

Leadership Behaviors, Organizational Commitment and Innovative Work Behaviors among Nurses

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Abstract: Leadership behaviors have often been seen as a vital element that influences the level of commitment and innovative work behaviors of employees within the organization to achieve the organizational objectives. **This study:** Aimed to determine the relationship between leadership behaviors, organizational commitment, and innovative work behaviors among nurses. **Design:** A descriptive design was utilized in this study. **Setting:** This study was conducted at Belbeis general hospital affiliated to ministry of health. **Subjects:** A convenient sample of 100 staff nurses was used in this study. **Tools of data collection:** Three tools were used: Multifactor leadership behaviors questionnaire, organizational commitment scale and innovative work behaviors questionnaire. **Results:** Indicated that 75% of staff nurses had a positive perception of the transformational leadership behavior. As well, the majority of staff nurses had a high level of organizational commitment (84.0%). Additionally, 37 % of staff nurses had a high level of innovative work behaviors, while, 35% of them had a low level of innovative work behaviors. **Conclusion:** Organizational commitment was positively and significantly correlated to transformational and transactional leadership behaviors. As well, there was statistically significant and positive correlation between innovative work behaviors and all multifactor leadership behaviors. Furthermore, transformational leadership behavior and organizational commitment were statistically significant positive predictors of staff nurses' innovative work behaviors. **Recommendations:** The nurse manager should respond positively to nurses' innovative efforts by supporting them with the time and resources to carry out, and plan to increase the participation of staff nurses in decision-making process to promote their commitment and perception about leadership behaviors.

Keywords: Innovative work behaviors, leadership behaviors, organizational commitment, staff nurses.

INTRODUCTION

Nursing is a healthcare profession focused on the care of individuals, families, and communities, so nurses are considered as the central component of the healthcare sector in all parts of the world. Today's many challenges are facing health care organizations such as personnel diversity, national and international competition, development, innovations, new leadership and management approaches, commitment and globalization. So nursing leadership is a key skill for nurses at all levels, and there's increasing need for leadership that inspires followers to aspire for a common greater good in a supportive environment (Iqbal et

al., 2020). Leadership behaviors are the most prevalent factors that influence employees' attitudes and behaviors including organizational commitment and provide direction to foster innovative work behaviors among nurses. Leadership can be defined as the process of working with individuals, groups, and other resources in order to achieve the objectives of the organization. As well, leadership behaviors can be defined as the behavior which a leader exhibits (Alkahtani, 2016). Moreover, Leadership is the process of influencing individuals and providing them with an atmosphere that helps them to accomplish team or organizational objectives and goals. Leadership occurs when one person induces others to willingly meet the minimum requirements for their job (Chris & Ukaidi, 2016; Best et al., 2020). Additionally the leader is an important factor affecting the success or failure of the organization. Competent leaders can motivate, encourage and identify with their staff to promote the completion of their jobs and the achievement of the required objectives (Harlianto & Rudi, 2018). Moreover, leaders use a wide range of different leadership behaviors to inspire and motivate staff nurses; general leadership behaviors are often split into transformational, transactional, and laissez-faire leadership (KO & Kang 2019). Transformational leadership is defined as influencing others by changing follower's values and demands to reach exceptional goals. Transformation leaders are often highly visible and known in all aspects of their work for their passion and energy. They spend most of their time communicating with others and seeking projects that add value to the future of their teams. This leadership behavior is divided into four dimensions are: idealized influence, individualized consideration, inspirational motivation and intellectual stimulation (Kuria et al., 2016). Idealized influence refers to the ability of leaders to act as role models by creating a sense of appreciation, respect and trust in followers. This characteristic of transformational leaders tends to encourage employees to engage in innovative ways of carrying out their work. (Amankwaa et al., 2018). Intellectual stimulation, a feature that provides the opportunity of transformational leaders to raise consciousness and appreciation of followers, as well as their own beliefs, values and creativity; this helps to inspire workers to question conventions and to examine new and innovative ways of dealing with challenges (Northouse, 2019). Individualized consideration, an attribute that encourages transformational leaders to pay attention to individual followers and taking into account their strengths and limitations, the leader constantly engages followers by coaching and providing them with input in a process that ensures that the desires of followers are in line with the purpose of the organization such that opportunities are given for development and self-actualization (Sammut & Scicluna, 2020). Inspirational motivation, refer to the ability of leaders to inspire and motivate confidence and a sense of mission in employee, Strong communication skills support inspirational motivation in which the leader visualizes a desirable future, communicates a simple and appealing vision and then convincingly communicate the key priorities and improvements expected from the employee (Pereira et al., 2020). Transactional leadership is based on the premise of mutual relationship between leaders and employee. Transactional leaders seek a cost-benefit economic exchange with members as their material and psychological requirements are fulfilled to attain anticipated work performance. On the other hand, transactional leadership followers are required to agree with, embrace, and comply with the leader in order for praise, reward, and resources or to avoid punishment. As a result, this type of leadership limits the advancement of the innovative and creative abilities of

employees and hinders personal and organizational growth (Masa'dehet al., 2016). Additionally, transactional leadership has been used as a corrective approach, and has two dimensions: contingent reward; and management by exception (active and passive). Contingent reward indicates that to get the desired outcomes from the followers, the leader uses incentives and promotions. Contingent reward is seen as a constructive form of behavior based on a bargaining exchange mechanism in which the leader clarifies subordinate expectations and both agree on the accomplishment of organizational goals, and when goals are accomplished, the leader provides appreciation and rewards to subordinates (Smith et al., 2016). Management by exception is considered a corrective form of behavior. Can take the form of active management by exception in which the leader determines compliance standards and what is considered ineffective performance, therefore active management by exception aims to proactively avoid potential problems early by following appropriate preventive measures. May also, take the form of passive management, Passive leaders fail to specify or clarify expectations; rather they intervene when problems become apparent. This style not responds to problems systematically but takes a wait and sees approach where problems are awaited before taking appropriate corrective action (Smith et al., 2016; Silva & Mendis, 2017). The laissez-faire leadership was described as avoidance and abdication of one's responsibilities. Generally, Laissez-faire leaders avoid decisions, ignore challenges in the workplace and fail to model suitable behaviors. Laissez-faire leadership is characterized by indifference to the achievement of objectives, authority and transparency of followers. This passive leadership behavior often indicates a lack of clarification about followers' roles and obligations, leading to discontent and disappointment. Laissez faire leaders' followers don't know what their authority is and what they are supposed to do (Diebig & Bormann, 2020). Leadership behaviors play an important role in creating a positive work environment, enhancing job satisfaction, innovation and commitment (Northouse, 2016). Organizational commitment is defined as the psychological bond characterized by the feeling of attachment, responsibility, and loyalty of the members to a particular organization. Commitment also describes the level of acceptance by employees of the goals of the organization and the willingness to work towards these goals it divided into three components; affective, continuance and normative commitments (Rego et al., 2016). Affective commitment concerns the emotional attachment of the employee to the organization's identification and involvement. Employees remain in the organization because they want to accomplish the goals of the organization and thus highly motivated because they consider them as their own goals. (Abdallah et al, 2017). On the other hand, continuance commitment refers to the assessment of employees as to whether the cost of leaving the organization exceeds the cost of staying. Employees who feel the cost of leaving the organization is higher than the cost of staying will be reimbursed (Labrague et al., 2018). Normative commitment defined as "the work behavior of individuals, directed by a sense of duty, responsibility and loyalty towards the organization". Employees are committed to an association based on religious reasons. In spite of how much status enhancement or pleasure the organization offers, the normative committed employee finds it morally right to remain in the organization (Udofia et al, 2019). Affectively committed employees would feel less constrained by technical rule-bound aspects of their work and freer to explore new and alternative cognitive pathways, instead of compelled to strictly follow organizational routines. As a result, they will be more likely to

interpret innovation as a valuable and socially valued way to contribute to the organization than a deviant and disturbing behavior (Odoardi et al., 2019). Innovative work behavior can be seen as a motivational and cognitive process of the individual nurse or a group of nurses, expressed in certain activities. Nurses must be able to perform tasks that go beyond a team, group, or organization's established routines. They may search for new technologies, suggest new ways of achieving goals, apply new methods of working, and explore and secure resources for implementing new ideas. These actions are called innovative work behaviors, which can be defined as an individual's intentional introduction, promotion and realization of new ideas, products, processes, and procedures within a work role, work group or organization, in order to benefit role performance, the group, or the organization (Masood & Afsar, 2018). In the health sector, healthcare practitioners' innovative work behavior can occur in a gradual adjustment of current healthcare procedures, services or as entirely new practical alternatives. In order to engage in creative behavior, nurses need leadership, organizational commitment, resources and understanding the role of innovation. Nursing leadership is important for establishing and maintaining frameworks and conditions to promote intensity and is therefore necessary for the innovation process. Additionally, leadership behaviors play an important role in creating a positive work environment that affects the degree of nurses' commitment and innovation (Ahmed et al., 2019).

Significance of the study

Over the last few years organizations have undergone dramatic changes, including flatter and looser buildings, downsizing and horizontal approaches to the flow of data, owing to fast technological innovations, global competition and the shifting nature of the workforce caused by measures such as total quality management and reengineering of business processes (El Dahshan et al., 2017). The manager of any organization is considered a strategic factor that leads the organization to one of its duties towards its predetermined objectives. Nowadays, leadership behaviors are a very significant variable that enhances employee commitment and promote the employee innovation. Committed staffs are anticipated to conduct at a higher level of performance than uncommitted. Additionally, innovation in nursing not only contributes to improve healthcare quality, but also promotes medical productivity (Ahmed et al., 2019). Therefore, encouraging commitment and innovative work behavior among nurses has been an important development direction for healthcare organizations. Although, studies were conducted to study leadership behaviors but, no study was conducted to examine relationship leadership behaviors, organizational commitment, and innovative work behavior among nurses, so, the current research aims to determine the relation between leadership behaviors, organizational commitment, and innovative work behavior among nurses at Belbeis general hospital.

Aim

The present study aimed to determine the relation between leadership behaviors, organizational commitment, and innovative work behaviors among nurses at Belbeis general hospital.

Research questions

1. What are the nurses' perceptions of leadership behaviors at Belbeis general hospital?
2. What is the level of organizational commitment among nurses at Belbeis general hospital?
3. What is the level of nurses' innovative work behaviors at Belbeis general hospital?

METHODOLOGY

Design

A descriptive correlation design was used for this study.

Setting

This study was conducted at Belbeis general hospital affiliated to ministry of health.

Subjects

A convenient sample of 100 staff nurses working at Belbeis general hospital at the time of data collection and agreed to participate in the present study.

Instruments

A questionnaire sheet was used to collect data for this study which consisted of three tools:

Tool I: Modified multifactor leadership behaviors questionnaire

This tool contained two parts as follows: Part 1: Personal and job characteristics of staff nurses, developed by the researchers to collect data about age, gender, years of experience, and educational qualification...etc. Part 2: Developed by Bass and Avolio (2004) to measure nurses' perception of multifactor leadership behaviors. It included 21 items that are grouped into seven dimensions (each dimension includes three items); four dimensions represent transformational leadership (idealized influence, inspirational motivation, intellectual stimulation, & individual consideration), two constructs for transactional leadership (contingent reward & management-by-exception), and one for laissez-faire leadership. The nurses' responses were measured on a five-point Likert scale ranging from always (5) to never (1), the total score of this tool ranging from 21-105. The nurse's score was considered a positive perception of each type of leadership behaviors if it is ≥ 63 ($\geq 60\%$) and a negative perception if it is < 63 ($< 60\%$). The reliability of the tool was measured by Cronbach alpha coefficient and it was 0.85.

Tool II: Organizational commitment scale

This tool was developed by Meyer and Allen (1991) to assess nurses' organizational commitment levels. This scale included 24 items subdivided into three subscales, namely: affective, continuance, and normative commitment. Every subscale is eight items. The nurses' responses were measured on a five-point Likert scale ranging from strongly agree (5) to strongly disagree (1), the total score of this tool ranging from 24-120. Scores ≥ 72 ($\geq 60\%$) indicate a high level of commitment, while scores < 72 ($< 60\%$) indicate a low level. The reliability of the tool was measured by Cronbach alpha coefficient and it was 0.91.

Tool III: Modified Innovative Work Behavior Questionnaire:

It was developed by Harby et al. (2016) to assess innovative work behaviors. It consisted of 47 leader behaviors subdivided into 10 dimensions, as follows: Innovative role modeling (4 items), support for innovation (12 items), stimulating knowledge diffusion (7 items), providing vision (5 items), consulting (5 items), task assignment and delegation (3 items),

organizing feedback (2 items), rewarding (3 items), providing resources (3 items), and monitoring (3 items) The nurses' responses were measured on a five-point Likert scale ranging from strongly agrees (5) to strongly disagree (1). The total score of this tool ranging from 47-235. The scoring levels are arranging as follows; <146 ($< 65\%$) for low innovative work behavior, from $146 < 176$ ($65 < 75\%$) for moderate innovative work behavior, and ≥ 176 ($\geq 75\%$) for high innovative work behavior.

Fieldwork

The field work of this study was executed in one month started from the middle of September to the middle of October, 2020. The researcher met staff nurses in each unit in the morning, afternoon, and night shifts after finishing their work to distribute the questionnaires after clarifying the purpose of the study. Staff nurses completed the questionnaires at the same time of distribution and took about 20-30 minutes.

Pilot study

A pilot study was carried out on 10 % of study subjects (10 staff nurses) to test applicability, feasibility, practicability of the tools. In addition, to estimate the time required for filling in the questionnaire sheets. Staff nurse were selected randomly and excluded from the main study sample and the necessary modifications were done according to the results of the pilot study.

Content validity

The questionnaire was translated into Arabic; and then content and face validity were established by a panel of three experts at the faculty of nursing, Zagazig University, and two experts at the faculty of nursing, Mansoura University. Experts were requested to express their opinions and comments on the tool and provide any suggestions for any additions or omissions of items. According to their opinions all recommended modifications were performed by the researcher.

Administrative and ethical considerations

Official permissions were obtained from the dean of the Faculty of Nursing, Zagazig University, and approval to conduct the study was obtained from the medical and nursing directors of the hospital and the head nurses of each department after explaining the nature of the study. An individual oral consent was received from each participant in the study after explaining the purpose of the study. Staff nurses were given an opportunity to refuse or to participate and they were assured that the information would be used confidentially and used for the research purpose only. Confidentiality was confirmed by maintaining anonymity of subjects' data.

Statistical analysis

Data entry and statistical analysis were done using the statistical package for social science (SPSS) version 24.0. Quantitative data were expressed as the mean \pm SD & median (range), and qualitative data were expressed as absolute frequencies (number) and relative frequencies (percentage). Percent of categorical variables were compared using Chi-square test.

Spearman's correlation coefficient was calculated to assess relationship between various study variables, + sign indicated direct correlation and - sign indicate inverse correlation, also values near to 1 indicated strong correlation and values near 0 indicate weak correlation. All tests were two sided. P-value < 0.05 was considered statistically significant (S), and p-value \geq 0.05 was considered statistically insignificant (NS).

RESULTS

Table 1 shows personal and job characteristics of staff nurses. According to the table, 52% of staff nurses aged 30 years old or more with a mean age 30.8 ± 6 . As well, the majorities of them were female and married (92% and 93%, respectively). As regards nurses educational level, 41% of them had bachelor degree of nursing. Additionally, more than half of them had less than 10 years of experience and worked in ICU and emergency units (57% and 64%, respectively). Moreover, 82% of staff nurses attended training courses.

Figure 1 illustrates the perception of multifactor leadership behaviors among staff nurses. This figure presents that 75% of staff nurses had a positive perception of the transformational leadership behavior. On the other hand, 78% and 54% of them had negative perceptions of laissez-faire leadership behavior and transactional leadership behavior, respectively.

Figure 2 illustrates that the majority of staff nurses had a high level of organizational commitment (84.0%), while, 16.0% of them had a low level of organizational commitment.

Figure 3 presents the level of innovative work behaviors among staff nurses. It is clear from this figure that 37 % of staff nurses had a high level of innovative work behaviors, while, 35% of them had a low level of innovative work behaviors.

Table 2 clarifies the correlations between the different study variables as reported by staff nurses. This table displays that the organizational commitment was positively and significantly correlated to transformational and transactional leadership behaviors, where p-value < 0.05. As well, there was statistically significant and positive correlation between innovative work behaviors and all multifactor leadership behaviors, where p-value, < 0.05.

Table 3 displays the effect of leadership behaviors and organizational commitment on staff nurses' innovative work behaviors. As obvious from this table, transformational leadership behavior and organizational commitment were reasonable for 53% of the variation in nurses' innovative work behaviors ($R^2=53\%$). As a result transformational leadership behavior and organizational commitment were statistically significant positive predictors of staff nurses' innovative work behaviors.

Table 4 show relation between personal job characteristics of staff nurses and different study variables, the table, represents that there were no statistically significant relationships between nurses' personal and job characteristics as regards their perception of transformational and transactional leadership behaviors, where p-value >0.05. As well, there were statistically significant relationships between nurses' perception of laissez-faire leadership behavior as regards their age, gender, marital status, educational level and years of experience, where p-value <0.05. Additionally, there were statistically significant relationships between staff nurses' organizational commitment level as regards their age and years of experience, where p-value < 0.05. Moreover, there were statistically significant relationships between staff nurses' innovative work behaviors level as regards their educational level and attending training course, where p-value < 0.05.

Table 1: Personal and job characteristics of staff nurses (n=100)

| Items | No | % |
|------------------------------------------------|---------|------|
| Age per years: | 48 | 48.0 |
| <30 | 52 | 52.0 |
| ≥30 | 30.8±6 | |
| Mean± SD | | |
| Gender : | | |
| Male | 8 | 8.0 |
| Female | 92 | 92.0 |
| Marital status: | | |
| Married | 93 | 93.0 |
| Single | 7 | 7.0 |
| Educational level: | | |
| Bachelor degree of nursing | 41 | 41.0 |
| Technical institute of nursing | 38 | 38.0 |
| Diploma and specialty of nursing | 21 | 21.0 |
| Years of experience: | 57 | 57.0 |
| <10 | 43 | 43.0 |
| ≥10 | 9.6±6.3 | |
| Mean± SD | | |
| Department: | 15 | 15.0 |
| Surgical units | 21 | 21.0 |
| Internal medical units ICU and emergency units | 64 | 64.0 |
| Attended training courses | | |
| yes | 82 | 82.0 |
| no | 18 | 18.0 |

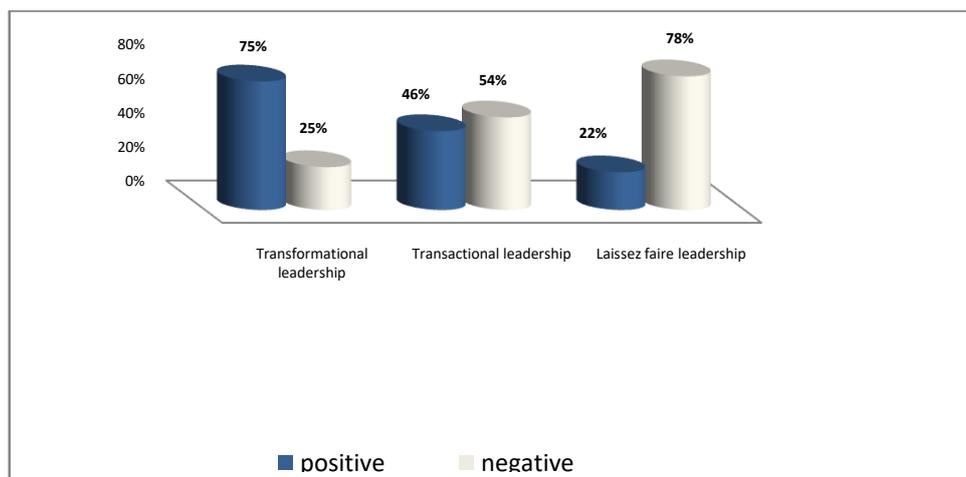


Figure 1: Perception of multifactor leadership behaviors among staff nurses (n=100)

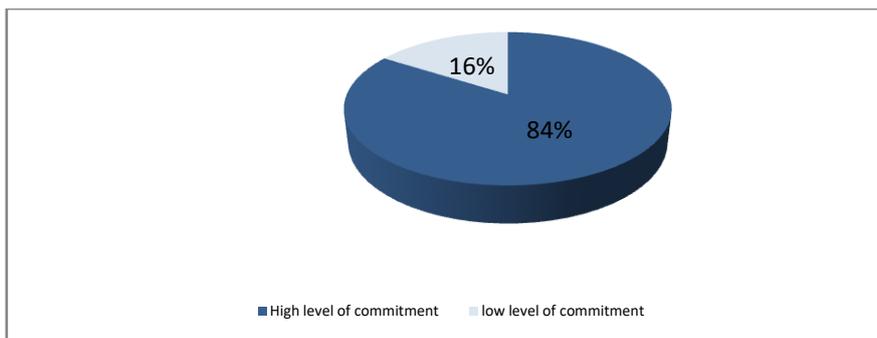


Figure 2: Levels of the organizational commitment among staff nurse (n=100)

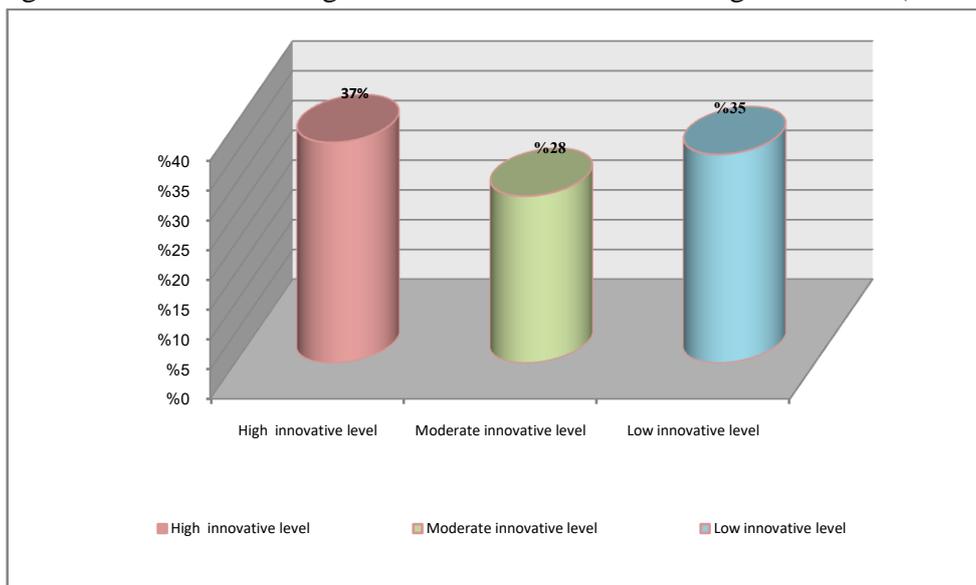


Figure (3): Level of innovative work behaviors among staff nurses (n=100)

Table 2: Correlation matrix between the different study variables as reported by staff nurses (n=100)

| Variables | Multifactor leadership behaviors | | | | | | Organizational commitment | |
|---------------------------|----------------------------------|--------|--------------------------|--------|---------------------------|-------|---------------------------|------|
| | Transformational Leadership | | Transactional leadership | | Laissez - fair leadership | | r | p |
| | r | p | r | p | r | p | | |
| Organizational commitment | 0.466** | 0.0001 | 0.449** | 0.0001 | 0.103 | 0.308 | | |
| Innovative work behaviors | 0.653** | 0.0001 | 0.585** | 0.0001 | 0.332** | 0.001 | 0.124 | 0.22 |

**Significant at $p < 0.05$ (r) Correlation coefficient

Table 3: Multiple linear regression analysis to study the effect of leadership behaviors and organizational commitment on staff nurses' innovative work behaviors (n=100)

| Variables | Un standardized Coefficients | | t | Sig. | R | R ² |
|------------|------------------------------|------------|---|------|---|----------------|
| | β | Std. Error | | | | |
| (Constant) | 36.147 | | | | | |

| | | | | | | |
|-----------------------------|-------|-------|-------|--------|------|-----|
| Transformational leadership | 1.247 | 0.274 | 4.546 | 0.0001 | 0.73 | 53% |
| Organizational commitment | 1.041 | 0.169 | 6.149 | 0.0001 | | |

Model a nova test =54 p=0.0001R square =53%Predictors: (Constant), organizational commitment, transformational leadership.Parameters excluded from model are laissez-fair leadership, transactional leadership.

Table 4: Relationship between personal and job characteristics of the staff nurses and different study variables (n=100)

| Variables | Leadership behaviors | | | | | | | | | | | |
|----------------------------------|-----------------------------|------|---------------------|------|--------------------------|------|---------------------|------|--------------------------|------|---------------------|------|
| | Transformational leadership | | | | Transactional leadership | | | | Laissez-faire leadership | | | |
| | Positive perception | | Negative perception | | Positive perception | | Negative perception | | Positive perception | | Negative perception | |
| | No | % | No | % | No | % | No | % | No | % | No | % |
| Age per years | | | | | | | | | | | | |
| <30 | 36 | 75.0 | 12 | 25.0 | 22 | 45.8 | 26 | 54.2 | 15 | 31.3 | 33 | 68.7 |
| ≥30 | 39 | 75.0 | 13 | 25.0 | 24 | 46.2 | 28 | 53.8 | 7 | 13.5 | 45 | 86.5 |
| P-value | 1 | | | | 0.97 | | | | 0.032(S) | | | |
| Gender | | | | | | | | | | | | |
| Male | 7 | 87.5 | 1 | 12.5 | 4 | 50.0 | 4 | 50.0 | 5 | 62.5 | 3 | 37.5 |
| Female | 68 | 73.9 | 24 | 26.1 | 42 | 45.7 | 50 | 54.3 | 17 | 18.5 | 75 | 81.5 |
| P-value | 0.67 | | | | 0.99 | | | | 0.012(S) | | | |
| Marital status | | | | | | | | | | | | |
| Married | 70 | 75.3 | 23 | 24.7 | 41 | 44.1 | 52 | 55.9 | 18 | 19.4 | 75 | 80.6 |
| Single | 5 | 71.4 | 2 | 28.6 | 5 | 71.4 | 2 | 28.6 | 4 | 57.1 | 3 | 42.9 |
| P-value | 0.99 | | | | 0.24 | | | | 0.04(S) | | | |
| Educational level | | | | | | | | | | | | |
| Bachelor degree of nursing | | | | | | | | | | | | |
| Technical institute of nursing | 30 | 73.2 | 11 | 26.8 | 17 | 41.5 | 24 | 58.5 | 7 | 17.1 | 34 | 82.9 |
| Diploma and specialty of nursing | 32 | 84.2 | 6 | 15.8 | 21 | 55.3 | 17 | 44.7 | 14 | 36.8 | 24 | 63.2 |
| | 13 | 61.9 | 8 | 38.1 | 8 | 38.1 | 13 | 61.9 | 1 | 4.8 | 20 | 95.2 |
| P-value | 0.16 | | | | 0.34 | | | | 0.01(S) | | | |
| years of experience | | | | | | | | | | | | |
| <10 | 42 | 73.7 | 15 | 26.3 | 27 | 47.4 | 30 | 52.6 | 18 | 31.6 | 39 | 68.4 |
| ≥10 | 33 | 76.7 | 10 | 23.3 | 19 | 44.2 | 24 | 55.8 | 4 | 9.3 | 39 | 90.7 |
| P-value | 0.73 | | | | 0.75 | | | | 0.008(S) | | | |

| | | | | | | | | | | | | |
|---------------------------|-------|-------|----|------|------|------|----|------|------|------|----|------|
| Department | | | | | | | | | | | | |
| Surgical units | | | | | | | | | | | | |
| Internal medical units | 15 | 100.0 | 0 | .0 | 11 | 73.3 | 4 | 26.7 | 4 | 26.7 | 11 | 73.3 |
| ICU and emergency units | 5 | 71.4 | 6 | 28.6 | 8 | 38.1 | 13 | 61.9 | 2 | 9.5 | 19 | 90.5 |
| | 45 | 70.3 | 19 | 29.7 | 27 | 42.2 | 37 | 57.8 | 16 | 25.0 | 48 | 75.0 |
| P-value | 0.053 | | | | 0.07 | | | | 0.3 | | | |
| Attended training courses | | | | | | | | | | | | |
| yes | 63 | 75.0 | 21 | 25.0 | 39 | 46.4 | 45 | 53.6 | 18 | 21.4 | 66 | 78.6 |
| no | 12 | 75.0 | 4 | 25.0 | 7 | 43.8 | 9 | 56.3 | 4 | 25.0 | 12 | 75.0 |
| P-value | 1 | | | | 0.84 | | | | 0.75 | | | |

(s)= Significant $P < 0.05$

Continued, table4: Relationship between personal and job characteristics of the staff nurses and different study variables (n=100)

| Variables | Organizational commitment | | | | Innovative work behaviors | | | | | | |
|----------------------------------|---------------------------|------|-----------|------|---------------------------|------|----------------|------|-----------|-------|--|
| | High level | | low level | | High level | | Moderate level | | Low level | | |
| | No | % | No | % | No | % | No | % | No | % | |
| Age per years | | | | | | | | | | | |
| <30 | 36 | 75.0 | 12 | 25.0 | 19 | 39.6 | 13 | 27.1 | 16 | 33.3 | |
| ≥30 | 48 | 92.3 | 4 | 7.7 | 18 | 34.6 | 15 | 28.8 | 19 | 36.6 | |
| P-value | 0.018(S) | | | | 0.87 | | | | | | |
| Gender | | | | | | | | | | | |
| Male | 7 | 87.5 | 1 | 12.5 | 5 | 62.5 | 3 | 37.5 | 0 | 0.00 | |
| Female | 77 | 83.7 | 15 | 16.3 | 32 | 34.8 | 25 | 27.2 | 35 | 38.0 | |
| P-value | 0.99 | | | | 0.09 | | | | | | |
| Marital status | | | | | | | | | | | |
| Married | 79 | 84.9 | 14 | 15.1 | 34 | 36.6 | 26 | 28.0 | 33 | 35.4 | |
| Single | 5 | 71.4 | 2 | 28.6 | 3 | 42.9 | 2 | 28.6 | 2 | 28.57 | |
| P-value | 0.31 | | | | 0.92 | | | | | | |
| Educational level | | | | | | | | | | | |
| Bachelor degree of nursing | 34 | 82.9 | 7 | 17.1 | 16 | 39.0 | 5 | 12.2 | 20 | 48.8 | |
| Technical institute of nursing | 31 | 81.6 | 7 | 18.4 | 16 | 42.1 | 14 | 36.8 | 8 | 21.1 | |
| Diploma and specialty of nursing | 19 | 90.5 | 2 | 9.5 | 5 | 23.8 | 9 | 42.9 | 7 | 33.3 | |
| P-value | 0.65 | | | | 0.017(S) | | | | | | |
| years of experience | | | | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|----------|-------|----|------|---------|------|----|------|----|------|
| <10 | 43 | 75.4 | 14 | 24.6 | 21 | 36.8 | 12 | 21.1 | 24 | 42.1 |
| ≥10 | 41 | 95.3 | 2 | 4.7 | 16 | 37.2 | 16 | 37.2 | 11 | 25.6 |
| P-value | 0.007(S) | | | | 0.12 | | | | | |
| Department | | | | | | | | | | |
| Surgical units | 15 | 100.0 | 0 | 0.0 | 8 | 53.3 | 6 | 40.0 | 1 | 6.7 |
| Internal medical units | 18 | 85.7 | 3 | 14.3 | 7 | 33.3 | 8 | 38.1 | 6 | 28.6 |
| ICU and emergency units | 51 | 79.7 | 13 | 20.3 | 22 | 34.4 | 14 | 21.9 | 28 | 43.7 |
| P-value | 0.15 | | | | 0.07 | | | | | |
| Attended training courses | | | | | | | | | | |
| yes | 68 | 82.9 | 14 | 17.1 | 35 | 42.7 | 19 | 23.2 | 28 | 34.1 |
| no | 16 | 88.9 | 2 | 11.1 | 2 | 11.1 | 9 | 50.0 | 7 | 38.9 |
| P-value | 0.73 | | | | 0.02(S) | | | | | |

(s)= Significant P<0.05

DISCUSSION

Leadership behaviors have often been seen as a vital element and feature of management that influence the level of commitment of employees within the organization and have the possibility to boost organization effectiveness, innovative work behaviors among staff nurses, job satisfaction, as well as a sense of confidence about problem solving in order to achieve the organizational objectives (Abasilim et al., 2019). Therefore, the aim of this study was to determine the relation between leadership behaviors, organizational commitment, and innovative work behavior among nurses at Belbeis general hospital. Regarding the perceptions of leadership behaviors; the present study findings showed that the highest percentage of staff nurses had a positive perception of the transformational leadership behavior. This finding might be due to that staff nurses choose to work with a leader using this style of leadership behaviors that includes pure vision, commitment to excellence, loyal to their staff nurses, willingness to inspire, communicate, and lead others to greater accomplishment. They also foster innovation and stress the value of appreciating and valuing staff nurses. These will push new standards of service and sustainability to high quality performance, safer working conditions for nurses, and secure patient-centered care. The current study finding is in agreement with previous studies, such as the one conducted by Olu-Abiodun and Abiodun (2017), who studied the perception of transformational leadership behavior among nurses, in Nigeria; and another one conducted by Majeed et al. (2017), who explored the relationship between transformational leadership and organizational citizenship behavior, in Malaysia, and they found that nurses had a positive perception about transformational leadership behavior. As well, Afsar and Umrani (2018), who investigated the effect of transformational leadership on employee's innovative work behaviors, in Pakistan, and revealed that nurses had a positive perception about transformational leadership behavior. Concerning the distribution of total organizational commitment level among the staff nurses; the results of this study revealed that the majority of staff nurses were highly committed to their hospital. This might be due to that staff nurses feel obligated to their hospital due to the benefits that the

hospital provided and the cost of leaving the hospital is very high that resulted in high level of commitment. Also, this might be due to the fact that the highest percentage of studied nurses had more than ten years of experience that resulted in high sense of loyalty to the hospital. The previous finding is congruent with previous studies, such as the one conducted by Yousef (2017), who examined the organizational commitment and attitudes toward organizational change, in the United Arab Emirates (UAE), and another one conducted by Ata et al. (2019), who assess the organizational culture perception as a predictor of organizational commitment and attitudes toward organizational change among nurses, in Egypt, and they found that nurses were highly committed to their hospital. Conversely, the previous study finding is in disagreement with those studies such as the one conducted by Elzohairy et al. (2019), who examined the relationship between organizational commitment and intention to leave among nurses, in Egypt, and another one conducted by Gholami et al. (2019), who studied the relationship between perception of job empowerment, organizational commitment and trust among nurses, in Iran, and they found that nurses had moderate level of commitment. Regarding the level of innovative work behaviors; this study findings showed that slightly more than one third of staff nurses had a high level of innovative work behaviors. The potential explanation for this result may be attributed to the fact that the innovation behavior is comparatively new and unfamiliar concept for nurse managers; so they didn't interested in enhancing these behaviors in their units. The current study findings go in the same line with that of a study conducted by Ahmed et al. (2019), who examined the relationship between leadership behaviors, organizational climate, and innovative work behaviors among nurses, in Egypt, and revealed that slightly less than half of them have a high average level of innovative work behaviors. Conversely, the previous result goes in disagreement with that of a study conducted by Kamel and Aref (2017), who investigated the perception of staff nurses about organizational culture and its relationship to innovative work behaviors at critical care units, in Egypt, and pointed out that half of staff nurses, had a highly level of innovative work behaviors. Additionally, Abd El Fattah (2017), who conducted a study about innovation behaviors levels and its relation with TIGER-based nursing informatics competencies among critical care nurses, in Egypt, confirmed that more than half of participants had a moderate level of innovative work behaviors. With regard to the correlations between the different study variables and the predicting effect of the leadership behaviors and organizational commitment on innovative work behaviors; the present study findings revealed that the organizational commitment was positively and significantly correlated to transformational and transactional leadership behaviors. As well, there was statistically significant and positive correlation between innovative work behaviors and all multifactor leadership behaviors. Moreover, transformational leadership behavior and organizational commitment were statistically significant positive predictors of staff nurses' innovative work behaviors. The previous study results might be due to that leadership behaviors consider the important aspect that contributes to the staff nurses' organizational commitment and innovative behaviors. Additionally, leaders of transformational leadership behavior able to motivate staff to perform beyond their expectations by mean of purposeful tasks inspire hard work, share vision and simply express objectives and priorities. As well, encourages the adoption and implementation of new ideas with decentralization. Moreover, they enhance and provide staff with more decision-making autonomy in all actions related to

tasks they perform and support new activities that could positively affected staff nurses' innovative work behaviors. The previous study findings go in the same line with Dariush et al. (2016), who studied how leader facilitating organizational commitment among employees, in Iran, Abasilim et al. (2019), who examined the relationship between leadership styles and employees' commitment, in Nigeria, and Rindu et al. (2020), who investigated the relationship between transformational leadership, organizational commitment, work stress and turnover intentions of nurse, in Indonesia, and they found that transformational leadership behavior relates more with nurses' commitment. Additionally, the previous findings are in agreement with a study conducted by Abdullah et al. (2015), who examined the mediating effect of organizational commitment on the relationship between transformational leadership behavior and innovative work behaviors, in Malaysia, and pointed out that transformational leadership and organizational commitment significantly affected innovative work behaviors. As well, Ismail and Mydin (2018), who examined the impact of transformational leadership and commitment on innovative behaviors, in Malaysia, asserted that transformational leadership behavior and organizational commitment positive predictors on innovative work behaviors. Moreover, Afsar and Masood (2017), who examined how nurse managers' transformational leadership behavior relates to innovative work behaviors of subordinate nurses, in Pakistan, and revealed that transformational leadership has the strongest positive relationship with innovative work behaviors. Also, Afsar and Umrani (2018) pointed out that transformational leadership behavior directly predicted nurses' innovative work behaviors. As well as, Muzafary et al. (2019), who studied the influence of transformational leadership behavior on the employees' innovative work behaviors, in Afghanistan, and revealed that transformational leadership behavior completely influenced innovative work behaviors. Regarding the relationship between studied nurses' personal and job characteristics as regards the different study variables; there were no statistically significant relationships between staff nurses' perception of transformational and transactional leadership behaviors as regards their personal and job characteristics. These results might be due to that there were other factors that affect nurses' perception of transformational and transactional leadership behaviors such as the organizational rules, policies, regulation, job satisfaction, nurse manger' personality, salaries, and work requirements. These results are supported by a study conducted by Metwally et al. (2018), who studied organizational justice, organizational citizenship behavior and turnover intention among nurses: The mediating effect of transformational leadership, in Egypt, and they detected that there were no statistically significant relationships between nurses' personal and job characteristics as regards the transformational leadership. Likewise, Ahmad et al. (2019) reported that there were no statistically significant relationships between staff nurses' perception of transactional leadership behaviors as regards their personal and job characteristics. As well, the current study results showed that there were statistically significant relationships between staff nurses' perception of laissez-faire leadership behavior as regards their age, gender, marital status, educational level and years of experience. These results might be due to that this hospital had a centralized decision making process that could affect negatively on older and more experienced nurses. Additionally, female nurses specially who are married used to take orders from others and didn't participate in the decision making process. As well, staff nurses who had diploma and specialty of nursing may not have the suitable training and maturation

to take their decisions alone without head nurses; as a result they had negative perception about laissez-faire leadership behavior. These results are in consistent with Al-Yami et al. (2018), who investigated the relationship between leadership style and organizational commitment among staff nursing in kingdom of Saudi Arabia, and Ahmed et al. (2019) and they revealed that there was a statistically significant relationship between nurses' perception of laissez-faire leadership behavior as regards their educational level and years of experience. Additionally, the current study results showed that there were statistically significant relationships between nurses' organizational commitment level as regards their age and experience. These results might be related to that the older age nurses and who had more years of experience usually had high feeling of obligation to remain in the current hospital because they had family and can't move from hospital to another under the pressure of the environment and matching with the limited chances of employment. These results are matching with Sepahvand et al. (2017), who examined the organizational commitment of nurses, in Iran, Labrague et al. (2018), who studied the extent of nurses' organizational commitment and turnover intention, in Philippines, and Abasilim et al. (2019), and they found that there were statistically significant relation between nurses' organizational commitment level as regards their age and work experience. Moreover, the present study findings demonstrated that there were statistically significant relationships between nurses' level of innovative work behaviors as regards their educational level and attending training course. The possible clarification for these results could be related to that the ability to create innovative solutions is dependent on the knowledge, training, and education of nurses to apply that knowledge in solving the new problems and generating new ideas. These results are in accordance with the findings of previous studies, as the one conducted by Jose et al. (2016), who examined the innovative behaviors of hospital based registered nurses, in California, and another one conducted by Karavasilis (2019), who investigated the relationship between work satisfaction, work engagement, burnout and innovative work behaviors, in Greece, and they found that there was a strong correlation between nurses' educational level and their level of innovative work behaviors.

CONCLUSION

Organizational commitment was positively and significantly correlated to transformational and transactional leadership behaviors. As well, there was statistically significant and positive correlation between innovative work behaviors and all multifactor leadership behaviors. Furthermore, transformational leadership behavior and organizational commitment were statistically significant positive predictors of staff nurses' innovative work behaviors.

Recommendations

Based on the results of this study it is recommended that:

The nurse manager should:

- Use leadership styles that make it easy for nurses to communicate their perspectives and share the organization's expectations.
- Foster and encourage innovation as a work necessity and include innovation-related training opportunities in nursing.

- Respond positively to nurses' innovative efforts by supporting them with the time and resources to carry out.
- Plan to increase the participation of staff nurses in decision-making process to promote their commitment and perception about leadership behaviors.
- Maintain regular meeting with staff nurses to promote their commitment level.
- Explain staff nurses' rights, responsibilities and how to deal with their problems during the orientation period to promote perception about leadership behaviors.

Further research

The effect of training program about innovation in nursing on staff nurses' emotional intelligence, empowerment and performance

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