

Head Nurses' Mindfulness; Its Relationship to Staff Nurses' Innovative Work Behavior

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Abstract: Background: Mindfulness is an attention and awareness of the present moment that enables head nurses to be aware of themselves and environment surrounding them. It also assists head nurses to cope with organizational changes and stress, resulting in motivating staff nurses to generate, search and apply novel ideas in workplace. **Purpose of the study:** To determine head nurses' mindfulness and it's relation to their staff nurses' innovative work behavior at Menoufia University Hospital. **Design:** A descriptive correlational research design was used. **Setting:** This study included selected inpatient departments and closed units of Menoufia University Hospital at Shebin EL-Kom. **Subjects:** This study included all head nurses and a simple random sample of 255 staff nurses who work in selected units at Menoufia University Hospital at Shebin El-Kom and accepted to participate in the study. **Tools of the study:** Two instruments were utilized by the investigator. Instrument one was Five Facet Mindfulness Questionnaire, Instrument two was Innovative Behavior Inventory. Instruments were face and content validated by 5 experts **Results:** More than two-thirds of head nurses had moderate level (67.5%) of mindfulness. The highest mean score of mindfulness dimension as perceived by head nurses (73%) was related to describing dimension, while the lowest mean score (58.5%) was related to acting with awareness dimension. Near to half of staff nurses had a moderate level (45.9%) regarding innovative work behavior. The highest mean score (72.9%) was related to involving others dimension, while the lowest mean score (66.5%) was related to implementing starting activities dimension for staff nurses. **Conclusions:** There was a highly positive statistical significant correlation between total head nurses' perceived mindfulness and total perceived innovative work behavior among staff nurses. **Recommendations:** Hospital administration should collaborate with staff development department to provide continuing education program to develop head nurses' mindfulness in workplace. Hospital administration should develop the perception of innovative work behavior and provide activities that develop innovation among staff nurses.

Key Words: Creativity, Head nurse, Staff nurse, Innovative work behavior, Mindfulness.

Introduction:

Nursing profession is a highly demanding and stressful job. So, mindfulness is effective in low or moderate work load as it encourage staff nurses to find new ideas that may help them to improve their work and to be more engaged in the work and facing stressful situations(Montani et al., 2020).

Mindfulness refers to deliberate, unbiased and openhearted awareness of perceptible experience in the present moment. With its focus on clear-headed values and actions to self, others and the world, as well as its possible value in fostering greater coherence between values, attitudes and behavior (Fischer et al., 2017). Mindfulness is defined as being

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attentive to and aware of what is taking place in the present. This ability to pay attention to "here and now" requires a focus on internal experiences such as thoughts, emotions and physical sensation (Reina & Kudesia, 2020).

Mindfulness helps individuals to cope with organizational changes that occur continuously, as it helps in reducing level of stress that may occur as a result of these changes. It also helps in increasing cognitive flexibility, objectivity and improving health and psychological well-being in work place (Goilean et al., 2020). Mindfulness not only helps health care professionals to manage stress and to develop coping strategies but also enables them to be more aware of patients concerns and become able to design effective treatment plans that meet health care objectives of patients (Gutman et al., 2020). Mindfulness is founded to have an impact on reducing level of burnout among nurses through reducing emotional exhaustion and increasing personal accomplishment of them (Zhao et al., 2019).

Mindfulness allows head nurses to be fully present, aware of themselves and their impact on their subordinates, and aware of their reactions in stressful situations. Head nurses who have high level of mindfulness and authentic leadership, will have clearer, extra focused thinking, and growth mindset that allows their subordinates to improve and grow through the health care organization (Elmawla et al., 2020).

Innovative work behavior is a complex behavior of staff nurses that generates, introduces, and applies innovative ideas. Thus, it offers capabilities for retaining competitive advantage and maintaining organizational sustainability through exploring solutions and opportunities (Alessa et al., 2021). Innovative behavior can be referred as the introduction and

application of new ideas, products, processes, and procedures to a person's work role or an organization (Vasanthapriyan, 2018).

Innovative behavior refers to the introduction and application of new ideas, products, processes, and procedures to a person's work role, work unit, or organization. Innovative behavior can be carried out both by an individual organizational member or groups of individuals within an organization. It is a broader concept than creativity and encompasses a variety of behaviors involved in the generation, promotion, and implementation of new ideas (Yuan & Marquardt, 2021).

Organizations that support innovation must develop and maintain an innovative climate where members feel secure and free to experiment with new ideas and where diversity of thought and opinion is valued. Thus, an innovative climate encourages staff nurses to engage in innovative activities. Furthermore, staff nurses working in an innovative environment are more willing to take the risk and are encouraged to think freely and exchange their opinions and ideas openly. It follows that the perception of an innovative climate is more likely to exert innovative work behavior (Liu et al., 2019). Innovations in the health sector, especially in nursing, new methods, technologies, and working methods, are described as development processes. Innovation is vital for improving the quality of nursing care and its sustainability. Planning nursing practice submitting and assessing innovative strategies is one of the main factors that directly affect the quality of services (Alkhaqani, 2022).

Health care organizations face big challenges of the low performing managers and lack of creative ideas. There is a great need for research to assess what types of staff nurses can

create new ideas and innovative things to perform high. Hence, managers with mindfulness traits are the key factors for high performance. For instance, if staff nurses and managers have high mindfulness, they will create and seize new opportunities that will result in high performance. Nevertheless, mindfulness may be the central predictor of high innovative abilities that can result in high performance (Ilyas & Khattak, 2021).

Significance of the study

Mindfulness assists head nurses in feeling more confidence and authenticity as well as more inspiring of staff nurse. As a result, mindfulness interventions have a positive effect on health of head nurses and their staff nurses and improvement of their innovative behavior (Parsons et al., 2020). Innovations are the essence of the successful organization. The process of their creation is strongly based on individual and team commitment to create improvements in every organizational area (Glińska-Noweś et al., 2017). The health care organizations face rapid changes, technological development and more challenges. So, studying mindfulness and innovative work behavior may have an important role to adapt to those challenges. Mindfulness increases the head nurses' awareness of the current situation, self-regulation of attention and the focus on the present moment. It also, improves the ability to effectively and flexibly respond to situations and regulate emotions positively. It helps in improving the staff nurses' work engagement, job satisfaction, relationships, cognitive function and psychological well-being. It also improves creativity and innovative work behavior through generation, promotion and implementation of novel ideas, resulting in, reduction of the level of

stress, depression and the resistance to changes (Little et al., 2016). So the present study will be conducted to determine head nurses' Mindfulness and its relation to their staff nurses' innovative work behavior.

Purpose of the study

The purpose of this study was to determine head nurses' mindfulness and its relationship to staff nurses' innovative work behavior at Menoufia University Hospital.

Research questions:

- 1) What are the levels of mindfulness as perceived by head nurses at Menoufia University Hospital?
- 2) What are the levels of innovative work behaviors as perceived by the staff nurses at Menoufia University Hospital?
- 3) What is the relationship between head nurses' mindfulness and staff nurses innovative work behaviors at Menoufia University Hospital?

Methods

Research design:

A descriptive correlational research design was conducted to achieve the purpose of the study.

Research Setting:

The study was conducted at Menoufia University Hospital at Shibin El-Kom, Menoufia. The study was conducted at selected departments as inpatient departments (Medical, Surgical, Pediatric, Obstetrics, Chest and Orthopedic departments) and Critical Care Units (Adult ICUs, Pediatric ICU, Emergency unit, Operative rooms, Hemodialysis unit and Neonate unit). These departments and units includes (40) head nurses and (700) staff nurses.

Subjects:

Head nurses:

All head nurses working at selected inpatient departments and closed units who accepted to participate in the study. Total number of head nurses were (40) head nurses.

Staff nurses group:

A simple random sample of staff nurses who was working at selected inpatient departments and closed units at Menoufia University Hospital. Total number of staff nurses were (255) staff nurses. The sample size of staff nurses was determined by using the following formula (solvin formula) to assess the sample size of staff nurses (Tajada, 2012).

$$N = N/1 + (Ne^2)$$

$N \Rightarrow$ total number of staff nurses are (700) nurses.

$N \Rightarrow$ sample size

$E \Rightarrow$ error tolerance (.05)

$1 \Rightarrow$ a constant value

$$\text{Sample size of staff nurse} = 700 / 1 + (700 \times (.05)^2) = 255 \text{ staff nurses.}$$

Data collection Instruments

Two instruments were used to conduct this study:

The first instrument:

- **Part one:** personal characteristics the head nurses as (age, gender, level of nursing education, years of experience and working department).
- **Part two:** Five Facet Mindfulness Questionnaire (FFMQ); It was developed by (Baer et al., 2006). and adopted from (Mohamed et al., 2021). This instrument was used to assess the level of mindfulness of head nurses. It consisted of 39 items divided into 5 dimensions as follows: Observe (8 items), describe (8 items), act with awareness (8

items), non-judging (8 items), and non-reactive (7 items). The negative statements are 3,5,8,10,12,13,14,16, 17,18,22,23,25,28,30,34,35,38, and 39.

Scoring system:

The scoring system of Five Facet Mindfulness Questionnaire was measured using five -points likert scale ranged from 1=Never or very rarely true, 2= Rarely true, 3= Sometimes true,4= Often true, and 5=Very often or always true.

The Second Instrument:

- **Part one:** personal characteristics the staff nurses as (age, gender, level of nursing education, years of experience and working department).
- **Part two:** Innovative Behavior Inventory: This instrument was developed by (Lukes & Stephan, 2017). and adopted by (Mahgoub et al., 2019). To assess the level of innovative work behavior of staff nurses. It consisted of 23 items and categorized under 7 main dimensions, which are: Idea generation (3 items), Idea search (3 items), Idea communication (4 items), Implementation starting activities (3 items), Involving others (3 items), Overcoming obstacles (4 items), and Innovation outputs (3 items).

Scoring system:

The scoring system of Innovative Behavior Inventory was measured using five- point Likert scale. Range from never to always these respectively scored 1-5 this is applicable to all items. The scores of items were summed-up and the total divided by the number of the items, giving a mean score of the part. Range of score 23-115 High 86-115 = >- 75%, Moderate 69-85 = 60-<75%, Low 23-86 = <60%

Validity of the instruments:-

A bilingual group of five experts was selected to test the content and face validity of the instruments. The panel included five experts (four Professors and one Assistant Professor) from Nursing Administration department at Faculty of Nursing Menoufia University. The investigator asked the panel to critique the instruments as a whole, including identifying areas of concern and reviewing the construction, flow and grammar. Necessary modification of some questions was done to reach the final valid version of the instruments. The instruments were considered valid from the experts' perspective.

Reliability of instruments:

These instruments were tested for reliability to estimate the consistency of measurement. Reliability of the instruments indicates its accuracy with respect to stability and repeatability in gathering data. Reliability performed using Alfa Coefficient test (Chronbach alpha).

Cronbach's alpha for Five Facet Mindfulness Questionnaire = 0.92

Cronbach's alpha for Innovative Behavior Inventory = .94

Ethical consideration:

Before beginning to collect data from the study subjects the investigator introduce herself to them, explained the aim of the study, and informed them that their information will be treated confidential and will be used only for the purpose of the research; additionally, each participant was notified about the right to accept or refuse to participate in the study. The respondents were assured that the data will be treated as strictly confidential; furthermore, the respondents' anonymity was maintained as they weren't required to mention their names.

Field Work

A. Preparation phase:-

This phase started from January 2022 to March 2022 covering three months and includes the following:

- Reviewing the available literature concerning the topic of the study including national and international magazines, papers, previous studied, internet and textbooks.
- Developing the tools of the study and distribute it to expertise to determine it's clearly, ordering, sequence, and content validity and take the acceptances of instrument's distribution.

B. Implementation Phase:

Data was collected in the morning and afternoon shifts and subjects fill in the questionnaire in the presence of the investigator to ascertain all questions were understood and answered. The time required for each nurse to fill the questionnaire was estimated to be 10-15 minutes. Data was collected upon three months started from 3th of April 2022 to 3th June 2022.

Statistical analysis of results:

The collected data organized, tabulated and statistically analyzed using SPSS (Statistical Package for Social Studies) version 26 for windows, running on IBM compatible computer. Descriptive statistics were applied (e.g frequency, percentage, mean and standard deviation). Chi-square test was used to detect the relation between variables. In addition, the correlation coefficient(r) test and spearman's rank coefficient were used to estimate the closeness association between variables. A significant level value was considered when p- value < 0.05 and a highly significant level value was considered when p- value < 0.001 , While p- value > 0.05 indicated non-significant results.

Results

Table (1): This table illustrates distribution of the studied subjects' regarding their personal characteristics. As evident from the table, more than two thirds (77.5%) of head nurses were in the age group 40 years or more. As regarding to their gender, all of them were females. As regarding to their marital status, the majority (92.5%) of them were married. As regarding to their educational level, more than two thirds (80%) of them were had Bachelor of Nursing Science. As regarding to their years of experience in nursing, the majority (90%) of them had more than 15 years of experience in nursing. In relation to years of experience in nursing administration, less than half (45%) of them were had experience range from 5 years to less than 15 years of experience in nursing administration.

Also, This table illustrates distribution of the studied subjects' regarding their personal characteristics. As evident from the table, more than half (65.5%) of staff nurses were in the age group range from 20 to less than 30 years. As regarding to their gender, more than two thirds (79.6%) of them were females. As regarding to their marital status, more than two thirds (76.9%) were married. As regarding to their educational level, more than two thirds (72.5%) of them were had Associate Degree of Nursing. As regarding to their years of experience in nursing, less than half (48.6%) of them had experience range from 5 years to less than 15 years of experience in nursing.

Figure (1): This figure shows distribution of the studied subjects' according to the study setting. As evident from the figure, more than half (55%) of head nurses work in Critical Care Units, while (45%) of them work in Inpatient Departments.

According to staff nurses, this figure shows that more than half (63.5%) of

staff nurses work in Critical Care Units, while (36.5%) of them work in Inpatient Departments.

Figure (2): This figure indicates total levels of mindfulness as perceived by head nurses. As showed from the figure, more than two-thirds (67.5%) of head nurses had moderate level regarding mindfulness, whenever, one-fifth (20.0%) of head nurses had high level regarding mindfulness and (12.5%) of them had low level of mindfulness.

Table (2): It is clear that the total mean scores for all dimensions of head nurses' mindfulness were 126.53 ± 15.36 . The first ranking with highest mean score was 29.20 ± 8.23 with mean percent 73.0 % related to describing dimension. While the last ranking with lowest mean scores was 23.42 ± 2.77 with mean percent 58.5 % related to acting with awareness dimension for head nurses.

Figure (3): This figure indicates total perceived level of innovative work behavior among staff nurses. As showed from the figure, less than half (45.9%) of staff nurses had a moderate level regarding innovative work behavior, whenever, (40.4%) of staff nurses had high level regarding innovative work behavior and (13.7%) of them had low level of innovative work behavior.

Table (3): It is clear that the total mean scores for all dimensions of staff nurses' innovative work behavior were 81.81 ± 13.49 . The first ranking with highest mean score was 10.94 ± 2.39 with mean percent 72.9% related to involving others dimension. While the last ranking with lowest mean scores was 9.97 ± 3.68 with mean percent 66.5 % related to implementing starting activities dimension for staff nurses.

Table (4): It correlation between total head nurses perceived mindfulness and total innovative work behavior among nurses. There was a highly positive

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statistical significant correlation between total head nurses' perceived of mindfulness and total perceived innovative work behavior among staff nurses. (p<0.001).

Table (1): Distribution of the studied subjects' regarding their personal characteristics (n=295)

Subjects Items	Head nurses n=40		Staff nurses n=255	
	No.	%	No.	%
Age (years)				
20 -< 30	1	2.5	167	65.5
30 -< 40	8	20.0	73	28.6
≥ 40	31	77.5	15	5.9
M±SD	40.62±4.24 years		28.70±5.67 years	
Range	20		31	
Sex				
Female	40	100.0	203	79.6
Male	0	0.0	52	20.4
Marital status				
Married	37	92.5	196	76.9
Unmarried	3	7.5	59	23.1
Educational qualification				
Nursing diploma	0	0.0	28	11.0
Associate degree in Nursing	6	15.0	185	72.5
Bachelor of Nursing Science	32	80.0	42	16.5
Others	2	5.0	0	0.0
Years of experience in nursing				
< 5	0	0.0	87	34.1
5 -< 15	4	10.0	124	48.6
≥ 15	36	90.0	44	17.3
M±SD	18.22±4.32 years		8.21±6.10 years	
Range	19		29	
Years of experience in nursing administration				
< 5	16	40.0	-	
5 -< 15	18	45.0		
≥ 15	6	15.0		
M±SD	8.45±5.37 years			
Range	17			

M= mean SD= standard deviation

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Figure (1): Distribution of the studied subjects' according to the study setting

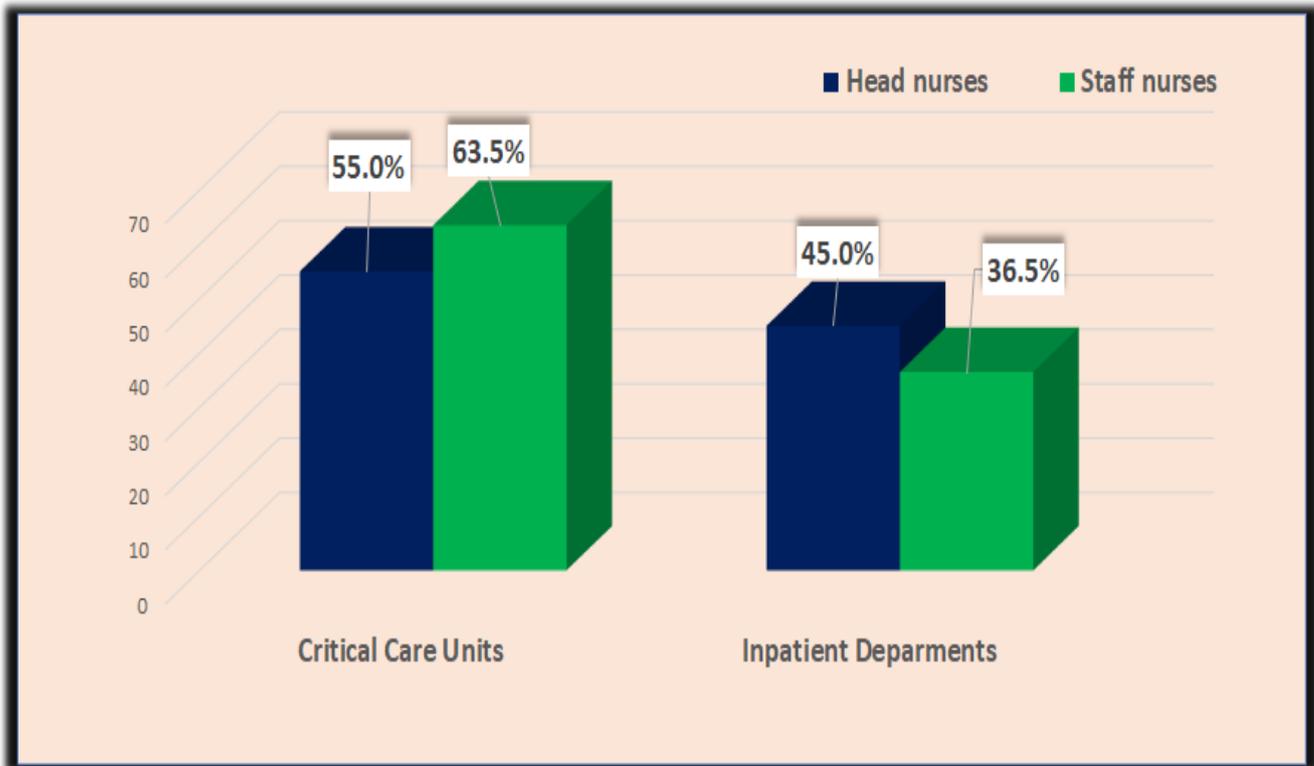
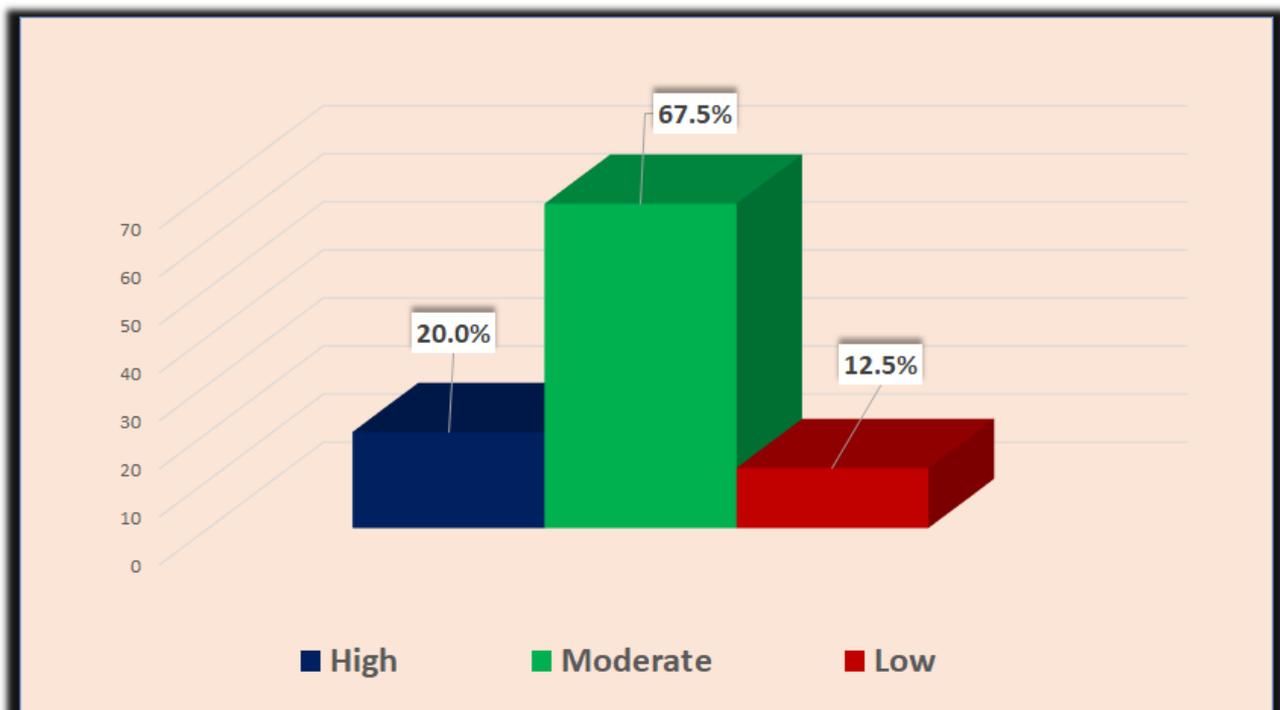


Figure (2): Total levels of mindfulness as perceived by head nurses

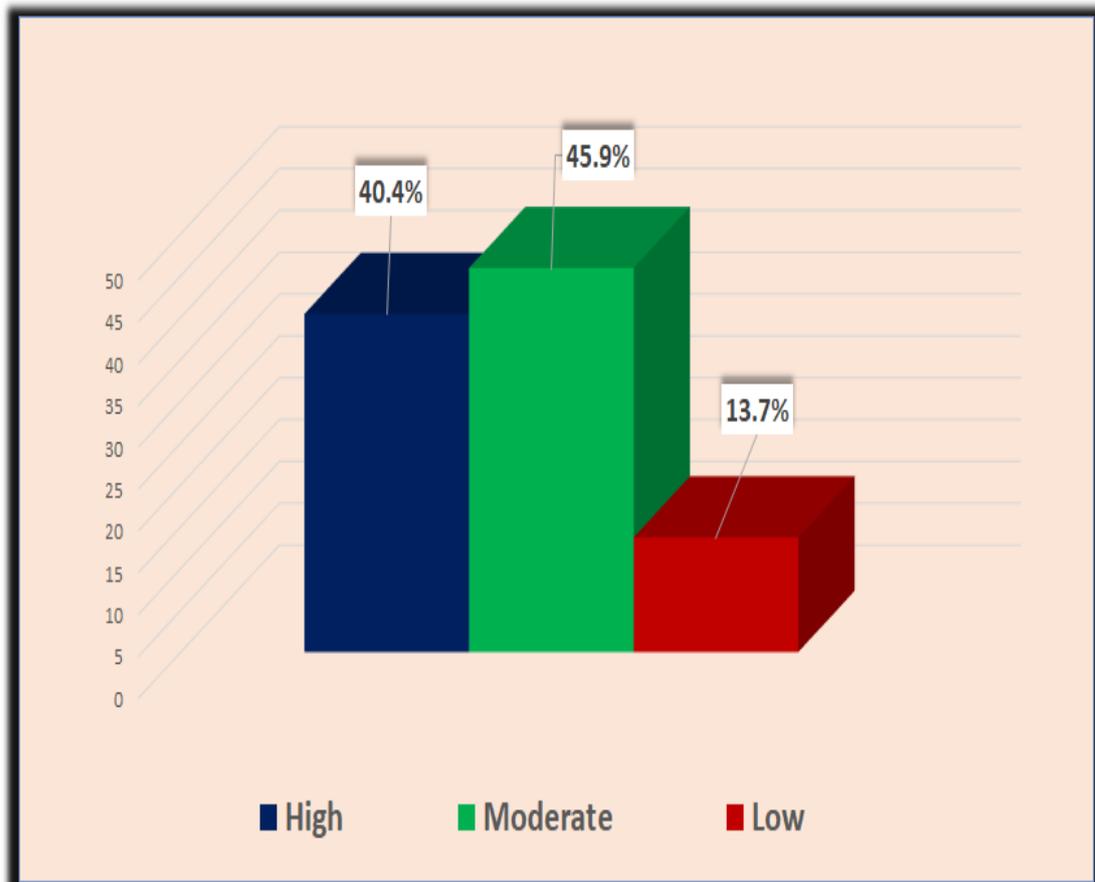


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Table (2): Mean scores of mindfulness dimensions as perceived by head nurses' (n=40)

Mindfulness dimensions	Maximum score	Mean ± SD	Mean %	Ranking
Observing	40	26.92±5.64	67.3	2
Describing	40	29.20±8.23	73.0	1
Acting with awareness	40	23.42±2.77	58.5	5
Non-judging of inner experience	40	25.87±4.48	64.7	3
Non-reactivity to inner experience	35	21.12±3.95	60.3	4
Total	195	126.53±15.36		

Figure (3): Total perceived level of innovative work behavior among staff nurses



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Table (3): Mean scores of innovative work behavior dimensions as perceived by staff nurses' (n=255)

Innovative work behavior dimensions	Maximum scores	M±SD	Mean%	Ranking
Idea generation	15	10.76±2.99	71.7	3
Idea search	15	10.82±2.30	72.1	2
Idea communication	20	14.08±3.03	70.4	5
Implementation starting activities	15	9.97±3.68	66.5	7
Involving others	15	10.94±2.39	72.9	1
Overcoming obstacles	20	14.23±2.95	71.15	4
Innovation outputs	15	10.38±2.43	69.2	6
Total	115	81.81±13.49		

Table (4): Correlation between total head nurses perceived mindfulness and total innovative work behavior among nurses

Variables	Total innovative work behavior among nurses'	
	r	P value
Total head nurses' perceived of mindfulness	.944**	0.000**

** Highly statistical significance (p<0.001)

Discussion:

Mindfulness in organization refers to the degree to which individuals are mindful and aware of their workplace and is considered a practicable strategy that encourages performance of individuals and organizational efficiency. It occurs when promoting awareness of vision, goals, and values of the organization, integrating organization vision with the executive team members, interacting mindfully with internal and external stake holders, identifying the fundamental problems that face health care organization, and creating an environment where individuals interconnected with each other and their voice is equally valued (Yesilkus & Ozbozkurt, 2020).

Innovative work behavior refers to the introduction and application of novel

ideas, products, procedures, and processes to individuals' work role, work unit, or organization. Innovative behavior can be carried out by both an individual, organizational members or groups of individuals within an organization. It is a broader concept than creativity and encompasses a variety of behaviors involved in the generation, promotion, and implementation of novel ideas (Yuan & Marquardt, 2021).

The present study results illustrated that more than two-thirds of head nurses had a moderate level of mindfulness. And one-fifth of them had high level of mindfulness. This finding may be due to increase workload of head nurses, lack of support from managers, stress level in the work environment, lack of

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autonomy, experience and lack of mindfulness educational programs in workplace.

The present study results were in agreement with (Elmawla et al., 2020) who conducted study about "Effect of Educational Program about Authentic Leadership and Mindfulness Factors on Head Nurses Practice Self – Evaluation" stated that more than half of head nurses had moderate level of mindfulness in pre educational program assessment, that may result from lack of practicing mindfulness continuously. The current study results also were supported by (Alsukah & Basha, 2021) who performed study about "the relative contribution of mindfulness and gratitude in predicting happiness among university students" and found that there was a moderate level of mindfulness among students as they looked forward to identify their role in life and surroundings.

On the contrary (Sousa et al., 2021) who conducted study about "Brief mindfulness-based training and mindfulness trait attenuate psychological stress in university students: a randomized controlled trial" and stated that individuals who have high level of trait mindfulness have low levels of stress and anxiety. After a brief mindfulness training, it was observed a decrease in negative affect, perceived stress anxiety and increase in positive affect. It was found a mediation effect of meditation on perceived stress, positive affect through mindfulness.

The present study results found that the highest mean score of mindfulness dimension as perceived by head nurses was related to describing, while the lowest mean score was related to acting with awareness. From investigator point of view, that may be due to the lack of ability of head nurses to find right words to express their opinions and feelings due to

experience level and communication. They also may be easily distracted as a result of workload that occurs in the working environment and feeling of dissatisfaction.

(Calcagni et al., 2021), were in the same line with the present study results and conducted study about "Differential Effects of Mindfulness-Based Intervention Programs at Work on Psychological Wellbeing and Work Engagement" displayed that the highest dimension of mindfulness that was increased was describing dimension, while the lowest dimension was acting with awareness.

The present study results were in the opposite direction with (Yela Aránega et al., 2020) who conducted study about "Mindfulness as an entrepreneurship tool for improving the working environment and self-awareness" indicated that the highest score of mindfulness' dimensions was observing dimension that helped individuals to identify their role, the present moment and enabled them to pay attention to their emotions.

The current study illustrated that near to half of staff nurses had moderate level regarding innovative work behavior, whenever, less than half of staff nurses had high level regarding innovative work behavior and less than one fifth of them had low level of innovative work behavior. This finding may be due to decrease the motivators in work environment, increase workload of staff nurses, lack of support from nurse managers and lack of awareness of nurse managers to the needs of their staff nurses.

The present study results supported by (Ismail & Mydin, 2019) who conducted study about "The Impact of Transformational Leadership and Commitment on Teachers' Innovative Behaviour" reported that there was moderate level of innovative work behavior among teachers. The present

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study results supported (Elsayed et al., 2020) who conducted study about "The Role of Work Locus of Control and Inclusive Leadership on Nurses' innovative Work Behavior" stated that staff nurses had a moderate level of innovative work behavior.

The results of the present study were in the opposite direction with (El Desoky et al., 2021) who conducted study about "Organizational Culture, Individual Innovation and their relation to Nursing Staff's Work Engagement" stated that staff nurses had high level of innovative work behavior due to their knowledge and experience to generate and apply new ideas and solutions to their problems.

The current results indicated the total mean scores for all dimensions of staff nurses' innovative work behavior that showed the highest mean score was related to involving others dimension. While the lowest mean scores was related to implementing starting activities dimension for staff nurses. From investigator point of view, this may be due to good communication among head nurse and their staff nurses, when staff nurses had new ideas; they involve others to assist them to develop it. Also lack of implementation of novel ideas may result from insufficient financial resources and lack of new technologies to be used in implementation of ideas.

The finding of the present results in the same line with (Mahgoub et al., 2019) who studied "Relationship between Work Environment and Innovative Behavior among Staff Nurses" revealed that the lowest mean score of innovative work behavior dimension as perceived by staff nurses was related to implementation starting activities. Also the current results agreed with (El-Sayed et al., 2022) who study "The Relationship between Workforce Agility and Staff Nurses' Innovative Work Behavior at Critical Care Units"

indicated that the highest mean score was related to involving other dimension, while the lowest mean score of innovative work behavior was related to implementing starting activities dimension.

The present results were different from (Mostafa & Mahfouz, 2021) who conducted study about "Head Nurses' Leadership Effectiveness, Communication Skills and Mindfulness: It's' Relation to Staff Nurses' Innovative Work Behavior" indicated that the highest mean score of innovative work behaviors' dimension as perceived by staff nurses was related to implementation starting activities and the lowest mean score was related to idea search.

The present finding results displayed correlation between total head nurses perceived mindfulness and total innovative work behavior among nurses. There was a highly positive statistical significant correlation between total head nurses' perceived of mindfulness and total perceived innovative work behavior among staff nurses. From investigator point of view, this may occur as head nurses' mindfulness resulting in increasing their attention to present moment, increased their attention to their staff nurses and environment that affect their staff nurses ability to generate and apply novel ideas.

The current results were in agreement with (Mostafa & Mahfouz, 2021) who reported that there was high statistical positive correlation between mindfulness and innovative work behavior. These finding were different from (Ilyas & Khattak, 2021) who studied "The Role of Mindfulness in Employees Performance; Do Innovative behaviors mediate the link?" demonstrated that there was statistical positive correlation between mindfulness and innovative work behavior among employees. Mindful

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employees have reduced level of stress resulting in encouraging them to find and apply new ideas and solution in the working environment.

Conclusion

In the light of the present study results, it was concluded that more than two-thirds of head nurses had a moderate level of mindfulness. Moreover, the highest mean score of mindfulness dimension as perceived by head nurses was related to describing, while the lowest mean score was related to acting with awareness. Also, near to half of staff nurses had a moderate level regarding innovative work behavior. Moreover, the highest mean score was related to involving others dimension, while the lowest mean scores was related to implementing starting activities dimension for staff nurses. Additionally, there was a highly positive statistical significant correlation between total head nurses' perceived of mindfulness and total perceived innovative work behavior score among staff nurses.

Recommendations:

▪ **At administration level:**

- Hospital administration should develop strategies to improve head nurses observing, describing, acting with awareness, non-judging of inner experience and non-reactivity to inner experience to reduce their work stress and turn over.
- Hospital administration should develop activities that develop innovation among staff nurses.

▪ **At educational level:**

- Hospital administration should collaborate with staff development department to provide continuing education programs to develop

head nurses' mindfulness in workplace.

- Innovative work behavior programs should be involved into orientation program of newly staff nurses.

▪ **At research level:**

- Further research is needed to identify how to improve individuals' mindfulness in workplace.
- Further research is needed to identify strategies to motivate individuals to develop their innovative work behavior.

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