Effects of Head Nurses' Leadership Behaviors and Social Intelligence on Staff Nurses' Job Involvement

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Abstract

Background: Actual leadership is vital for each organization, and leadership behavior is an essential variable that has significant influence on the success of any organization. Staff nurses with higher perception of leadership behavior, social intelligence, and job involvement are motivated, display good performances at work, and devote themselves to their work and organization. ***Aim:***This study was designed to explore the effects of head nurses' leadership behaviors and social intelligence on staff nurses' job involvement. ***Design:***A descriptive correlational design was adopted. ***Setting:*** This study involved a convenience sample of 256 staff nurses who were responsible for providing nursing care for patients at the Main Mansoura University Hospital. ***Tool:***Data were collected using the Multifactor Leadership Questionnaire (MLQ), Social Intelligence Questionnaire, and Work Involvement Scale. ***Results:***Most staff nurses had a moderate level of leadership style, social intelligence, and job involvement. A statistically significant positive relationship was observed between nurses' insight of social intelligence and transformational style. Moreover,leadership outcomes have a statistically significant relationship with social intelligence. ***Conclusion:***Nurses, who have good leadership style, will have higher social intelligence and be more involved in their work. ***Recommendations:***Workshops and training programs should be provided in areas concerned with social behavior at work to increase the consciousness of nurses on how to grow their social intelligence and job involvement.

Keywords: Leadership behavior, Social Intelligence,Head Nurses,Staff Nurses, Job Involvement

Introduction

Leadership is a crucial management function that helps in allocating resources within a healthcare organization to promote efficiency and achieve goals. The constant changes in the organizational environment present obstacles in managing complex activities. Effective leaders make the organization's mission clear, inspire the nursing staff, and help them accomplish the mission **(Ginter, Duncan, & Swayne, 2018).**A successful leader recognizes the value of nurses in achieving the goals of a healthcare organization and the importance of inspiring nurses to achieve these goals. Head nurses act as a bridge between the expectations of staff nurses and those of the organization and can help match nurses' goals for their positions

with those of the organization **(Saleh et al, 2021).** Therefore, healthcare systems need leaders who can motivate and guide individuals with a vision of what is possible (Saleh et al., 2021). The nursing profession anticipates that head nurses will recognize nurses' expectations and properly address those**(Schneider et al., 2019).**

Leadership has been described as a social influence process in which nurses can think about how others can help and support them in performing common activities. The two types of leadership are transactional and transformative. In transactional leadership, leaders and followers engage in an exchange relationship where followers gain financial benefits or social status in exchange for adhering to the leader's instructions. Instead, of

only earning obedience because of the leader's actions, transformational leaders inspire followers to execute high levels of performance by changing their followers' attitudes, beliefs, and values. Additionally, transformational leadership is predicated in the relationship between the leaderships' direction and coaching and their provision of socio-emotional support and the state of readiness or ability of subordinates to perform particular activities, functions, or goals (**Katou, Budhwar, & Patel, 2021).**

One of the most crucial elements that significantly affect a healthcare institution's efficiency is leadership behavior. The behaviors that a leader employs to influence followers are referred to as "leadership behavior." These include task-based oriented behavior, which includes describing roles, planning operations and projects, and optimizing organizational performance.These measures strongly emphasize tasks, efficient resource and labor use, dependable and secure procedures, and progress acceleration. Relationship-focused actions include assisting, encouraging, recognizing, consulting, and managing(**Reza Balaghat&Azizpour, 2014).** Leadership behaviors can be used to influence the staff for better organizational outcomes, such as work engagement. By describing to followers where and how to perform tasks, leaders will engage in one-way communication. Additionally, they can incorporate two-way communication by offering social and economic support (**Asrar-ul-Haq&Anjum, 2020).**

Social intelligence is described as the capacity of nurses to comprehend partnerships with individuals, form emotional ties, collaborate, and use social interaction abilities. Social intelligence develops over because of interactions with family, friends, and other individuals and by observing successes and failures in social situations (**Savci, Akinci, &Keles, 2022).** It also includes the ability to enter new and up-to-date positions and develop suitable behavior according to condition and social skills, such as information processing and social awareness (**Goleman&Boyatzis, 2017).**

Social intelligence is the ability of leaders to interpret others' behavior in terms of mental states, including thoughts, intentions, desires, and beliefs. It includes the ability to interact with complex social groups and close relationships and to empathize with others' states of mind (**Shahid, 2017).** Leaders with higher levels of social intelligence are presumed to be better able to sense the feelings of others and behave in socially acceptable ways. Socially intelligent leaders may also be more likely to have proficient social support systems, which can be used as a buffer and support against psychological harm (**Lepore&Kliewer, 2019).**

The term "job involvement" describes a nurse's psychological commitment to their job and the degree to which their work environment shapes who they are as a person. Furthermore, it refers to how much a nurse is cognitively involved, preoccupied, and concerned about their current position. Actively engaged nurses are more likely to be happy with their occupations and organizations and to be committed to them as a result (**Rehman, Shahzad, Farooq, &Javaid, 2020).** Highly involved nurses view their work responsibilities as a significant aspect of their lives, and their performance in each specific job directly affects how they feel about themselves (**Mabrouk&Elshrief, 2018).** Staff nurses with high job involvement are more independent and self-assured; they are also more likely to perform their duties in line with the organization's job obligations and to make significant contributions to the accomplishment of organizational goals. In contrast, nurses with low job involvement have been found to "engage in various unpleasant on-the-job activities" (**Lambert, Liu, Jiang, Zhang, & Kelley, 2018).**

More specifically, we contend that successful leaders have a level of social intelligence that enables them to identify social needs and choose the best behavioral responses. Therefore, socially adept leaders can modify their responses to fit the circumstances. These skills result from social knowledge structures representing the typical social components in the organizational context that leaders must navigate. The skills that come from having high social intelligence are crucial

for understanding social issues and for coming up with and putting into practice subsequent, successful solutions **(Garg& Gera, 2019).**

Significance of the study

The concepts of leadership behavior, staff involvement, and social intelligence are all critical aspects of any organization's existence and survival. This is because an organization's effectiveness is determined by its leaders' behavior and attitude toward their given tasks and its executives' ability to manage and retain productive nurses. Moreover, social intelligence competencies help increase motivation, reduce cultural barriers, resolve problems, foster cooperation and collaboration, and improve team communication. These competences are part of the social intelligence domain, highlighting the importance of social intelligence in the workplace.

Furthermore, high job involvement denotes a sense of excitement, pride, and a good attitude toward work. In this case, the person gradually develops an interest in their employment. Furthermore, staff nurses with a high level of job involvement place a higher value on their work.

Aim of the study

The study was designed to explore the effects of head nurses' leadership behaviors and social intelligence on staff nurses' job involvement.

Research questions

1. What is the head nurses' leadership behavior and level of social intelligence as perceived by the staff nurses?

2. What is the level of job involvement among staff nurses?

3. Is there a relationship among head nurses' leadership style and social intelligence and staff nurses' job involvement?

Subjects and Methods

Design

A descriptive correlational study design was adopted.

Setting

This study was conducted at the Main Mansoura University Hospital, which offers a comprehensive range of healthcare services in the Delta Region. This hospital comprises 1800 beds and contains many departments, including general medicine, orthopedic, dialysis, neurosurgery, anesthetic care unit obstetrics, gynecology, ear, and nose and throat surgery, for providing medical care for patients with different diseases.

Study subjects

All staff nurses (256) who were in charge of providing nursing care to patients in the chosen environment at the time of data collection were included in this study.

Tools for collecting data

The study tools used in data collection were divided into three sections: Multifactor Leadership Questionnaire, Social Intelligence Questionnaire, and Work Involvement Scale.

Section (1): Multifactor Leadership Questionnaire (MLQ)

This tool was modified by researchers after it was developed by **Bass and Avolio in 2004** to assess to assess the leadership styles and behaviors of head nurses. It was divided into two parts as follows:

Part I: Included head nurses' personal characteristics such as age, sex, marital status, level of education, and years of experience.

Part II: Consists of 45 items and is divided into three categories: transformational leadership (five dimensions, 20 items), transactional leadership (two dimensions, eight items), and laissez-faire leadership (two dimensions, eight items), which assesses the outcomes of leadership (three dimensions, nine items).

Scoring system

Responses ranged from "frequent" to "not always" and were measured using a 5-point Likert scale. The total score for each staff nurse (256) was calculated and converted into percent score also, was categorized into "low " if the score less than 50% and "moderate " if the scoring ranged between 50 -57%, and "high " if the scoring more than 75%.

Section (2): Social Intelligence Questionnaire

The Tromso Social Intelligence Scale (TSIS), and the Social Intelligence Scale by **Mohamed (2008)** and **Alenezi, Saleh, &Elkalashy (2020)** served as the foundation for developing the questionnaire (2008). It has 81 items, which are divided into six subscales: social information processing (13 items), social skills (13 items), social awareness (13 items), social self-efficacy (16 items), social empathy (12 items), and social problem solving (13 items) (14).

Scoring system:

Using a Likert scale with a range of 1 to 5, nurses respond. Strongly disagree is denoted by 1, while strongly agree is denoted by 5. Each category were summed to give a total score and was categorized into lower social intelligence (81-202), moderate social intelligence (203-303) and higher social intelligence (304-405).

Section (3): Work Involvement Scale

This scale was created by **Kanungo (1982)** to measure research respondents' job involvement in the workplace. It contains 10 items. A total involvement score was generated by adding the scores of the 10 items. High marks signify a greater caliber of work.

Scoring system:

The response options on a 5-point Likert scale ranged from 1 (strongly disagree) to 5. (Strongly agree). Each category was summed to give a total score and was categorized into lower work involvement (10-24), moderate work involvement (25-37) and higher work involvement (38-50).

Pilot study

Twenty-five staff nurses participated in the pilot trial, making up 10% of the study's total sample (n = 256). The application and clarity of the instruments were assessed before data collection. It helped in identifying potential problems and obstacles that might appear during the data collection process. It served as a timeline for finishing the questionnaire as well. The main study's sample did not contain any of the staff nurses who participated in the pilot trial. Then, the pilot study's findings were analyzed.

Field work

Data collection occurred from the beginning of January 2021 to the end of June 2021. Each staff nurse spent approximately 20–25 min answering the MLQ, Social Intelligence Questionnaire, and Work Involvement Scale.

Validity and reliability

Five nursing administration professors examined the data-gathering instruments to assess their face and content validity. Cronbach's alpha was used to assess the reliability of the instruments; the results for the three scales—leadership style, social intelligence, and job involvement—were 0.87, 0.90, and 0.89, respectively.

Ethical considerations and data collection

The hospital director, the leaders of the units, and the participants were informed of the study's objective. The Mansoura University Faculty of Nursing provided formal consent to the hospital director to conduct this study. The Mansoura University Faculty of Nursing's Ethical Research Committee granted approval (No.10-2020) . Each respondent verbally agreed to participate in the study after being informed that it was entirely voluntary. The collected data were kept private. The content of the tool would only be used for academic reasons, according to the subjects. The participants were granted the freedom to end the study at any time.

Statistical analysis

The gathered data were arranged, tabulated, and statistically examined using Statistical Package for the Social Sciences, version 26. Frequencies and percentages were used to express categorical variables. Means and standard deviations were used to represent continuous variables. A separate t-test was employed to examine any differences between two continuous variables' means. The differences between two means of continuous variables were examined using analysis of variance. The connection between two continuous variables was evaluated using Pearson's correlation coefficient. *P*-values of

less than 0.01 and 0.05 were used to denote statistical significance.

Results

Table 1 shows the personal characteristics of the staff nurses under study. Accordingly, more than half of the nurses under study (60.5%) were aged between 20 and 30 years; 33.2% were aged 31–40 years, and the remaining nurses (6.3%) were aged 41–50 years. Most staff nurses under study were female (76.6%), were married (72.7%), and had a technical degree on nursing science (67.6%). Meanwhile, nearly half of the nurses under study (44.5%) had <6 years of experience.

Table 2 shows the mean scores of the dimensions of leadership styles as perceived by the staff nurses under study. This table reveals that the highest mean score was related to transformational leadership style (50.21 ± 2.92), followed by the mean scores of transactional leadership style (21.96 ± 1.44) and leadership outcomes (21.15 ± 2.15), whereas the lowest mean score was related to laissez-faire leadership style (19.79 ± 2.10).

Table 3 shows that 99.6%, 94.55%, and 86.3% of the head nurses had a moderate level of transformational, laissez-faire, and transactional leadership, respectively. The aforementioned table also presents that 96.9% of the staff nurses under study had a moderate level of leadership outcomes, whereas 2.3% had a low level of leadership outcomes.

Table 4 shows the mean scores of all social intelligence and job involvementdimensions as perceived by the staff nurses under study. This table presents that the mean score for all social intelligence dimensions was 300.64 ± 7.05. The mean scores for social self-efficacy, social problem solving, social information processing, social empathy, social awareness, and social skills were 59.95 ± 2.38, 52.85 ± 2.00, 50.48 ± 1.61, 48.80 ± 1.76, 45.51 ± 1.93, and 43.05 ± 2.12,

respectively. Additionally, the mean score forjob involvement was 30.04 ± 1.91.

Table 5 shows the levels of social intelligence as perceived by the staff nurses. This table reveals that more than half of the head nurses under study (63.3%) had a moderate level of social intelligence, whereas the remaining head nurses (36.7%) had the highest level of social intelligence. Furthermore, this table shows that nearly all staff nurses under study (99.6%) had a high level of job involvement, whereas the remaining staff nurses (0.4%) had a low level of job involvement.

Table 6 shows the mean differences in leadership style in relation to the personal characteristics of the staff nurses under study. This table reveals no statistically significant relationship between leadership styles and the personal characteristics of the staff nurses under study, except for transactional leadership style and marital status, which were statistically significant ($p = 0.04^*$).

Table 7 shows the mean differences in social intelligence and job involvement in relation to the personal characteristics of the nurses under study. This table reveals no statistically significant relationship between social intelligence and job involvement and the personal characteristics of the nurses under study.

Table 8 shows the relationship between social intelligence, leadership styles, and job involvement among the nurses under study. The table shows that there was a highly statistically significant relationship between nurses' perception of social intelligence and transformational leadership style ($r = 0.17$; $p = 0.007^{**}$). Furthermore,leadershipoutcomes were significantly related to social intelligence ($r = 0.12$; $p = 0.05^*$). Meanwhile, no significant relationship was observed between job involvement, leadership styles, and social intelligence.

Table 1: Personal characteristics of the staff nurses under study (n = 256).

Variables	N	%
Age years		
▪ 20–30	155	60.5
▪ 31–40	85	33.2
▪ 41–50	16	6.3
Sex		
▪ Male	60	23.5
▪ Female	196	76.6
Marital status		
▪ Single	57	22.3
▪ Married	186	72.7
▪ Divorced	10	3.9
▪ Widowed	3	1.2
Level of education		
▪ Diploma degree	83	32.4
▪ Technical degree	173	67.6
Experience years:		
▪ 1–5	114	44.5
▪ 6–10	48	18.8
▪ >10	94	36.7
Mean ± SD	9.43 ± 7.51	

Table 2: Mean scores of leadership behaviors as perceived by the nurses under study (n = 256).

Leadership styles	No of items	Range	Mean ± SD
A. Transformational style	20	44.0–65.0	50.21 ± 2.92
▪ Idealized attributes	4	6.0–12.0	8.43 ± 1.43
▪ Idealized behaviors	4	7.0–14.0	9.90 ± 1.33
▪ Inspirational motivation	4	7.0–13.0	9.30 ± 1.55
▪ Intellectual stimulation	4	11.0–14.0	12.86 ± 0.80
▪ Individual consideration	4	8.0–12.0	9.71 ± 0.89
B. Transactional style	8	19.0–26.0	21.96 ± 1.44
▪ Contingent reward	4	9.0–13.0	11.50 ± 0.86
▪ Active management by exception	4	8.0–13.0	10.45 ± 1.19
C. Laissez-faire style	8	14.0–24.0	19.79 ± 2.10
▪ Passive management byexception	4	7.0–14.0	10.63 ± 1.70
▪ Laissez-faire leadership	4	7.0–11.0	9.16 ± 1.28
Outcome of leadership	9	16.0–28.0	21.45 ± 2.15
▪ The aspects of extra effort	3	4.0–10.0	6.78 ± 1.73
▪ Effectiveness	4	9.0–14.0	11.23 ± 1.02
▪ Satisfaction with the leadership	2	2.0–5.0	3.45 ± 0.65

Table 3: Levels of leadership styles and outcomes as perceived by of the nurses under study (n = 256).

Leadership styles and outcomes	Levels of leadership styles and outcomes	N	%
A. Transformational style	▪ Low	0	0.0
	▪ Moderate	255	99.6
	▪ High	1	0.4
B. Transactional style	▪ Low	0	0.0
	▪ Moderate	221	86.3
	▪ High	35	13.7
C. Laissez-faire style	▪ Low	9	3.5
	▪ Moderate	242	94.5
	▪ High	5	2.0
▪ The aspects of extra effort	▪ Low	58	22.7
	▪ Moderate	143	55.9
	▪ High	55	21.5
▪ Effectiveness	▪ Low	0	0.0
	▪ Moderate	187	73.0
	▪ High	69	27.0
▪ Satisfaction with the leadership	▪ Low	149	58.2
	▪ Moderate	107	41.8
	▪ High	0	0.0
Total outcomes	▪ Low	6	2.3
	▪ Moderate	248	96.9
	▪ High	2	0.8

Table 4: Mean scores of social intelligence and job involvement as perceived by the staff nurses under study (n = 256).

Social intelligence	No of items	Range	Mean ± SD
▪ Social information processing	13	38.0–55.0	50.48 ± 1.61
▪ Social skills	13	37.0–51.0	43.05 ± 2.12
▪ Social awareness	13	38.0–49.0	45.51 ± 1.93
▪ Social self-efficacy	16	46.0–64.0	59.95 ± 2.38
▪ Social empathy	12	41.0–53.0	48.80 ± 1.76
▪ Social problem solving	14	40.0–57.0	52.85 ± 2.00
Total social intelligence	81	251.0–313.0	300.64 ± 7.05
Total job involvement	10	24.0–35.0	30.04 ± 1.91

Table 5: Levels of social intelligence and job involvement as reported by of the staff nurses under study (n = 256).

Levels of social intelligence	Scores	N	%
▪ Low (> 50%)	81–202	0	0.0
▪ Moderate (50->75%)	203–303	162	63.3
▪ High (≤ 75%)	304–405	94	36.7
Levels of work involvement			
▪ Low (>50%)	10–24	1	0.4
▪ Moderate (50->75%)	25–37	255	99.6
▪ High (≤75%)	38–50	0	0.0

Table 6: Mean scores of leadership styles in relation to the personal characteristics of the staff nurses under study.

Variables	Transformational style	Transactional style	Laissez-faire style
Age (years)	Mean ± SD	Mean ± SD	Mean ± SD
▪ 20–30	50.42 ± 3.00	21.87 ± 1.34	19.91 ± 2.10
▪ 31–40	49.91 ± 2.83	22.09 ± 1.55	19.48 ± 2.16
▪ 41–50	49.75 ± 2.59	22.06 ± 1.77	20.25 ± 1.73
F-value/p	1.05/0.35	0.70/0.49	1.55/0.21
Sex			
▪ Male	50.37 ± 3.26	21.82 ± 1.40	19.90 ± 2.17
▪ Female	50.16 ± 2.82	22.00 ± 1.45	19.76 ± 2.09
T-value/p	0.48/0.62	0.86/0.38	0.46/0.64
Marital status			
▪ Single	50.77 ± 3.02	21.74 ± 1.29	19.58 ± 2.28
▪ Married	50.04 ± 2.92	22.08 ± 1.46	19.90 ± 2.01
▪ Divorced	50.20 ± 2.04	20.90 ± 1.52	19.30 ± 2.21
▪ Widowed	49.67 ± 3.21	22.33 ± 1.53	18.33 ± 4.04
F-value/p	0.94/0.42	2.78/0.04*	1.03/0.38
Level of education			
▪ Bachelor degree	50.55 ± 2.85	22.08 ± 1.56	19.88 ± 2.11
▪ Technical degree	50.04 ± 2.95	21.90 ± 1.38	19.75 ± 2.10
T-value/p	1.32/0.18	0.98/0.32	0.47/0.63
Experience years:			
▪ 1–5	50.44 ± 2.77	21.82 ± 1.37	20.04 ± 2.15
▪ 6–10	50.25 ± 3.48	22.15 ± 1.27	19.63 ± 1.89
▪ >10	49.90±2.78	22.03 ± 1.60	19.56 ± 2.13
F-value/p	0.86/0.42	1.08/0.34	1.53/0.22

* Statistically significant (p ≤0.05)

Table 7: Mean scores for social intelligence and job involvement in relation to the personal characteristics of the nurses under study.

Variables	Social intelligence	Job involvement
Age years	Mean ± SD	Mean ± SD
▪ 20–30	300.79 ± 7.75	30.08 ± 1.93
▪ 31–40	300.38 ± 5.81	30.00 ± 1.99
▪ 41–50	300.56 ± 6.17	29.94 ± 1.24
F-value/p	0.09/0.91	0.07/0.93
Sex		
▪ Male	301.60 ± 6.21	30.30 ± 1.70
▪ Female	300.34 ± 7.28	29.96 ± 1.96
T-value/ p	1.21/0.22	1.19/0.23
Marital status		
▪ Single	301.21 ± 6.79	29.77 ± 1.94
▪ Married	300.44 ± 7.21	30.09 ± 1.94
▪ Divorced	300.10 ± 6.47	30.70 ± 0.95
▪ Widowed	304.00 ± 3.46	30.00 ± 1.00
F-value/ p	0.42/0.74	0.82/0.48
Level of education		
▪ Bachelor degree	300.47 ± 5.75	30.11 ± 1.85
▪ Technical degree	300.72 ± 7.61	30.01 ± 1.93
T-value/ p	0.26/0.79	0.38/0.70
Experience years:		
▪ 1–5	301.07 ± 6.88	30.16 ± 1.93
▪ 6–10	299.54 ± 9.47	29.79 ± 2.06
▪ >10	300.67 ± 5.71	30.03 ± 1.80
F-value/p	0.79/0.45	0.62/0.53

* Statistically significant (p ≤0.05)

Table 8: Relationships between leadership styles and social intelligence of head nurses on job involvement of staff nurses.

Leadership styles and social intelligence	Job involvement	
	r	p
Transformational style	0.04	0.44
Transactional style	0.06	0.30
Laissez-faire style	0.005	0.93
Outcome of leadership	0.10	0.11
▪ The aspects of extra effort	0.12	0.06
▪ Effectiveness	0.02	0.71
▪ Satisfaction with the leadership	0.009	0.88
Social intelligence	0.06	0.30

Discussion

I: Leadership style, social intelligence, and job involvement among staff nurses and their relationship with their personal characteristics

Leadership style

The findings of this study clarified that most nurses under study had a moderate level of transformational, transactional, and laissez-faire leadership styles. This could be due to a lack of managerial support, job uncertainty, job stress, or a lack of participation in decision-making. The highest perception was related to the intellectual stimulation domain in the transformational leadership style, followed by the contingent reward domain in the transactional leadership style and the passive management by exception domain in the laissez-faire leadership style. This finding could be related to the fact that transformational leadership is preferred over transactional leadership because it encourages nurses to improve their knowledge and skills in making sound decisions while also assisting them in developing leadership traits. These findings agree with those of **Abdalla (2013)**, who found that the level of transformational leadership is moderate. **Zakaria and Abo Habeb (2019)** also showed that the nurses working in the Mansoura Health Insurance Hospital had a moderate level of transformational, transactional, and laissez-faire leadership styles. This result agrees with those reported by **Rezaei (2016)**, who indicated that most nurse managers' leadership style had a moderate score; implementing

management training methods to promote leadership styles would be desirable.

These results disagreed with those of **Şahin and Özgenel (2020)**, who discovered that transformational leadership style insights are at the top of the scale, laissez-faire leadership style insights are at the bottom, and transactional leadership style insights are in the middle. It also disagreed with the results reported by **Ejere and Ugochukwu (2013)**, who discovered that both transactional and transformational leadership styles had a strong and favorable association with organizational performance. A hybrid leadership style, which combines transactional and transformational leadership styles, was found to be the most appropriate approach depending on the situation. Therefore, it was recommended that a mix of transactional and transformational leadership styles should be adopted, but with careful consideration of the circumstances and nature of the responsibilities delegated to employees/followers.

The findings of this study revealed that most staff nurses under study had a moderate level of leadership outcomes. The highest perception of leadership outcomes was related to leadership effectiveness, whereas the lowest perception was related to satisfaction with the leadership. This result may be related to the attainment of organizational outcomes, objectives, goals, and subordinates' requirements in their job. In contrast, subordinates are unsatisfied with their leader's behavior, and the leader does not cooperate well with others. Additionally, the leader

cannot increase subordinates' desire to succeed.

This finding agrees with that of **Zakaria& Abo Habeb, (2019)**, who found that effectiveness had the highest mean score (10.56), followed by extra effort (8.54), and satisfaction had the lowest mean score (5.78). According to **Bush, Michalek, and Francis (2021)**, among nurse leaders at a regional medical center in the United States, contentment with leadership had the highest mean frequency score (3.2 ± 0.4), followed by perceived leadership effectiveness (3.1 ± 0.5) and encouraging staff to put in extra effort. This finding is in contrast with their findings (2.9 ± 0.5).

Relationship between the personal characteristics of nurses and their leadership styles

This study revealed that there is no statistically significant relationship between the leadership styles of the nurses under study and their personal characteristics, except for transactional leadership style and marital status, which were statistically significant. These results disagreed with those reported by **Rezaei (2016),** who indicated that individual variables (i.e., age, sex, marital status, education, and experience) had no significant association with leadership style. They also disagreed with those reported by **Zakaria and Abo Habeb (2019),** who reported that there was no statistically significant relationship between other leadership styles and the demographic features of the nurses examined; however, the study nurses' perceptions of transformation style were significantly associated with their educational qualifications. Additionally, **Francis and Chiyem (2017)** reported that there was no significant difference in leadership styles based on marital status; however, there was a substantial difference in leadership styles based on educational level.

Social intelligence as perceived by staff nurses

The findings of this study revealed that more than half of the head nurses under study had a moderate level of social intelligence. The social self-efficacy domain had the highest score, among social intelligence domains. Meanwhile, the social skills domain had the lowest score. This result might be related to the fact that leadership style is at a moderate level, which might have affected the level of social intelligence among staff nurses because strong leaders are frequently described as visionaries who are adept at conveying their visions to others and encouraging others to perform their plans. Strong leaders are noted for their ability to build personal and professional relationships. Moreover, the results of the study by **Mohamed (2020)** indicated that the foundation for group self-efficacy and service provider performance for doctors in Egyptian governmental hospitals is provided by social intelligence competences. The findings of this study agree with those of **Uygun and Aribas (2020),** who investigated social intelligence among teachers and found that they had a moderate level of social intelligence. Furthermore, the findings agree with those of **Ibragimov et al. (2020),** who discovered average values for total social intelligence. Moreover, **Garg and Gera (2019)** reported that social intelligence is also found to be moderate. These results disagreed with the findings of **Varanasi and Thailand (2018) and Al Salt (2012),** who discovered that nursing students at the undergraduate level had a high level of social intelligence. They also stated that nursing students with high social intelligence have fundamental skills for understanding social situations and the ability to recognize people's thoughts and feelings, can form positive relationships with others, and develop interventions that promote good health. Furthermore, this result disagrees with the findings of **PP and Babu (2021**), who conducted a study in South India and observed that nurses are equipped with good levels of social intelligence. Moreover, **Al Salt (2012)** reported that social intelligence scale was high.

Relationship between social intelligence and the personal characteristics of staff nurses

This study reported that there was no statistically significant relationship between social intelligence and the personal characteristics of the staff nurses under study. These findings agree with those of **Sheela and**

Anand (2015), who reported that there was no statistically significant relationship between personal characteristics and social intelligence. However, these findings disagree with those of **Ali, Ahmad, and Khan (2019),** who found that there was no substantial difference based on sex or location. However, there was a strong association between social intelligence and age; social intelligence increases with age. These findings also disagree with those of a study conducted in the City Center of Bolu-Turkey by **Yildiz (2018),** who discovered that there was no significant difference in social intelligence between male and female samples. In contrast, the findings revealed that there is a significant difference in social intelligence among age groups.

Job involvement

The findings of this study revealed a moderate level of job involvement among the staff nurses under study because the staff nurses were less motivated to exert a strong effort and use their imagination to solve difficulties and work effectively. These findings agree with those of **Victor (2015),** who revealed that job involvement is at a moderate level. Furthermore, the study by **Sharma and Deolia (2017)** conducted in Delhi found that job involvement is more likely to be at a moderate level. Meanwhile, the findings of this study disagree with those of **Mugiono, Purwoko, Soelton, and Yuvitasari (2020),** who reported that nurses of international hospitals in Jakarta have a high level of job involvement, and **Sujono, Tunas, and Sudiarditha (2020)** found that nurses with a high level of job involvement are more likely to work beyond the organization's standards and targets and contribute positively to the organization's development and effectiveness.

Relationship between the personal characteristics of nurses and their job involvement

The results of this investigation revealed that there was no statistically significant relationship between job involvement of the staff nurses under study and their personal characteristics. These findings are supported by the study by **Sharma &Deolia (2017),** who found that

there was no statistically significant difference between various categories of work status in terms of age, marital status, experience, education, and job involvement. This study disagreed with the study by **Gopinath, Yadav, Saurabh, and Swami (2020),** who found that there was a significant relationship between age, designation, educational qualification, year of experience, and salary. Hence, in terms of job involvement, there was a substantial disparity among all demographic profiles of respondents.

II: Relationships between leadership styles, social intelligence, and job involvement

Relationship between leadership styles and social intelligence

According to the findings of this investigation, there was a statistically significant association between nurses' perception of social intelligence and transformational leadership style, and leadership outcomes have a statistically significant positive relationship with social intelligence. This result may be related to the ability of a capable leader to inspire and encourage individuals, establish a positive work environment, understand and manage emotions, form relationships, communicate, and influence, which are skills that may be learned. This result agrees with the findings of Silman(2015), who examined 202 Turkish administrators and discovered substantial associations between specific aspects of the administrators' leadership styles and social intelligence. Furthermore, this result agrees with the findings of **Nauman (2012)**. According to the researchers, the findings have important implication for social intelligence, leadership behaviors, and behaviors in general. Moreover, the study supports the view of **Pasha, Poister, Wright, and Thomas (2017),** who claimed that there is a connection between transformational leadership and employee behavior when they said that transformational leaders inspire, energize, and intellectually challenge their nursing staff. As a result, given that the social intelligence of leaders and the behavior of staff nurses are related, transformational leaders, and thus socially intelligent leaders, use their inspirational abilities, motivational skills,

intellectual stimulation, and individualized consideration to change the aspirations and behavior of staff nurses.

This result disagrees with the study of **Reza Balaghat and Azizpour(2014),** who examined the relationship between social intelligence and leadership style in Zahedan's District 2 and discovered a positive substantial relationship between all characteristics and managers' leadership style. Therefore, we may conclude that managers with high social intelligence can readily communicate with others and place a premium on communication abilities, such as active listening and relationship continuation, maintenance, and termination.

Relationship between leadership style and job involvement

This study showed that there was no significant relationship between job involvement and leadership behaviors. This research suggests that having a high level of job involvement causes a job to become a staff nurse's personal identity. These results agree with the study by **Omolayo and Ajila (2012**); their research included 300 employees who were working at tertiary institutions in Ekiti State, Nigeria, and there was no discernible difference between job involvement and leadership styles, according to the study. Meanwhile, this result disagrees with the findings of **Basyir, Madhakomala, and Handaru (2020),** who found that transformational leadership has a positive effect on job involvement. A similar finding was discovered in the studies by **Othman et al. (2017); Ariyani and Hidayati (2018); and Mubarak and Noor (2018).** As a result, transformational leadership is thought to have a favorable impact on job involvement.

Relationship between social intelligence and job involvement

The findings of this study revealed that there was no significant relationship between social intelligence and job involvement. This finding could be linked to the levels of job involvement among staff nurses, who play the most crucial role in providing healthcare. Nurses who are actively involved in their profession are more motivated than those who

are not. Thus, social intelligence can form the cognitive basis for personality, whereas job involvement is a basic requirement for the success of any organization. This result agrees with **Mabrouk, &Elshrief, (2018)**who stated that job involvement is a powerful tool for improving both in-role and extra-role performances. A study has demonstrated that job involvement has a favorable impact on attitudinal and behavioral outcomes, in additionto improving performance.

Conclusion

From the results of this study, the following conclusions were made:

- The levels of leadership style, social intelligence, and job involvement were moderate.

- There was a positive relationship between nurses' perception of social intelligence and transformational leadership style.

- Leadership outcomes have a statistically significant relationship with social intelligence.

Recommendation

✓ Improving the curricula of healthcare professional programs would enhance social intelligence, caring, leadership, job involvement, and moral judgment.

✓ Nurse managers should re-design employment to incorporate job qualities, such as autonomy, feedback, variety, and task identity, to boost nurses' job involvement.

✓ Workshops and training courses should be organized to educate nurses on how to improve their social intelligence and job involvement.

✓ Future studies in this area should examine job involvement and social intelligence that are based on nurse supervisory or peer ratings.

✓ It would be advantageous to replicate this study in other contexts to increase the generalizability of the findings.

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