale (N=290)	87
<b>Table 5</b>	Item-total correlation of Dedication subscale (N=290)	88
<b>Table 6</b>	Item-total correlation of Absorption subscale (N=290)	88
<b>Table 7</b>	Item-total correlation of Revised Self-Leadership Questionnaire (RLSQ) (N=290)	89
<b>Table 8</b>	Item-total correlation of Behaviour Focused Strategy (N=290)	90
<b>Table 9</b>	Item-total correlation of Natural Reward Strategy (N=290)	91
<b>Table 10</b>	Item-total correlation of Cognitive Thought Pattern (N=290)	91
<b>Table 11</b>	Item total correlation of Job Performance Scale (N=290)	92
<b>Table 12</b>	Item total correlation of Job Performance (Supervisor Rating Scale)(N=290)	92
<b>Table 13</b>	Correlation matrix of all variables of the study (N=290)	93
<b>Table 14</b>	Multiple Regression analysis of Behaviour Focused Strategy, Natural Reward Strategy and Cognitive Thought Pattern (N=290)	95
<b>Table 15</b>	Mediation analysis of Work Engagement between Self-Leadership and Job	96



Performance. (N=290)

<b>Table 16</b>	Mediation analysis of Work Engagement between Behaviour Focused Strategy and Job Performance (N=290)	98
<b>Table 17</b>	Mediation analysis of Work Engagement between Natural Reward Strategy and Job Performance. (N=290)	100
<b>Table 18</b>	Mediation analysis of Work Engagement between Cognitive Thought Pattern and Job Performance (N=290)	102
<b>Table 19</b>	Gender differences on Self-Leadership, Work Engagement and Job Performance (N=290)	104
<b>Table 20</b>	One-Way Analysis of Variance (ANOVA) between positions and research variables. (N=290)	105
<b>Table 21</b>	Tukey Kramer's for Mean Differences across various groups of positions in relation to research variables (N=290)	106
<b>Table 22</b>	One- way Analysis of Variance (ANOVA) between age groups and research variables (N=290)	107
<b>Table 23</b>	Tukey Kramer's for Mean Differences across various age groups in relation to research variables	108
<b>Table 24</b>	One-way Analysis of Variance (ANOVA) between education levels and research variables (N=290)	109
<b>Table 25</b>	Tukey Kramer's for Mean Differences across various education levels in relation to research variables (N=290)	111
<b>Table 26</b>	One-way Analysis of Variance (ANOVA) between total work experience and research variables (N=290)	113

<b>Table 27</b>	Tukey Kramer's for Mean Differences across total work experience in relation to research variables (N=290)	114
<b>Table 28</b>	One-way Analysis of Variance (ANOVA) between status in organization and research variables (N=290)	115
<b>Table 29</b>	Tukey Kramer's for Mean Differences across status of organization in relation to research variables (N=290)	116
<b>Table 30</b>	One-way Analysis of Variance (ANOVA) between groups of experience in the present Organization and research variables (N=290)	117
<b>Table 31</b>	Tukey Kramer's for Mean Differences across groups of experience in the organization (current) in relation to research variables (N=290)	118
<b>Table 32</b>	Summary of Hierarchical Regression analysis for predicting Vigour through factors of Self- Leadership (N=290)	119
<b>Table 33</b>	Summary of Hierarchical Regression analysis for predicting Dedication through factors of Self- Leadership (N=290)	121
<b>Table 34</b>	Summary of Hierarchical Regression analysis for predicting Absorption through factors of Self- Leadership (N=290)	123
<b>Table 35</b>	Summary of Hierarchical Regression analysis for predicting overall Work Engagement (N=290)	125

## List of figures

		<b>Page #</b>
<b>Figure 1</b>	Schematic representation of the effect of Self-Leadership Strategies of health care employees on Work Engagement and Performance.	05
<b>Figure 2</b>	A Comprehensive Model of Self-Leadership	16
<b>Figure 3</b>	Graphical representation of Kahn’s Work Engagement Theory	54
<b>Figure 4</b>	The Broaden-and-Build Theory of Positive Emotions.	55
<b>Figure 5</b>	Job Demand-Resource Model.	60
<b>Figure 6</b>	Mediating role of Work Engagement in relation between Self-Leadership and Job Performance among health care employees.	96
<b>Figure 7</b>	Mediating role of Work Engagement in relation between Behaviour Focused Strategy and Job Performance among health care employees.	98
<b>Figure 8</b>	Mediating role of Work Engagement in relation between Natural Reward Strategy and Job Performance among health care employees	100
<b>Figure 9</b>	Mediating role of Work Engagement in relation between Cognitive Thought Pattern and Job Performance among health care employees.	102

## **List of Appendices**

<b>Appendix A</b>	Permission letter
<b>Appendix-B</b>	Consent form/demographic sheet
<b>Appendix C</b>	Revised Self-Leadership Questionnaire (RLSQ)
<b>Appendix D</b>	Utrecht Work Engagement Scale (UWES)
<b>Appendix E</b>	Job Performance Scale
<b>Appendix F</b>	Job Performance (Supervisor -Rating Scale)

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## **Introduction**

Past studies have demonstrated that exceptional leadership fostered through self-leadership. Specifically, leadership encompasses the individual responsible for decision-making (Katewa, 2016). Moreover, extensively posited, it has been found that the self-leadership method a leader employs, is a crucial predictor of success or failure, as managing oneself represents a challenging managerial feat (Hybels, 2016). Thus, leaders' ability in effectively governing themselves is indicative of their management capabilities, given that their adopted leadership style speaks volumes about their individual leadership traits. Significantly, research has evinced that poor leadership exhibited by top management teams has resulted in adverse organizational performance, as leaders in these organizations appear to lack a head start individually, which can transfer to the management of the organization (Neck & Manz, 2010). The extant literature on leadership underscores that individual-level leadership attributes are essential for successful organizations, where self-leadership is identified as a crucial enabler of effective organizational leadership (Alnakhli, Singh, Agnihotri, & Itani, 2020). However, contemporary leaders appear to confront a plethora of challenges emanating from the inadequate convention of intentionally influencing their actions and thoughts towards achieving desired outcomes. Additionally, stress and burnout experienced in the workplace are predominantly attributable to employees' lack of self-leadership, as posited by Backlander, Rosengren, and Kaulio (2018), respectively.

Organizations commonly utilize diverse control systems to shape their work environment by influencing their employees through means such as work standards, appraisals, and reward systems, among others. These types of control systems are regarded as external. However, an alternative perspective is the self-control system, which considers each individual to possess an internal self-control system (Manz, 1979). At its most fundamental

level, organizational control systems provide performance standards and evaluation mechanisms (Lawler & Rhode, 1976). Likewise, People establish their own personal standards, evaluate themselves, and offer incentives and punishments to regulate their everyday behaviors (Manz & Sims, 1980).

The current body of research recognizes that external cues, such as the interpretations of observable physical behaviors according to social learning theory perspectives (Manz & Sims, 1980; Feldman, 1981), have a role in cognitive processes. Nevertheless, it falls short in appropriately acknowledging the self-governing system as a central area of emphasis for enhancing understanding and execution of organizational management, rather than merely a facilitator. The aim is to address the lack of research and generalizability in Pakistan by examining the impact of self-leadership strategies on performance and work engagement among healthcare employees, hence addressing the existing vacuum in knowledge. Additionally, the study will also analyze the role of work engagement as a mediator.

### **Rationale of the study**

The recap of the relevant literature indicates substantial advancements in elucidating the notion of self-leadership. An extensive body of empirical research has established connections between the fundamental strategies of the subject and many antecedents, such as conscientiousness (Stewart et al., 2019). Additionally, these strategies have been linked to work-related consequences like job performance, job satisfaction and self-efficacy (Manz, 2015; Stewart et al., 2011). Nevertheless, despite these progressions, there are still deficiencies in the current body of knowledge. Stewart et al. (2011) conducted a thorough investigation across many levels and verified the influence on performance and attitudinal results at the individual level. Moreover, it is crucial to acknowledge that the previous study did not utilize systematic search procedures to uncover all existing studies on self-leadership (Stewart et al., 2019), in addition to the limitations already noted. Hence, there is a potential

for the reviewed papers to be incomplete in capturing the entirety of the research body (Harari, Parola, Hartwell, & Riegelman, 2020).

Despite the consensus on self-leadership, contemporary leaders face numerous challenges due to their insufficient practice of intentionally influencing their actions and thoughts towards their desired goals. Consequently, it is crucial to foster a culture of self-leadership that empowers individuals to identify their personal assets and shortcomings before assuming leadership positions.

The literature on self-leadership has proposed several anticipated dependent variables that are supposedly linked with the implementation of self-leadership strategies. They encompass dedication, autonomy, creativity/innovation, efficacy, positive emotional state, job satisfaction, self-confidence and psychological empowerment. These consequences can potentially act as the procedures that affect the performance of individuals, groups, and organizations. But the direct link between self-leadership and performance is not visible from these studies. Self-leadership has predominantly emerged within the cultural context of the United States of America. Therefore, thoroughly reviewing the applicability of self-leadership in a diverse range of international contexts is essential. In fact, ongoing efforts are already underway to achieve this objective. For example, Georgianna (2005) recently documented notable differences between Chinese and American students in the implementation of self-leadership strategies (Neck, 2006).

Thus far, there has been a dearth of research conducted in this particular realm within the Pakistani context. Consequently, it is increasingly essential for occupational health services and health insurers to focus their efforts on fostering the active participation and involvement of healthy employees. Therefore, it becomes crucial to acquire a greater depth of scientific and empirical knowledge in order to ascertain whether employee engagement genuinely contributes to their performance. Only then can one truly perceive the preservation of



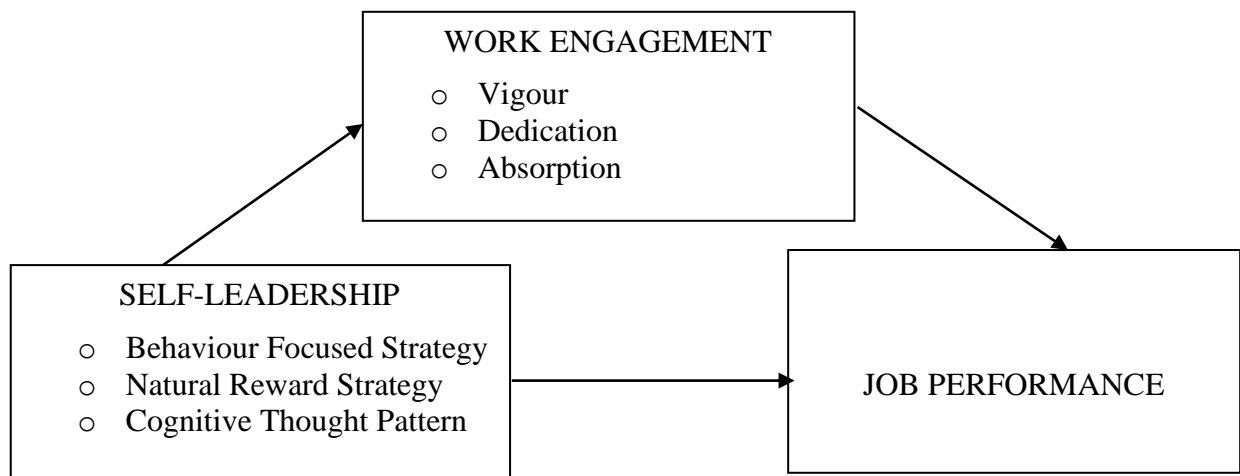
workers' health and well-being as a strategic investment as opposed to an enduring cost, particularly within the confines of Pakistani culture.

### **Problem formulation**

The public healthcare sector in many nations often faces scrutiny or assessment from the public, particularly in terms of its performance or delivery of services. Pakistan is no exception; numerous hurdles have heavily laden the public sector, ranging from limited access to basic healthcare services to inconsistencies in policies, insufficient funding, a lack of infrastructure, brain drain, conflicts among healthcare workers competing for dominance, and consistent violations of collective bargaining agreements. These issues have prompted calls for a comprehensive approach (Oyewunmi and Oyewunmi, 2014). Leaders in this sector are responsible for ensuring employee performance despite the challenges. Thus, this study specifically examines the relationship between self-leadership, performance and work engagement, specifically among healthcare employees in the Pakistani context.

The healthcare sector in Pakistan presents exclusive examples of disengagement of employees due to ongoing demands, stringent laws and regulations, inadequate provision of facilities, low salaries, and political interference. Many modern organizations employ a highly engaged workforce that feels a sense of alignment and commitment to their job, as their primary concern (Neininger, Lehmann & Henschel, 2010). Organizations are shifting from the conventional hierarchical leadership structure to adopt a new style of leadership known, i.e self-leadership. This approach enables people to assume more accountability for their actions which are work related (Pearce & Manz, 2005). In view of the researcher, there is a scarcity of study that has examined the collective and synchronous influence of self-leadership on job performance and work engagement in the healthcare industry in Pakistan.

## Conceptual Framework



**Figure 1.** Schematic representation of the impact of self-leadership strategies on work engagement and job performance.

The provided diagram illustrates the correlation among the factors of self-leadership, work engagement, and job performance and illustrates the effect of self-leadership on both job performance and work engagement. The approach focuses on the work engagement variable, which serves as a mediator between job performance and self-leadership.

## **Significance of the study**

This research offers a novel approach to understanding self-leadership among healthcare workers within the cultural framework of Pakistan. Additionally, it offers insight into the significance of self-leadership tactics in impacting both job performance and work engagement. The present study specifically benefits the following individuals or groups.

The research may emanate cognizance among administrators on recognizing self-leadership as essential matter for professional development and management of office environments and the need to improve the professionals' output in Pakistan.

Through this research, public sector organizations may arrange for training programs regarding development of self-leadership strategies in dealing with their leadership issues.

The outcome of this study could offer significant insights for advocates seeking to advance their campaign in raising awareness about the process of discovering and cultivating self-leadership methods among both employees and employers.

This research might persuade managers to consider arranging training programs that may help them deal with their subordinates and other employees effectively in the workplace.

Students could directly benefit from this research since its conclusions may energize them to account for the significance of developing self-leadership strategies that may help them become better administrators and managers once they enter their occupational life.

This study covers information involving self-leadership strategies among health care employees in the context of Pakistan, the culture of which is inhibited and submissive, not encouraging self-leadership strategies as such. Applying pertinent theories enhances the research's significance and yields intriguing discoveries. Hence, the findings of this study can be applied in future conversations regarding the significance of self-leadership and job engagement variables that might enhance leadership practices within businesses.

The study also furnishes a foundation for managers and administrators for the development of training programs for themselves as well as for other employees to enhance the outcomes of their organizations.

### **Delimitations**

The study has been restricted to a sample size of 290 health care personnel, consisting of 107 men and 183 women. These individuals were recruited through various channels such as institutes, personal visits, facilitation and google forms via WhatsApp, in order to complete the questionnaire. The chosen participants were selected from various hospitals, encompassing both public and private institutions situated in Rawalpindi and Islamabad, in order to mitigate any potential bias and obtain impartial responses. The participants were restricted to those between 18 and 65 years old, encompassing a broad spectrum of employees ranging from newly hired individuals to those with extensive experience. The data was collected following official authorization from the relevant authorities and obtaining informed consent from the actual research participants.

## Chapter 2

### Literature Review

#### Self-leadership

Self-leadership draws from several literatures and is influenced by various sources. Stewart et al. (2011) discussed that it has implications for different layers of analysis. Essentially, it is based on the idea of triadic reciprocity. Triadic reciprocity asserts that cognitions, behaviour and the exterior environment exert a mutual effect on one another. Both the external environment and internal mechanisms influence the behaviour, and conversely, the external environment is also influenced by behavior. In addition, social cognitive theory discerns and combines self-control, strongly related to self-management. According to Mahoney and Thoresen (1974, p. 12), the traditional definition of self-control from early psychology literature is as follows: "Self-control is exhibited when an individual engages in behavior, without any immediate external limitations, that was less likely to occur compared to other possible behaviors."

The initial studies on self-management in the workplace were primarily linked to theories of social learning and behavioral modification, as evidenced by the works of Bandura (1986), Luthans and Kreitner (1985), and Manz and Sims (1980). This study focused specifically on the outcomes and causes of behavior in self-regulating contexts (Uhl-Bien & Graen 1998). The initial research mostly concentrated on the behavioral and cognitive techniques of self-control (Hackman 1986, Manz, 1986). Sims and Manz (1980) developed the idea of self-leadership as a further development of self-administration philosophy, as outlined by Manz (1986). Self-influence is the act of exerting control over oneself (Manz and Neck, 2010). Self-leadership originates from the theory of self-management (Manz & Sims, 1980), which predominantly emphasizes behavioral techniques. Nevertheless, Manz (1986, 1991) subsequently contended that behavioral self-management offered an inadequate

comprehension of the comprehensive scope and capacity of employee self-influence within the work environment. Self-management is the act of exerting control over oneself in order to satisfy certain criteria and goals set by external sources. For instance, in situations where an employee must comply with stringent restrictions for a certain job assignment, they do not independently and outside select and establish the methods. However, individuals have the ability to control and direct their own behavior by employing cognitive and behavioral self-influencing tactics.

Self-influence processes can be most effectively comprehended as a continuum, where one extreme of the continuum signifies behavior that is predominantly impacted by external causes. Within the intermediate spectrum, self-management entails a certain degree of personal regulation, however the choice of tactics and assessment of advancement are guided by externally defined benchmarks. Self-leadership's greater degree of control is evident, when individuals not only use self-influencing tactics, but also evaluate the suitability of current norms and form their personal standards. Hence, the degree to which control emanates from other sources or individuals themselves is a pivotal aspect to contemplate while analyzing self-influence mechanisms in the workplace. As individuals move along the self-management continuum towards self-leadership, they acquire greater control over their selection of tasks, their performance, and the motivations driving their behaviors (Stewart et al., 2011). Moreover, while individuals' progress towards self-leadership; their conduct becomes less dependent on external incentives. Self-leadership is the pinnacle of inner control within businesses (Manz, 2015).

Manz proposed the theory of self-leadership as an expanded and comprehensive process that includes a greater level of self-control and a wider range of self-control states and methods (Manz 1986). Manz (1991) clarified the differences between self-management and self-leadership by asking three essential questions: "What?" The questions "Why?" as well as

"How?" According to Manz (1991), self-management's self-influence processes and techniques largely focus on how activities are done to meet externally specified benchmarks and objectives. This approach heavily relies on extrinsic motivation and primarily emphasizes behavior.

### **Self-leadership perspectives/theories**

The literature on self-leadership has developed many perspectives and viewpoints. Sims and Manz in 1980 initiated self-leadership theory built upon the concept of self-management. They highlighted the significance of an individual's ability to steer themselves towards future goals, as emphasized by Manz in 1986 and Neck and Houghton in 2006. Self-leadership expands on the idea of self-management, focusing on behavioral reinforcement, including aspects of constructive thinking and inner motivation for improving self-direction and individuals' self-regulation (Neck & Houghton, 2006).

### ***Self-regulation process***

Powers (1973), Carver's theory and research on self-leadership, along with Scheier's work in 1981 and 1998, have put forth a comprehensive explanation of how behavior unfolds in the realm of self-regulation. From this standpoint, the process of self-regulation bears resemblance to the functioning of a thermostat. Much like a thermostat detects variations in temperature according to a specific standard and prompts appropriate action to minimize the difference, behavioral self-regulation (as expounded by Carver in 1979 and Carver and Scheier in 1981 and 1998) involves a sensor that monitors achievement in the environment. This sensor generates a signal which is then compared to a predetermined standard or desired state. In the presence of any discrepancy or error, a change in behavior is assisted through an adjustment of effort.

Moreover, in 1998 Carver and Scheier propose the theory of self-regulation as a hierarchical structure of the self-regulatory system, distinguished by subordinate and superior

feedback loops or goals. The hierarchy of objectives encompasses various tiers, commencing with overarching conceptualizations such as a worldwide perception of the idealized self as espoused by Burke, 1991 & Klein, 1987. It subsequently advances to comprehensive principles of one's preferred identity, and subsequently narrows down to more precise behavioral programs that guide adherence to higher-level principles. Finally, it culminates in precise sequences of behaviors that facilitate the accomplishment of program objectives (Carver & Scheier, 1998).

Self-regulation theory states that individuals with optimistic beliefs about achieving their goals are more inclined to continue or increase their efforts when encountering obstacles or setbacks in their goal pursuit. Conversely, those who possess low expectancies for goal attainment are motivated to either search for alternate goals or disengage totally.

In addition, the theory differentiates between a promotion self-regulatory focus and a prevention self-regulatory focus. The former is distinguished by its emphasis on attaining favorable results, whereas the latter functions by taking into account safety, responsibility, and obligations, governing the presence or absence of adverse consequences.

### ***Social Learning Theory/Social Cognitive Theory***

According to Bandura (1977), the basis of self-leadership is deduced from the principles of Social Learning and Social Cognitive Theory. According to him, the former theory describes how individuals impact their own thinking, drive, and actions, while Social Cognitive Theory clarifies the ongoing relation between individuals and their surroundings, and how the results of behavior act as information and motivation.

The notion of self-leadership is interpreted from the theoretical principles of Social Cognitive Theory (Bandura, 1986), which functions within the framework of Bandura's (1991) Social Cognitive Theory. This theory posits that human behavior can be elucidated through a triadic reciprocal relationship encompassing internal influences, external effects,



and behavior. According to Social Cognitive Theory, humans engage in continuous interaction with their environment, and the consequences of their activities serve as sources of motivation and information. The reciprocal deterministic perspective, when combined with the self-regulation theory, offers fundamental conceptual frameworks that support self-leadership tactics. These frameworks elucidate the cognitive, motivational, and behavioral methods that self-leaders employ in their thinking and actions (Yun et al., 2006).

Bandura's work in Social Cognitive Theory has significantly influenced the development of self-leadership. This theory proposes that; humans are not driven solely by internal factors or passively shaped by their environment. Instead, the construction of individual motives and behaviors is influenced by a dynamic interplay between internal cognitions and a network of situational cues (Bandura, 1991). The process of self-monitoring involves seeing and controlling both internal and external inputs. This supervisory activity is essential for directing oneself and is the foundation for cognitive methods in self-leadership (Bandura, 2011). Self-leadership involves individuals setting their own criteria for performance. The study titled "The impact of psychological capital, self-leadership, and job embeddedness on work engagement among employees in the banking sector" was conducted in 2018 by Harunavamwe.

The social cognitive theory, akin to the self-regulation theory, posits that the fundamental framework of the self-regulatory system encompasses mechanisms that encompass self-judgments, self-monitoring and self-reactions (Houghton & Neck, 2002). The social cognitive theory operates under the core premise that individuals possess the capacity to exert control over their behaviors.

### ***Self-leadership and Self-Control theory***

Manz and Neck (2004) developed the idea of self-control based on the research conducted by Kerr and Jermier (1978). Self-control involves setting performance benchmarks

to govern an individual's conduct, ensuring adherence to a specific standard as stated by Stewart, Courtright & Manz, 2011. The theory of self-control comprises an individual's capacity to regulate their own behavior or performance, facilitating the cultivation of self-leadership abilities such as goal setting, self-monitoring, self-reward and problem solving (Brown, 2003). According to Houghton and Manz (2006), the therapeutic literature has provided particular self-control interventions to address self-destructive behaviors. The mechanisms encompassed in this approach consist of self-monitoring, self-targeting, cue-based techniques, self-reward, self-punishment, and practice. The organizational setting has adopted these methodologies, which now serve as the foundation for behavior-focused initiatives in the area of self-leadership (Stewart et al., 2011).

### ***Self-leadership and intrinsic motivation theory***

In 1985, Deci and Ryan proposed the theory of intrinsic motivation. According to this hypothesis, individuals have the ability to access internal motivational factors when participating in activities that genuinely bring them satisfaction. Manz and Houghton (2006) observed that intrinsic motivation is linked to a rise in perceptions of competence, self-determination, and purpose. According to this viewpoint, enjoyment comes from being able to behave with purpose and feeling competent and self-determined. These factors serve as a foundation for natural reward strategies, as emphasized by Lovelace et al. in 2007. Kawondera (2007) asserts that self-leadership fosters outstanding and inventive individual performance by means of internal motivation. Moreover, intrinsic motivation plays a crucial role in goal formation, since people are highly driven when they exert effort to attain personally significant goals that are appropriately challenging, as proposed by Bryant and Kazan in 2013.

### *Self-leadership and Self-determination theory*

The theory developed by Deci and Ryan in 1985 sets self-leadership as a normative theory, apart from other psychology theories. Specifically, a key aspect of self-leadership involves emphasizing innate incentives. Self-leadership involves individuals consciously directing their attention towards the enjoyable and intrinsically rewarding components of an activity, while intentionally dismissing any concentration on the unpleasant and fundamentally uninspiring elements of the same task. In essence, individuals should emphasize their engagement in activities that offer them joy.

According to the self-determination theory given by Deci and Ryan, in 2000 individuals possess an inherent need to experience feelings of competence, which can be achieved through basic mechanisms such as intrinsic motivation (Consequently, people strive to feel capable and maintain a sense of control over certain aspects of their lives. People who employ natural reward strategies to attain their goals, serves as a cornerstone by concentrating on deriving satisfaction from the inherent facets of their pursuits. By being motivated by internal processes rather than external incentives, individuals experience a heightened sense of accomplishment and control, thereby fostering feelings of competence.

In summary, the self-determination theory provides valuable insights into the importance of natural rewards within the self-leadership framework. By focusing on enjoyable aspects of tasks and harnessing intrinsic motivation, individuals can cultivate a sense of competence and control, ultimately contributing to their overall well-being and success (Knotts K. G., 2018).

Bandura's (1991) social cognitive theory and Carver and Scheier's (2004) self-regulation theory provide useful insights for enhancing individuals' ability to regulate themselves (Manz, 1986). According to Houghton and Neck (2006), self-leadership entails

the deliberate utilization of psychological tactics, such as defining goals and establishing performance expectations, to improve the process of self-regulation.

To achieve this, a method is employed which involves the establishment of thorough standards and motivators that shape goals and behaviors (Neck & Manz, 2010). Self-regulation seeks to mitigate disparities that arise from individual or organizational goals, as articulated by Bandura (1991). Conversely, self-leadership entails the process of minimizing, managing, and generating these disparities, as elucidated by Neck and Houghton (2006).

Self-leadership theory is classified as a normative theory that offers guidance for successful self-regulation by utilizing the knowledge and discoveries from other theories (Neck & Houghton, 2006). The self-leadership hypothesis posits that employing self-leadership tactics improves and intrinsic motivation (Deci & Ryan, 1985) and perception of individuals' self-efficacy (Bandura, 1991) thereby exerting a beneficial influence on their behavior (Manz, 1986). Self-leadership emerges as a unique leadership method by empowering employees with direct control over their own conduct. Self-leadership involves individuals taking charge of their own direction, monitoring their own progress, motivating themselves, and providing their own rewards for achieving success, rather than depending on external leaders for guidance.

Numerous studies have demonstrated that exceptional leadership is developed through self-leadership. In other words, leadership enables the individual responsible for decision-making (Katewa, 2016). Therefore, leaders' ability to effectively govern themselves reflects their management capabilities, as their chosen leadership style speaks volumes about their leadership qualities.

### ***A comprehensive self-leadership model***

Manz and Neck (2003) developed an all-encompassing framework for Self-Leadership. The paradigm proposes that self-leadership comprises four primary elements:

behavior-focused tactics, methods employing natural rewards, strategies promoting constructive cognitive patterns, and team self-leadership. The model encompasses all fundamental components of self-leadership as stated by Neck and Manz, 2007. The graphic in Figure 1.2 illustrates a schematic illustration of the comprehensive self-leadership concept.

<b>Behaviour Focused Strategies</b>		<b>Constructive Thought Pattern Strategies</b>
<i>World-Altering Strategies;</i>		beliefs
reminders & attention focusers		Thought patterns
removing negative cues		Imagined experience
increasing positive cues		Self-talk
<i>self-imposed strategies</i>		
Self-observation		
Self-goal setting		
Self-goal setting	<b>Mind and Body</b>	<b>Team self-leadership (Team think)</b>
Self-reward	Individual behaviours	self-leadership of individual team members
Self-punishment	Individual thoughts	Team behaviours
<b>Natural reward strategies</b>		Self-leadership of collective teams
Detect your natural rewards		Team behaviours
Redevelop natural rewards into strategies		Self-leadership of collective teams
Concentrate on the natural rewards		Team thoughts
Personal and team effectiveness		

**Figure 2.** *A Comprehensive Model of Self-Leadership (Manz & Neck, 2003, p. 112).*

The paradigm proposed by Neck and Manz (2013) has four fundamental elements of self-leadership: behavior-focused tactics, intrinsic reward tactics, positive cognitive patterns, and collective self-leadership. Behaviour-focused tactics entail employing techniques to alter

one's immediate physical surroundings and exhibit self-control. Strategies involving natural rewards exploit the indirect advantages of our activities. Constructive thought patterns encompass an individual's ideas, imagined experiences, and self-talk, which collectively impact their cognitive processes and contribute to the formation of distinct psychological realms. Team self-leadership encompasses the strategies and methods employed to guide oneself effectively within a team environment. The four aspects interact and complement each other to provide a detailed framework (Neck & Manz, 2004).

As to the paradigm, effectively utilizing these four essential components of self-leadership results in the synchronization of the body and mind. This leads to motivated, intelligent and purposeful thought and conduct as suggested by Manz and Neck, 2007. The alignment refers to the individual's self-directed focus on three projects aimed at personal growth in certain areas of overall well-being, as proposed by Sydänmaanlakka's (2006) Self Leadership model. The dedication to these tasks results in individual proficiency and accomplished outcomes, subsequently bolstering self-confidence and fostering additional personal effectiveness. This constructive loop engenders an ascending spiral of achievement (Neck & Manz, 2013).

In conclusion, this model provides a comprehensive and systematic approach to self-leadership. It recognizes the complexity of the self-leadership process, with multiple variables and various avenues for improvement. By applying self-leadership strategies, individuals can ultimately achieve a transformed, more effective, and motivated lifestyle and work experience.

### **Self-leadership strategies**

The self-leadership tactics are classified into three distinct categories: strategies that focus on behavior, strategies that promote constructive cognitive patterns, and strategies that utilize natural rewards.

### ***Behaviour focused self-leadership strategies***

These strategies are to effectively manage and enhance the behaviors required for successful task completion. These strategies encompass various techniques such as self-cueing, goal setting, self-observation and self-rewards. Self-observation allows individuals to gather valuable information about their own functioning, which is crucial for bringing about actual behavioral changes. The work of Neck and Houghton (2006) and Mahoney and Arnkoff (1978) support this notion. Goal setting involves the establishment of evident and challenging objectives for oneself, as proposed by Latham and Locke (1991), with the aim of stimulating action. Self-cueing entails the creation of tangible reminders, such as images, to-do lists, or motivational posters, to help maintain focus on significant matters and goals. Houghton and Neck (2002) have explored this concept. When intrinsic motivation is lacking, self-rewards, whether in the form of tangible incentives or simply acknowledging one's accomplishments, serve as potent motivators during the pursuit of goals. (Neck & Houghton, 2006). These behavior-focused self-leadership strategies rely on two key capabilities of self-control theory: self-regulation and self-reflection.

The primary focus of behavioral strategies lies in enhancing self-awareness with the aim of guiding individuals to manipulate their behavior towards necessary, yet potentially unpleasant activities (Manz & Neck, 1999). Neck and Houghton (2002) prepared the Revised Self-Leadership Questionnaire (RSLQ), a tool designed to assess various methods of personal behavior. This instrument will be further discussed in the section dedicated to the measurement of self-leadership. However, subsequent overview outlines six behavioral strategies pinpointed by Manz and Neck (2004) and quantified through the RSLQ: self-reward, self-goal setting, rehearsal, self-cueing and self-punishment.

**Self-goal setting-** The concept of self-goal setting, as outlined by Locke, Shaw, Saari, and Latham (1981), entails the creation of precise and ambitious objectives that are

realistically achievable. According to Locke et al. (1981), goals have a significant impact on individual behavior by commanding attention, mobilizing effort, enhancing persistence, and facilitating the adoption of effective strategies. Locke and Latham (1990) established that establishing challenging and unambiguous objectives results in enhanced performance. Self-goal setting procedures involve individuals assessing their personal and professional goals, both in the current and future contexts (Manz, 1992a, 1992b). Sims and Manz (1996) corroborated that personnel who establish ambitious, unambiguous, and attainable objectives attain superior performance results in contrast to those who do not.

**Self-reward strategy.** This strategy proposed by Manz and Neck (1999), is a behavioral technique used to incentivize improved performance and goal attainment. The reward can take the form of a tangible reward, such as a break or after finishing a challenging task. It can also be intangible, such as self-praise or visualization of a positive memory (Houghton & Neck, 2002).

**Self-punishment.** It involves self-evaluation and self-criticism in response to undesirable outcomes or failures in achieving a goal. This strategy is the counterpart of self-reward. For self-punishment to be productive, it needs to be productively crafted and involve thoughtful analysis of failures and actions that need correction (Neck & Houghton, 2006). It is pertinent to mention that the application of self-punishment should be done carefully and moderately in order to be effective. This strategy involves a touch of blame and self-shame, hence employing it unnecessarily can be detrimental to its effectiveness (Manz & Sims, 2001).

**Self-observation.** Self-observation refers to the deliberate act of increasing one's self-awareness to promptly gather information about one's own actions and performance. The purpose of self-observation is to rectify undesirable and ineffective actions. By engaging in this process, individuals are able to gain more accurate and precise knowledge about their current level of performance, which enables them to effectively establish new goals and



modify their behavior accordingly. Those who exhibit self-leadership are individuals who actively seek to find meaning in their behaviors, with the intention of determining when to intentionally employ a specific behavior. An elevated level of self-observation can enhance self-awareness and promote a greater focus on oneself. Numerous studies have demonstrated that a higher degree of self-focus can encourage individuals to concentrate more on their tasks, resulting in improved task performance. If the observed behaviors during self-observation prompt individuals to recognize behaviors needing to be changed, improved, or eliminated in order to successfully achieve their objectives, then self-observation can lead to positive behavioral changes.

**Self-cueing.** This involves reminders or cues about preferred actions, has the potential to enhance self-regulation. These cues can take the form of visual aids, such as calendars and signs, as well as social links that foster positive and constructive behaviors. Additionally, environmental cues, such as physical surroundings that are intended to promote positive behavior, can also be used as reminders. It is worth noting that meaningful cues primarily highlight the behavior of others around the person. According to Bandura, "of the many cues that influence behavior, none is more common than the actions of others at any point in time" (1986, p. 206).

**Rehearsal.** In a manner akin to engaging in musical performance or participating in any competitive athletic endeavor, the practice of self-leadership stands as the most validated means by which individual performance can be improved. Preparatory behavioral rehearsals prior to actual execution can effectively facilitate evaluation, augmentation, and constructive modifications, thereby resulting in enhanced individual efficacy and a reduction in costly errors (Manz, 1992a; Manz & Sims, 1980).

In essence, the objective of employing behavioral strategies lies in the cultivation of desirable actions that yield favorable outcomes, while simultaneously exerting control over undesired actions that yield unfavorable consequences. While self-management places

considerable on extrinsic rewards, such as praise and recognition for achieving desired outcomes, self-leadership transcends this perspective by underscoring the intrinsic rewards derived from the act of performing an action (Manz, 1986). In addition, self-leadership tactics involve a greater self-control and impact than self-management (Manz, 1986). Self-leadership conjoins behavior-focused tactics promoted in self-management, self-control, and cognitive theories. These theories are built on the idea of internal motivation and positive, constructive thinking (Manz, 1986). In addition, self-leadership centers on the suitability and justification of an individual's values, needs, and expectations, acknowledging the inherent inconsistency within these requirements and expectations (Manz, 1986 as cited in Shumais, 2013).

### ***Constructive thought pattern strategies***

These tactics aim to adopt an optimistic and problem-solving perspective, while avoiding excessive focus on unchangeable and negative features (Neck & Houghton, 2006). These tactics involve estimating beliefs and assumptions, participating in positive self-talk, and imagining excellent performance. The effectiveness of constructive-thought self-leadership tactics relies on two specific talents outlined in Social Cognitive Theory (SCT): symbolizing and vicarious learning. The (SCT) emphasizes the significance of recognizing one's own efficacy by utilizing imagination and choosing specific thought patterns (Bandura, 2001). The ability to symbolize, which is essential for converting visual impressions into cognitive models guiding actions, allows humans to evaluate alternative solutions symbolically before accepting or rejecting them through cognitive processes (Bandura, 1986). The ability to learn vicariously, also involved in self-perception, enables individuals to gather principles for initiating and controlling behavior and thinking patterns (Bandura, 1977), which are essential for the self-guidance inherent in constructive thought strategies. The process of identifying alternative beliefs to challenge dysfunctional beliefs entails carefully reviewing current thought patterns and replacing irrational and dysfunctional beliefs with more positive and

constructive thoughts. This, in turn, helps foster a sense of self control and self-motivation. (Manz, Campbell, & Mathi, -Hans, 1988 as cited in Harari, 2021).

**Evaluating beliefs and assumptions.** Dysfunctional beliefs and assumptions are detrimental to positive performance; thus, individuals should engage in the process of assessing and substituting ineffective beliefs with logical alternatives. This enables the establishment of positive thought norms (Manz & Neck, 2004). An instance of a belief that can be evaluated and modified is self-determination, which refers to an individuals' faith in their ability to exert control over job-related behaviors (Deci & Ryan, 1985).

**Mental Imagery.** Mental imagery, as defined by Finke (1989), "involves the mental recreation or invention of an experience that bears some resemblance to the actual perception of an object or event. Such imagery can occur with or without direct sensory stimulation" (p. 2). According to Manz (1986), engaging in mental imagery allows individuals to conceptually visualize the completion of a task while also evaluating assumptions, exploring probabilities, and considering the nature of the task. It has been observed that individuals who imagine positive outcomes before initiating an activity are more likely to achieve successful outcomes (Manz & Neck, 2004).

**Self-talk.** Self-talk pertains to the internal discourse that individuals engage in with themselves, whether it is explicit or implicit. Manz and Neck (2004) conducted research that showed self-talk to have a beneficial effect on performance. Self-leadership focuses on using self-talk techniques to identify and replace negative and harmful self-talk with positive and beneficial self-talk. The cited studies by Neck, Manz, & Godwin (1999) and Shumais (2013) demonstrate that individual thought patterns can be influenced, leading to an ultimate impact on performance.

### *Natural reward strategies*

These are a set of techniques aimed at increasing the intrinsic motivation and implicit joy for a job task. These strategies can be both behavioural and cognitive in nature. Behaviour strategies incorporate pleasant and enjoyable features into the activity, making the job more enjoyable. Cognitive strategies, on the contrary, involve mentally attending to the pleasant aspects of a task, rather than the negative ones. The ultimate goal of these strategies is to make the activity itself intrinsically rewarding.

There are two primary methodologies for natural rewards. The initial strategy involves integrating additional enjoyable features into a specific work to inherently enhance its satisfaction. The second strategy entails focusing one's attention on the inherently satisfying facets of a work while deliberately shifting attention away from its unpleasant elements, with the aim of influencing perceptions. These tactics are anticipated to enhance sentiments of self-determination and competence, the two fundamental components of inner motivation.

To sum up, natural reward techniques are considered to induce feelings of autonomy and competence, hence stimulating performance-enhancing actions related to tasks. These tactics have demonstrated efficacy in enhancing intrinsic motivation and job satisfaction. As per the Social Cognitive Theory (SCT), individuals have the ability to build innate strategies for self-leadership by utilizing their capacity for planning. Forethought aptitude pertains to individuals' capacity to strategically anticipate and prepare forthcoming actions that will result in favorable and enjoyable consequences (Bandura, 1986).

Social Cognitive Theory (SCT) posits that foresight, which involves thinking about and planning future actions, relies on competence and self-control. These qualities empower individuals to behave independently and based on their own free will, make decisions. This idea is supported by research conducted by Bandura (2001) and Gagne and Deci (2005). The

presence of these aspects is essential for the formulation of effective natural reward methods, as individuals need to possess the ability to recognize inherently motivating activities and the discipline to integrate these activities into their job. By directing their attention towards the favorable features of their work, such as inherent incentives, individuals are prone to encounter heightened levels of job contentment (Neck & Manz, 1996 as cited in Harari et al, 2021).

Implementing behavior-focused tactics, just like self-reflection, goal-setting, and practical self-rewards, can be highly effective in motivating individuals to achieve their desired performance. In addition, employing tactics that promote positive thought patterns and natural incentives might be advantageous in making boring, tough, or difficult job duties more inherently satisfying or, at the very least, more significant (Neck & Houghton, 2006).

Self-leadership strategies have been found to exhibit intra-individual variability over short time periods. Breevaart, Bakker, and Demerouti (2014) conducted a study involving 72 maternity nurses who maintained an online diary for five workdays. The researchers discovered that employees displayed greater work engagement on days when they engaged in self-monitoring, set personal goals, and utilized reminders to aid their focus on desired achievements. It is widely acknowledged that individuals utilize self-leadership strategies to improve their self-managerial soundness. For example, when adhering to a diet, strategies such as self-rewarding for successful adherence and self-affirmation ("I can do this") may facilitate adherence to the diet. However, encountering a challenging day or attending a celebratory event for a loved one may result in temporary self-regulatory failure. Similarly, it is plausible that employees may vary their usage of self-leadership strategies, depending on factors such as high workload or conflicts with colleagues.

Based on the theoretical framework of Social Cognitive Theory (SCT), which suggests that individuals have influence over personal, contextual, and behavioral aspects, it

is expected that different self-leadership tactics will have distinct effects on specific outcome variables. Behavioral techniques are anticipated to have a greater impact on controlling behavioral results, cognitive thought strategies on shaping cognitive beliefs, and natural reward techniques on influencing emotional or attitudinal outcomes. For understanding the systems that explain the connection between self-leadership and different criteria, it is essential to determine the specific methods that are causing this relationship. Furthermore, it is crucial to ascertain whether all three strategies are required to explain the influence of self-leadership on performance or if a more cautious approach can be suggested. This is because self-leadership serves as a normative model that dictates how individuals should behave (Neck & Houghton, 2006).

To summarize, self-leadership tactics function within the wider conceptual framework of self-regulation. Implementing targeted self-leadership techniques can enhance self-regulatory effectiveness by optimizing self-awareness, goal-setting procedures, goal significance and relevance, feedback mechanisms, and task-specific performance expectations. Self-leadership does not refer to a separate theoretical perspective on self-governance, but rather encompasses a set of systems aimed at enhancing the process of self-regulation.

### **Self-leadership and health care profession**

Working in the healthcare sector is widely recognized as being very valuable, as it is believed to produce feelings of fulfillment and happiness throughout one's career (De Cooman et al., & Toode et al., 2011). Nevertheless, healthcare workers worldwide often state that their work is arduous, unpleasant, and disappointing, culminating in elevated levels of premature departure and absenteeism from the labor market in this industry (Astryin-Behar et al., 2010; Hayes et al., 2012).

Referring to the job demand control model given by Karasek, 1979, it has been consistently supported that the limited well-being observed in healthcare workers is a result of the interaction between the raised workload and restricted job control in the healthcare business (e.g., Laschinger et al., 2001). Health personnel must demonstrate self-control and self-determination when confronted with demanding job requirements (Wagner et al., 2010). Essentially, it is hypothesized that individuals need skills in self-leadership.

Self-leadership is thought to play a significant influence in enhancing the performance and well-being of healthcare workers in demanding roles (Lovelace et al., 2007). A growing amount of evidence in the healthcare literature supports this concept (Kayral & Dugler, 2019; Kim & Kim, 2019). The theory of self-leadership suggests that creating a work environment that is both autonomous and supportive is useful for employees' self-leadership. This type of environment encourages employees to take responsibility for their work using cognitive and behavioral strategies to improve their performance and motivation (Stewart et al., 2019 as cited in Boog & Jong, 2020). The investigation adds to the current discussion in healthcare literature about the importance of healthcare workers having greater job autonomy to ensure their continued willingness and ability to stay employed in this specific field (e.g., Cicolini et al, 2014; Broetjeetal, 2020). The theory of person-environment fit (Kristof-Brown et al, 2005; Caplan, 1987) argues that healthcare workers do not all experience the same level of benefits from perceiving job autonomy. Furthermore, it is proposed that healthcare professionals who demonstrate self-leadership traits have the ability to exert control over their job autonomy. This connection is especially strong for persons who have a strong desire for job autonomy. Hence, the findings of this investigation will aid healthcare businesses, particularly those engaged in human resource management (HRM), in fostering a favorable work environment where individuals may effectively leverage their autonomy (Boog & Vuuren, 2022).

The Institute of Medicine proposed that increasing the diversity of the healthcare workforce could be an effective strategy for improving cultural competence and attracting a wider pool of trainees. Their proposition posited that providing medical students and trainees with advanced self-leadership abilities could amplify their ability to exercise influence inside medical schools and medical organizations. Sahi and other researchers have suggested methods to enhance self-leadership skills, including behavior-focused tactics, intrinsic rewards, and positive thinking. The session had a duration of 70 minutes and encompassed a concise presentation, a self-evaluation activity, interactive conversations in both small and large groups, as well as the analysis of real-life scenarios. The primary objectives of the workshop were to elucidate the significance of diversity in leadership within medical schools, delineate the notion of leadership, construct a precise definition of self-leadership, and evaluate one's personal self-leadership capabilities. The workshop was held in three medical institutions in the United States, with the objective of reaching a diverse group of medical students and residents. The program occurred from September to December in 2019. The pre- and post-workshop evaluations were meticulously scrutinized. The research indicated that a substantial majority of the learners (n=66) concurred that the workshop effectively accomplished its stated learning objectives, with a percentage above 95%. Furthermore, it provided strategies for enhancing one's self-leadership skills in order to exert greater influence inside their organizations. The learners highly praised the case scenarios, which appeared to effectively serve as a good instructional tool (Lucas & Kothri, 2020 as cited in Mokuwane, 2014).

The field of public health is currently experiencing swift and complex changes. These changes involve substantial changes in the prevalence of diseases and the excessive requirements of clinical care, which eclipse those of public health. Public health practitioners have long overlooked the need to incorporate leadership and management skills into public health training, similar to how Master of Business Administration (MBA) schools do. This



study is based on the author's leadership experiences and the information gained from an ongoing program of education and instruction that has been created since 2008 at the Melbourne School of Population and Global Health, located at the University of Melbourne in Australia. The main goal of this program is to develop abilities in public health leadership, focusing on self-leadership, self-awareness, and gaining knowledge and understanding of colleagues via reflection on past experiences and anticipation of future ones. The most crucial result is the development and execution of participants' personal strategies for improving and cultivating their leadership skills. Participants are encouraged to share their personal experiences regarding self-care and the cultivation of their physical and emotional well-being. They are urged to prioritize their own needs in order to be productive leaders, thereby necessitating the investment of time and effort in self-care. Furthermore, they are prompted to consider the various facets that constitute their overall lives, not solely their professional endeavors, and to incorporate these aspects into their leadership development plans (Moodie, 2016).

### **Performance**

According to Wirawan (2009), performance is the result generated by the functions or indications of a job or profession during a certain period of time. The assessment of performance then developed into the utilization of performance indicators. Performance indicators are used as the foundation for creating evaluation systems that measure an employee's performance. Job analysis is utilized to implement the establishment of dimensions and performance indicators (Herminingsih & Superdi, 2017). Mangkunagara (2007) defines work performance as the result of an employee's capacity to effectively carry out their given obligations with the required degree of quality and quantity. Rival (2009) suggests that employee performance in a corporation is exhibited by their tangible behaviors that are in line with their assigned tasks.

Gregory et al. (2010) qualified employee job performance as “a supervisor-rated assessment [of] whether or not a particular employee completes their assigned duties, meets formal performance requirements, and performs the tasks that are expected of him or her” (Wilson, 2014).

Job performance encompasses the activities that are aligned with the organizational objectives (Ferris, Lian, Brown, Pang, et al., 2010). For many decades, it has been widely acknowledged that employees are the invaluable assets of an organization. Job performance refers to the extent to which a company expects excellence and quantity from each employee. Performance serves as a crucial metric that is intertwined with the success and outcomes of the organization (Yahaya, Bon, Ismail, et al., 2011). It is contended that the success or failure of a firm hinges on the performance of its employees. Individuals who achieve a higher level of performance are deemed more valued than their counterparts, and their performance is recognized and rewarded. As a result, workers have the ability to influence others, including their immediate supervisors, by surpassing expected performance levels (Yun, Takeuchi, & Liu, 2007, as cited in Inderyas, Khattak, Raza, et al., 2015).

Job performance is persuaded by various factors, including the attainment of objectives and social drive. These factors affect either task performance or contextual performance, which are the two main components of job performance. Task performance pertains to the proficiency of personnel in a certain job position to execute actions that directly or indirectly support the technological foundation of the business, such as supplying essential goods or services (Borman & Motowidlo, 1993). This facet of job performance is intricately linked to role behaviors and the overarching mission or vision of the organization. Conversely, contextual performance serves as a supplement to task performance by encompassing actions supporting the psychological and social environment where task performance occurs (Organ, 1997). Organizational citizenship behaviors refer to voluntary actions not part of an individual's official job requirements and are not explicitly rewarded, but are often motivated

by prosocial objectives. These behaviors play a crucial role in contextual performance, as highlighted by Batson and Shaw (1991) and Grant and Mayer (2009). Both contextual performance and task performance contribute to the overall success of the organization, but they function in distinct domains of the work environment and rely on separate elements of an individual's self-system (Bentley, 2014).

Sabuhari, Sudiro, and Irawanto (2020) provide a definition of performance as "the set of outcomes that arise from a specific activity or job function within a designated time period". Based on this explanation, the term performance can be defined as "a record of results achieved over a specific period of time". Abdirahman (2018) argues that performance is not solely related to individual actions, but also encompasses the analysis and judgment process. Furthermore, employee performance encompasses the actions, outcomes, and behaviors of individuals in their pursuit of organizational objectives (Abdirahman, 2018). Pradhan and Jena (2017) also suggest that performance is a manifestation of an individual's efforts. Hence, performance reflects the measurable actions of individuals. Organizations strive for higher performance from their employees in order to meet organizational objectives and gain a competitive advantage. According to the business dictionary, performance refers to the perceived actions of an employee in relation to their job and how these actions are carried out. Additionally, employee performance imposes a direct impact on the victory of the company. Essentially, employee performance is measured by the outcomes and achievements that an employee attains in their work. When aiming for specific outcomes, employees develop strategies to achieve a desired level of performance. An individual's performance or organization is primarily influenced by the organizational design, practices, and policies in place (Dahkoul, 2018).

Thus, the job performance of an employee is demonstrated to be a pivotal factor for the organization. Inuwa (2016) refers to employee efficiency and performance as a substantial concern encompassing the entire organization, inclusive of employers and managers;

primarily due to the reason that exceptional employee performance plays a significant role in contributing to the organizational performance, manifesting as organizational growth and productivity. Moreover, Imhmed (2016) defines job performance as a result of an expatriate's dedicated effort and time dedicated to their work. Additionally, the success of the organization relies entirely on the level of job performance exhibited by the employees. Companies that possess highly capable employees provide a comparative advantage to the organization, thus, employees make a significant contribution to organizations through their performance (Rui, 2020).

Individual Work Performance (IWP) refers to activities that are directly linked to the goals and objectives of the business. It pertains to the specific acts and behaviors of employees, rather than the ultimate results they achieve. The concept centers on the task performance of employees (Koopmans et al., 2014).

The link between leadership approaches and organizational performance is of great importance due to several reasons. One primary reason is the dynamic and demanding nature of today's market, which is characterized by struggles based on novelty, competition focused on price/performance, declining revenues, and the innovative dismantling of modern competencies. Organizational performance refers to an organization's ability to achieve various objectives, including increased profits, improved product quality, greater market share, favorable financial results, and overall survival. This achievement is accomplished through the implementation of relevant strategies for action. Additionally, organizational performance serves as a measure of an enterprise's role within the industry, including its level of profitability, product quality and market share relative to other enterprises. Essentially, it reflects the efficiency of the enterprise's members in terms of revenue, profit, and the overall growth and development of the organization. Identifying and comprehending the impact of leadership on performance is crucial, as some scholars perceive leadership as a dynamic force that can enhance a firm's performance. P leadership is universally recognized as a powerful

source of management development and sustained competitive advantage, ultimately leading to improvements in organizational performance.

Job performance, a multidimensional construct as explained by Campbell et al., 1993, at its most fundamental level, can be categorized into two aspects: process (i.e., behavioral) and output (Campbell et al., 1993; Roe, 1999). The behavioral aspect pertains to the actions individuals engage in while at work (Campbell, 1990). Performance embraces specific behaviors, such as engaging customers in conversations related to sales, teaching undergraduate students, statistics, computer software programming, or arranging product parts. This view suggests that performance is limited to acts that can be measured and expressed in numerical terms (i.e., counted) (Campbell et al., 1993) and specifically emphasizes behaviour that is directed towards achieving goals. Conversely, the outcome element pertains to the consequences of an individual's actions. The aforementioned actions may result in the formation of contracts or the generation of sales figures, enhance students' understanding of statistical techniques, produce a software product, or determine the quantity of products manufactured. From an empirical standpoint, the behavioural and outcome components are intricately connected. Nevertheless, there is not a total convergence, as the result component is impacted by influences beyond the behavioural component. Moreover, it is crucial to distinguish performance from efficiency or productivity and from effectiveness (Campbell et al., 1993; Pritchard et al., 1992). Effectiveness pertains to the assessment of performance outcomes, such as the monetary worth of sales. Productivity, on the other hand, is the measure of how effectively a desired goal is achieved in relation to the cost incurred. Productivity can be quantified by calculating the ratio of hours worked (input) to the number of products assembled (output).

### ***Work Role Performance***

The assessment of employees' performance in the workplace is determined by work role approaches, which acknowledge that employees assume and fulfill various organizational

roles, such as being a member of the organization along with their role as a job holder (Gryphon et al., 2007). Work roles entail two distinct categories of behavior: competence, which pertains to the fundamental work-specific skills and abilities, and adaptivity and proactivity, which are not clearly specified in the job description but have the capacity to positively influence the organization (Gryphon et al., 2007). In their study, Gryphon et al. (2007) identified nine distinct aspects of work role performance. They achieved this by categorizing roles into three categories: person, team member, and organization member. Furthermore, they classified behaviors into three categories: proficiency, adaptivity, and proactivity. Given that the primary work responsibilities for team members are often those of a team member and an individual (Ricketta & Van Dick, 2005), we have selected these two positions as the central focus of the present study. Hence, we shall examine six facets of work role performance:

**Proficiency.** Proficiency, in terms of work role performance, explains the extent to which a person fulfils the expected or anticipated requirements of their employment. Task performance can be defined as the degree of competence which an employee utilizes to carry out their specific job responsibilities, sometimes referred to as individual task proficiency. Past studies have shown that a direct relationship exists between the ability of individuals to lead themselves in a team setting and how their superiors evaluate their performance in individual tasks. This discovery is congruent with prior studies that have demonstrated a favourable correlation between self-leadership and individual task performance in situations that are not inside a team setting (Prussia et al., 1998).

Within a team setting, personnel are expected to not only carry out their designated tasks, but also assume the obligations associated with being a team member assumed by Griffin et al., 2007. Although collaborative behaviors have traditionally been examined at the team level, with an emphasis on the collective activities of the team, there has been a recent surge

in interest in individual contributions to collaboration (Sonnentag & Volmer, 2009; Tasa et al., 2007). The effectiveness of a team depends greatly on the collaborative behavior connected to tasks, such as coordination, cooperation, and information exchange (LePine et al., 2008; Rousseau et al., 2006). These actions demonstrate the extent to which an employee fulfills their responsibilities as a part of a team, referred to as proficiency of team member. Bligh et al. (2006) argue that individual team members can improve team functioning by self-leadership, although there is not enough empirical evidence to confirm this assertion. Advocates contend that the use of self-leadership tactics inside a team has a beneficial effect on team interactions, leading to the establishment of trust among members, confidence in the team's capacity to accomplish its objectives, and heightened dedication. Team members that effectively employ self-leadership tactics to manage their resources in order to achieve personal objectives (Neck & Houghton, 2006) are more likely to have a greater number of resources at their disposal to offer to the team. Work role performance can be conceptualized as a self-regulatory process including the pursuit of numerous objectives within a team setting where individuals rely on each other (DeShon et al., 2004). According to Sonnentag and Volmer (2009), it can be inferred that managers who perform well individually are likely to put in more effort towards the team.

**Adaptivity.** Both the responsibilities of particular tasks and the composition of team members are prone to alteration. Hence, the capacity to adjust, or the degree to which employees react positively to alterations in their work setting, has emerged as a vital necessity (Gryphon et al., 2007; Pulakos et al., 2000). Individual team members may be required to adapt to changes within a team that affect their specific work responsibilities, which is referred to as "individual task adaptivity" by Gryphon et al. (2007). Additionally, they may need to deal with changes that impact their roles as team members, known as "team member adaptivity" (Gryphon et al., 2007). Self-leadership can be a potent strategy to aid individuals in effectively handling variation in their work setting. Empirical research has shown that self-

leadership training imparted to employees experiencing changes resulting from organizational bankruptcy effectively improved their job satisfaction, decreased negative emotions, and alleviated negative views of the situation (Neck & Manz, 1996). This supports the notion that using constructive thought patterns as techniques might be beneficial for employees in managing and adjusting to change. Behavior-centric tactics, such as self-guidance and performance, assist employees in strategizing, overseeing, and executing the requisite adaptable behaviours. Conversely, employing natural reward systems, which entails emphasizing the enjoyable components of the novel encounter, might amplify intrinsic motivation (Manz, 1986). Consequently, it is anticipated that the use of all three self-leadership strategies will improve people's capacity and drive to adjust to modifications in their job responsibilities within a collaborative setting.

**Proactivity.** Whereas adaptivity displays a reactive nature, proactivity can be defined as the active initiation of change. Proactive behavior entails engaging in self-initiating, future-oriented actions with the goal of altering the current situation and/or oneself. Proactive team members have the capacity to suggest or implement changes to their individual tasks or to the overall operations of the team. Self-leadership theory posits that there are positive connections between proactivity and self-leadership, both of which emphasize the active role of employees in the workplace. Numerous studies have unveiled positive associations between self-leadership and various facets of proactive performance, such as innovative behaviors, work role innovation, and initiative taking. These findings align with the fundamentals of self-leadership theory, suggesting that self-leadership includes inquiring of established structures and routines. As such, actively adapting and persuading the work environment, adopting an innovative approach to addressing questions are essential components of self-leadership. Nevertheless, the correlation between self-leadership and proactive conduct has not been subjected to empirical analysis within a team setting.



Similar to adaptive behaviours, self-leadership equips employees with the essential mastery to plan, inspire, and carry out proactive job role performance within teams. Proactive behaviour is the result of a procedure involving anticipating future needs and engaging in planning (Grant and Ashford, 2008). At every level of this process, employees can utilize self-leadership tactics. To be more precise, cognitive techniques like mental imagery can be helpful in the crucial processes of anticipating and visualizing future results and behaviours (e.g. Carmeli et al., 2006). By employing natural reward strategies (Manz, 1986), employees can identify appealing opportunities for change that enhance intrinsic motivation. In the planning phase, behavior-oriented strategies prove particularly valuable as they can direct behavior by means of goal setting, rewarding intermediate milestones, and formulating plans (Hauschildt & Konardt, 2011).

### ***Role-based Performance***

The key and essential concept in assessing performance based on roles is the idea of the specific functions that individuals hold inside organizations. Welbourne et al. (1998) pointed out the shortcomings of prior performance appraisals that only considered the performance of people in a single function within an organization. They contended that these performance evaluations are susceptible to measurement inaccuracies due to individuals assuming a wide range of responsibilities in their work, drawing on both role theory and identity theory. However, Welbourne et al. (1998) argued that measuring employee performance across all prospective roles, even those that have not yet been realized, is difficult due to the numerous possibilities. As a result, they recommended examining the importance of a role from the perspective of identity theory. According to this idea, individuals are most influenced by the roles that are most important and meaningful to them, which in turn affect their actions (Thoits, 1991; Welbourne et al., 1998).

Considering the aforementioned concerns regarding performance evaluations, Welbourne et al. (1998) devised the Role-Based Performance Scale (RBPS), which encompasses five

fundamental employee roles: work roles, organizational roles, career roles, team roles, and innovator roles. This scale evaluates both employees' formal performance, which is obligatory as a component of their employment, and their discretionary performance, which beyond their job obligations. Job roles are the fundamental and essential components of work performance that have been widely examined by different scholars. Job roles encompass the execution of the specific duties outlined in a job description and contract. Organizational roles refer to tasks that are not formally assigned, such as engaging in organizational citizenship behavior (OCB). The career role involves participating in professional development programs to enhance abilities, acquire up-to-date knowledge, and enhance one's value as a worker. The team position requires active participation in team activities as a member, while the innovator role involves making contributions to initiatives that generate novel ideas and enhance organizational effectiveness (Kim, 2014).

### ***Self-leadership and Job Performance***

Organizational behaviour research has extensively investigated the relationship between individual performance and individual-level characteristics over a long period of time. Therefore, it is unsurprising to discover a significant amount of research that investigates self-leadership impact on individual performance. This area mostly focuses on conceptual and theoretical publications, while also including empirical methodologies in the investigations. The association between performance and self-leadership is extensively studied in the field, particularly in relation to self-efficacy, creativity and job satisfaction. The initial exploration of this relationship was undertaken by Prussia et al. in 1998 through early empirical experiments. Their study sought to investigate the influence of self-efficacy views and self-leadership skills on performance. The researchers employed structural equations modeling to examine self-leadership influence on performance affected by views of self-efficacy. The results, obtained from a group of 151 participants, suggest that self-leadership strategies have a significant effect on self-efficacy evaluations, and that self-efficacy affects performance

directly. Moreover, recent findings indicate that self-efficacy views play a crucial role in fully moderating the relationship between performance and self-leadership (Prussia & Anderson, 1998).

Multiple significant conceptual pieces explore the connection between individual performance and self-leadership. Manz and Neck (1992) were among the first to write a conceptual piece that argued that self-leadership is related with improved performance. According to these writers, the utilization of mental imagery techniques and self-talk in self-leadership can result in enhanced performance levels for individuals. The model was characterized by its seeming simplicity, as it solely consisted of direct connections between individual performance and self-leadership methods (Manz & Neck, 1992). Nevertheless, these postulated links have significant ramifications and laid the groundwork for the subject of self-leadership.

Following the initial theoretical investigation of performance and self-leadership conducted by Manz and Neck in 1992, further study in the late 1990s persisted in analyzing the correlation between self-leadership techniques and individual performance. Godwin, Neck, and Houghton (1999) tried to enhance goal setting theory by incorporating self-leadership. The authors produced a cognitive model and explained how by impacting the relationship between cognitive processes and goal setting; thought self-leadership can improve individual goal attainment. Godwin and colleagues (1999) built upon the foundational research conducted by Manz and Neck (1992) to pave the way for future empirical investigations on self-leadership (Knotts, 2018).

In a qualitative case study, Hernandez (2012) examined how mental imagery and self-leadership might be used to improve athletes' performance. The study entailed closely tracking the progression of a single season for a group of five athletes belonging to a Division I college baseball team. The author largely gathered data through interviews with the

participants, using a naturalistic style. The study's findings indicated that the five pitchers who took part in the research showed a considerable enhancement in their performance during the previous season as a result of their employment of mental imagery. This enhancement is additionally bolstered by a juxtaposition of the statistical data from the preceding season with that of the more recent season. Moreover, the study emphasizes the significance of self-leadership in the baseball players' utilization and integration of mental imagery in their training. Their experience clearly demonstrates the significant role of self-discipline, as their trainers had minimal participation in teaching and applying mental visualization techniques. The study offers a thorough qualitative analysis of mental images and self-leadership in the field of sports. The work examines the origins of this cognitive method and investigates its use in different athletic scenarios (Hernandez, 2012).

The self-leadership hypothesis strongly assists the idea that self-leadership imparts a significant positive impact on behaviors beyond individual task performance (Neck & Houghton, 2006). Multiple researches have proven that self-leadership is linked to proactive and initiative-taking behaviors in individual employees (Carmeli et al., 2006; Curral & Marques-Quinteiro, 2009). Nevertheless, there is a lack of scientific investigation that explores the connection between self-leadership and the many dimensions of adaptive performance. Although there is theoretical underpinning for the relationship between adaptive performance and self-leadership (Lovelace et al., 2007), empirical research has only formed a link between conceptualized self-leadership and the adaptive aspects of performance (Neck, 1996). The goal is to investigate the hypothesis that there exists a direct positive relationship between self-leadership and both job happiness and employee adaptive performance, particularly in the context of fast-paced and unpredictable work settings. To test this assumption, a quasi-experimental study was conducted in which a self-leadership training program was implemented in the Private Banking division of a multinational bank. The study

evaluated the adaptive performance, self-leadership and job satisfaction of private bankers at three distinct intervals spanning 8 months.

A fortuitous bank rescue took place during the fourth month of the training program. A group of 28 private bankers was assigned to an experimental group randomly, while another set of 24 bankers was assigned to a control group. The experimental group exhibited enhanced adaptive performance, self-leadership and job satisfaction, whereas the control group experienced a decline. The findings indicate that different forms of self-leadership enhance long-term job satisfaction and adaptive performance. Hence, the study presents fresh evidence that self-leadership training enhances flexibility and job satisfaction. Training of self-leadership can be utilized by organizations to enhance adaptive performance of employees and job satisfaction, particularly in times of crises (Pedro Marques-Quinteiro, 2019).

Hauschildt and Konardt (2011) conducted a study that built upon past research on self-leadership. They investigated the relationship between job performance and self-leadership of team members. These factors encompass individual task mastery, team member mastery, adaptability, and initiative. Furthermore, the objective is to evaluate the moderating influence of collectivism. An exploratory study was carried out where individuals of an organization's team assessed their own self-leadership skills and their performance in six different aspects of their job roles, namely individual task proficiency, adaptivity, team member proficiency and proactivity. The data was subsequently analyzed with partial least squares modelling. The results indicate that there are favorable correlations between competence and self-leadership, flexibility, and initiative, both at the team and individual levels. Moreover, the findings suggest that collectivism plays a role in mitigating the connection between self-leadership and the proficiency of team members. The study holds significant ramifications for managerial decision-making concerning staff selection, leadership tactics, training programmes, and overall organizational development endeavors (Hauschildt & Konardt, 2011).

A lack of collaboration occurs regarding the definition and quantification of individual work performance, despite its significance and prevalence. Upon examination of research from various fields, it becomes apparent that there is a dearth of conceptual framework for individual work performance. This absence is problematic as a clear definition and conceptual framework is essential for accurately measuring individual work performance. The attraction and retention of talented individuals rank among the foremost concerns for most organizations in contemporary times. Scholars in organizational leadership highlight the scope of skills required for future leaders as expanding due to the increasingly disruptive nature of the business environment. Self-leadership is concerned with cultivating and managing one's personal energy to initiate, motivate, and excel at a superior level, thereby enhancing and maintaining an organization's individual-level leadership philosophy (Neck & Manz, 2007). In the 21st century, organizations, businesses, and higher education institutions have adopted self-leadership fundamentals through training programs geared at augmenting behaviors and self-leadership behaviours within the workplace (Neck & Manz, 2010).

While a significant amount of research has been conducted on the topic of self-leadership and its relationship with performance, there continues to be a persistent focus on this particular relationship in recent years. An illustration of this focus can be seen in the work of Marques-Quinteiro and Curral (2012), who explored self-leadership effect on both proactive and adaptive work role performance. These scholars made a valuable contribution to the existing literature by explicitly examining two dimensions of performance. Their findings revealed that strategies centered around self-leadership behavior were effective in predicting proactive and adaptive work role performance, thus highlighting the positive effects of self-leadership on overall performance (Marques-Quinteiro & Curral, 2012).

While previous research has explored the self-leadership impact on work role performance within teams (Konradt et al., 2009), current studies have continued to explore this relationship. Notably, Hauschildt and Konradt, 2012 discovered that self-leadership positively influenced individual task performance. This investigation further reinforces the notion that the effects of self-leadership can be observed in team environments, not solely in situations where individuals concentrate on their own tasks.

In a study conducted by Andressen, Konradt, and Neck (2012), the researchers evaluated the impact of self-leadership, work motivations, and transformational leadership on performance. The researchers discovered that self-leadership serves as a source of motivation and has an impact on work performance (Andressen et al., 2012). The study aims to further explore the relationship between work performance and self-leadership in certain contexts. The recognition of self-leadership as a procedural mechanism that enhances motivation and boosts performance provides an explanation for its overarching impact.

Although there has been extensive research on self-leadership and its impact on job performance, new literature has pointed out certain shortcomings. Ho and Nesbit (2014) investigated self-leadership effect on job performance in China. Ho and Nesbit (2014) discovered a favorable correlation between performance and self-leadership ratings in China. They also made a valuable contribution to existing research by demonstrating that work autonomy could potentially influence this correlation. Therefore, autonomy has the potential to uplift the effectiveness of self-leadership strategies. The cross-sectional study obtained self-leadership self-ratings and six job role performance indicators from members of an organizational team. The data was examined using partial least squares modeling. Significant correlations exist between self-leadership and competency, proactivity and adaptivity at both the group and individual levels. Furthermore, the research has revealed a significant correlation between collectivism and both self-leadership and team member competency. The

research has implications for staff recruitment, leadership strategies, training initiatives, and organizational growth (Hauschildt, 2016).

Kayral and Dulger (2019) explored how nurses' self-leadership affects their work performance. They also examined nursing unit self-leadership and team effectiveness. This study chose 202 general nurses from five Korean general hospitals using a reasonable selection approach. A February 2015 self-report questionnaire survey on 35 nursing units collected data. Self-goal setting, self-expectation, creative thought, clinical career in the marital status and current nursing unit, explained 44% of job role performance, a measure of proficiency. Personal expectations, goal-setting, positive thinking, and marital status also affected 42.3% of adaptability. Personal aspirations, goal-setting, optimistic thinking, clinical career in the current nursing unit, self-reward and designation accounted for 26.4% of proactive behavior. Self-expectation and self-reward, in nursing units accounted for 29.0% of team members' competency. Nursing units' self-reward and self-expectation increased team members' flexibility by 31.6%. Self-reward drove 16.8% of nursing unit team members' proactivity. These data confirm that self-leadership of nurses affects both their personal and their team's job effectiveness.

Kayral (2019) investigated the correlation between the self-leadership abilities of healthcare workers and both job performance and institutional performance. The study was conducted in two hospitals located in Ankara, one of which is accredited and the other is not. The survey, which was developed specifically for this research, was administered to the healthcare employees. A total of 332 valid questionnaires were collected from the survey, consisting of 109 from the accredited hospital and 223 from the non-accredited hospital. Upon analyzing the two institutions in terms of their levels of self-leadership in general, it was observed that the employees in the accredited hospital possessed higher levels of self-leadership (4.160) compared to their counterparts in the non-associated hospital (3.830). The



results show that employee self-leadership skills help complex healthcare organizations meet performance goals including patient safety, efficiency, and productivity (Kayral, 2019).

Konardt and Anderbern (2009) studied the association between self-leadership and the motivation, contentment, and performance of team members within organizational teams. The study examined how motivational processes at the individual level influenced the outcome. Furthermore, it analyzed group-level moderating variables, including autonomy and task type, as well as intra-team dynamics, such as conflicts pertaining to tasks and relationships. The utilization of hierarchical linear modeling research revealed a positive association between individual performance and self-leadership. The association is partially impacted by instrumentality and self-efficacy. Furthermore, it has been found that conflicts stemming from tasks and relationships have a negative impact on performance. The relationship between performance and self-leadership was not found significant, regardless of the level of autonomy and task type (Konrdrdt & Anderbern, 2009).

Ayub (2017) aims to determine the importance of the institutional framework on social behavior and social cognition in the performance of employees in the business sector in Pakistan. The reason for focusing on self-leadership development is based on the various theories of social cognitive behavior and the social context in which behavior occurs, which includes concepts such as self-efficacy and self-regulation of conduct. The study suggests that an ability of an employee to build self-leadership is likely to be greater when their self-efficacy and self-regulation of motivation are higher. The study utilizes a quantitative methodology, where a total of 200 surveys were distributed to organizations in the corporate sector in Islamabad and Rawalpindi. These companies belong to various industries including service, IT, telecom, and manufacturing. The study's findings demonstrate a direct correlation between the institutional environment of social conduct and the growth of self-leadership. Additionally, the study reveals a connection between social cognition and self-leadership

development, as well as a link between development of self-leadership and improved employee performance (Ayub, 2017).

In their 2012 study, Furtner et al. conducted an intervention study on a group of psychology students. Self-leadership tactics considered most favourable for improving motivation and success in their academic endeavors, were highlighted. The investigation found that the students placed great importance on the use of natural incentives systems, since they were effective in promoting intrinsic motivation in their studies as implored by Furtner et al., 2012. Moreover, empirical data suggests a negative relationship between the use of natural rewards techniques and the fear of failure (Furtner & Rauthmann, 2011). Additionally, it establishes a clear and strong connection between these strategies and job performance (Furtner et al., 2015).

Neubert and Wu (2006) conducted a study to investigate the relationship between self-leadership and performance, building upon the research undertaken by Prussia and colleagues in 1998. The investigation's findings revealed a direct correlation between self-leadership and in-role performance. Politis (2006) examined the self-leadership influence on performance in team environments. Politis found a positive correlation between the deployment of self-leadership behavioural focused methods by individuals and greater levels of team performance. These data indicate that self-leadership has an impact on both individual performance and team performance. The statement emphasizes the diverse and significant influence of self-leadership on both academic and professional results (Knotts, 2018).

Recent studies have begun to investigate the possible mediating and moderating influences on the connection between performance and self-leadership. Sahin (2011) found a direct correlation between job success and self-leadership in a sample from Turkey. Sahin (2011) demonstrated the interaction impacts of psychological climate on self-leadership, hence increasing the influence of self-leadership on job performance. This preliminary stage

offered valuable insight into a possible moderating influence that could modify the strength of the connection between job performance and self-leadership. Although most research on self-leadership show a favorable impact on performance (Manz, 2015), there is still uncertainty about the magnitude of the overall benefit, the differences across individuals, and the influence of methodological factors and specific factors related to the topic. The current body of research on job performance, such as the studies conducted by Andressen, Konradt, and Neck (2012) and Van Korten Hof (2013), has found no correlations. Additionally, the many sources of evaluations, such as self-ratings versus ratings by others, have not been taken into account in previous literature reviews. Furthermore, there have been little efforts to clarify and examine the mechanisms that explain the connection between job performance and self-leadership.

Marques-Quinterrio and Curral (2012) analyze the relationship between self-leadership qualities, goal orientation and adaptable and proactive work role performances. The authors propose that adopting a learning-oriented attitude, as opposed to a performance-oriented one, positively influences one's ability to be proactive and adaptable in their professional capacity. They moreover contend that this connection is impacted by the utilization of self-leadership strategies that prioritize behavior-oriented methods. It is claimed that employing tools for self-leadership, such as natural incentive systems and strategies for controlling cognitive patterns, can moderate this link. 108 employees from a software company took part in the survey. Confirming the premise, it was found that possessing a learning orientation strongly predicts adaptive and proactive job role performance. Furthermore, a controlled mediation effect was discovered for the application of natural rewards and thinking pattern strategies in the connection between a focus on learning and proactive job role performance, achieved through the implementation of self-leadership behavior-focused procedures. Marques-Quinterrio and Curral (2012).

Sims (2020) examined the relationship between the communication proficiency, self-leadership abilities, nursing performance and self-efficacy of clinical nurses. A structural model analysis was established to determine the variables that impact nursing performance and to examine the role of self-leadership and self-efficacy as mediators. A survey was administered to clinical nurses employed at general hospitals situated in Seoul, Gyeonggi, and Gangwon Province in the Republic of Korea. The model's goodness-of-fit indices met the requirements established in prior research, suggesting its precise prediction of a causal relationship between nurses' communication competence, self-efficacy, nursing performance and self-leadership. Furthermore, a substantial statistical impact of self-efficacy was observed in the correlation between communication abilities of nurses and their self-leadership.

Moreover, a statistically significant influence on self-leadership was found in the association between communication proficiency and self-efficacy. The nursing performance of nurses was directly impacted by their communication abilities, which served to enhance their self-efficacy (Sim, 2020).

Channar (2016) examined how leadership traits affect the healthcare business and performance of health care business and hospitals. The main objective of the study was to examine the impact of leadership attributes and behavior on the performance of hospitals. The researchers assessed both transactional and transformative leadership characteristics. The study assessed the attributes of transformational leadership, including leaders' charisma, individual consideration, and inspirational motivation, in correlation with performance indicators such as additional effort, effectiveness, and satisfaction. The study also evaluated the characteristics of transactional leadership, which encompass positive/contingent incentives or rewards and corrective actions/management by exception. These attributes were examined in relation to performance factors such as effort, productivity, and commitment/loyalty. In order to collect data for this study, a survey questionnaire was used,

and a quantitative analytic method was applied. The research utilized primary data obtained via the Multifactor Leadership Questionnaire (MLQ), which was administered to the participants. The results indicate that the presence of transformational leadership qualities has a beneficial effect on performance, albeit this effect is not statistically significant. Conversely, the characteristics of transactional leadership have a substantial and positive impact on the success of both the organization and its employees. The study also determines that transactional leadership characteristics are more appropriate for stimulating and improving performance in hospitals in comparison to transformational leadership approaches. Thus, it is advisable for healthcare organizations and hospitals to embrace the characteristics and actions of transactional leadership, while concurrently formulating policies and strategies to transition towards transformational leadership as the hospitals progress, expand, and advance (Channar, 2016).

Oyewunmi (2015) aims to analyze the impact of leaders' emotional intelligence on employees' performance in public healthcare system in Nigeria, while providing insights into the contextual factors that underlie this relationship. The study utilizes the survey methodology and adopts a random sampling technique to pick leaders and employees from the sector. The data analysis, using the t-test and hierarchical regression, reveals a significant association between leaders' emotional intelligence and employees' performance. The study reveals that effective leadership in Nigeria's public healthcare industry requires a significant level of emotional intelligence to improve staff performance, given the various problems faced (Oyewunmi, 2015).

Brown (2021) used a correlational research design to examine perceptions of leadership styles of sergeants of patrol officers (passive-avoidant, transactional and transformational) and leader-member exchanges (LMX) on their self-reported IWP. The theoretical framework included leader-member exchanges and leader-member exchanges. The study recruited from a target sample of 366, 94 local patrol officers. Internet surveys with 70-item questionnaires

collected data. This questionnaire used the IWPQ, MLQ5X, and LMX7. Only patrol officers' transactional leadership style evaluations predicted their self-reported work performance. The regression analysis showed statistically significant links between self-reported work performance and all four predictors: leader-member exchanges, perceived passive avoidant leadership style, transformational leadership and transactional leadership. We can use the data to improve sergeant training programs to boost subordinate performance (Brown, 2021).

Richardson (2022) examined and correlated self-leadership skills and behaviors, service climate, customer-oriented extra-role work, among trip planners and US travel agents. The aim of the study was to monitor and document travel agent and planner service habits and strategies. The goal was to better illustrate how these professionals match service climate contextual job characteristics. In a survey, 99 US travel agents and planners assessed their service climate, self-leadership and customer-focused extra-role work. The study determined the statistical correlations between self-leadership, customer-oriented extra-role work, and service climate using correlational analysis. This knowledge is essential for companies, contact workers and service climate leaders seeking customer service excellence. The study found a statistically significant correlation between service climate, each dimension of self-leadership (behavior-focused, natural rewards, and thought pattern), and customer-oriented extra-role work. This showed a substantial link between these four constructs (Richardson, 2020).

The relationship between self-leadership and performance has been extensively studied in various studies on self-leadership. Several variables that have been studied as both outputs of self-leadership and mediators in the relationship between self-leadership and performance have been researched.

### **Role of Work engagement**

Self-leadership has emerged as an intriguing variable for engaging employees in organizations that operate with flatter structures and often have team leaders who also serve

as managers. The conventional notion that work engagement is solely driven by one organizational manager is now considered outdated (Bakker, 2017). Presently, organizations are striving to attract self-governing individuals who are voluntary, and self-determined. These individuals have the knack to set their own goals and experience increased energy levels upon achieving them. (Ryan &Deci, 2000).

The origins of the investigation into work engagement can be attributed to Kahn (1990), as referenced in Schaufeli's (2013) article in the Academy of Management Journal. Nevertheless, it required an additional ten years for other academics to acknowledge and pay attention to this subject matter. In the late 1999, the positive psychology movement arose, and it became clear that job engagement is in line with this progressive strategy that has acquired considerable traction in the last decade (Shuck, 2011).

Work engagement is typically described as a condition of active and satisfying participation in one's job, marked by the presence of energy, commitment, and deep involvement. It is an essential element of every demanding work environment. Recent research suggests that employees who are engaged demonstrate elevated levels of energy and self-efficacy. They also perceive work difficulties as chances to overcome in their pursuit of demanding objectives. In essence, engaged employees view their work as invigorating and dynamic, something they gladly devote their time and effort to. Additionally, they perceive their work as significant and valuable, which motivates them to totally pursue it (demonstrating dedication). In addition, engaged employees possess a feeling of captivation and the capacity to completely focus on their work (absorption) (Bakker et al.,2011).

### ***Dimensions of work engagement***

Work engagement can be generated by utilizing the three aspects of vigour, devotion, and absorption, as outlined by Schaufeli et al. (2002).

**Vigor** characterized by heightened levels of vitality and cognitive prowess during labor, propensity to dedicate oneself to tasks, and unwavering perseverance in the face of obstacles. According to Bakker et al. (2009), vigorousness refers to the state of having mental resilience and high levels of energy and when working. This indicates a strong commitment to putting in a lot of effort in work performance, even when it is difficult.

**Dedication** is marked by a strong sense of significance, passion, motivation, satisfaction, and difficulty. Dedication is the emotional aspect of professional engagement, where an individual totally commits themselves to their job and demonstrates a forceful sense of identity with their work (Chughtai & Buckley, 2008). Dedication refers to the combination of excitement, passion, pride, and challenge that individuals experience in their profession. It represents their psychological engagement and sense of importance in what they do (Gawke, Gorgieveski & Bakker, 2017). According to Broughs and Biggs (2014), those who are dedicated to their work are highly involved and feel a strong feeling of significance, enthusiasm, and challenge.

**Absorption** is the state of being fully concentrated and immersed in one's task, leading to the illusion of time passing quickly. It is important to mention that according to Salanova and Schaufeli (2008, p.118), engagement is not a temporary and unique state like an emotion, but rather a long-lasting motivating state that is not focused on any single item, event, or behaviour. This signifies a cognitive component of work participation. This aspect of work engagement refers to the state in which individuals have entire focus, satisfaction, and deep involvement while carrying out their job-related responsibilities. It is also known as the eudaimonic approach, where individuals receive fulfillment from their work.

Comprehending the job engagement construct involves three fundamental concerns. According to Schaufeli and colleagues, burnout is a psychological state that is well defined, well-defined, and can be measured and studied empirically. This definition allows for both



research and practical use of the term (Leiter & Bakker, 2010, p. 2). Furthermore, it is crucial to acknowledge that work involvement is neither temporary nor inflexible (Sweetman & Luthans, 2010). It is crucial to distinguish between employee engagement and work engagement, as they are not the same thing (Schaufeli & Bakker, 2010). Work engagement points to the employee's connection with their work. While, employee engagement involves a wider term that includes the person's connection with the company, joy, occupational role, and other factors (Schaufeli and Salanova, 2011). This differentiation is important both in practical implementation and in differentiating work engagement from related notions (Schaufeli & Bakker, 2010).

Nevertheless, it is widely agreed upon that work engagement is a comprehensive concept that includes emotional, cognitive and behavioral aspects (Christian et al., 2011). The primary emphasis is on formal task performance rather than voluntary conduct (Saks, 2006). It is described as having both trait-like and state-like qualities, being persistent but also subject to change over time (Christian et al., 2011). Work engagement can be understood from different perspectives, such as a psychological state of being fully present in one's organizational job (Kahn, 1990), as the antithesis of burnout as explained by Schaufeli et al., 2002, and as a mechanism to exchange benefits and resources obtained from organizations (Saks, 2006). However, there is a general agreement that it is a complex concept that includes cognitive, emotional, and behavioral aspects (Christian et al., 2011).

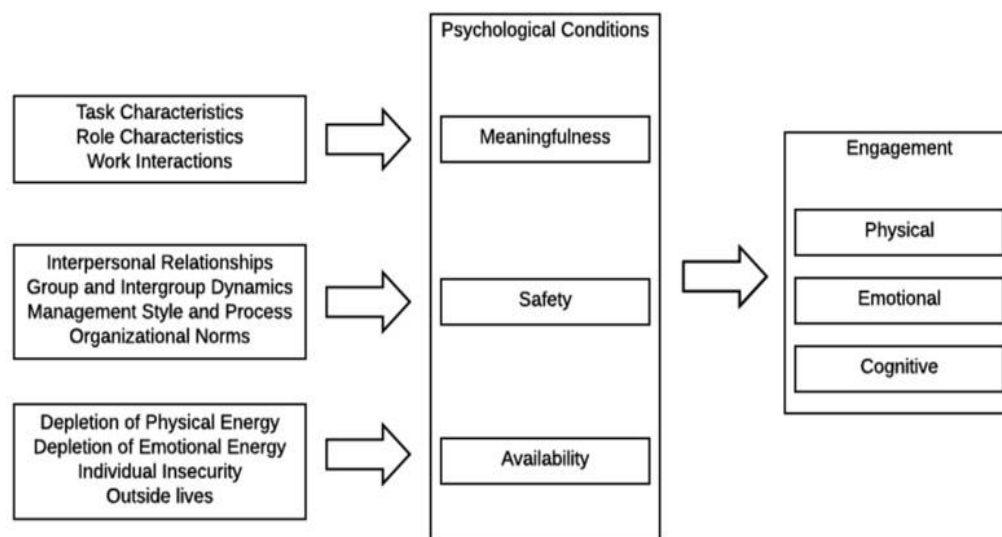
### *Theories of work engagement*

Employee engagement is a concept that can be understood in several ways, leading to the emergence of several theories on job engagement. However, it is important to note that, as stated by Shuck (2011), there is currently no widely acknowledged theory of job engagement. Nevertheless, these theories stem from two main areas of research: employee well-being and job burnout (Maslach & Leiter, 2000), as well as Kahn's (1990) anthropological exploration of personal engagement and disengagement. The subsequent section offers an exhaustive examination of theories pertaining to engagement. This study comprehensively investigates a diverse array of theories, as they form the fundamental underpinning for the research.

**Kahn's theory of work engagement.** The basic rationale for employee involvement was originally articulated in Kahn's (1990) ethnographic inquiry. The study entailed conducting interviews with summer camp counsellors and people of an architecture company to gain insights into their experiences of being actively involved and not being actively involved in their profession.

Kahn (1990) discovered through interviews that an individual's level of participation is impacted by three key psychological factors: psychological safety, psychological meaningfulness and psychological availability. In his study, Kahn (1990) discovered that individuals who had an elevated perception of safety, psychological meaningfulness and availability are more likely to actively engage in their work duties. According to this idea, as depicted in Figure 3, psychological meaningfulness is associated with how much individuals perceive their work as meaningful and feel that their personal commitment to their profession is acknowledged and rewarded (Kahn, 1990). Hence, employees have a sense of significance when they are appreciated, productive, and not overlooked inside the organization. Psychological safety encompasses the capacity to openly and authentically express oneself in the workplace, without apprehension of detrimental effects on one's self-perception, social

standing, or professional trajectory (Kahn, 1990). Psychological availability refers to the conviction that an individual has the essential emotional, physical and psychological resources to fully participate in their work responsibilities.



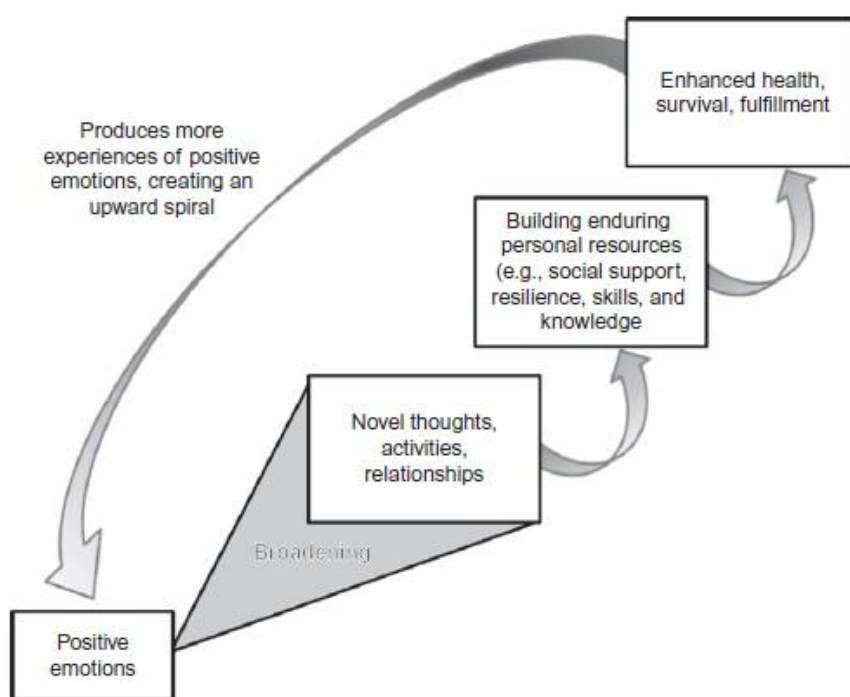
**Figure 3.** Graphical representation of Kahn's (1990) work engagement theory

Consequently, the idea suggests that individuals will exhibit greater levels of engagement in work environments that offer them the essential emotional, physical and psychological resources required to fulfil their job responsibilities. In a parallel manner, May, Gilson, and Harter (2004) conducted an empirical investigation to examine the validity of Kahn's (1990) hypothesis. Their findings revealed a substantial correlation between job engagement and the factors of safety, meaningfulness and availability.

**Social exchange theory.** The Social Exchange Theory (SET) is another theory that supports the idea of reciprocating inside an organization. Saks (2006) argues that the SET provides a stronger theoretical basis for employee involvement by emphasizing that duties emerge from a series of interactions between interdependent parties. The core tenet of SET posits that work relationships evolve via the cultivation of trust, loyalty, and reciprocal obligations, provided that both sides comply to prescribed rules of exchange. Cropanzano and Saks (2006) discovered that individuals had a tendency to reciprocate the organization based

on their level of commitment. Consequently, employees choose to participate to different degrees depending on the resources provided by the firm. Hence, the Social Exchange Theory (SET) provides a conceptual structure to explain the reasons behind employees' decisions to either enhance or diminish their level of commitment and involvement with their job and the company.

### Broaden and Built theory of positive emotions



**Figure 4.** *The Broaden-and-Build theory of positive emotions, (Adopted from Fredrickson and Cohn, 2008).*

The broaden-and-build hypothesis of positive emotions clarifies the notion of job engagement, as proposed by Fredrickson in 2001. Based on the notion depicted in Figure 4, specific positive emotions like joy, interest, and happiness have the ability to broaden individuals' transient scope of thoughts and activities. Moreover, these emotions have the potential to enhance their long-lasting personal assets, encompassing intellectual, physical and psychological resources, by expanding the range of thoughts and behaviors individuals can conceive. These resources act as reserves that can be used later to support the growth of individuals, creating a positive cycle as shown in Figure 4, resulting in more resources and

improved emotional well-being. Studies undertaken by Breevaart et al. (2016), and Gawke et al. (2017) have shown that employees that are engaged often experience pleasant feelings, leading to increased productivity. Studies have demonstrated that happy emotions can improve cognitive abilities such as creativity, flexibility, integration, and cognitive efficiency (Fredrickson, Tugade, Waugh & Larkin, 2003). Individuals experiencing happiness have heightened awareness of job-related prospects, possess better sociability, demonstrate a pronounced desire to serve others, and display elevated levels of confidence and optimism (Gawke et al., 2017).

Within an organizational setting, Losada and Fredrickson (2005) note that when managers exhibit a higher proportion of positive emotions compared to negative emotions while at business meetings, they tend to question more and display a broader spectrum between questioning and advocating. This leads to enhanced performance and growth. Bakker et al. (2008) confirmed that engaged individuals display increased levels of energy, demonstrate excitement for their work, and frequently become fully immersed in their duties. According to Attridge (2009), engaged workers are farsighted people who take the initiative to shape their own workplace by identifying and utilizing their own difficulties and resources. Therefore, happy emotions not only provide temporary positive sensations but also lead to long-lasting positive sensations (Fredrickson & Joiner, 2002; Gawke et al., 2017). People develop long-lasting psychological resources that launch positive cycles leading to emotional well-being. There is conclusive data that supports a positive relationship between work engagement and the availability of resources.

**Job Demands-Resources Model of Work Engagement.** The job demands-resources (JD-R) paradigm, established by Bakker and Demerouti (2007), serves as a fundamental framework for understanding employee engagement. According to previous research on burnout, this model, initially explained as the JD-R model of burnout by Bakker, Nachreiner,

Schaufeli and Demerouti, (2001), illustrates that burnout can result from two distinct processes. Primarily, burnout stems from increased job expectations, resulting in tiredness. Moreover, a lack of workplace resources leads to individuals being uninterested or disconnected from their work.

The JD-R model, classifies working conditions into two main categories: job resources and job demands. These classifications have universal applicability across diverse occupations. Job demands refer to the various components of a job, such as its psychological, physical and social, and organizational characteristics, that need employees to consistently exert physical, mental, and/or emotional energy, leading to psychological and/or physiological repercussions.

**Job demands.** Common examples of job demand include factors such as ambiguous job responsibilities, overwhelming workload, job security uncertainty, and contradicting workplace expectations. Regrettably, Wu and Norman (2006) highlight that there exists an adverse association between job expectations and both work engagement and commitment. These findings indicate that a rise in job expectations leads to a decrease in both work engagement and organizational commitment as suggested by Gawke et al., 2017 and Bakker, 2017.

**Job resources.** encompass the tangible, mental, social, or structural aspects of a job that play a practical role in assisting an individual in attaining work objectives, coping with job stress, and fostering personal growth (Schaufeli & Bakker, 2004). Additionally, they facilitate development and learning (Demerouti et al., 2001). Therefore, resources are not only essential for efficiently managing demanding workloads but also hold inherent importance. The employment resources may originate from the organization and encompass remuneration, career prospects, and job security. Furthermore, these connections can materialize in the form of interpersonal and social relationships, such as support from higher-ranking individuals and

colleagues, dynamics within a group, well-defined allocation of duties, involvement in decision-making processes, diverse range of skills, significance of tasks, autonomy, and assessment of one's performance (Bakker & Demerouti, 2007). In their study, Bakker, Schaufeli, and Van Rhenen (2009) discovered that alterations in job resources had the ability to forecast work engagement within a span of one year. More precisely, enhancements in social assistance, independence, educational prospects, and feedback on performance are favorable markers of forthcoming work involvement. Albrecht's (2010) study consistently demonstrates that workplace resources, such as performance feedback, social support opportunities to utilize autonomy, diverse abilities, learning opportunities and autonomy, positively correlate with work engagement.

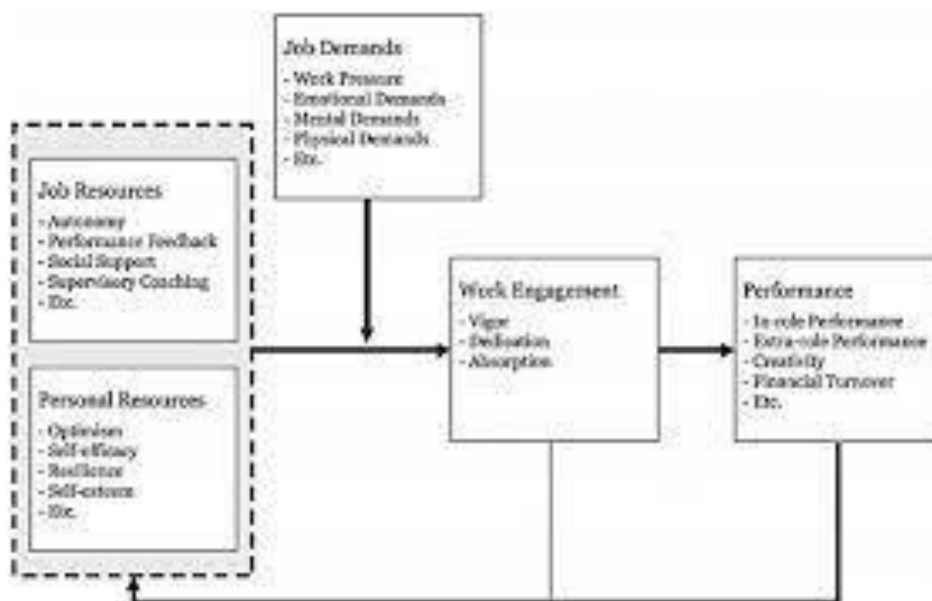
Both job demands and work place resources exert a substantial influence on work engagement and burnout through several mechanisms. Job resources have a vital role in launching a motivational process that leads to higher levels of engagement, well-being good attitudes. As a result, they help reduce the chances of burnout (Crawford et al., 2010). Job resources fulfill both extrinsic and intrinsic motivating roles by meeting and facilitating fundamental psychological needs, such as personal growth, acquisition of knowledge, and progress. In addition, work environments that promote resourcefulness can also serve as external motivators by encouraging individuals to fully dedicate themselves to their assigned tasks. Studies have demonstrated that workplace resources, which are external in character, are essential for accomplishing work-related objectives (Bakker et al., 2017; Gawke et al., 2017). Colleagues who provide support and give positive feedback on performance enhance the possibility of achieving work goals (Schaufeli & Bakker, 2004).

Furthermore, the availability of job resources is crucial in helping individuals efficiently handle job expectations and reduce the negative effects of these demands on burnout and job strain (Bakker & Demerouti, 2007). In contrast, increased job demands exhaust the physical and mental abilities of employees, leading to less energy, elevated stress levels, lack of

involvement, exhaustion, and health problems (Bakker & Demerouti, 2007, 2008). In their 2010 study, Crawford et al. conducted a meta-analysis and discovered that the connection between job demands and work engagement depends on the specific type of job demand. In their study, Crawford et al. (2010) discovered that workplace demands that are viewed as obstacles, like stressful demands that obstruct personal development, goal achievement and learning (e.g., conflicting responsibilities, unclear roles, and excessive workload), have a negative correlation with work engagement. On the other hand, job requirements that are seen as difficult but beneficial, such as demanding tasks that help improve skills, foster personal development, or contribute to long-term goals (such as a heavy workload, strict deadlines, and significant job responsibilities), are positively linked to employee engagement.

The visual depiction of the JD-R model presented in Figure 5 clarifies that personal resources and job resources can forecast the expectation of work engagement either individually or in combination. Moreover, both job and personal resources have a notably positive impact on engagement, especially in situations where job expectations are severe. Work engagement has a positive effect on job performance, a desirable result for most organizations (Bakker & Leiter, 2010). Finally, persons who are actively involved and demonstrate exceptional performance have the capacity to create their own resources, thereby sustaining their involvement over time and establishing an ongoing positive cycle that lasts throughout their lifetime, as previously mentioned (Crawford et al., 2010). The study titled "The impact of psychological capital, self-leadership, and job embeddedness on work engagement among employees in the banking sector" was conducted in 2018.





**Figure 5.** *Job Demands-Resources Model (Bakker and Leiter, 2010)*

A thought-provoking inquiry that fascinates experts and professionals in the area of Human Resource Development (HRD) is if work engagement should be seen as an independent and distinct concept or as a combination of existing ideas. This problem has been extensively examined by several scholars (Shuck et al., 2013; Shuck & Wollard, 2010). Newman, Joseph, and Hulin (2010) defined work engagement as “a unique blend of conventional components”. (p. 45). Shuck (2011) emphasizes the significance of recognizing the unique benefits provided by work engagement when compared to other well researched workplace attitudes and organizational variables such as, organizational commitment, job satisfaction, affect and job involvement. In light of the constraints on HRD budgets and the significance of identifying the most influential job attitude that enhances performance of employees and effectiveness, it is imperative for HRD professionals to determine the unique benefits of work engagement and its added value in comparison to other comparable job attitudes (Shuck, 2011).

Previous studies have differentiated work engagement from burnout and workaholism (Gorgievski & Bakker, 2010), as well as from organizational commitment and job satisfaction (Christian et al., 2011; Eldor & Harpaz, 2016). Furthermore, it has been

distinguished from the dedication to serving the public and engagement in public projects (Vigoda-Gadot, Eldor, & Schohat, 2013). Participation is restricted to cognitive aspects only, as stated by Kanungo (1982). On the other hand, work engagement incorporates cognitive, affective, and physical components simultaneously, as supported by Eldor and Harpaz (2016), Hallberg and Schaufeli (2006), and Vigoda-Gadot et al. (2013). Furthermore, it is important to note that work engagement should not be confused with emotional commitment. Emotional commitment pertains to feeling a sense of pride in one's organization and aligning with its ideals (Hallberg & Schaufeli, 2006). Emotional commitment is a part of job engagement, specifically the feature of being engaged in one's work (Hallberg & Schaufeli, 2006; Macey & Schneider, 2008; Vigoda-Gadot et al., 2013). Work engagement and change-oriented citizenship behaviour are distinct concepts. The former refers to the level of involvement and enthusiasm that individual has towards their work, while the latter entails proactively initiating functional improvements inside the organization (Vigoda-Gadot & Beerli, 2012). The former pertains to behaviours that are within the scope of one's role, whilst the later pertains to behaviours that extend beyond one's role (Vigoda-Gadot & Beerli, 2012 as cited in Eldor, 2016).

A research investigation employing a nationally representative sample of Dutch employees, comprising approximately 4,000 individuals, conducted by Smulders (2006), discovered that individuals occupying complex, professional roles with substantial job control (e.g., managers, farmers, entrepreneurs artists and teachers) exhibit greater levels of engagement when compared to those performing less practiced and autonomous occupations (e.g., blue-collar employers, retail workers and home care staff). Notably, no discernible gender disparities were observed, although older employees demonstrated a slight elevation in engagement levels in comparison to their younger counterparts. Furthermore, it appears that engagement levels in Asian countries, particularly Japan, are lower in comparison to other regions (Shimazu, Miyanaka, & Schaufeli, 2010).

Engaged employees exhibit heightened levels of energy, enthusiasm for their work, resilience in the face of obstacles, and a perception of time passing swiftly when performing their job duties (Schaufeli & Bakker, 2004). It is crucial to recognize that the degree of employee engagement can fluctuate across individuals over brief timeframes (e.g., Xanthopoulou & Bakker, 2013), suggesting that even highly engaged employees may have occasional days when their level of engagement is reduced. For instance, in research conducted with Dutch educators, Bakker (2010) shown that when teachers were more engaged in their job, they displayed elevated levels of both extra-role and in-role performance. Xanthopoulou, Bakker, Demerouti, and Schaufeli (2009) conducted a study which found that Greek employees in the fast-food business reported higher financial gains on days when they were more engaged in their work. The primary objective of this study is to examine the tactics that employees and their supervisors might apply to enhance their daily engagement in their work, hence enhancing their job performance.

### ***Trends in work engagement***

Most current research on work engagement primarily focuses on how personal resources can enhance and sustain work engagement. Gawke et al (2017) found that persons with higher personal resources are more prone to have higher more stable levels of work engagement. Hence, companies aiming to enhance work engagement must give priority to establishing a conducive climate that fosters the growth of both personal and job-related resources. The researchers have not reached a consensus on how to categorize dimensions of self-leadership, psychological capital, and job engagement as antecedents, effects, outputs, or mediators (Waal & Pienaar, 2013; Tabaziba, 2015). Work engagement has received considerable focus in recent years. Gawke et al. (2017) noted that within the realm of work, researchers often concentrate on workplace engagement because of its association with employee energy, motivation, and performance. Every organization requires its people to have motivation, proactivity, responsibility, and engagement. By promoting work

engagement, a state of maximum involvement and dedication is nurtured among individual employees, leading to a mutually beneficial relationship between the employees and the business as a whole. This results in the attainment of the most favorable results for all parties concerned (Bakker, 2017). The previous debate has clearly shown that job and personal resources play a crucial role in the process of work engagement.

It is crucial to recognize that individuals have different layers of engagement while performing their duties, which is important for effective organizational implementation. However, equally important is to understand the extent of participation generally and whether these levels can be impacted by human resource policies. An observable trend in the current body of research is the increasing number of human resource researchers investigating the influence of practices on employee work involvement human resource management (HRM) and from a top-down perspective. Albrecht et al. (2015) employed various theoretical models presenting an integrated strategic involvement model. This model takes into account the impact of contextual factors within an organization, contextual factors within a job, and individual motivational psychological factors on involvement. In the same vein, Gruman and Saks (2017) proposed that scholars studying engagement could gain insights by employing the ability-motivation-opportunity model to understand how HRM practices can impact involvement. Overall, there is a noticeable shift towards acknowledging that HRM professionals should go beyond simply conducting annual involvement surveys and should instead integrate involvement into HRM practices and policies such as, socialization, performance management, personnel selection, and training and development (Albrecht et al., 2015).

Another significant pattern observed is the correlation between involvement and leadership. Despite the abundance of knowledge regarding the relationship between transformative leadership and engagement, leaders in modern organizations are increasingly

recognizing the significance of fostering organizational cultures that are adaptable, nimble, and receptive.

Currently, scholars are exploring leadership styles that are more inclusive, such as shared, distributive, collectivist, and adaptable leadership styles. This surpasses the traditional forms of leadership that rely on appointment, protocol, and positions (Caulfield and Senger, 2017; Heifetz et al., 2009; Yammarino et al., 2012).

Social cognitive theory used as a conceptual framework, it is hypothesized that there is a positive correlation between higher levels of work engagement and higher degrees of self-leadership. As previously stated, the triadic reciprocal system of social cognitive theory proposes that internal cognitive processes have the ability to shape one's perceptions of the external environment as well as their outward behaviours (Wood and Bandura, 1989). We suggest that by employing self-leadership techniques, employees can effectively alter their views of their work environments and behaviours, resulting in increased passion, dedication, and engagement in their work. An example of this is organizing job activities in a manner that naturally provides satisfaction, which is anticipated to lead to heightened energy, commitment, and complete engagement in the current activity. Likewise, utilizing internal cognitive techniques like positive self-talk and envisioning positive results is anticipated to improve work engagement and motivation.

Bryant and Kazan (2012) contend that despite the growing focus on leadership research, a comprehensive analysis has failed to uncover the impact of self-leadership on job engagement. Despite the presence of research demonstrating the favorable effect of self-leadership on outcomes related to work, this finding is unexpected. In addition, prior studies have found that self-leadership brings about various advantages for organizations. These include the cultivation of a motivated and empowered workforce, better goal-setting and

outcomes, faster and improved decision-making processes, increased creativity and innovation, and the encouragement of collaborative team endeavors (Jooste & Roux, 2014).

A review of the literature uncovers research that has investigated the relationship between work engagement and self-leadership (Gomes et al., 2015; Breevaart et al., 2016). These studies examine the connection between job engagement and self-leadership. However, no research has explored the potential mediating systems that explain why individuals who use self-leadership tactics at work experience a higher degree of engagement.

In a study conducted by Gomes et al. (2015), the researchers investigated the role of job engagement as a mediator between creativity and self-leadership. The researchers discovered that engaging in self-leadership was highly likely to result in heightened work engagement, thus leading to elevated levels of creativity. This discovery has demonstrated a direct relationship between work engagement and self-leadership, a topic that had not been previously explored in the existing body of research.

Breevaart et al. (2016) analyzed the role of job engagement as a mediator between performance and self-leadership. The correlation between individual performance and self-leadership is widely acknowledged. Somehow, the involvement of work engagement as a mediator between these variables is a novel and valuable contribution to the current study literature. These findings further substantiated the association observed by Gomes et al. (2015). Although this association was aspect of a larger sequence, it is important to highlight the direct connection that provided additional support to the existing literature.

Nielsen and Daniels (2012) contend that the concept of employee engagement, in conjunction with self-leadership and self-efficacy, provides a comprehensive and detailed understanding of employee performance. Past research has declared several positive effects of self-leadership on both individuals and enterprises. However, a lack of literature evaluating the connection between work engagement and self-leadership exists. Several studies have

identified specific leadership behaviors that improve work-related resources, like decision-making ability, task performance guidance, work quality feedback, social support, and skill utilization opportunities (Nielsen & Daniels, 2012; Tuckey, Bakker & Dollard, 2012).

According to Bakker and Demerouti (2014), self-leadership, which involves a high level of independence in decision-making and is crucial for establishing a productive work environment, is likely to have an influence on job engagement.

New study has shown that people may also influence their own levels of work engagement, in addition to top-down techniques and organizational-level. Job crafting is a commonly used bottom-up strategy for promoting work engagement. Wrzesniewski and Dutton (2001) contend that, job crafting refers to the intentional modifications that individuals make to their responsibilities or relationships in the workplace. Physical changes pertain to modifications in the structure, extent, or amount of employment activities or relationships, whereas cognitive changes encompass the adjustment of one's view of the job. Tims et al. (2012) have utilized the JD-R theory to assert and substantiate that job designing encompasses the proactive augmentation of job resources, the enhancement of demanding job requirements, or the reduction of obstructive job requirements. Researchers discovered that individuals in diverse professions, such as teachers, tax officials, consultants, general practitioners, chemical plant operators, and nurses, actively participate in job crafting activities, consistently making adjustments to their job responsibilities. More precisely, the act of job crafting, which involves raising demanding job tasks and improving available job resources, is directly linked to task performance and higher levels of work engagement (Bakker, 2018).

Bakker (2008) outlines four justifications for the greater performance of engaged employees in comparison to employees who are non-engaged. Engaged personnel experience frequent uplift emotions such as contentment, elation, and zeal. They also enjoy improved psychological and physical well-being. Additionally, they are able to generate their own

resources, both professionally and personally, such as receiving help from their peers. Lastly, engaged personnel are able to transmit their engagement to others. Positive emotions expand an individual's range of cognitive and behavioral abilities, according to Fredrickson (2003). Optimal health improves performance by allowing individuals to fully employ their cognitive and physical resources, such as skills, capacities, and expertise. Moreover, personnel are better equipped to handle their job demands and achieve their work goals who generate their own resources (Bakker & Demerouti, 2007). Ultimately, the combined efforts of individual employees in the majority of firms have resulted in performance. Therefore, it is reasonable to assume that the spreading of active involvement across team members enhances performance (Bakker, 2008).

A recent study offers additional empirical evidence about the distinctiveness and influence of the work engagement concept (Christian et al., 2011; Shuck, Reio, & Rocco, 2011). Christian et al. (2011) have presented evidence that demonstrates how engagement is distinct from job attitudes like job satisfaction and organizational commitment, and also how it is more closely associated to job performance. Furthermore, Rich et al. (2010) provide empirical data indicating that engagement is a robust indicator of work performance consequences, such as job and contextual performance. This prediction remains valid even when taking into account other job attitudes, such as job satisfaction, job involvement and intrinsic motivation.

Engaged employees demonstrate a higher level of efficiency in directing their attention and energy compared to less engaged individuals (Demerouti & Cropanzano, 2010). As a result, they exhibit a stronger commitment to attaining the organization's objectives (Rothbard & Patil, 2010). Kahn (1990, 1992) asserts that work engagement, demonstrated by alertness and connectedness to one's work, can cultivate a mindset where work performance is seen as



encompassing various initiating, responsive and involved behaviours that surpass the conventional limits of in-role performance behaviours (Eldor, 2016).

Previous research has shown empirical evidence indicating a direct and strong positive relationship between work engagement and self-leadership. Gomes et al. (2015) conducted a study, where 337 nurses and doctors was selected to investigate the role of job engagement as a mediator between innovation and self-leadership. Their study provided further evidence of the direct relationship between work engagement and self-leadership. The sample for this inquiry was collected through the use of survey technique and standardized measurement scales. A study conducted by Breevaart et al. (2016) showed 57 employees were instructed to fill out a quantitative diary survey every week for a period of five weeks. The study's results revealed a significant link between work engagement and self-leadership, further confirming the direct relationship between these two elements. Park et al. (2016) observed the role of self-leadership as a mediator between organizational justice and work engagement in their research. The investigation's findings further validated the association between job engagement and self-leadership across a cohort of employees in Korea employed by profit-oriented organizations. The total sample size of the study consisted of 237 participants who successfully completed the survey items. The study held by van Dorssen-Boog et al. (2020) has shown that in the connection between job autonomy and work engagement and health, self-leadership acted as a mediator in two healthcare organizations. A total of 337 participants were enrolled in the study. In their study, Breevaart et al. (2016) observed a positive correlation between self-leadership and work engagement among employees, as evidenced by a weekly diary study.

A research conducted by Breevaart et al. (2014), discovered that self-leadership strategies that concentrate on behavior, such as, self-observation, self-goal setting and self-cueing, have a beneficial impact on work engagement among maternity nurses. This effect is mediated by

particular job resources such as "feedback" and "developmental opportunities" (Breevaart et al., 2014).

Shooraj (2012) investigated the association between self-leadership, charismatic leadership and work engagement in the healthcare sector. The investigation was carried out in hospitals located in Iran. 348 questionnaires were selected for data analysis according to their accuracy, after distribution. This study included three separate questionnaires, encompassing self-leadership, charismatic leadership and work engagement. The conclusion showed that charismatic leadership had a significant and favorable effect on both work engagement and self-leadership. The path coefficients, as determined by structural equation modeling, were 0.69 and 0.78, respectively. Furthermore, it was discovered that self-leadership had a beneficial effect on work engagement, as indicated by a substantial path coefficient of 0.73. The inquiry findings suggest that charismatic leadership can be seen as a predictor of both work engagement and self-leadership. Additionally, self-leadership can be considered a predictor of job engagement.

An independent investigation seeks to examine the effects of a self-leadership intervention on the engagement, productivity, and well-being of healthcare professionals. The concept proposes that providing employees with training in the principles of self-determination and self-leadership theory can improve their capacity to autonomously affect their thoughts and behaviors. Consequently, this is anticipated to have a favorable impact on their level of commitment to work, their perception of their own performance, and their general well-being. In order to test these hypotheses, a longitudinal field experiment was conducted, consisting of three separate measurement periods: one carried out prior to the intervention, one immediately following one or two months after the intervention. The study had 195 healthcare professionals from five distinct organizations who actively participated and were randomly assigned to either the intervention group or the control group. The results

indicate that implementing a self-leadership training program positively affects the level of performance and work engagement among healthcare workers. Furthermore, the heightened level of job engagement serves as an intermediate variable in the link between the training and the health and performance outcomes observed after a span of two months. However, according to the research conducted by Boog et al. (2021), the intervention did not produce any noticeable effect on general health.

To examine the relationship between self-leadership, job engagement, and individual innovation is the aim. It is proposed that the positive emotional and motivational state that individuals experience when they are engaged with their work plays a role in the relationship between their ability to lead themselves and their ability to innovate. Data was collected from a sample of 337 doctors and nurses, employed at a comprehensive healthcare institution to investigate the relationship. The results of our study demonstrate a positive correlation between self-leadership, work engagement, and individual innovation. Additionally, the findings suggest that in the connection between individual innovation and self-leadership, work engagement acts a mediating variable. The reference for this information is Gomes and Curral (2015).

The dissertation primarily aimed to examine the effect of self-leadership on improving favourable employee outcomes. The study specifically investigated the impact of self-leadership on organizational citizenship behaviours and employee work engagement. Moreover, the research suggested that organizational commitment and emotional weariness act as mediators in the connections between self-leadership and employee results. Furthermore, the study sought to investigate the influence of organizational support on the relationships between an individual's self-leadership degree and other pertinent outcomes. The results, derived from a sample of 283 individuals working in the transportation industry, demonstrated a direct correlation between organizational citizenship behaviours and self-

leadership. The favourable correlation was detected through both direct and indirect means, with the latter being mediated by emotional weariness. Similarly, there was a notable correlation between work engagement and self-leadership, once again influenced by emotional weariness. Perceived organizational support was discovered as a moderator in the connections between organizational citizenship behaviours, self-leadership behaviours and emotional weariness, as indicated by Knotts (2018).

The demanding nature of the healthcare profession sometimes leads to a substantial workload, which in turn causes problems such as increased rates of absenteeism, vacant employment positions, and voluntary turnover among healthcare staff. Job autonomy is a vital element in improving work engagement and the well-being of healthcare workers, as it fulfills their inherent need for autonomy. However, the authors propose that the relationship between, work engagement, health and job autonomy can be better understood by considering the idea of self-leadership. People who have self-leadership qualities, such as taking initiative and being responsible, are thought to use self-directing strategies (including setting objectives, self-observation, and creating intrinsic rewards) to enhance their motivation and overall well-being. To investigate these relationships, we conducted a survey among 337 employees from two healthcare organizations. The survey assessed many aspects including work engagement, job autonomy, general health and self-leadership. The proposed model was evaluated by a series of regression studies, confirming the indirect connections between work engagement, job autonomy and general health, respectively, by utilizing natural incentive processes. The cognitive and behavior focused strategies had limited significance as mediators, with a positive effect on work engagement and a negative effect on overall health. Nevertheless, the behaviour of self-leadership did not demonstrate any noteworthy correlations with work engagement and overall health (Boog, 2016).

The self-leadership capacity and job involvement of the middle and primary school headmaster exceed the average level. Nevertheless, there is no discernible association between the magnitudes of self-punishment or self-reward and contribution, nor between self-reward and concentration. However, there are notable connections between many aspects of self-leadership and professional engagement among primary and middle school principals. Multiple stepwise regression analysis has revealed that goal setting and job inner reward collectively account for 16.6% of the regression equation in accurately predicting work engagement. To enhance their self-leadership skills, primary and middle school headmasters might focus on establishing a clear professional objective, valuing the inherent value of their vocation, overlooking negative parts, and reflecting on its positive significance. Consequently, this leads to heightened levels of work engagement for them.

Bakker, Demerouti, and Verbeke (2004) established that employees who are actively engaged in their work receive more favorable assessments from their colleagues in terms of both their expected job responsibilities and their voluntary contributions outside their formal function. This implies that employees who are actively involved demonstrate exceptional performance and a readiness to surpass expectations. In addition, a study conducted by Schaufeli, Taris, and Bakker (2006) among employees in the Netherlands from different professions found a direct correlation between job engagement and performance within their assigned roles. Gierveld and Bakker (2005) conducted a research among secretaries and found additional evidence to support these findings. They observed that engaged secretaries demonstrated elevated levels of both in-role and extra-role performance. Furthermore, the findings demonstrated that actively involved secretaries exerted a more significant impact on day-to-day company activities.

There has been an increase in requests for them to take on more responsibilities, such as selecting individuals in advance, coordinating trade shows and conferences, and supervising

websites. Salanova, Agut, and Peiro´ (2005) conducted a noteworthy study that primarily targeted individuals working in the hospitality industry in Spain, particularly in restaurants and hotels. Reach out to workers from more than 100 service units, including restaurants and hotel front desks, to gather data on organizational resources, staff engagement, and service ambiance. Moreover, clients from these divisions furnished data pertaining to personnel performance and consumer loyalty. The analysis of structural equation modeling, unveiled a model in which organizational resources and work engagement acted as fully mediating factors for the determinants of service climate. Consequently, this had a direct effect on the productivity of the employees, which in turn had a significant influence on the level of loyalty exhibited by customers. Bakker, Xanthopoulou, Schaufeli and Demerouti, and conducted a diary study including employees at a fast-food establishment in Greece. It has been found that the employees' daily levels of work engagement can predict the objective daily financial results. Self-leadership encompasses the condition of possessing control and autonomy over one's own behaviors and choices (Manz, 1986; Neck & Houghton, 2006). Studies have shown that employees exhibit higher levels of engagement and enthusiasm towards their work when they are given more freedom and independence in deciding when and how to perform their tasks (Breevaart et al., 2014; Xanthopoulou et al., 2009).

Moreover, employees must have a sense of control and self-determination in order to make changes to their job and so increase their level of involvement in their work (Petrou, Schaufeli, Demerouti, & Hetland, 2012; Bakker & Derks, 2013). Furthermore, self-leadership involves cultivating a positive mindset towards work, attending on internally satisfying elements of the job, and offering external incentives to oneself for executing the task proficiently. These actions together provide the work with meaning. Extended durations of practicing self-leadership are likely to result in employees experiencing heightened energy, dedication, and involvement in their work (Wrzesniewski & Dutton, 2001). Research undertaken by Bakker (2010) and Xanthopoulou et al. (2009) has confirmed that employees

who are more engaged in their work tend to receive higher job performance ratings (Breevaarti, 2016).

Schultz (2021) entailed the determination of the correlation between work engagement, self-leadership and the future of HRM. An area that remains insufficiently explored is the future of HRM in South Africa, particularly in relation to organizational behavior dimensions, namely self-leadership and work engagement. To effectively prepare for the future of HRM, it is necessary to have a more thorough understanding of work engagement, which serves as the missing link connecting self-leadership with the upcoming domain of work. A quantitative research methodology was utilized by conducting a survey among members of the South African Board of People Practices. The relationships were examined using regression analysis and correlation analysis. There is a positive correlation between all variables, with self-leadership being a predictor of job engagement and the future of HRM. Moreover, work engagement acts as a mediator in the connection between self-leadership and the future of HRM. Human resource professionals are tasked with the obligation of maintaining their capacity to autonomously guide themselves, actively participate in their work, and adequately prepare for the future of human resource management. The relationship between work engagement and self-leadership has the potential to help organizations improve and develop the ability of employees and human resource managers to be more engaged and lead themselves (Schultz, 2021).

This study examines the impact of leadership on the innovative work practices and performance of R&D professionals. It utilizes patents, peer-reviewed journal papers, supervised keynote addresses and PhDs' as indicators. This can be accomplished by integrating the behavioural leadership theory with the job demands-resources theory of engagement. Data from 467 scientists at India's largest civilian research and development institution were analyzed using structural equation modelling. A positive correlation exists

between job involvement and innovative work habits and inventive performance. Leaders' engagement has a direct impact on employees' work behaviours and inventiveness. The impact of leadership on creative performance was not as significant as its influence on innovative work practices (Gupta, 2007).

Although the existence of a favourable correlation between self-leadership and job engagement has been confirmed, there is a lack of research that explores this potentially critical relationship. The importance of this link is amplified by the intrinsic nature of self-leadership, which suggests that individuals in intrinsically unstimulating environments can maintain their motivation and continue to be actively involved in their job, even when they might otherwise lose the will to accomplish it. Furthermore, the current body of research concerning the connection between work engagement and self-leadership has exclusively concentrated on the direct correlation between these two factors, without exploring the underlying mechanisms that could explain why individuals who demonstrate higher levels of self-leadership are able to maintain their engagement in their work. Therefore, there is a need to investigate particular intermediary mechanisms that could potentially result in higher levels of job engagement due to the implementation of self-leadership techniques (Knotts, 2018).

In a recent study, Breevaart and colleagues (2016) conducted research to investigate the impact of self-leadership on job performance, mediating factor being work engagement. The researchers utilized a fully mediated model and identified a positive correlation between employees' job performance and self-leadership through work engagement (Breevaart et al., 2016). This discovery presents a fresh viewpoint on the connection between self-leadership and job performance by clarifying how work engagement might enhance performance to a greater extent. This study, being the latest, emphasizes the ongoing interest and necessity for further study on self-leadership impact on job performance.



Consequently, it can be deduced that the existing study supports the connection between performance and work engagement. Employees who experience a sense of vitality and strength, coupled with enthusiasm for their work, exhibit extra-role performance and in-role performance. Consequently, engaged employees achieve better financial outcomes and foster greater satisfaction among clients and customers.

## **Research method**

### **Research Objectives**

Following are the objectives of the current study:

1. To examine the relationship between self-leadership strategies, work engagement and employees' job performance.
2. To investigate the mediating role of work engagement in relationship between self-leadership strategies and job performance.
3. To investigate the mediating role of different aspects of work engagement in relationship between self-leadership and job performance.
4. To explore the role of certain demographic variables (age, gender, education, position, and experience in the organization) in relation to self-leadership strategies, work engagement and job performance.

### **Hypotheses**

The current research intended to test the following hypotheses:

1. H 1: There is a positive relationship between self-leadership and job performance, more specifically.
2. H 1a: There is a positive relationship between behavior focused strategy of self-leadership and job performance.
3. H 1b: There is a positive relationship between natural reward strategy of self-leadership and job performance.
4. H 1c: There is a positive relationship between constructive thought pattern strategy of self-leadership and job performance.
5. H 2: Work engagement mediates the relationship between self-leadership and job performance, more specifically.

6. H 2a: Work Engagement mediates the relationship between cognitive thought pattern strategy of self-leadership and job performance.
7. H 2b: Work Engagement mediates the relationship between behavior focused strategy of self-leadership and job performance.
8. H 2c: Work Engagement mediates the relationship between natural reward strategy of self-leadership and job performance.

### **Operational definition of variables**

The variables of the current study were operationally defined as follows:

#### ***Self-leadership***

Self-leadership is the act of inspiring oneself to achieve self-motivation and self-direction to perform effectively. The process involves three strategies: behavior-focused, natural rewards, and constructive thought patterns. Behavior-focused techniques aid in enhancing an individual's self-awareness to promote behavior management, particularly in relation to necessary but disliked tasks (Manz and Neck, 2004). There are two ways for natural rewards: (1) making a task delightful by adding enjoyable qualities to it, making it inherently rewarding, and (2) changing the way we perceive the unpleasant features of a task by focusing on its inherent rewarding aspects. Constructive thought patterns methods encompass the establishment of productive and positive habitual behaviours, and the cultivation of cognitive thinking that promotes constructive performance (Neck and Manz, 2010). In essence, self-leadership refers to the process by which individuals exert control over their own behaviour, utilizing certain behavioural and cognitive methods to influence and guide themselves (Neck and Houghton, 2006, p. 270). Individuals who obtain high scores on the Revised Self-Leadership Questionnaire (RSLQ) prepared by Houghton and Neck (2002) are likely to exhibit more utilization of self-leadership tactics.

### ***Work Engagement***

Schaufeli et al. (2002) stated that work engagement is a fulfilling and positive psychological state related to work, characterized by energy, absorption and dedication. Vigour is characterized by mental resilience and heightened levels of energy throughout employment. Dedication involves a profound commitment to one's work, piloted by a sense of enthusiasm, commitment, drive, satisfaction, and a longing for difficulty. Absorption is the state of being deeply engaged and fully focused in one's work, to the point where it becomes difficult to detach oneself from work (Schaufeli et al., 2002, as referenced in Simpson, 2009). Individuals who achieve high scores on the Utrecht Work Engagement Scale (UWES; Schaufeli et al., 2002) are prone to displaying heightened levels of work engagement in their profession.

### ***Job performance***

Job performance means the degree to which an individual effectively carries out their organizational duties and core responsibilities in order to accomplish their objectives, which are beneficial to the organization. Individuals that achieve high scores on the job performance scale will demonstrate superior performance in their employment. The high performance of subordinates in their particular roles, as evaluated by their supervisors, also indicates excellent performance.

### **Research Design**

The current study utilized cross-sectional survey method.

### **Research instruments**

#### ***Utrecht Work Engagement Scale (UWES)***

The Utrecht Work Engagement Scale (UWES), created by Wilmar Schaufeli and Arnold Bakker in 2004, is a 17-item scale that measures work engagement. It consists of three subscales: energy, devotion, and absorption. Following psychometric assessment in two

distinct cohorts of employees and students, a total of 17 items were retained after eliminating 7 flawed items from the initial 24-item scale. These 17 items consisted of 5 dedication items, 6 vigour items, and 6 absorption items (Schaufeli, Salanova, Gonzalez-Roma & Bakker, 2002a). Following factor analysis in 2006, the scales were condensed to a nine-item scale.

Adding up the scores on the particular scale, dividing the amount by the number of items in the subscale leads to average scale score of UWES scales. Consequently, the UWES generates three subscale scores and/or a total score that ranges from 0 (representing never) to 6 (representing always). Higher ratings suggest a greater level of work engagement. The sum of the individual scores for each item determines the total score on the scale. To compute the subdomain scores of work engagement, sum the scores of all the components within that domain and thereafter divide by the total number of items in that domain.

The UWES has been validated using confirmatory factor analysis in many countries, including Finland (Hakanen, 2002), China (Yi-Wen & Yi-Qun, 2005), Japan (Shimazu et al., 2008), Greece (Xanthopoulou, Bakker, Demerouti, & Kantas), the Netherlands (Schaufeli & Bakker, 2003), South Africa (Storm & Rothmann, 2003), and Spain (Schaufeli et al., 2002). This confirms the cross-cultural validation of the three-factor solutions. In addition, the three subscales demonstrated good internal consistencies in each research. Aligned with previous CFA research, the findings of this study suggest that work engagement can be understood as either a singular aspect or a multidimensional term, contingent upon the particular objectives of the research. However, when looking at the practical aspect, the strong connections between the components suggest that there is a great degree of overlap between them. This, in turn, restricts their usefulness as separate dimensions. The stability measure value lies between 0.82 and 0.86.

### ***Revised Self-Leadership Questionnaire (RSLQ)***

Authored by Houghton and Neck (2002), the RSLQ comprises a total of 35 item measures divided into nine separate sub-scales that represent three key characteristics of self-leadership: natural reward strategies, behavior focused strategies and constructive thought pattern strategies. The RSLQ is assessed using a Likert scale ranging from 1 (indicating no accuracy) to 5 (indicating total accuracy). Increased scores signify a stronger manifestation of self-leadership. Domain scores are determined by adding up the scores of specific objects within a given domain and then dividing by the total number of items in that domain.

Originally, it consisted of a compilation of 50 works crafted by Anderson and Prussia (1997). After doing component analysis, a total of 17 elements that were ambiguous or subject to several interpretations were eliminated. The coefficient alpha is equal to 0.74. The RSLQ has demonstrated good validity and reliability in several empirical studies, including those undertaken by Carmeli et al. (2006), Cural & Marques-Quinteiro (2009) and Houghton & Jinkerson (2007). The RSLQ has been translated into six foreign languages: Africans (Van Zyl, 2008), Chinese (Ho & Nesbit, 2009), Turkish (Dogan & Sahin, 2008), Hebrew (Carmeli et al., 2006), German (Andressen & Konradt, 2000) and Portuguese (Cural & Marques-Quinteiro, 2009). The translated versions of the scale have continuously exhibited robust reliability and validity. Furthermore, the consistent factor structures discovered in these translations corroborate the initial findings of Houghton and Neck (2002) and offer additional proof of the cross-cultural reliability of the self-leadership concept.

### ***Job Performance Scale***

The job performance of participants is assessed using the measurement tool established by Wright et al. (1995). The scale consists of 08 elements. In this study the Likert scale consists of 5 points, with scoring possibilities ranging from 1 (strongly disagree) to 5 (strongly agree). There are no items with reverse scoring. The measure includes both

employee self-evaluation and supervisor or immediate boss rating. The scale has a maximum score of 40 and a minimum score of 8. According to Shafique (2008), the alpha reliability of the work performance scales, as measured by self-rating and supervisor rating, is 0.78. The author proposed that the alpha reliabilities are contingent upon the particular sample being examined. A higher score signifies superior job performance. For the present research purposes, job performance scale was completed by employees and their respective supervisors who were the immediate head of each category of employees. In other words, the same scale was used twice for employees and their respective supervisors. Their scores were also computed separately.

### **Sample**

The present study was conducted on hospital employees including a sample of 290 health care employees (36.9% men, 63.1% women). Convenient sampling was used for selecting the sample for the present study. The age of the participants ranged from 18 to 65 years ( $M=23.5$ ,  $SD=.68$ ). Their qualification ranged from matriculation to post graduation/specialization because their designations ranged from doctors, nurses and paramedical staff of 6 major hospitals (both government and private) of Rawalpindi and Islamabad.

### ***Inclusion criteria***

The sample contained full time and even half time health care employees ranging from doctors to paramedical staff from different departments of major public and private hospitals such as Pakistan Institute of Medical Sciences (PIMS), Benazir Bhutto Hospital (BBH), General Services Hospital, CDA hospital, Maroof International Hospital, and Ali Medical Hospital, with experience in the organization (current) up to 15 years to 35 years and total work experience up to 10 years to 33 years respectively. Age range and education are already mentioned above.

**Exclusion criteria**

Doctors doing house job and medical/nursing students were not included in the study since the criteria of inclusion in the sample was health care employees.

**Table 1** Sociodemographic characteristics of the sample (N=290)

<b>Sample characteristics</b>	<b>f</b>	<b>%</b>
<b>Gender</b>		
Male	107	36.9%
Female	183	63.1%
<b>Age</b>		
18-30	195	67.2%
31-45	73	25.2%
46-65	22	7.6%
<b>Education</b>		
Matriculation/intermediate	16	5.5%
Under graduation	35	12.1%
Graduation	64	22.1%
Post-graduation/specialization	175	60.3%
<b>Designation/Position</b>		
Doctors	133	45.9%
Nurses	57	19.7%
Paramedical staff	46	15.9%
Trainees	54	18.6%
<b>Experience in the organization (current)</b>		
Upto 15years	260	89.7%
16-25years	23	7.9%
26-35years	7	2.4%
<b>Total experience (tenure)</b>		
Upto 10years	215	82.1%
11-20years	39	14.5%
21-33years	17	3.4%
<b>Status of organization</b>		
Public	195	67.2%
Private	85	29.3%
Both	10	3.4%

Note: N=290

According to the table, the sample size was 290, as indicated by the information gathered from the demographic sheet given to the participants. Participants were on average 23.5 years



old,  $SD = .68$ . The sheet requested data regarding gender, age, education, position, overall experience (tenure), current experience inside the organization, and the organization's status. The table presents a thorough overview of the demographics derived from the research sample.

### **Data collection/Procedure**

A convenient sampling strategy was employed to pick a sample of 290 health care professionals. The selection was based on the cross-sectional method.

Prior to engaging with the participants, formal permission was sought from relevant authorities, including the department heads of various government and private hospitals. The researcher rigidly followed all Standard Operating Procedures (SOPs) when visiting hospitals to collect data.

The researcher created electronic forms using Google Forms to provide convenience for individuals who preferred electronic access, while ensuring their safety. Prior to completing the questionnaires, the participants were assured that their responses would be kept anonymous and were given a comprehensive explanation of the study's objectives and. The participants were able to complete all four questionnaires in just 15-20 minutes. They were given guidance on the protocol for filling out the surveys. Job performance scales for self and supervisor both were distributed at the same time to the employee and his/her immediate head and were strictly monitored by the researcher so that their responses are not shared.

### **Data Analysis**

The data was examined utilizing SPSS version 22. Following the completion of essential data cleaning and reverse coding, a reliability test was conducted on the scales to determine the alpha reliability and descriptives. This was done to further confirm the suitability of the original versions of the scales.

In order to assess the content validity, item total correlation was also conducted for these scores. In addition, descriptive statistics and frequency distribution were computed to ascertain the features of the sample. Once the suitability of the data for the research variables was established, additional analysis was conducted using multiple regression, independent sample t-test to identify gender disparities, and ANOVA to identify disparities depending on demographic characteristics. Finally, the mediation analysis in the current study utilized the Hayes Process macro (2018). Since two scales of job performance were utilized for the current research, i.e self and supervisor rating, hence descriptives and calculation of mean differences undertook analysis on both these scales separately. However, mediation analysis and multiple regression took combined scores on both scales of job performance.

### **Research Ethics**

Data collection was authorized by the separate heads of various departments in each visited hospital. Participants were required to provide informed consent prior to participating in the trial. Participants were guaranteed the confidentiality of the information they submitted. Data collection, analysis, and reporting were conducted in a way that guaranteed the anonymity of participants, thereby mitigating the risk of social stigma or branding.

### **Delimitations of Research Study**

The researcher confined the study to 290 health care employees (108 men, 183 women) formally employed at their respective hospitals either as permanent employees or contract based from the area of Rawalpindi and Islamabad. For the present study the age group from 18 to 65 years was taken, since there were a variety of health care employees with varying qualifications from matric to post graduation in varying age groups. They were selected from different departments in different hospitals to prevent bias and gather objective responses.

**Table 2** *Descriptive statistics, Cronbach's alpha and univariate normality of the study variables (N=290)*

Variables	No. of items	$\alpha$	M	SD	Skew	Kurtosis	Range	
							Actual	Potential
<b>SL</b>	35	0.84	124.09	23.98	-.78	.35	44-165	35-175
BFS	18	0.79	64.17	12.44	-.68	.19	24-90	18-90
CTPS	12	0.80	41.90	8.87	-.65	.32	14-60	12-60
NRS	5	0.84	3.65	.79	-.86	.54	5-25	5-25
<b>WE</b>	17	0.81	68.14	14.15	-.40	.28	17-102	17-102
VI	6	0.82	22.74	5.66	-.46	.59	2-36	6-36
DED	5	0.83	21.92	4.72	-.52	.12	5-30	5-30
AB	6	0.78	23.48	5.75	-.35	.11	3-36	6-36
<b>JP</b>	8	0.83	30.02	4.73	-1.18	3.17	8-32	8-40
<b>JPS</b>	8	0.83	29.48	5.79	1.06	10.60	8-32	8-40

*Note.* SL=Self Leadership, BFS=Behaviour Focused Strategy, CTPS=Cognitive Thought Pattern Strategy, NRS=Natural Reward Strategy, WE=Work Engagement, VI=Vigour, DED=Dedication, AB=Absorption, JP=Job performance, JPS=Job Performance Supervisor rating.

Table 2 displays the descriptive analytic findings of the current study, encompassing the average, variability, Cronbach's alpha reliability, range, skewness, and kurtosis of a total of 290 participants (107 males and 183 women) aged between 18 and 65. The alpha reliability scores for all primary scales ranged from 0.81 to 0.84, suggesting that they are all within the acceptable range and are considered good. Similarly, the alpha coefficients of the subscales ranged from 0.79 to 0.84. Furthermore, the skewness and kurtosis values for both the major scales and subscales were within the ranges of  $\pm 1$  and  $\pm 3$ , respectively. Therefore, according to the overall findings the instruments employed to assess the variables in the current study are all suitable.

**Table 3** *Item-total correlation of Work Engagement Scale (UWES) (N=290)*

Sr. No	Item-total correlation	Corrected Item-Total Correlation
1	.46**	.42
2	.54**	.50
3	.56**	.52
4	.61**	.57
5	.61**	.58
6	.50**	.45
7	.63**	.60
8	.62**	.58
9	.66**	.62
10	.47**	.43
11	.61**	.58
12	.56**	.53
13	.37**	.33
14	.49**	.45
15	.52**	.48
16	.59**	.55
17	.55**	.51

Note. \*\*p<.01

Table 3 demonstrates the item-total correlation for Work Engagement Scale. The findings indicate all items contributing positively towards the measure.

**Table 4** *Item-total correlation of Vigor Subscale (N=290)*

Sr. No	Item No	Item-total correlation	Corrected Item- Total Correlation
1	1	.47**	.42
2	4	.61**	.58
3	8	.63**	.59
4	12	.56**	.53
5	15	.52**	.48
6	17	.55**	.51

Note. \*\*p<.01

Table 4 demonstrates that all items are significantly correlated with the total test scores.

**Table 5** *Item-total correlation of Dedication Subscale (N=290)*

Sr. No	Item No	Item-total correlation	Corrected Item-Total Correlation
1	2	.44**	.50
2	5	.61**	.58
3	7	.62**	.60
4	10	.55**	.43
5	13	.53**	.33

Note. \*\* $p < .01$

Table 5 indicates that item-total correlations of items contribute positively towards the measure.

**Table 6** *Item-total correlation of Absorption Subscale (N=290)*

Sr. No	Item no	Item-total correlation	Corrected Item Total Correlation
1	3	.51**	.47
2	6	.50**	.43
3	9	.64**	.61
4	11	.58**	.56
5	14	.52**	.51
6	16	.56**	.53

Note. \*\* $p < .01$

Table 6 shows that all 5 items correlate positively and significantly with the total measure.

**Table 7** Item-total correlation of Revised Self-Leadership Questionnaire (RSLQ)  
(N=290)

Sr. No	Item-total correlation	Corrected Item-Total Correlation
1	.59**	.57
2	.52**	.50
3	.53**	.48
4	.69**	.66
5	.60**	.59
6	.59**	.55
7	.62**	.58
8	.61**	.59
9	.55**	.50
10	.64**	.61
11	.60**	.58
12	.63**	.61
13	.63**	.57
14	.66**	.61
15	.65**	.59
16	.61**	.56
17	.63**	.58
18	.63**	.63
19	.63**	.62
20	.64**	.60
21	.58**	.56
22	.67**	.66
23	.69**	.65
24	.56**	.52
25	.61**	.50
26	.65**	.62
27	.68**	.66
28	.68**	.65
29	.64**	.65
30	.58**	.56
31	.69**	.65
32	.64**	.63
33	.63**	.60
34	.64**	.67
35	.62**	.63

Note. \*\*p<.01

Table 7 indicates all 35 items positively correlating with the total Self-Leadership measure.

**Table 8** *Item-total correlation of Behaviour Focused Strategy Subscale (N=290)*

Sr. No	Item No	Item-total correlation	Corrected Item-Total Correlation
1	2	.53**	.50
2	4	.68**	.66
3	6	.58**	.55
4	7	.61**	.58
5	9	.54**	.50
6	11	.61**	.58
7	13	.61**	.57
8	15	.64**	.59
9	16	.59**	.56
10	18	.66**	.63
11	20	.63**	.60
12	22	.68**	.66
13	24	.55**	.52
14	25	.59**	.57
15	28	.65**	.65
16	30	.56**	.56
17	31	.65**	.65
18	34	.67**	.67

*Note.* \*\* $p < .01$

Table 8 points that all the items associate positively with the total Behaviour Focused Strategy measure, suggesting the internal consistency of the measure.

**Table 9** *Item-total correlation of Natural Reward Strategy Subscale(N=290)*

Sr. No	Item No	Item-total correlation	Corrected Item-Total Correlation
1	8	.62**	.59
2	17	.61**	.58
3	26	.65**	.62
4	32	.66**	.63
5	35	.66**	.63

Note. \*\*p<.01

Table 9 shows all items significantly related to the total test scores, indicating internal consistency of the items of Natural Reward Strategy measure.

**Table 10** *Item-total correlation of Cognitive Thought Pattern Subscale(N=290)*

Sr. No	Item No	Item-total correlation	Corrected Item-Total Correlation
1	1	.59**	.59
2	3	.52**	.52
3	5	.60**	.62
4	10	.64**	.64
5	12	.62**	.64
6	14	.66**	.64
7	19	.63**	.65
8	21	.58**	.59
9	23	.60**	.67
10	27	.68**	.68
11	29	.64**	.57
12	33	.63**	.69

Note. \*\*p<.01

Table 10 shows that item-total correlation of all 12 items point positively towards the measure.



**Table 11** *Item-total correlation of Job Performance Scale (N=290)*

Sr. No	Item No	Item-total correlation	Corrected Item-Total Correlation
1	1	.66**	.60
2	2	.76**	.72
3	3	.65**	.58
4	4	.68**	.63
5	5	.65**	.58
6	6	.71**	.65
7	7	.54**	.45
8	8	.71**	.66

Note. \*\*p<.01

Table 11 shows that item-total correlation of all 8 items point positively towards the measure.

**Table 12** *Item-total correlation of Job Performance Supervisor Rating Scale (N=290)*

Sr. no	Item No	Item-total Correlation	Corrected item-total correlation
1	1	.64**	.59
2	2	.63**	.47
3	3	.71**	.66
4	4	.70**	.66
5	5	.68**	.64
6	6	.63**	.57
7	7	.63**	.57
8	8	.61**	.56

Note. \*\*p<.01

Table 12 points towards all items contributing positively towards the total measure.

**Table 13** Correlation matrix of all the variables of the study (N=290)

Variables	1	2	3	4	5	6	7	8	9	10
1 SL		.97**	.87**	.95**	.45**	.47**	.33**	.38**	.39**	.33**
2 BFS	-		.81**	.87**	.45**	.47**	.32**	.37**	.38**	.31**
3 NRS	-	-		.76**	.41**	.45**	.34**	.35**	.36**	.36**
4 CTP	-	-	-		.42**	.45**	.30**	.35**	.37**	.31**
5 WE	-	-	-	-		.89**	.81**	.90**	.46**	.35**
6 VI	-	-	-	-	-		.56**	.74**	.41**	.33**
7 DED	-	-	-	-	-	-		.61**	.39**	.25**
8 AB	-	-	-	-	-	-	-		.41**	.32**
9 JP										.52**
10 JPS		-	-	-			-			

*Note.* \*\*p<0.01 SL=Self-leadership, BFS=Behaviour Focused Strategy, NRS=Natural Reward Strategy, CTP=Cognitive thought pattern, WE=Work Engagement, VI= vigour, DED=Dedication, AB= Absorption, JP=Job Performance, JPS= Supervisor ratings of job performance.

The table illustrates the correlation analysis between the subscales of the instruments and study variables. The findings indicate that the subdomains of the main study variables had positive correlations with one another. The range of the primary variables is between .33 and .45. Similarly, the subdomains of self-leadership had a substantial positive association with self-leadership, with correlation coefficients ranging from .87 to .97. The subdomains of work engagement had strong positive correlations with work engagement, ranging from .81 to .91. The job performance scale exhibited a substantial positive connection with the work performance supervisor scale, ranging from .32 to .41.

## **Discussion**

The questionnaires offered a comprehensive picture on the distribution of demographics and provided insight into the connections between factors, the reliability of the scales, and the correlations among items. The results demonstrate a normal distribution of scores within acceptable parameters. The alpha coefficients for the sub scales ranged from .78 to .84, indicating acceptable to good levels of reliability. Nunnally (1978) has proposed that a reliability coefficient of .70 is deemed adequate for research endeavors. A construct is considered credible if the alpha coefficient exceeds .70, as stated by Hair et al. (2013).

The sample comprised 290 healthcare personnel from various public and private facilities. The sample indicated that certain questions within the self-leadership measures were challenging to understand or had redundant content. To evaluate the internal consistency of the scales, item-total correlation, corrected item total correlation and alpha reliability analysis was performed using the Statistical Package for Social Sciences (SPSS 22). The overall reliabilities of the main scales and their subscales range from satisfactory to outstanding.

The correlation matrix demonstrates a statistically significant positive association between all variables. The findings of the correlational analysis among all the variables in the study align with the previous research.

## Results

## Multiple Regression Analysis

**Table 14** Multiple Regression Analysis of Behaviour Focused strategy, Natural Reward Strategy and Cognitive Thought Pattern (N=290).

JP	B	SE	$\beta$	t	p	95%CI	
						LL	UL
BFS	.01	.09	.01	.12	.90	-.16	.19
NRS	.67	.21	.29	3.07	.002	.23	1.09
CTP	.15	.12	.15	1.33	.18	-.07	.38
R=.44		$R^2=.19$		$\Delta R^2=.19$		F=21.1	

Note. JP=Job Performance, BFS=Behaviour Focused Strategy, NRS=Natural Reward Strategy, CTP=Cognitive Thought Pattern.

\*p<0.05.

Table 14 shows multiple regression analysis of Behaviour Focused Strategy, Natural Reward Strategy and Cognitive Thought pattern on job performance. Variance of 19% is shown by  $R^2$  for the outcome variable. The examination depicts Natural Reward Strategy significantly positively predicting job performance. Whereas Behaviour Focused Strategy and Cognitive thought pattern do not appear to predict job performance significantly.

## Mediation Analysis

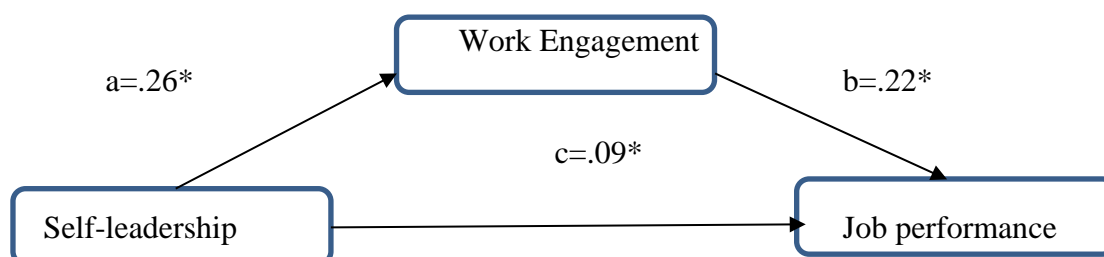
**Table 15** Mediating Role of Work Engagement in Relation between Self Leadership and Job Performance (N=290)

Predictors	JP			
	Model 1		Model 2	
	B		95%CI UL LL	
(Constant)	35.59*	23.29*	37.70	14.88
SL	.26*	.09*	.13	.05
WE		.22*	.29	.15
Indirect Effect SL → WE → JP		.05	.21	.08
R <sup>2</sup>	.26	.29		
F	12.50*	12.72*		
ΔR <sup>2</sup>		.20		
ΔF		9.09		

Note. CI=Confidence Interval, SL=Self-leadership, WE=Work Engagement, JP=Job performance.

\*p<0.05.

**Figure 6.** Role of Work Engagement as mediating in relation between Self-leadership and Job Performance among health care employees.



The above table and corresponding figure depict the association between the variables under study. Model 1 was calculated to analyze the role of work engagement as a mediator in the association between self-leadership and job performance. The influence of self-leadership on job performance was notably diminished when work engagement mediated in the relationship between self-leadership and job performance in the total effect stage with 20% variance. Increased variance in model 1 from 26% to 29% in model 2 confirms the influence of work engagement as a mediator between self-leadership and job performance. Therefore, this validates the existence of a partial mediating influence of work engagement.

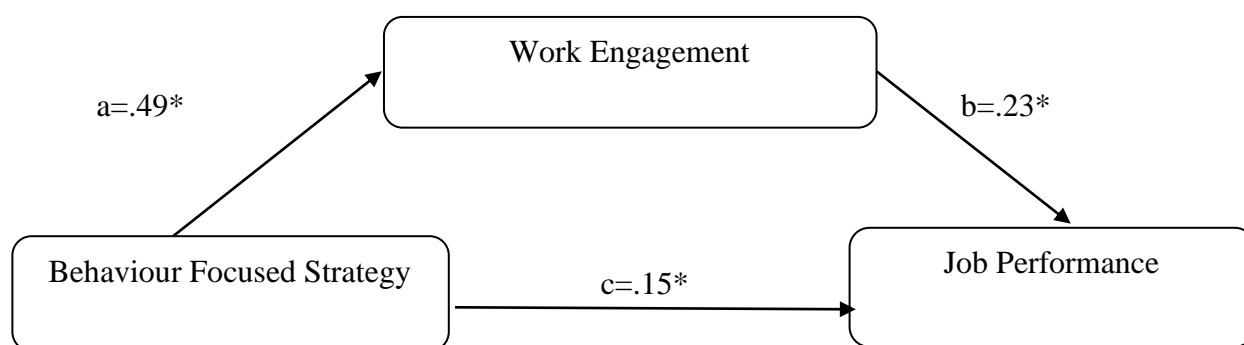
**Table 16** *Mediating Role of Work Engagement in Relation between Behavior Focused Strategy and Job Performance (N=290).*

Predictors	JP			
	Model 1	B	Model 2	
			95%CI	
			UL	LL
Constant	36.68 *	24.07*	35.52	15.62
BFS	.49*	.15*	.23	.06
WE		.23*	.30	.15
Indirect effect BFS → WE → JP		.11		
R <sup>2</sup>	.25	.28		
F	12.06*	12.11*		
ΔR <sup>2</sup>			.18	
ΔF			8.0	

Note. BFS=Behaviour Strategy, WE=Work Engagement, JP=Job Performance.

\*p<0.05.

**Figure 7.** *Mediating Role of Work Engagement in relation between Behavior Focused Strategy and Job Performance among health care employees.*



The table above and the corresponding figure indicate the mediating role of work engagement between behavior focused strategy and job performance. In model 1, it is apparent that the impact of behavior focused strategy on job performance is significant and positive. In model 2, the relationship between the three variables is significant and positive indicating the impact of work engagement as a mediating variable on dependent variable. Total effect, where only the behavior focused strategy predicts job performance has reduced variance i.e 18% from 28% in model 2 which confirms the presence of partial mediation. The indirect effect is also positively significant.



**Table 17** Mediating Role of Work Engagement in Relation between Natural Reward Strategy and Job Performance (N=290)

Predictors	JP			
	Model 1		Model 2	
	95% CI			
	B		UL	LL
Constant	40.84*	23.53*	53.15	28.53
NRS	1.41*	.58*	.84	.33
WE		.22*	.29	.14
R <sup>2</sup>	.23	.29		
Indirect Effect				
NRS → WE → JP		.31		
F	10.58*	13.30*		
ΔR <sup>2</sup>			.21	
ΔF			9.36	

Note. NRS=Natural Reward Strategy, WE=Work Engagement, JP=Job performance.

\*p<0.05.

**Figure 8.** Mediating Role of Work Engagement in relation between Natural Reward Strategy and Job Performance among health care employees.

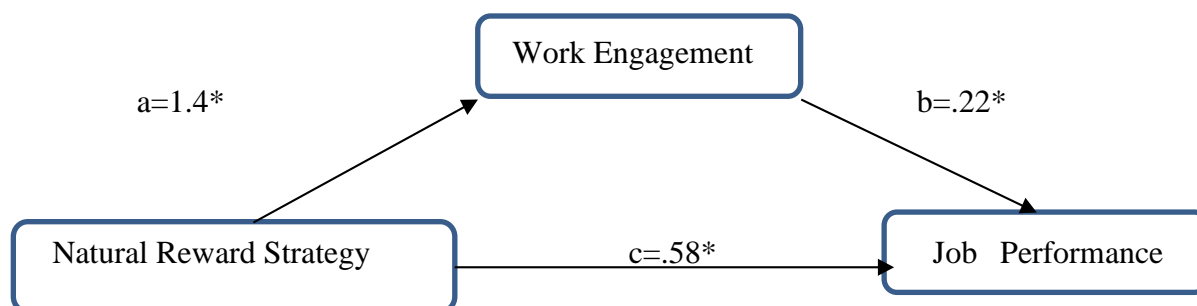


Table 17 shows the role of work engagement as a mediator between natural reward strategy and job performance among health care employees. Model 1 depicts positive effect of natural reward strategy on job performance as significant. The predicting effect of work engagement in model 2 is also positively significant on job performance. Partial mediation is evident because the indirect effect of the mediating variable on job performance is significant and positive. Also, the reduced variance from 29 in model 2 to 21 % in total effect model, points towards the significant predicting role of the mediating variable.

**Table 18** Mediating Role of Work Engagement in Relation between Cognitive Thought Pattern and Job Performance (N=290)

Predictors	JP			
	Model 1	Model 2		
	B	95% CI		
		UL	LL	
Constant	39.79*	24.05*	52.16	27.41
CTP	.64*	.22*	.81	.47
WE		.23*	.30	.15
Indirect Effect				
CTP → WE → JP		.15		
R <sup>2</sup>	.23	.28		
F	10.8*	12.45*		
ΔR <sup>2</sup>			.18	
ΔF			8.23	

Note. CTP=Cognitive Thought Pattern, WE=Work Engagement, JP=Job Performance.

\*p<0.05.

**Figure 9.** Mediating Role of Work Engagement in relation between Cognitive Thought Pattern and Job Performance among health care employees.

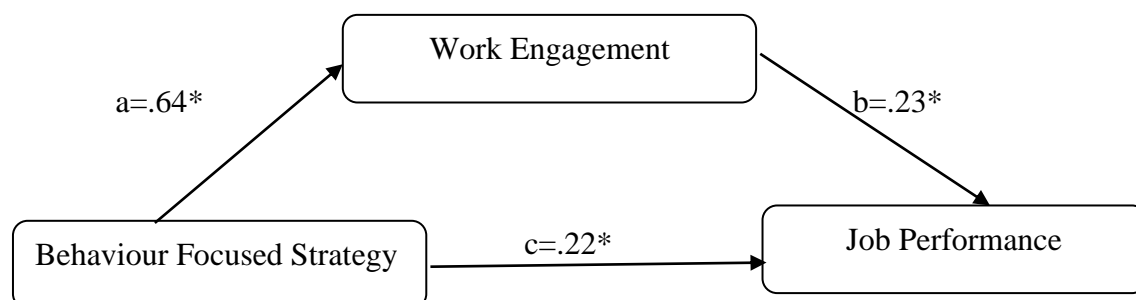


Table 18 shows the mediating role of work engagement between cognitive thought pattern and job performance. Model 1 indicates significant positive predicting affect of cognitive thought pattern on job performance, with 23% variance. Model 2 also describes significant positive relationship between the three variables, indicating positive significant mediating effect of work engagement. Lesser value of variance in total effect model i.e 18% signifies the predicting role of the mediating variable.

**Mean Difference**

Table 19 *Gender differences on Self-Leadership, Work Engagement and Job Performance*  
(*N=290*)

Variables	Men (n=107)		Women (n=183)		t(288)	p	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
<b>SL</b>	120.23	21.01	115	23.07	-.02	.09	-1.15	1.13	.15
BFS	66.03	11.63	63.56	12.75	1.56	.12	-.64	5.59	.15
CTP	43.19	8.30	41.15	8.91	1.87	.06	-.15	4.23	.17
NRS	18.48	3.66	18.12	4.11	.70	.48	-.64	1.35	.01
<b>WE</b>	70.02	12.93	67.10	14.74	1.69	.09	-.46	6.24	.20
VI	23.68	5.27	22.20	5.82	2.16	.03	.13	2.83	.26
DED	22.32	4.48	21.69	4.85	.43	.27	-.50	1.76	0.1
AB	24.02	5.20	23.22	6.02	1.14	.25	-.57	2.17	.12
<b>JP</b>	30.01	4.60	30.02	4.86	-.02	.98	-1.15	1.13	.02
<b>JPS</b>	29.40	5.14	29.52	6.16	-.17	.86	-1.51	1.26	.02

*Note.* VI=Vigor, DED=Dedication, AB=Absorption, BFS=Behaviour Focused Strategy, CTP=Cognitive Thought Pattern, NRS=Natural Reward Strategy, SL=Self-Leadership, WE=Work Engagement, JP=Job Performance.

\* $p < 0.05$ .

Table 19 depicts the findings of an independent sample t-test, run to relate self-leadership, work engagement and job performance for men and women. The table depicts no significant gender differences for self-leadership, job performance and work engagement. However, only vigor dimension of work engagement shows significant differences between the two genders, with men displaying more vigor than women do.

**Table 20***One-Way Analysis of Variance (ANOVA) between positions and research variables (N=290)*

Variables	Doctors (n=133)		Nurses (n=57)		Paramedic. Staff (n=46)		Trainees (n=54)		F(3,286)	p	$\eta^2$
	M	SD	M	SD	M	SD	M	SD			
VI	22.87	5.18	25.00	5.03	23.02	5.49	19.81	6.43	8.5*	.000	.08
DED	21.71	4.95	22.63	4.60	21.67	4.46	21.91	4.54	.56	.642	.01
AB	23.88	5.74	25.02	5.56	22.54	5.97	21.67	5.28	3.8*	.010	.04
WE	68.46	14.40	72.65	12.70	67.24	13.72	63.39	14.10	4.17	.006	.04
BFS	62.42	12.57	66.96	10.55	65.74	14.92	64.20	10.37	2.1	.100	.02
NRS	17.99	4.00	18.77	3.63	18.24	3.18	18.39	4.80	.54	.657	.10
CTP	40.50	9.17	43.45	7.17	43.87	6.55	41.11	10.36	2.8*	.043	.04
SL	130.75	24.68	121.19	19.91	127.85	28.70	123.70	19.04	2.1	.097	.02
JP	29.98	4.25	29.96	5.06	31.00	3.10	29.91	5.67	.66*	.57	.09
JPS	29.22	5.53	29.32	5.51	32.07	6.79	28.30	5.33	4.01	.008	.04

*Note.* VI=Vigor, AB=Absorption, BFS=Behaviour Focused Strategy, NRS=Natural Reward Strategy, CTP=Cognitive Thought Pattern, SL=Self-Leadership, WE=Work Engagement, JP=Job Performance., JPS=Job Performance Supervisor rating

\*p<0.05.

Table 20 indicates the mean differences of four positions i.e doctors, nurses, paramedical staff and trainees on self-leadership, job performance and work engagement. The findings reveal statistically significant mean differences on work engagement. Among work engagement and self-leadership subdomains, CTP, VI and AB dimensions show significant mean differences, with nurses and paramedic staff having higher means than that for other professionals. The Tukey post-hoc comparisons studied groups of positions that differed significantly for work

engagement, self-leadership and job performance. The pair wise comparisons for self-leadership, job performance and work engagement are shown in table 21:

**Table 21** *Tukey Kramer's for Mean Differences across various groups of positions in relation to research variables (N=290)*

Variables	(I)	(J)	MD (I-J)	SE	p	95%CI	
						LL	UL
VI	Doctors	Trainees	3.06	.881	.003	.78	-5.33
	Nurses	Trainees	5.18	1.03	.000	2.51	7.86
	Paramedics	Trainees	3.21	1.15	.019	.38	6.04
AB	Nurses	Trainees	3.35	1.07	.011	.57	6.13
WE	Nurses	Trainees	9.26	2.64	.003	2.43	16.09
CTP	Doctors	Nurses	-3.11	1.39	.11	-6.71	.48
		Paramedics	-3.53	1.50	.09	.36	.36
		Trainees	-.77	1.41	.94	2.89	2.89
	Nurses	Paramedics	-.41	1.74	.99	-4.92	-4.92
JPS	Doctors	Paramedics	-4.22	1.56	.037	-.18	-.18
	Paramedics	Trainees	4.86	1.83	.006	9.61	9.61

*Note.* VI=Vigor, AB=Absorption, WE=Work Engagement, CTP=Cognitive Thought Process, JPS=Job Performance Supervisor rating.

Post-hoc comparisons demonstrate no statistically significant differences among four position groups in self-leadership. Doctors and paramedical staff show significant difference on job performance supervisor ratings with paramedical staff reporting significantly higher scores than other groups. Nurses show higher significant difference with trainees on work engagement, vigor and absorption dimensions as compared to other professionals.

**Table 22** *One-Way Analysis of Variance (ANOVA) between various age groups and research variables (N=290)*

Variables	18-30years (n=176)		31-45years (n=67)		46-65years (n=19)		F(2,287)	$\eta^2$	
	M	SD	M	SD	M	SD	p		
VI	22.21	5.86	23.09	4.58	27.32	4.00	6.08*	.001	.06
DED	21.82	4.64	21.28	4.37	25.37	3.83	6.78*	.002	.05
AB	23.05	5.43	23.67	5.33	28.16	4.68	7.14*	.001	.06
WE	67.08	13.74	68.04	11.98	80.84	11.53	8.37*	.000	.07
BFS	63.74	12.48	64.55	12.47	70.89	9.53	3.35	.057	.06
NRS	18.16	3.80	17.94	4.35	20.16	3.50	2.97	.085	.02
CTP	41.77	8.34	41.66	9.98	43.95	7.68	.86	.568	.00
SL	116.27	21.97	116.91	24.30	126.74	17.96	2.4	.153	.01
JP	29.79	4.20	30.14	5.11	33.36	4.60	6.40*	.002	.04
JPS	29.19	4.91	28.92	5.69	34.62	10.16	9.32*	.000	.06

*Note.* VI=Vigor, DED=Dedication, AB=Absorption, BFS=Behaviour Focused Strategy, CTP=Cognitive Thought Pattern, NRS=Natural Reward Strategy, WE=Work Engagement, SL= Self-Leadership, JP=Job performance, JPS=Job Performance supervisor rating

\* $p < 0.05$ .

Table 22 demonstrates average differences of three age groups i.e., 1=1-30 years, group 2=31-45years, group 3=46-65years with respect to self-leadership, job performance and work engagement respectively. The results revealed statistically significant mean differences on overall work engagement, its dimensions and job performance. The effect sizes are medium for different age groups, but statistically not significant mean differences on self-leadership. Participants in the age group 46-65 show greater mean differences as compared to those in other age groups on all three variables and their dimensions. Examination of Tukey post-hoc comparisons reveal age groups differing significantly for self-leadership, work engagement and job performance. The pair wise comparisons for self-leadership, work engagement and job performance given in table 23 are as follows:



**Table 23** Tukey Kramer's for Mean Differences across various age groups in relation to study variables(N=290)

Variables	(I)	(J)	MD (I-J)	SE	p	95% CI	
						LL	UL
VI	18-30	31-45	-.879	.783	.500	-2.72	.97
		46-65	-5.106*	1.316	.000	-8.21	-2.00
	31-45	46-65	-4.226*	1.417	.009	-7.57	-.89
DED	18-30	31-45	.540	.650	.684	-.99	2.07
		46-65	-3.545*	1.093	.004	-6.12	-.97
	31-45	46-65	-4.085*	1.177	.002	-6.86	-1.31
AB	18-30	31-45	-.626	.769	.695	-2.44	1.19
		46-65	-5.112*	1.294	.000	-8.16	-2.06
	31-45	46-65	-4.486*	1.393	.004	-7.77	-1.20
WE	18-30	31-45	-.965	1.890	.866	-5.42	3.49
		46-65	-13.763*	3.180	.000	-21.26	-6.27
	31-45	46-65	-12.797*	3.422	.001	-20.86	-4.73
BFS	18-30	31-45	-.814	1.766	.890	-4.98	3.35
		46-65	-7.156*	2.970	.044	-14.16	-.15
	31-45	46-65	-6.342	3.197	.118	-13.88	1.19
JP	18-30	31-45	-.586	1.227	.882	-3.48	2.31
JPS	18-30	46-65	-8.803*	2.063	.000	-13.67	-3.94
		31-45	46-65	-8.217*	2.221	.001	-13.45

Note. VI=Vigor, DED=Dedication, AB=Absorption, BFS=Behaviour Focused Strategy, WE=Work Engagement, JP=Job performance Supervisor rating.

The Tukey post-hoc comparisons depict statistically significant difference between two age groups in work engagement and job performance i.e., between 18years-30years and 46years-65years; and between 31years-45years and 46 years and 65 years respectively. The latter age groups also show significant difference on VI and AB. No statistically significant difference among three age groups in case of self-leadership are reported. However, BFS, JP and JPS do show significant differences for age groups 46-65 years.

**Table 24**

*One-Way Analysis of Variance (ANOVA) between various education levels and research variables (N=290)*

Variables	Matric/ Intermediate (n=16)		Undergrade (n=35)		Graduate (n=64)		Postgraduate (n=175)		F(3,286)	$\eta^2$	
	M	SD	M	SD	M	SD	M	SD	p		
VI	23.00	5.97	23.91	4.52	24.55	5.61	21.83	5.70	4.34*	.005	.04
DED	21.75	4.29	21.86	5.45	22.80	4.36	21.63	4.74	.96	.410	.01
AB	23.20	6.14	23.09	6.52	24.94	5.65	23.05	5.54	1.77	.152	.02
WE	67.94	14.68	68.86	14.78	72.30	13.24	63.57	14.09	2.68*	.047	.03
BFS	64.50	11.23	61.11	12.62	67.42	10.42	63.57	13.03	2.33	.074	.02
NRS	18.00	3.39	17.34	4.26	18.92	3.16	18.15	4.18	1.38	.250	.01
CTP	42.06	8.29	39.51	8.73	44.52	7.21	41.00	9.31	3.30*	.021	.03
SL	125.38	20.98	117.97	23.72	130.86	19.93	122.71	25.25	2.71*	.045	.03
JP	30.60	5.29	30.08	4.43	30.08	4.48	30.81	5.00	.40	.803	.01
JPS	27.94	5.37	31.03	7.01	29.01	5.22	29.92	5.98	2.13	.076	.03

*Note.* VI=Vigor, DED=Dedication, AB=Absorption, BFS=Behaviour Focused Strategy, CTP=Cognitive Thought Pattern, NRS=Natural Reward Strategy, SL=Self-Leadership, WE=Work Engagement, JP=Job performance, JPS=Job Performance Supervisor rating.

\* $p < 0.05$ .

Table 24 demonstrates the differences in means of five education levels i.e., matric/intermediate, undergraduate, postgraduate, specialization on self-leadership, work engagement and job performance. The results demonstrate statistically significant difference for vigor, work engagement; cognitive thought pattern and overall self-leadership with small effect size, with graduates showing higher means as compared to other education groups. Other variables showed non-significant group differences.

**Table 25** Tukey Kramer's for Mean Differences across various education levels in relation to study variables (N=290)

Variables	(I)	(J)	MD			95% CI		
			(I-J)	SE	p	LL	UL	
VI	Intermediate	2 undergraduate	-.97	2.07	.990	-6.68	4.73	
		3 graduate	-1.53	1.87	.924	-6.68	3.60	
		4 post graduate	1.42	1.79	.932	-3.51	6.37	
		5 specialization	.86	1.96	.992	-4.52	6.25	
		3 graduate	-.56	1.34	.993	-4.25	3.12	
	Undergraduate	4 post graduate	2.40	1.23	.300	-1.00	5.81	
		5 specialization	1.84	1.46	.718	-2.18	5.86	
		4 post graduate	2.72*	.85	.005	.63	5.30	
	Graduate	5 specialization	2.40	1.15	.229	-.76	5.57	
		5 specialization	-.56	1.03	.983	-3.39	2.27	
	CTP	Intermediate	2 undergraduate	-.41	5.10	1.000	-14.45	13.62
			3 graduate	-3.79	4.60	.923	-16.44	8.85
			4 post graduate	1.95	4.42	.992	-10.20	14.11
			5 specialization	.80	4.82	1.000	-12.44	14.05
			3 graduate	-3.38	3.30	.844	-12.45	5.69
Undergraduate		4 post graduate	2.36	3.04	.937	-6.01	10.74	
		5 specialization	1.21	3.60	.997	-8.67	11.11	
		4 post graduate	5.75*	2.08	.049	.01	11.49	
graduate		5 specialization	4.60	2.83	.484	-3.19	12.39	
		5 specialization	-1.14	2.53	.991	-8.12	5.82	
CTP		Intermediate	2 undergraduate	1.95	3.27	.976	-7.05	10.95
			3 graduate	-1.38	2.95	.990	-9.49	6.72
			4 post graduate	2.30	2.83	.927	-5.49	10.09
			5 specialization	2.88	3.09	.884	-5.61	11.38
			3 graduate	-3.34	2.11	.512	-9.15	2.47
	Undergraduate	4 post graduate	.348	1.95	1.000	-5.02	5.72	
		5 specialization	.931	2.30	.994	-5.41	7.27	
		4 post graduate	3.68*	1.33	.049	.01	7.37	
	Graduate	5 specialization	4.27	1.81	.133	-.72	9.27	
		5 specialization	.583	1.62	.996	-3.88	5.05	

WE	Intermediate	2 undergraduate	-.413	5.109	1.000	-14.45	13.62
		3 graduate	-3.795	4.602	.923	-16.44	8.85
		4 post graduate	1.955	4.424	.992	-10.20	14.11
		5 specialization	.806	4.822	1.000	-12.44	14.05
	Undergraduate	3 graduate	-3.382	3.300	.844	-12.45	5.69
		4 post graduate	2.368	3.048	.937	-6.01	10.74
		5 specialization	1.219	3.601	.997	-8.67	11.11
	graduate	4 post graduate	5.750*	2.088	.037	.01	11.49
		5 specialization	4.601	2.835	.484	-3.19	12.39
	postgraduate	5 specialization	-1.149	2.536	.991	-8.12	5.82

*Note.* VI=Vigor, CTP=Cognitive Thought Pattern, WE=Work Engagement.

The pair wise comparisons depict significant group differences only between graduates and postgraduates on vigour dimension and cognitive thought pattern. Rest of the variables showed group differences which were not significant.

**Table 26** One-Way Analysis of Variance (ANOVA) between total work experience and research variables (N=290)

Variables	Upto 10years (n=215)		11-20years (n=39)		21-33 years (n=8)		F(2,287)	p	$\eta^2$
	M	SD	M	SD	M	SD			
VI	22.40	5.71	24.56	4.77	25.13	3.79	4.76*	.041	.05
DED	21.76	4.59	22.69	4.77	23.25	4.36	2.14	.367	.01
AB	23.33	5.60	24.46	4.74	26.25	5.62	4.32	.213	.02
WE	67.49	13.80	71.62	11.85	74.63	12.72	3.21	.090	.03
BFS	63.75	12.47	67.28	12.23	70.00	7.05	3.34	.115	.02
NRS	18.181	3.86	18.26	4.63	20.25	2.12	1.99	.348	.01
CTP	41.64	8.68	42.90	9.50	44.00	6.12	1.25	.560	.03
SL	118.10	19.94	116.09	17.82	123.39	18.96	2.43	.256	.02
JP	29.91	4.44	30.64	5.00	33.00	4.64	2.53	.008	.05
JPS	29.11	5.00	30.14	5.87	37.22	14.72	9.25*	.000	.09

*Note.* VI=Vigor, DED=Dedication, AB=Absorption, BFS=Behaviour Focused Strategy, CTP=Cognitive Thought Pattern, NRS=Natural Reward Strategy, SL=Self-Leadership, WE=Work Engagement, JP=Job Performance, JPS=Job Performance Supervisor rating.

\* $p < 0.05$ .

Table 26 indicate the mean differences of three groups of total work experience. Results show statistically significant difference for vigor and job performance supervisor rating, where eta square  $\eta^2$  reflects small effect size for vigor and large effect size for job performance. Total experience group of 21-33years have the higher means among other groups. The pair wise comparisons for self-leadership, job performance and work

engagement, given in table 27 are only for those variables which showed significant group differences:

**Table 27** Tukey Kramer's for Mean Differences across total work experience in relation to study variables (N=290)

Variables	(I)	(J)	MD (I-J)	SE	p	95% CI	
						LL	UL
<b>VI</b>							
	Upto 10years	11 -20 years	-2.38*	.936	.035	-4.45	.13
		21 -33 years	-2.725	1.995	.360	-7.43	1.98
	11-20 years	21-33 years	-.561	2.151	.963	-5.63	4.51
<b>JPS</b>	Upto 10 years	11-20 years	-1.796	1.505	.458	-5.34	1.75
		21-33 years	-10.165*	3.114	.004	-17.51	-2.82
	11-20years	21-33years	-8.369*	3.357	.035	-16.28	-.46

*Note.* VI=Vigor, JP=Job performance Supervisor rating.

Tukey post-hoc comparisons indicate difference of total work experience on job performance as statistically significant i.e., between Upto10 years and 11years -20years; between11 years-20years and 21years-33years with  $p=.004$  and  $p=.035$  respectively on JPS. No statistically significant differences among three work experience groups in case of self-leadership exist. Only VI as dimension of work engagement showed significant results for the groups Upto 10 years and 11years-20 years.

**Table 28** One-Way Analysis of Variance (ANOVA) between status in organization and research variables (N=290)

Variables	public (n=195)		private (n=85)		both (n=10)		F(2,287)	η <sup>2</sup>	
	M	SD	M	SD	M	SD		p	
VI	22.08	5.40	24.32	5.74	22.30	7.73	4.13	.009	.03
DED	21.86	4.67	21.99	4.92	22.60	4.42	.13	.88	.00
AB	23.13	5.86	24.57	4.76	27.10	4.27	3.83*	.023	.02
WE	67.08	14.34	72.05	12.06	77.00	12.92	4.32	.065	.03
BFS	63.69	13.15	66.26	9.62	71.40	15.92	3.67*	.027	.02
NRS	18.14	4.19	18.76	3.17	16.20	4.82	2.14	.119	.01
CTP	41.02	9.34	43.55	7.15	38.00	10.66	3.35*	.036	.02
SL	122.85	25.32	128.58	18.78	110.00	30.19	3.53*	.031	.02
JP	29.83	4.57	31.12	4.39	27.50	4.22	4.12*	.017	.03
JPS	29.28	6.27	30.27	4.63	27.56	4.41	1.39	.249	.01

*Note.* VI=Vigor, DED=Dedication, AB=Absorption, BFS=Behaviour Focused Strategy, CTP=Cognitive Thought Pattern, NRS=Natural Reward Strategy, SL=Self-Leadership, WE=Work Engagement, JP=Job performance, JPS=Job Performance Supervisor rating.

\*p<0.05.

Table 28 indicates the mean differences of three groups of status of organization depicting statistically significant difference for job performance and for self-leadership where eta square η<sup>2</sup> reflects small effect size for self-leadership and job performance respectively. AB, BFS and CTP also show significant results. Participants in private organizations reported significantly higher levels for SL, CTP and JP. Whereas, AB and BFS had significant results for the ‘both’ category. The Tukey post-hoc comparisons for self-leadership, job performance and work engagement are given in table 29 for only those variables which demonstrated significant group differences.



**Table 29** Tukey Kramer's for Mean Differences across Status of Organization in relation to research variables (N=290)

Variables	(I)	(J)	MD (I-J)	SE	p	95% CI	
						LL	UL
AB	public	private	-1.86*	.74	.03	-3.60	-.11
CTP	public	private	-.21	.09	.09	-.44	.01
SL	private	both	18.57*	7.95	.05	-.15	37.31
JP	public	private	-.15	.07	.08	-.33	.02
	private	both	.42*	.10	.04	-.03	.87
BPS	private	both	10.46*	4.12	.03	-20.17	-.75

*Note.* AB=Absorption, BFS=Behaviour Focused Strategy, CTP=Cognitive thought pattern, SL=Self-Leadership, JP=Job performance.

The pair wise comparisons for self-leadership, work engagement and job performance reveal significant group differences between public and private on only AB dimension of work engagement. Likewise, BFS reveal significant difference between public and private organization. So does SL and JP.

**Table 30** One-way Analysis of Variance (ANOVA) of differences between experience in the present organization and research variables (N=290)

Variables	Upto 15years (n=260)		16year-25years (n=23)		26years-35years (n=7)		F(2,287)	p	$\eta^2$
	M	SD	M	SD	M	SD			
VI	22.50	5.77	24.35	3.82	26.7	14.75	2.92*	.05	.02
DED	21.72	4.77	23.35	3.67	24.86	4.70	2.67	.07	.02
AB	23.32	5.80	24.73	4.71	28.43	5.71	2.74	.06	.02
WE	67.53	14.31	71.43	10.18	80.00	14.08	3.37*	.03	.02
BFS	63.59	12.44	69.09	12.52	69.71	6.47	2.81	.06	.02
CTP	3.46	8.90	3.62	9.29	3.58	6.13	.60	.38	.02
NRS	3.63	.77	3.74	.97	4.14	.46	1.52	.22	.01
SL	123.21	23.97	131.13	25.51	133.43	14.52	1.70	.18	.02
JP	30.01	4.53	30.87	4.65	32.14	5.17	1.07	.343	.04
JPS	29.25	5.08	30.17	6.05	37.43	16.99	7.24*	.001	.01

*Note.* VI=Vigor, DED=Dedication, AB=Absorption, WE=Work Engagement, BFS=Behaviour Focused Strategy, CTP=Cognitive Thought Pattern, NRS=Natural Reward Strategy, JP=Job performance, JPS=Job Performance Supervisor rating.

\*p<0.05

Table 30 demonstrate the mean differences of three groups of experience in the organization on all three variables. Results depict statistically significant difference for job performance supervisor rating and work engagement, where eta square  $\eta^2$  reflects small effect size.

Experience group 26-35 years show higher means as compared to other work groups. Only

the Tukey post-hoc comparisons for variables with non-significant group differences are reported as follows:

**Table 31** *Tukey Kramer's for Mean Differences across groups of experience in the organization (current) in relation to research variables (N=290)*

Variables	(I)	(J)	MD	SE	p	95% CI	
			(I-J)			LL	UL
WE	26years-35years	Upto 15 years	12.46*	5.377	.055	-.20	25.13
VI	Upto 15years	16years-25years	-1.85	1.22	.28	-4.7	1.03
		26years-35years	-4.21	2.15	.12	.93	.86
JPS	26years-35years	16years-35years	2.36	2.43	.009	-3.36	8.09
	Upto-15years	26years-35years	-1.03*	.272	.001	-1.67	-.39

*Note.* WE=Work Engagement, VI=Vigor, JP=Job performance Supervisor rating.

The pair wise comparisons for self-leadership, work engagement and job performance show no significant group differences for self-leadership but work engagement and job performance supervisor rating demonstrate significant difference between Upto 15years and 26-35years, with the latter group showing higher mean as compared to the other group.

### Additional findings

The study investigates the relationship between various types of work engagement and self-leadership strategies. Therefore, this analysis examines the effects of self-leadership techniques, specifically natural reward, behavior focused strategy and cognitive thought processes, on work engagement, specifically in terms of vigor, devotion, and absorption.

**Table 32** Hierarchical Regression analysis for predicting Vigor (N=290)

Variables	B	95% CI		SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
		LL	UL				
Step 1						.11	.11
(constant)	3.8	21.56	31.61	2.55			
Designation	-.11	-1.42	-.25	.29	-.14		
Gender	-.24	-3.22	-.50	.68	-.12		
Age	-.11	.09	2.82	.69	.07		
Education	-.09	-1.59	-.14	.36	-.08		
Total exp.	.17	-1.93	2.13	1.03	.08		
Exp in Org	.15	-1.80	2.80	1.16	.06		
Status of Org.	.07	-.17	2.36	.64	.15		
Step 2						.31	.20
Designation	-1.06	-1.57	-.55	.26	-.18		
Gender	-1.24	-2.43	-.05	.60	-.12		
Age	1.10	-.09	2.29	.60	.05		
Education	-.81	-1.44	-.17	.32	-.10		
Total Exp.	-.15	-1.92	1.62	.90	.04		
Exp. in Org	.15	-1.85	2.16	1.0	.05		
Status of Org	.78	-.32	1.88	.56	.13		
BF	.25	-.21	.71	.23	.29		
NR	.10	-.32	.54	.22	.01		
CT	.18	-.30	.66	.24	.18		

Note. BFS=Behaviour Focused Strategy, NR=Natural Reward, CTP=Cognitive Thought Pattern.

\*p<0.001, \*p<0.05.

Table 32 shows the impact of Behaviour Focused strategy, Cognitive thought patterns and Natural reward strategy on vigor dimension of work engagement after controlling for demographics in the first step. Initially, the  $R^2$  value of .11 exhibited that the demographics determined 11% variance in the vigor. The findings revealed that these demographics positively predicted vigor. The  $R^2$  value of .31 reveal that BFS, CTP, NRS and demographics explain 31% variance in the vigor dimension. The findings reveal that BFS, CTP, NRS positively predicted vigor.

**Table 33** Hierarchical Regression analysis for predicting Dedication (N=290)

Variables	B	95%CI		SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
		LL	UL				
Step 1						.13	.11
(constant)	26.58	21.56	31.61	2.51			
Designation	-.83	-3.22		.29	-.17		
Gender	-1.86	-3.22	-.50	.68	.16		
Age	1.46	.09	2.82	.69	-.15		
Education	-.86	-1.59	-.14	.36	.00		
Total Exper.	.10	-1.9	2.13	1.03	.03		
Exp. in Org	.50	-1.80	2.80	1.16	.10		
Status of Org	1.09	-.17	2.36	.64	.10		
Step 2	13.40	8.20	18.59	2.63		.35	.33
Designation	-1.06	-1.58	-.55	-1.06	.01		
Gender	-1.23	-2.41	-.04	-.10	-.06		
Age	1.09	-.09	2.28	.122	.04		
Education	-.81	-1.45	-.18	-.14	-.01		
Total Exper.	-.15	-1.92	1.61	-.01	.02		
Exp. in Org	.16	-1.84	2.16	.01	.01		
Status of Org	.76	-.33	1.86	.07	.04		
BFS	.02	.048	.26	.34	.01		
NR	1.53	-.21	.27	.02	.27		
CT	.02	-.05	.22	.13	.06		

Note. BFS=Behaviour Focused Strategy, NR=Natural Reward, CTP=Cognitive Thought Pattern.

\*p<0.001; \*p<0.05.

Table 33 shows the impact of Behaviour Focused strategy, Cognitive thought patterns and Natural reward strategy on dedication dimension of work engagement after controlling for demographics in the first step. In step 1, the  $R^2$  value of .13 declared that the three strategies confirmed 13% variance in the dedication. The findings revealed that the demographics positively predicted dedication. In the next step the  $R^2$  value of .35 revealed that BFS, CTP, NRS explained 35% in the dedication dimension hence demonstrating positive prediction of dedication.

**Table 34** Hierarchical Regression analysis for predicting Absorption (N=290)

Variables	B	CI 95%		SEB	$\beta$	R2	$\Delta R2$
		LL	UL				
Step 1						.06	.04
(Constant)	3.6			.40			
Designation	-.09	-.19	.00	.04	-.12		
Gender	-.13	-.35	.09	.11	-.06		
Age	.19	-.03	.42	.11	.12		
Education	.00	-.11	.12	.06	.00		
Total. Exp	.09	-.25	.43	.17	.04		
Exp in the Org	.09	-.28	.47	.19	.04		
Status of Org.	.18.18	-.02	.38	.10	.10.10		
Step 2	1.93			.44		.20	.17
Designation	-.12	-.21	-.03	.04	-.15		
Gender	-.06	-.28	.14	.10	-.03		
Age	.16	-.05	.37	.10	.10		
Education	-.00	-.12	.11	.06	-.01		
Total. Exp.	.02	-.29	.34	.16	.01		
Exp. In the org	.04	-.30	.39	.17	.02		
Status of org	.15	-.03	.34	.09	.09		
BFS	.01	-.00	.03	.17	.20		
NR	.29	-.01	.07	.11	.13		
CT	.01	-.01	.03	.14	.07		

Note. BFS=Behaviour Focused Strategy, NR=Natural Reward, CTP=Cognitive Thought Pattern,

\*p<0.001; \*p<0.05

Table 34 shows the impact of Behaviour Focused strategy, Cognitive thought patterns and Natural Reward strategy on absorption dimension of work engagement after controlling for demographics in the first step. In step 1, the R<sup>2</sup> value of .06 revealed that the demographics explained 6%



variance in absorption. The findings revealed that the demographics positively predicted absorption. In step 2, the  $R^2$  value of .20 revealed that BFS, CTP, NRS explained 20% variance in the absorption dimension revealing positive predictability of dimension aspect of work engagement.

**Table 35** Hierarchical Regression analysis for predicting overall Work Engagement (N=290)

Variables	B	95%CL		SEB	B	R2	$\Delta R2$
		LL	UL				
Step 1						.07	.05
(constant)	3.78	3.09	4.47	.35			
Designation	-.06	-.14	.01	-.06	-.09		
Gender	-.17	-.37	.02	-.11	-.10		
Age	.13	-.06	.33	.13	.10		
Education	-.03	-.13	.07	-.03	-.03		
Total Exp	.11	-.18	.40	.10	.06		
Exp in the Org	.16	-.16	.48	.16	.07		
Status of org	.18	.00	.35	.18	.12		
Step 2	2.10	1.36	2.83	.35		.26	.23
Designation	-.09	-.16	-.02	.04	-.13		
Gender	-.11	-.28	.06	.10	-.06		
Age	.10	-.07	.28	.10	.08		
Education	-.04	-.13	.05	.05	-.04		
Total Exp	.04	-.22	.31	.13	.03		
Exp in the Org	.11	-.17	.40	.14	.05		
Status of org	.15	-.00	.31	.08	.09		
BFS	.24	-.04	.52	.14	.10	.25	
NR	.15	-.03	.33	.09	.01	.11	
CTP	.13	-.10	.37	.12	.07	.14	

Note. BFS=Behaviour Focused Strategy, NR=Natural Reward, CTP=Cognitive Thought Pattern.

$p^* < 0.001$ ;  $p^* < 0.05$

Table 35 shows the impact of Behaviour Focused strategy, Cognitive thought patterns and Natural reward strategy on work engagement after controlling for demographics in the first step. As a first step, the  $R^2$  value of .07 revealed that the demographics explained 7% variance in work engagement, thus positively predicting work engagement. In step 2, the  $R^2$  value of .26 revealed that BFS, CTP, NRS explained 26% variance in work engagement. The findings revealed that all three strategies positively predicted work engagement.

### Discussion

The goal of this study was to investigate the direct and indirect connections between self-leadership, job performance and work engagement along with the correlations among different characteristics of self-leadership, job performance and work engagement. The study further examined the impact of self-leadership tactics on several aspects of work engagement, yielding significant conclusions. The findings indicated a substantial and measurable connection between self-leadership, work engagement, and job performance. There was statistically significant correlation between the behavior centered strategy and job performance. The natural reward strategy and cognitive thought patterns elements of self-leadership, both direct and indirect, showed a substantial positive correlation with job performance.

The initial hypothesis posited a favourable link between self-leadership and job performance among healthcare employees. Additionally, the first hypothesis posits that the behavior-focused strategy, natural reward strategy, and cognitive thought patterns would each have a positive connection with job performance. The present study's findings corroborate previous research, demonstrating a significantly positive relationship between self-leadership and work performance. This further supports the assertions made by Marques-Quinteiro et al. (2019) and Alnakhli et al. (2020) that self-leadership strategies enable employees to adjust to situations and enhance their performance. Current research on self-leadership has primarily examined the comprehensive three-dimensional concept of self-leadership (Konradt et al., 2009). Alternatively, it has explored either cognitive strategies related to thought patterns (Houghton & Jinkerson, 2007) or behavioural strategies (Elloy, 2008) including their ability to predict individual job performance and subjective wellbeing.

Previous studies have indicated that self-leadership among nurses in general hospitals places a significant positive impact on job performance, job satisfaction and individual performance.

This suggests the need to enhance self-leadership among nurses in multiple nursing fields and effectively adapt to alterations in organizational environments in order to optimize job performance (Seomun et al., 2006; Seomun, 2005). However, noteworthy is the fact that this research is limited in scope, as it only includes doctors and paramedical staff as part of the sample.

Porat and Batman (2006) discovered in a separate investigation that self-regulated activities serve as a mediator between performance-oriented methods, learning and work performance in longitudinal contexts. These conclusions question the assumption that self-governing behaviours alone, without considering motivations and cognitions, can result in beneficial work outcomes such as innovation, job satisfaction and job performance. All three tactics, namely behavior-focused, thought pattern and behavior focused strategies, have a substantial effect on job performance. Behavioural thought pattern techniques bear similarities to fundamental self-regulatory and self-managing behaviours, which play a role in regulatory processes. However, motivational and cognitive aspects of regulatory functions are cognitive thought pattern and natural reward strategy respectively. The strength, dynamics and impact of behavioural regulatory functions on performance outcomes are interactively influenced by them (Belschak, 2010; Neck & Manz, 2010 as cited in Belschak, 2010).

While there is strong evidence supporting the idea that employee engagement in their work leads to positive outcomes and plays as a mediating variable between different job, personal, and social resources and these outcomes, the scope with which work engagement plays a mediating role in these relationships has not been adequately investigated. The second hypothesis of this study is to examine the function of work engagement by proposing that it acts as a mediator in the relation between job performance and self-leadership. In addition, the subdivisions of the second hypothesis propose that behavior-focused tactics, natural reward strategies, and cognitive thinking

patterns of self-leadership each independently moderate the connection between job performance and work engagement. The findings demonstrated a noteworthy kind of mediation, suggesting that the connection between self-leadership and job performance is not direct, but rather influenced by work engagement. Hence, the data obtained from this study substantiate the hypothesis that work engagement serves as a mediating role in the correlation between resources and outcomes. These findings are in congruence with prior research that has demonstrated how work engagement acts as a mediator in the relationship between self-leadership, its many aspects, and job performance. The aim of this study was to investigate the influence of self-leadership methods employed by healthcare personnel on work engagement and job performance. Additionally, the study aimed to determine the mediating effect of work engagement between job performance and self-leadership strategies. The study examined the elements of self-leadership, including the behavior-focused approach, natural reward system and cognitive thought pattern. It also investigated how these elements are associated with job performance, work engagement and its components, including vigour, absorption and dedication. Analyzing the role of job engagement in challenging working situations is vital due to its significance for sustainability and organizational development.

This emphasizes the notion that work engagement is a fundamental psychological phenomenon that links environmental and personal resources with performance. Gomes et al. (2015) found that job engagement acts as an intermediary in the connection between self-leadership and individual creativity. Nevertheless, in this research, work engagement acted as a mediator in the connection between self-leadership and job success. On the basis of the results of the mediation analysis, it was determined that personal resources, namely self-leadership tactics, had a favourable relationship with work engagement. These findings validate and broaden prior research that has recognized personal resources and job as important factors in predicting work engagement. The JD-R model suggests that job resources contribute to employees' work engagement by means of a motivating process. However, the enlarged JD-R model, which includes personal resources along

with job resources, places even more importance on the role of personal resources. Put simply, personal resources, which enhance individuals' favourable self-assessments, ultimately result in the enhancement of individuals' work-related welfare. This idea is relevant to the current investigation as it provides evidence for the material pathway. This concept is further reinforced by the broaden-and-build hypothesis of happy emotions (Fredrickson, 2004). Positive emotions enhance an individual's cognitive flexibility, leading to a more expansive and inclusive outlook. This, in turn, fosters the growth of personal capabilities and favourable attitudes towards work, finally resulting in increased levels of energy.

In a study, it was postulated that the components comprising self-leadership exhibit a positive correlation with the various dimensions of work engagement when considered individually. The weak yet significantly positive relationship observed between different self-leadership strategies and dimensions of work engagement can be elucidated by both the Self-Determination Theory (Gagne &Deci, 2005) and the theory of self-leadership (Stewart et al., 2011). The Self-Determination Theory expounds upon the motivational process that spans from calculated to self-regulated motivation. On the contrary, the theory of self-leadership delves into the process of self-influence, encompassing the transition from less control to more control over the what, why, and how. This observation is corroborated by the positive direct relationship found between work engagement as a whole and self-leadership, as well as the positive direct relationship between various leadership strategies and work engagement. Nevertheless, there are a few exceptions, such as moderate positive relationships between certain self-leadership strategies and specific domains of work engagement, particularly the vigor dimension, wherein all three self-leadership strategies are implicated. The study done by Harunavamwe et al. (2020) posited that self-leadership serves as a catalyst to work engagement is similar to the positive relationship between self-leadership and work engagement.

In addition, by utilizing the Conservation of Resources (COR) idea, employees have access to a variety of resources, both connected to their work and unrelated, that they can use to address the demands of their work environment. By investing in the development or utilization of these resources, employees contribute to the accumulation of more resources. As a result, when employees have a large amount of these resources, they form what is referred to as resource caravans (Hobfoll, 2001). Furthermore, it has been proposed that the use and efficiency of resources depend on the specific circumstances (Halbesleben, 2006). When employees have easy access to important workplace resources, their level of involvement is likely to increase. This can lead to them effectively utilizing their current resources and even developing new ones (Gorgievski & Hobfoll, 2008). This undertaking results in advantageous organizational outcomes in the form of enhanced performance (Hobfoll, 2002). When considering our proposed mediation model, it is argued that creating a stimulating and interesting learning environment, where employees have access to a variety of resources, promotes high levels of engagement. As a result, this increased involvement stimulates proactive, innovative, and flexible performance behaviours, while also promoting the exchange of knowledge. Therefore, based on the COR theory (Hobfoll, 2001), it is expected that the perceived learning environment affects employees' extra-role performance through the simultaneous allocation of personal resources, as demonstrated by the motivating process of employee engagement.

In addition, the impact of demographic variables (i.e age, gender, education, total experience, experience in the organization, status of organization) was also studied in relation to self-leadership, work engagement and job performance.

The health care employees' performance, particularly that of the paramedics and those with 21-30 years of experience, is significantly influenced by various general characteristics, including total work experience, experience in the organization, and positions held. These findings do not align with the study on nurses mentioned earlier. The performance of job and the quality of nursing



service are closely connected to the organizational effectiveness of the hospital, as stated by Soyoung Yu (2016). The results might be ascribed to the fundamental idea of self-leadership, which proposes that internal motivation and self-control are influenced by demanding organizational norms, as explained by Neck and Houghton (2006). The notion of inherent drive and self-regulation in self-leadership is consistent with the principles of social cognitive theory (Bandura, 2008) and intrinsic motivation (Miller et al., 1988). These ideas propose that self-leaders are motivated, directed, and influenced by themselves, which in turn leads them to participate in behaviours that improve their performance. In the context of Pakistan, health care workers are generally motivated by external factors and perform their tasks based on what is expected of them. This is true for doctors and other paramedical staff, but not for nurses. Doctors appear to be less motivated and more stressed compared to other positions, showing less dedication and absorption in their work. Among all positions, nurses demonstrate the highest mean scores on self-leadership strategies and aspects of work engagement, while only doctors have the highest mean scores on overall self-leadership. Specifically, the study reveals that three dimensions of work engagement have significant and positive relationships with all three major dimensions of self-leadership. The connection between self-leadership and work engagement seems to enhance attitudes and behaviors that benefit the organization, such as job performance and intent to stay.

Hierarchical multiple regression analysis to evaluate the predictive influence of self-leadership characteristics (behavior-focused approach, cognitive thought pattern, and natural reward strategy) on domains of work engagement was used. All the components of self-leadership were found as significant predictors of various aspects of work engagement, according to the findings. Social Exchange Theory (SET) posits that there is a negligible disparity between employees' self-assessment of their job performance and their supervisors' assessment of it (Shore et al., 2006). According to this view, the connection between the immediate supervisor and the employee can be conceptualized as a reciprocal exchange, where favours and assistance are reciprocated. This study

enhances the current theoretical understanding by investigating the relationship between Social Exchange Theory (SET) and performance, specifically by examining the role of job engagement. The findings indicate that employees who enhance their job engagement through the effective utilization and development of suitable resources are more likely to achieve higher performance levels and have fewer detrimental outcomes. Prior research has consistently demonstrated that job engagement is vital in connecting different resources to the outcomes of employee performance. These findings provide additional evidence that individuals who experience favourable support in their work environment are more inclined to reciprocate the positive treatment towards the organization. Put simply, when employees see that they possess adequate resources, they are inclined to actively participate in their tasks, resulting in enhanced performance.

The study also found no significant association between job performance and education, but a significant positive relationship with experience in the organization, particularly among those with 26-35 years of experience. This indicates that employees who have been with the company for a longer period of time are less likely to make mistakes compared to new employees, resulting in better performance. Additionally, the study found that job designation also has a significant effect on job performance. However, age had a significant positive impact on performance. Prior studies have typically determined that age has a minimal impact on job performance (Davies et al., 1991; Warr, 1994). Waldman and Avilio (1993) conducted a meta-analysis revealing a modest yet favourable correlation between age and production, however a subsequent study by Evoy and Cascio (1989) demonstrated a strong association between age and productivity. Prior research on sex differences in job performance has predominantly concentrated on performance evaluations carried out by supervisors or managers utilizing ratings and rankings (Arvey et al., 1992). Nevertheless, it is crucial to acknowledge that job performance ratings can be influenced by bias (Nieva & Gutek, 1980), particularly when considering men and women workers, as they may be affected by gender

stereotypes (Maurer & Taylor, 1994) and negative assessments of women's job-related skills (Greenhaus, 1988).

Employees in the age range of 25–40 have demonstrated a higher level of absorption in their work compared to employees under the age of 25. This finding aligns perfectly with those of Coetzee and de Villiers (2010). One possible explanation for this could be that individuals below the age of 25 are more inclined to frequently change jobs and prioritize opportunities for growth and development over stability. On the contrary, middle-aged employees exhibit a higher level of work engagement, particularly among men, compared to their female counterparts. Middle-aged individuals tend to find greater satisfaction in their work due to their familiarity with the organization they are employed by, which fosters a strong psychological connection with both the organization itself and their colleagues. Additionally, older employees may display higher levels of loyalty due to the challenges they face in restarting their careers in a less accommodating job market. Amazingly, researches have found older workers exhibiting higher levels of work engagement compared to younger or middle-aged employees (Pitt Catsouphes & Matz-Costa, 2008). However, there are conflicting results from different studies, indicating the need for further investigation into this notion. In one study, the three variables of age, number of children, and length of marital status were found to be negatively correlated with self-leadership, suggesting that as individuals grow older, have more children, and maintain longer marital statuses, their level of self-leadership decreases.

Furthermore, age and total length of employment demonstrate a negative directional relationship, with behavior-focused strategies being among the self-leadership strategies affected in one study. As individuals age and accumulate more years of employment, their utilization of behavior focused strategies decreases. However, this contradicts the conclusions of the present study, where no significant relationship between age and self-leadership strategies was observed, except for behavior focused strategies and natural reward strategies, which were predominantly

utilized by the middle-aged group. Self-leadership emphasizes the use of observed and socially learned experiences, combined with the rehearsal of ideal behavior, to achieve optimal results in terms of personal and professional effectiveness (Manz, 1983). Older and more experienced individuals draw upon their past experiences to make decisions in life. As a result, a positive and significant difference is observed in behavior-focused strategies respectively (Kazan,1999). An investigation of demographic variables was conducted to establish whether any of the variables had any influence on the results. The findings suggested that self-leadership associating with organizational commitment are not influenced by the age, education, gender, supervisory role of employees or time in current position (AbuShmais & Gordon, 2013).

Studies that have demonstrated no discernible impact of educational qualifications on the level of employee engagement encompass investigations conducted by Chaudhary and Rangnekar (2017), Sharma and Rajput (2017), and Avery et al. (2007). Conversely, Garg (2014), amid an exploration of various industries in India, discovered an inverse correlation between educational qualifications and employee engagement. In terms of the association between employee designation and employee engagement, Avery et al. (2007) and Xu and Cooper-Thomas (2011) ascertained a favorable connection between employee designation and the level of employee engagement. This aligns with the present study where significant outcomes were noted in terms of education and position, particularly with regard to vigor and overall work engagement. Moreover, extant literature provides evidence that education exerts a positive impact on self-leadership behaviors (Ugurluoglu, 2010; Ozer, 2013). Additionally, the current study demonstrates that there are notable differences between graduates and postgraduates in relation to CTP and SL, particularly when compared to other educational cohorts, as graduates exhibit higher means.

The post hoc analysis, conducted using the Tukey HSD test, verifies the presence of significant disparities in the vitality of executives at the junior and senior levels, including doctors, nurses, and trainees. Nevertheless, there were no substantial disparities observed in the vitality and assimilation

levels of executives between middle and junior positions, as well as between middle and senior positions. The results align with our anticipated outcomes, likely due to the fact that individuals in senior positions within the organization possess decision-making power and exert greater influence over crucial decisions that impact the success of the organization. Their close proximity to organizational goals enhances their level of engagement in the decisions they make for the organizations. The results align with the findings of several researches that have indicated a similar association between position and work engagement (Avery et al., 2007; Helene & Cooper-Thomas, 2011). Men exhibited somewhat greater work engagement scores compared to women (Chaudhary, 2017). A dearth of reported studies on the relationship between self-leadership and job success is there.

ANOVA was conducted to evaluate the significance of disparities in job performance, work engagement, and self-leadership between private and public organizations. The findings reveal noteworthy distinctions in the levels of self-leadership and job performance among executives in the public and private sectors. Specifically, the level of absorption and overall self-leadership in private organizations were significantly higher than those in public sector organizations, with a significance level of  $p < .01$ . This discrepancy may be attributed to the fact that private organizations frequently expose their employees to challenges, while public organizations prioritize job security, potentially leading to complacency and lower levels of engagement. Consequently, the mean level of engagement is greater among employees in private hospitals. These results align with a HR special survey conducted by Business World magazine, which reported low engagement scores in the government sector across various countries (Business World, 2008). Notably, the existing literature lacks any mention of studies examining the relationship between job performance and self-leadership.

Additionally, the study also explored gender differences in the three variables and their dimensions using a t-test. The findings of this study indicate significant gender disparities in the

vigor dimension of work engagement, with men exhibiting slightly higher levels than women. Furthermore, the presence of dependents at home was found to enhance both vigor and dedication at work, as supported by research. (SaijaMauno, 2006); hence contradictory results. Studies on gender differences have produced inconsistent and inconclusive results. Numerous studies, including those conducted by Schaufeli et al. (2006), Chaudhary and Rangnekar (2017) and Sharma et al. (2017), have found no significant disparity in employee engagement levels on the basis of gender. Schaufeli et al. (2006) conducted a scale-validation study across 10 different countries and discovered a tenuous and indistinct relationship between engagement and gender. Among their findings, they observed that Australian, Canadian, and French samples exhibited no variation in engagement levels with regards to gender. Similarly, Chaudhary and Rangnekar (2017) investigated 404 business-level executives in India finding nil noteworthy difference in employee engagement levels based on gender. One explanation provided by Chaudhary and Rangnekar (2017) for these findings is the influence of cultural environment and economic development in India. Some studies, such as those by Avery et al. (2007) and Rothbard (2001), suggest that female employees tend to portray higher levels of engagement compared to their male counterparts. A few studies indicate that female employees experience greater exhaustion, due to the combined responsibilities of home and work, placing them at a greater risk of stress and burnout. Consequently, female employees report lower levels of engagement than males, as reported by Schaufeli et al. (2006).

There were no significant differences in gender on strategies of self-leadership in the present study. One study reports that gender does not impact self-leadership as opposed to what the literature reports regarding leadership. This is in congruous with the current study (Kazan, 1999).

Due to the patriarchal nature of Pakistani society, male participants achieved superior results across all variables compared to their female counterparts, although the average scores did not show a level of statistical significance. The existing literature presents conflicting findings regarding the disparities between genders in terms of self-leadership. One particular study indicates that there

exists a notable distinction between the self-leadership scores of male and female graduate students, with women in this study scoring significantly higher than men. Several scholars have proposed that women in leadership positions may acquire a greater advantage over men in the professional sphere due to their inclination towards a more empowering and collaborative leadership style (e.g., Eagly & Carli, 2003 as cited in Norris, 2008).

There are contradictory results in the literature where in some studies behavior focused strategies are positively and significantly associated with work performance, while in others, natural reward strategies plays a role in associating positively and significantly with performance. The reason perhaps is that since the hospital setups in Pakistan are more in the government sector, there are limited outside resources to motivate the workers. Hence in line with the theory of intrinsic motivation, health care workers find their work rewarding. All positions in the health sector were almost equal with regards to the use of strategies of leadership.

## Conclusion, recommendations and implications

### Conclusion

The above discussion discovers, that self-leadership strategies of health care employees significantly influence work engagement and job performance. There exists a significantly positive correlation between work engagement and self-leadership; a significant positive correlation between self-leadership and job performance. In addition, work engagement plays a significant role in affecting job performance. Work engagement mediated the relationship between self-leadership and its strategies and job performance partially. The subdomains of self-leadership including behavior focused strategy; natural reward strategy and cognitive thought pattern had a significant positive relationship with job performance and are significant predictors.

Gender differences found in a few aspects of main variables showed where men scored significantly better than women on vigor sub-domain of work engagement. Nurses scored significantly better on vigor, absorption and overall work engagement and paramedical staff scored significantly better on job performance. Middle aged employees reported higher levels of work engagement; its subdomains and job performance. Graduates scored significantly better on vigor, work engagement, cognitive thought pattern and self-leadership. Employees with total work experience of 21-33 years showed higher levels of vigor and job performance. Employees working in the private sector hospitals showed higher levels of behavior focused strategy, cognitive thought pattern, self-leadership and job performance. Whereas, those in the private sector hospitals scored higher on absorption and behavior focused strategy. Employees with current work experience of 26-35 years in their respective organizations, scored significantly higher on vigor, work engagement and job performance. While organizations lack the ability to compel individuals to be involved, they can surely foster an environment that promotes successful self-leadership, potentially leading to heightened levels of job engagement and thereby enhancing performance.



## **Recommendations**

The present study bears limitations. The study was conducted exclusively inside the health care industry, which restricts the ability to generalize the findings to the broader population. Consequently, it is essential to reproduce this study in other sectors. Furthermore, the cross-sectional character of the data fails to offer a definitive representation of mediation. In order to gain a more comprehensive comprehension and obtain further elucidation on the interplay between these factors and mediation, forthcoming research should contemplate duplicating the identical investigation employing longitudinal designs or time-lagged studies in diverse contexts.

Furthermore, the data is exclusively derived from self-report surveys, making it susceptible to typical technique bias and social desirability. Another restriction was the use of same sources and method to collect data for both independent and dependent variables leading to frequent method error. The correlation between research variables in this research design may be ascribed to the same source data rather than a genuine underlying link (Podsakoff & Organ, 1986). Subsequent researchers could aim to mitigate common method variance by employing a research design that involves gathering data from several sources and employing numerous methods, or by collecting data from the same participants at different points in time.

Additionally, another significant constraint was the methodology employed for participant selection. The survey participants were not chosen in a random manner. The present study was cross-sectional. Future research should be conducted by employing a longitudinal design.

The utilization of non-random convenient sampling processes in research studies might pose a danger to the internal validity. This is due to the possibility of unknown confounding variables that may exert an influence on the individuals included in the sample (Rubin & Babbie, 1989). Additional research should include qualitative analysis and the implementation of more objective methodologies to gain insight into the perspectives and interpretations of executives or managers in hospital settings. This will allow for the comparison and validation of the empirical and qualitative findings.

Future research should consider employing a larger sample size to have a more comprehensive picture of health care employees. It is advisable to apply translated scales to a bigger sample in order to assess the validity and reliability for the local population.

Sample of the present study was collected from public and private sector of Pakistan, hence the results might be fabricated by structural and cultural factors unique to Pakistani private and public sectors. The inclusion criteria was quite vast with the categorization of work experience in the current organization and that of total work experience into large groups with greater class interval. The categories could be managed into smaller classes by dividing the experience groups into five years' experience. In this manner, any group differences could be easily detectable across all work groups. Regrettably, the study did not account for individual attributes such as personality or other leadership traits, as they were not deemed essential for the study's objectives. The incorporation of personality traits and leadership qualities can offer valuable understanding on the impact of these factors on the efficacy of self-leadership tactics and their associated trainings.

According to this study, self-leadership primarily emphasizes self-autonomy, although it can sometimes be counterproductive as it restricts an individual's entire possibilities. The concept of self-leadership proposes that one effective method to improve an individual's performance is to actively participate in collaborative efforts with others, leveraging the advantages of team cohesiveness (Stewart et al., 2019). Therefore, more of self-leadership is necessary in order to attain effective outcomes, both at the group and individual levels (Stewart et al, 2011).

One further constraint of the study is the restricted number of dimensions examined in the model. However, existing literature suggests the presence of more variables that can also impact work engagement. Subsequent research endeavors should contemplate the incorporation of more variables.

Further research should explore additional forms of engagement, including employee engagement, which encompasses the cognitive, emotive, and behavioural dimensions of an individual.

However, specific professional positions, especially in the healthcare sector, may not permit absolute autonomy as a result of the existence of several protocols and directives that must be adhered to. Consequently, the initial inherent drive might be readily hindered by mandatory work responsibilities, prompting the introduction of controlled regulations to cultivate motivation.

Only one job performance scale could have been sufficient for the purposes of the current research, unless one of the objectives of the research was comparative analysis of job performance of employees and their supervisors. In this case then two separate scales could have been utilized.

## **Implications**

The findings offer valuable insights into the precise processes that facilitate the connection between self-leadership tactics and job performance. The conclusions validate the intermediary function of work engagement along with its many aspects in the relationship between self-leadership and performance. This research provides substantial contributions to both the theoretical understanding and practical implementation.

### ***Theoretical implications***

Self-Determination Theory (Deci et al., 2017) proposes that individuals who possess the ability to operate independently are more inclined to actively participate in their job, prosper, and demonstrate resilience in the face of work-related pressures. As per the theory of self-leadership, individuals retain the capacity to exert control over their own performance and motivation. The present study provides evidence that healthcare practitioners can shift their motivation from being compelled by duty to being motivated by personal volition by using natural incentives. Moreover, research has confirmed that cognitive and behavioural techniques significantly influence work engagement. The

Self-Determination Theory posits that goals contribute to intrinsic motivation only when they are congruent with personal values.

This study has significant research significance as it introduces and assesses a comprehensive framework of self-leadership that investigates the influence of mediating variables and demography, in addition to direct interactions. This signifies progress in achieving a more profound understanding of broader models of self-leadership.

### ***Practical implications***

Thus far, self-leadership intervention studies have predominantly operated under the assumption that training in self-leadership affects performance and health through two mechanisms: motivating the conservation and accumulation of resources, and enhancing self-efficacy. The author has proposed a third mechanism by contributing to the existing body of literature: improved health and performance resulting from increased work engagement. This highlights the importance of redirecting attention from managing adverse external influences to taking charge and making decisions based on self-determination for the personal growth of healthcare professionals.

Empirical research indicates that the cultivation of leadership abilities generally commences at the individual level. This entails comprehending one's position in the process of cultivating leadership skills and attaining mastery over oneself.

Based on the findings of this investigation, organizations that heavily depend on the abilities of their employees to manage themselves should prioritize self-leadership and work engagement when selecting and recruiting individuals. These organizations may also benefit from establishing organizational structures that encourage self-initiative, in accordance with performance management systems that prioritize behaviours linked to self-leadership. Finally, it is crucial to acknowledge that self-leadership is a characteristic that may be imparted through instruction. Hence, it is imperative for

organizations to use strategic human resource management strategies that focus on creating training programmes aimed at improving the job performance of their employees.

Engagement can be strengthened indirectly by altering the demands and resources of a job, as well as by boosting employees' self-leadership tactics. This can be achieved by interventions that attempt to increase their concentration, motivation, and dedication. Furthermore, leaders may desire to enhance their personal levels of engagement, as this can significantly influence their efficacy as leaders and the amount of engagement exhibited by their subordinates. This is achieved through the mechanisms of role modelling and social interaction. Work engagement can be enhanced by effectively managing experiences and attaining performance goals, cultivating positive emotions through constructive thinking patterns and utilizing behavioural strategies. This can be achieved by the provision of coaching to staff members, aiding them in establishing attainable objectives that foster optimism, and offering the essential tools to facilitate the accomplishment of these objectives.

Organizational developers can provide leaders with training on how to promote and enable follower self-leadership. Leaders can gain valuable knowledge on how to reorganize job roles in order to encourage the implementation of self-leadership initiatives among employees. In order to achieve this objective, leaders may utilize instrumental leadership, which entails granting autonomy, offering assistance, and delivering feedback to their subordinates. Furthermore, leaders can bolster self-leadership and job engagement by incentivizing employees to actively tackle work-related difficulties through diverse approaches and transferring authority from leaders to employees. Leaders can enhance the empowerment of their followers by entrusting them with decision-making power, assigning them new responsibilities, and offering them a variety of employment resources.

By leveraging natural rewards, frontline healthcare employees intentionally experience intrinsic motivation without needing to physically alter their job tasks. Work tasks can be structured in a positive and uplifting manner when employees choose to infuse meaning into their work and go above and beyond job requirements.

As health care organizations implement a self-leadership training programme for their staff, they must carefully evaluate how to facilitate the progress of self-leadership. The HRM and managers face the challenge of enticing employee engagement in the training programme, which is voluntary in nature, rather than enforcing it.

Various kinds of communication, including direct emails and spoken information supplied by managers and HR specialists, can be utilized to promote employee engagement that emphasizes self-leadership and chances for personal growth. Moreover, it is imperative that individuals are encouraged to assert their autonomy in managing their own well-being and performance inside the organization.

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## APPENDIX -A



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No. ML 1-1/2022-Psy

Dated: -25-11-2022

### To Whom It May Concern

Respected Sir/Madam

The students of Applied Psychology have to conduct a research project as a necessary part of their M.Phil. Degree program. For this purpose they have to collect data from different public and private sector organizations including academic institutions, hospitals, financial institutions and others, depending upon the nature of the study.

Ms. Shehla Farouk, a student of M.Phil. Psychology, may kindly be allowed to collect data from your prestigious organization. The data collected will be remained confidential and will only be used for research purposes. Your cooperation in this regard will be highly valued.

Thanking you in anticipation.

Best regards

Prof. Dr. M. Anis-ul-Haque  
Department of Applied Psychology  
Phone: 9265100-10 Ext: 2099 & 2092  
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## APPENDIX -B



### **DEPARTMENT OF APPLIED PSYCHOLOGY** **NATIONAL UNIVERSITY OF MODERN LANGUAGES**

*This questionnaire is a part of the research work being carried out as an essential requirement of my M.Phil. Degree at Department of Applied Psychology, National University of Modern Languages. The purpose of this research is to study the leadership aspects and its relationship with work engagement and job performance. The information provided by you will be used only for research purposes. I will be very thankful to you for your kind cooperation in this regard.*

Ms. Shehla Farouk

M.Phil. Scholar, NUML

Email: virgoi.sf@gmail.com

Please provide the following information

1. Name (optional):
2. Position/Designation:
3. Gender:
4. Age:
5. Education:
6. Total experience:
7. Experience in this organization:
8. Status of the organization (public/private):
9. Your Email address:

## APPENDIX- C

*Read each of the following items carefully and try to decide **how true the statement is in describing you.** Put a (☐) in the box **that best describes you.** There is **no right or wrong answer.** Please don't leave any statement blank.*

	Statements	Not at all accurate	Somewhat accurate	A little accurate	Mostly accurate	Completely accurate
1	<b>I use my imagination to picture myself performing well on important tasks.</b>					
2	<b>I establish specific goals for my own preference.</b>					
3	<b>Sometimes I find I'm talking to myself (out loud or in my head) to help me deal with difficult problems I face.</b>					
4	<b>When I do an assignment especially well, I like to treat myself to something or activity I especially enjoy.</b>					
5	<b>I think about my own beliefs and assumptions whenever I encounter a difficult situation.</b>					
6	<b>I tend to get down on myself in my mind when I have performed poorly.</b>					
7	<b>I make a point to keep track of how well I'm doing at work.</b>					
8	<b>I focus my thinking on the pleasant rather than the unpleasant aspects of my job activities.</b>					
9	<b>I use written notes to remind myself of what I need to accomplish.</b>					
10	<b>I visualize myself successfully performing a task before I do it.</b>					
11	<b>I consciously have goals in mind for my work efforts.</b>					
12	<b>Sometimes I talk to myself (out loud or in my head) to work through difficult situations.</b>					
13	<b>When I do something well, I reward myself with a special event such as a good dinner, movie, shopping trip, etc.</b>					
14	<b>I try to mentally evaluate the accuracy of my own beliefs about the situations I am having problems with.</b>					
15	<b>I tend to be tough on myself in my thinking when I have not done well on my task.</b>					
16	<b>I usually am aware of how well I'm doing as I perform an activity.</b>					

17	<b>I try to surround myself with objects and people that bring out my desirable behaviours.</b>					
18	<b>I use concrete reminders (e.g., notes and lists) to help me focus on things I need to accomplish.</b>					
19	<b>Sometimes I picture in my mind a successful performance before I actually do a task.</b>					
20	<b>I work toward specific goals I have set for myself.</b>					
21	<b>When I'm in difficult situations I will sometimes talk to myself (out loud or in my head) to help me get through it.</b>					
22	<b>When I have successfully completed a task, I often reward myself with something I like</b>					
23	<b>I openly appreciate and evaluate my own assumptions when I have a disagreement with someone else.</b>					
24	<b>I feel guilt when I perform a task poorly.</b>					
25	<b>I pay attention to how well I'm doing in my work.</b>					
26	<b>When I have a choice, I try to do my work in ways that I enjoy rather than just trying to get it over with.</b>					
27	<b>I purposefully visualise myself overcoming the challenges I face.</b>					
28	<b>I think about the goals that I intend to achieve in the future.</b>					
29	<b>I think about and evaluate the beliefs and assumptions I hold.</b>					
30	<b>I sometimes openly express displeasure with myself when I have not done well.</b>					
31	<b>I keep track of my progress on projects I'm working on.</b>					
32	<b>I seek out activities in my work that I enjoy doing.</b>					
33	<b>I often mentally rehearse the way I plan to deal with a challenge before I actually face the challenge.</b>					
34	<b>I write specific goals for my own performance.</b>					
35	<b>I find my own favourite ways to get things done.</b>					

## APPENDIX-D

*The following statements are about **how you feel at work**. Please read each statement carefully and **decide according to the given scale**, if you ever feel this way about your job.*

*There is **no right or wrong answer**. Please don't leave any statement blank*

Never	Almost never	Rarely	Sometimes	Often	Very often
0	1	2	3	4	5
	Always	6			

1. \_\_\_\_\_ At my work, I feel bursting with energy.
2. \_\_\_\_\_ I find the work that I do full of meaning and purpose.
3. \_\_\_\_\_ Time flies when I'm working.
4. \_\_\_\_\_ At my job, I feel strong and vigorous.
5. \_\_\_\_\_ I am enthusiastic about my job.
6. \_\_\_\_\_ When I am working, I forget everything else around me.
7. \_\_\_\_\_ My job inspires me.
8. \_\_\_\_\_ When I get up in the morning, I feel like going to work.
9. \_\_\_\_\_ I feel happy when I am working intensely.
10. \_\_\_\_\_ I am proud of the work that I do.
11. \_\_\_\_\_ I am immersed in my work.
12. \_\_\_\_\_ I can continue working for very long periods at a time.
13. \_\_\_\_\_ To me, my job is challenging.
14. \_\_\_\_\_ I get carried away when I'm working.
15. \_\_\_\_\_ At my job, I am very resilient, mentally.
16. \_\_\_\_\_ It is difficult to detach myself from my job.
17. \_\_\_\_\_ At my work I always persevere, even when things do not go well.

Developed by Schaufell et al.,2002.

## APPENDIX-E

*Listed below are the statements that represent possible opinions that you may have about your job performance. Please indicate the degree of your agreement or disagreement with each statement by selecting the options that best represent your point of view about your job performance.*

	Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1.	<b>On the job I exhibit an underlying concern for doing things or tasks better, for improving situations</b>					
2.	<b>On the job I exhibit zeal about the job and a consequent willingness to work hard and energetically.</b>					
3.	<b>On the job I exhibit a willingness to go beyond what the situation requires and to act before being asked.</b>					
4.	<b>I always get things done on time.</b>					
5.	<b>My supervisor is never disappointed from the quality of work that he/she receives from me.</b>					
6.	<b>My work habits are exemplary</b>					
7.	<b>My supervisor has never to check on time</b>					
8.	<b>I get along well with my co workers</b>					

Developed by Wright et al (1995).

## APPENDIX-F

### JOB PERFORMANCE (SUPERVISOR-RATING SCALE)

Your subordinate's name:

Put a tick (  ) on the correct response below:

	Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1.	On the job this subordinate shows an underlying concern for doing things or tasks better, for improving situations					
2.	On the job this subordinate shows zeal about the job and a consequent willingness to work hard and energetically.					
3.	On the job this subordinate shows a willingness to go beyond what the situation requires and to act before being asked.					
4.	This subordinate always gets things done on time.					
5.	I am never disappointed from the quality of work that he/she receives from me.					
6.	This subordinate's work habits are exemplary					
7.	I have never to check up on this subordinate.					
8.	This subordinate gets along well with his/her co-workers/colleagues.					