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Relationship between Organizational Silence and Organizational Innovation among Staff Nurses

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Abstract: Background: The concept of learning silence has been linked to organizational innovation and performance in organizations. The capacity for change and continuous improvement to meet the challenges in the environment in which organizations operate has been associated with the capability of organizations to allow nurses to talk and communicate. **Purpose**: To determine the relationship between organizational silence and organizational innovation. Design: A descriptive correlational design was used. Sampling: Convenient sample of 300 staff nurses was included. **Setting**: Menoufia University Hospital. **Instruments**: Two instruments were used (organizational silence questionnaire and organizational innovation questionnaire). **Results**: The result of current study shows that more than two thirds of studied nurses (69.4%) had a high level of organizational silence and nearly two thirds of studied nurses (62.4%) had a low level of organizational innovation. **Conclusion**: There was a negative correlation between organizational silence and organizational innovation. **Recommendation:** Nurses should have periodic meetings to encourage them to talk and express their opinions, and training courses should be conducted to improve their critical thinking, creativity and their innovative behavior.

Keywords*: Organizational silence, organizational innovation, nurses.*

Introduction

The subject of organizational silence in healthcare organizations has recently begun to receive attention. As is known, when the healthcare staff in an organization do not express themselves well and information transfers and communication are ineffective, it negatively affects the motivation and job satisfaction of healthcare professionals (Çaylak and Altuntaş, 2020).

Organizational silence behaviors among nurses are the most important and significant barriers that influence organizational effectiveness and efficiencies. The propensity of nurses to maintain silence would be affecting the provision of safe care and quality of patient care. Thus, nurse managers must consider the effect of workplace silence behavior on nurses, patients and organization outcomes in health care settings (Bordbar et al., 2021). When organizational silence occurs amongst nurses, it is stated that nurses are afraid of making their voices heard and of coming together since many

managements in health care organizations
react adversely to the nurses who make their voice sound more, and criticize specific issues (Yalçın and Baykal, 2019).

Organizational Silence is a behavioral choice that can deteriorate or improve organizational performance. Excluding its emotionally difficult expression, silence can convey approval and sharing or disfavor and opposition, thus becoming a pressure mechanism for both individuals and organizations (Gambarotto et al., 2020). There are multiple views about the factors leading to organizational silence, because of its many different determinants or causes, as follows: support the top management of silence, lack of communication opportunities, and support of supervisor for silence, official authority and the subordinate's fear of negative reactions (Weber, 2020).

There are several implications of organizational silence, as silence is of a significant impact on individuals and the organization. Organizational silence correlates negatively with three dimensions of organizational trust (trust in the organization, trust in leadership, and trust in the supervisor). This means that the more silence means less trust (Bogosian, 2021). The three types of individuals‟ or groups‟ response to organizational silence are the affective, cognitive and instrumental. Affective response refers to the feeling of being linked to satisfaction or anxiety about change. Cognitive responses are opinions relating to usefulness, necessity and knowledge required to handle change. Instrumental responses refer to actions already taken or which will be taken to handle the change (Gambarotto et al., 2020).

The concept of organizational silence has been linked to organizational innovation and performance in organizations. The capacity for change and continuous improvement to meet the challenges in the environment in which organizations operate has been associated with the capability of these organizations to communicate positively .Thus; organizations will be able to keep abreast with developments and improvements to operate successfully. (Power and Waddell, 2020) Innovation in healthcare continues to be a driving force in the quest to balance cost containment and health care quality. Innovation is considered as a critical component of productivity and competitive survival. Innovation is the implementation of a new or significantly improved product, or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations (Power and Waddell, 2020).

Innovation is a dynamic technical, economic and social process involving the interaction of people with different horizons, perspectives and motivations. It represents a process, namely an activity of creating a new product or service, new technology, new organization, or enhancement of existing product or service using existing technologic processes and organizations (Berwick, 2020).

Organizational innovation is the organization’s capability to embrace an organization-wide atmosphere that is willing to accept diverse ideas and is

open to newness, and that encourages its individual members to think in novel ways The context in which organizational innovativeness is used in this study is defined as organization's willingness to encourage and support nurses' innovation whereby the development of new knowledge and insights are promoted (Lin, 2019).

Innovation can be defined as the intentional introduction and application within a role, group, or organization, of ideas, processes, products or procedures, new to the relevant unit of adoption, designed to significantly benefit the individual, the group, or wider society .Innovation in healthcare consists of a process of change and continuous improvement of individual and collective performance (Brunet, 2020).

Innovation consists of the generation of a new idea and its implementation into a new product, process or service, leading to the dynamic growth of the national economy and the increase of employment as well as to a creation of pure profit for the innovative organization enterprise. Innovation is never a one-time phenomenon, but a long and cumulative process of a great number of organizational decision-making processes, ranging from the phase of generation of a new idea to its implementation phase. (Lin, 2019).

Types of organizational innovation include administrative, technological innovation and innovative culture. Administrative innovation includes changes to the rules and structures that characterize the communication methods and work of nurses within an organization. This means that administrative innovation is not directly re- lasted to work activities. By way of contrast, technological innovation include implementation of programs and services that offer a break from established practices and is directly related to products and technological innovation indicates the degree of use of video confer- Smart Work centers, telecommuting, and mobile working. As such, administrative innovation is more likely related to innovation tends to involve work activities (Brunet, 2020)

The dimensions of healthcare innovation can be divided into two bands: the outer band which represents the environmental dimensions and the inner band which represents the operational dimensions. The Environmental dimensions include organizational leadership, organizational culture, regulatory acceptance, and physician acceptance, complexity of innovation and partnerships and collaboration. Similarly, the operational dimensions of healthcare innovation include patient satisfaction, profitability, effectiveness, efficiency, patient safety, aging population, productivity, cost containment, labor shortage, clinical outcomes and quality (Elaine, 2020).

There are seven critical success factors for the dissemination of health care innovation: Formal mechanisms to find sound innovations that should be disseminated, find and support innovators, invest in early adopters, make early adopter activity observable, trust and enable reinvention, create slack for change and lead by example (Berwick, 2020).

Nurse's silence is killing organizational innovation and perpetuating poorly

planned projects that lead to defective products, low morale and a damaged bottom line" organizational silence is a potentially dangerous impediment to organizational learning , change and development and is likely to pose a significant obstacle to the development of truly pluralistic organizations. (Weerawardena, 2020).

Absence of organizational silence and presence have essential role in generation of organizational innovation. However, innovation itself implies generation, acceptance and implementation of new ideas, processes, products and services and this need good communication channels. Therefore, organizational innovation is considered as the utilization of the new ideas and their application to the organizational management (Weerawardena, 2020).

Significance of the study

Nurses have an important role in success in organization. Nurse silence affects the emergence of new ideas, exhibition of talents and information share.Organizations need nurses who are responsive to the challenges of the environment and who are not afraid to share information and knowledge which lead to continuous organizational learning and use of knowledge to improve innovation that can serve as a critical key for organizational success. The concept of organization silence has been linked to organizational learning and innovation in organizations. (Power and Waddell, 2020).

From the researcher's clinical experience, it is observed that many of nursing supervisors interact negatively with their staff and give them vocal criticism which lead to inability and unwillingness of staff nurses to communicate about certain issues (silence) which will affect nurses ability to innovate. Therefore, the current study was conducted to determine relationship between organizational silence and organizational innovation.

Purpose of the Study

To determine relationship between organizational silence and organizational innovation among staff nurses at Menoufia University hospital.

Research questions

1) What are the levels of organizational silence among staff nurses?
2) What are the levels of organizational innovation among staff nurses?
3) Is there a relationship between organizational silence and organizational innovation among staff nurses?

Study Design

A descriptive correlational design was conducted.

Study Setting:

The study was conducted at Menoufia University Hospitals at Shebin El-Kom which was established in 1993. It is considered one of the largest hospitals in Delta region in Egypt. The bed capacity of this hospital is 1000 beds and the estimated number of the nursing workforce is 1200. They were distributed into 800 nurses in critical care units, 400 nurses in general departments. This hospital contains four buildings (Emergency hospital, General hospital, Specialized Hospital

and Oncology hospital). All of these buildings provide medical and surgical care to different population with different ages.

Study Sample:

The study included staff nurses working at the above-mentioned settings in Shebin El-Kom University Hospital during the time of study.

Sampling technique:

Convenient sample technique was used to conduct this study. The sample size was 300 staff nurses according the following equation:

$n = N/ 1+N (e)^2$

n= is the sample size

N= is the total number of staff nurses are (1200) nurse. e= is coefficient factor=0.05

1= is a constant value

Sample size of staff nurse = 1200 /1+ (1200× (.05)2 = 300 staff nurses.

Instruments

The researcher used two instruments.

<u>Instrument one</u>: Organizational silence questionnaire.

It was adopted from Schechtman (2008), Brinsfield (2009), Van Dyne (2003) and Çakıci (2008). It contained three parts:

- Part 1: Characteristics of nurses as: age, gender, marital status, educational level and years of experience.
- Part 2: Types of Silence: It contained 15 items used to determine organizational silence levels among nurses divided into three dimensions related to types of organizational silence: acquiescent silence (5 items), defensive silence (5 items) and prosocial silence (5 items).

Scoring system:

three - points Likert scale used for each statement as follows disagree (1), neutral
(2) and agree (3).Total score (15-45).The scores of less than (27) was considered a low level of organizational silence, while (27-34) was considered a moderate level of organizational silence, and more than (34) was considered a high level of organizational silence (Diab and Mohamed, 2020).

- Part 3: Causes of Silence: It was used to assess the causes of organizational silence and staff nurses level toward organizational silence and included 27 items divided into five dimensions: Support of the top management of silence (5 items), lack of communication opportunities (6 items), Support of supervisor for silence (5 items), Official authority (5 items) and subordinate's fear of negative reactions (6 items).

Scoring system:

Five - points Likert scale was used for each statement as follows: very ineffective (1), ineffective (2), neither effective (3), effective (4) and very effective (5). Total score (27-135).The scores of less than 81was considered ineffective causing factors of silence, while the scores of (81) and more was considered effective causing factors of silence (Diab and Mohamed, 2020).

Instrument two: Organizational innovation questionnaire.

It was adopted by the researcher from Mairesse and Mohnen (2010). It aimed to assess staff nurses level toward organizational innovation and included (16) items divided into three dimensions: Technical innovations (7 items), Administrative innovations (4 items) and Innovative culture (5 items)

Scoring system:

Five - points Likert scale was as follows: Strongly disagree (1), Disagree (2), Neutral (3), Agree (4) and strongly agree (5). Total score (16-80).The scores of less than (48) was considered a low level of organizational innovation, while (48-60) was considered a moderate level of organizational innovation and more than (60) was considered a high level of organizational innovation.

Validity and Reliability of instruments

Validity of the questionnaires was assessed by conducting face validity. Three better use five experts experts in administration nursing department (two professor of nursing administration, faculty of nursing, Menoufia University and one professor of nursing administration, faculty of nursing, Ain Shams University) in order to check relevancy, clarity, fluency and simplicity of each component in the questionnaires. The investigator asked the panel to analyze the instrument as a whole, including identifying areas of concern and reviewing the construction, flow and grammar. The panel examined the following criteria: relevance to the purpose of the study, clear and simple wording of research questions, instruments are easy to be understood, comprehensive questions, appropriate length of the instrument and each question, appropriate ordering of questions, unbiased and no redundancy in questions. Necessary modifications were done to reach the final valid version of the instruments, which was considered valid from the experts' perspective.

Reliability of instruments

These instruments were tested for reliability to estimate the consistency of measurement. Reliability was done using Cronbach's Alpha coefficient test. These instruments were tested for reliability to estimate the consistency of measurement. Reliability was performed using Alpha Coefficient test (Cronbach alpha). Internal consistency of the first instrument (Organizational silence questionnaire) with Cronbach alpha was 0.98. Internal consistency of the second instrument (Organizational innovation questionnaire) with Cronbach alpha was 0.94.

Pilot study

The pilot study was carried out on 30 nurses representing 10% of the total nurses from different departments in study setting. The purpose was to determine the applicability of the study, the clarity and feasibility of the study instruments. The participants in the pilot study were not included the main study sample because no modification was done.

Ethical Consideration

The study was conducted with careful attention to ethical standards of research and rights of the participants. The ethical committee at faculty of nursing, Menoufia University revised study protocol and accepts the topic as they assured this study didn't violate the rights of the participant. The sample rights were protected by ensuring voluntary participation so that informed consent was obtained by explaining the purpose, nature, time of conducting the study, potential benefits of the study and how data was be collected. The subjects were assured that the data would be treated as strictly confidential; furthermore, the respondents' anonymity was maintained as they weren't required to mention their names.

Procedure

Before any attempt to collect data, an official letter was submitted from the dean of the nursing college to collect data from the pre-mentioned study settings, also a written approval letter was submitted to the director of Menoufia university hospital. The letter contained the title, purpose of the study and methods of data collection. Data collection procedures, analysis and reporting of findings were undertaken in a manner designed to protect confidentiality of subjects.

Before beginning to collect data the investigator introduced herself to the study sample, explained the purpose of the study and informed them that their information was be treated confidentially and will be used only for the purpose of the study; additionally, each participant was notified about the right to accept or refuse to participate in the study. Data was collected in the morning, afternoon and night shifts and the sample' response to questions was in the presence of the investigator to ascertain that all questions were understood and answered. Data was collected upon five months started from November 2021 to Mars 2022. Questionnaire takes 20 minutes to be filled.

Statistical Analysis:

Data was coded and transformed into specially designed form to be suitable for computer entry process. Data was entered using SPSS (software statistical package for social science) version 22. For quantitative data, descriptive statistics were used and presented by mean and standard deviation. For qualitative data, comparison was done using: Firstly, the chi-square test ($\chi 2$) which is a test used to identify the differences throughout the study phases. Also, correlation between variables was evaluated using Pearson and Spearman's correlation coefficient r. A significance was adopted at $P<0.05$ for interpretation of results of tests of significance (*). Also, a highly significance was adopted at $P<0.01$ for interpretation of results of tests of significance (**).

Results:

Table (1): shows that more than half of nurses (54.6%) had their age between 25-35 years. According to sex, near to two thirds of sample (63%) were females. Regarding to experience more than half of the nurses (52.8%) had (5-10) years of experience. Concerning to educational level, the majority (77.3%)

were holding associated degree in nursing. Regarding to marital status, near to half of nurses (46.6%) were married.

Table (2): shows percentage distribution, mean score and ranking of organizational silence causes as reported by studied nurses. It shows that the highest percentage (23%) of organizational silence causes among studied nurses was "Official authority " and in first rank while the lowest percentage (16.5%) of organizational silence causes among studied nurses was "Support of supervisor for silence" and in last rank. In addition, there was highly statistical significance between all causes of organizational silence as (p value= 0.000).

Table (3): illustrates mean score and ranking of organizational innovation types as reported by studied nurses. It shows that the highest percentage (47%) of organizational innovation types among studied nurses was technical innovation and in first rank while the lowest percentage (12%) of organizational innovation types among studied nurses was administrative innovation and in last rank. Also there was highly statistical significance between all types of organizational innovation as p value = 0.000

Table (4): shows that there was a negative significant correlation between organizational silence and organizational innovation among studied nurses as p value <.001 and r -.2

Table (5): shows that there was highly statistical significant relationship between organizational silence and personal characteristics (age, marital status, sex and experience) as p value <0.01 and there was no significant relationship between organizational silence and educational qualifications as p value >0.05. Table: (6) shows that there was highly statistical significant relationship between organizational innovation and personal characteristics (age, marital status and experience) as p value <0.01 and there was no significant relationship between organizational innovation and sex and educational qualifications as p value >0.05

Figure(1): represents that more than two thirds of studied nurses (69.4%) had a high level of organizational silence, more than one quarter (28.3%) of nurses had a moderate level of organizational silence while the minority (2.3%) had a low level of organizational silence.

Figure (2): exhibits ranking of organizational silence types as perceived by the nurses. It shows that the highest type that face nurses was prosocial silence (45.5%) while the lowest type was defensive silence (20.5%).

Figure (3): shows total level of organizational learning among studied nurses. It illustrates that more than half of studied nurses (53.3%) had a low level of organizational learning and less than half of studied nurses (45%) had a moderate level of organizational learning, the minority of studied nurses (1.7%) had a high level of organizational learning.

Table (1): distribution of studied nurses according to their personal characteristics. (N=300)

Variable	No	%
Age (years)		
< 25 years	104	34.8
25-35 years	164	54.6
>35 years	32	10.6
Sex		
Male	111	37
Female	189	63
Experience		
<5 years	107	35.6
5-10 years	158	52.8
>10 years	35	11.6
Qualifications		
Nursing diploma	21	4.1
Associated degree in nursing	225	77.3
Bachelor degree in nursing	54	18.6
Marital status		
Married	140	46.6
Unmarried	160	53.4

Figure (1): Total level of organizational silence among studied nurses (N=300)

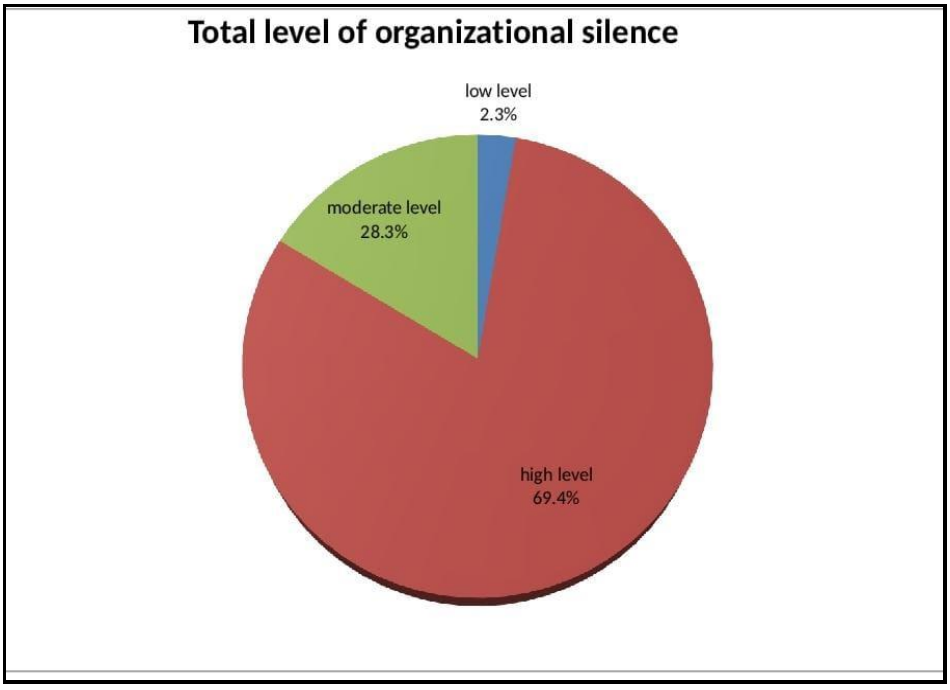

Figure (2): Ranking of organizational silence types among studied nurses

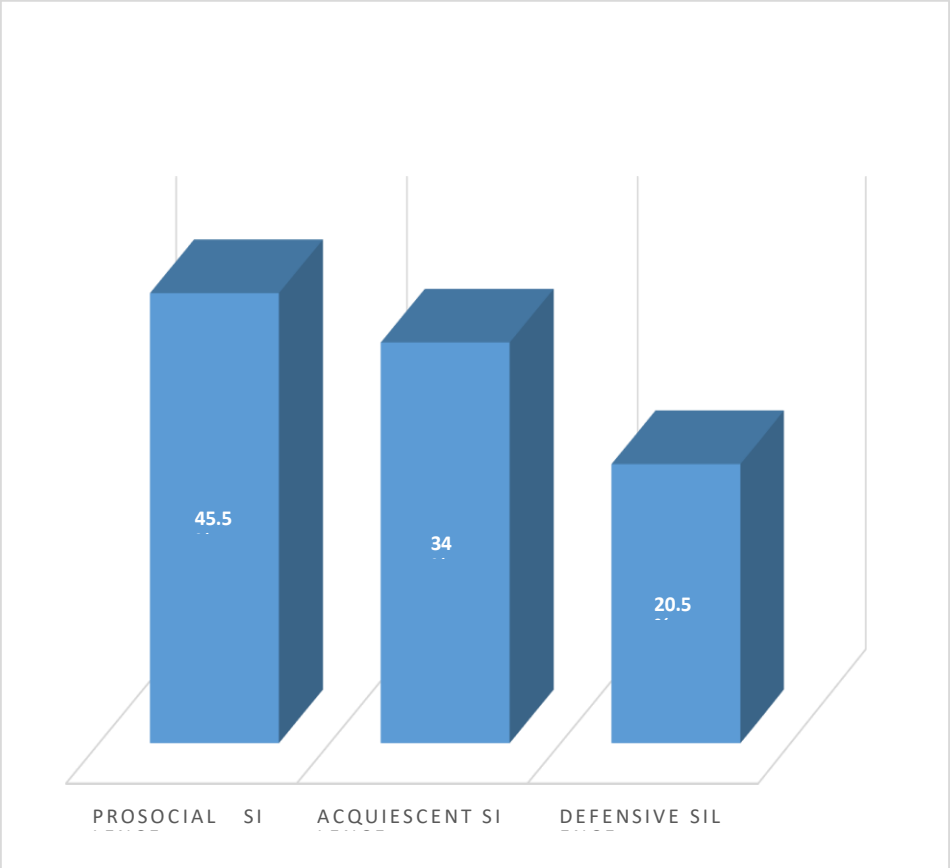

Table (2): mean score and ranking of organizational silence causes as reported by studied nurses. (N=300)

Organizational silence Causes	Mean ± SD	Mean Percentage	Minimum	Maximum	Ranking	P Value
▪ Official authority	17.412 ±4.568	23%	9	30	1	0.000**
▪ Support of the top management to silence	16.869± 4.003	21.3%	5	20	2	0.000**
▪ Subordinate's fear of negative reactions	15.629 ±4.103	20%	9	30	3	0.000**
▪ Lack of communication opportunities	14.450 ±3.140	19.2%	6	22	4	0.000**
▪ Support of supervisor for Silence	13.835 ±3.937	16.5%	8	24	5	0.000**

Figure (3): Total level of organizational innovation among studied nurses (N=300)

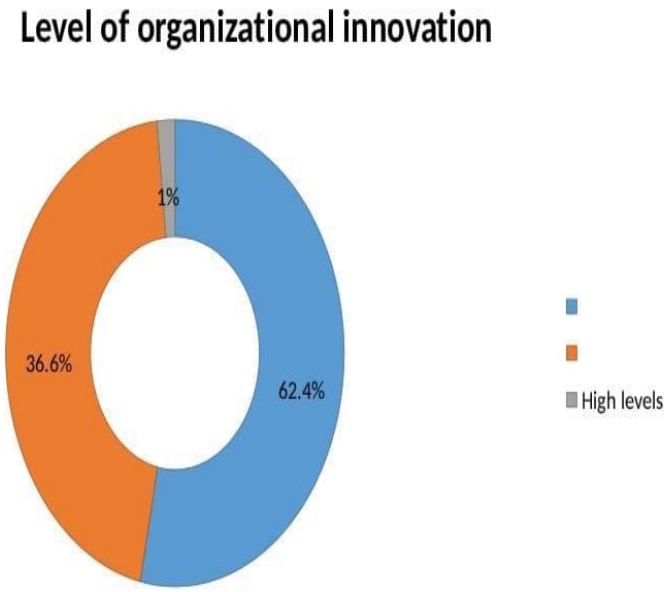

Table (3): Total percentage and mean score and ranking of innovation types among studied nurses (N=300)

Organizational innovation types	Mean± SD	Mean percentage	Minimum	Maximum	Ranking	P Value
▪ Technical innovation	**18.1±9.0**	**47%**	**5**	**25**	**1**	**0.000****
▪ Innovative culture	**12.7±5.7**	**41%**	**16**	**71**	**2**	**0.000****
▪ Administrative innovation	**9.2 ±4.1**	**12%**	**4**	**19**	**3**	**0.000****

Table (4): Correlation between total organizational silence total organizational innovation among studied nurses (N=300)

	Total organizational silence among nurses (N=300)	
	r	P value
Total organizational innovation among nurses	-.281**	<.001

Table (5): Relation between personal characteristics and organizational silence among nurses (N=300)

Variables	Total organizational silence among nurses	Test of sig.	P value
	Mean±SD		
Age / years			
▪ <25 years	**30.49±5.14**	F 32.580	**.001****
▪ 25-35 years	**25.76±4.62**		
▪ >35 years	**26.29±4.30**		
Marital status			
▪ Married	**25.05±.47**	F 37.275	**.001****
▪ Unmarried	**30.65±.60**		
Sex			
▪ Male	**31.18±5.30**	t-test 10.383	**.005****
▪ Female	**25.48±4.04**		
Educational qualifications			
▪ Nursing diploma	**23.91±.28**	F 3.618	**.028**
▪ Associated degree in nursing	**27.42±5.55**		
▪ Bachelor degree in nursing	**28.38±4.15**		
Years of experience			
▪ <5 years	**30.38±5.18**	F 31.608	**.001****
▪ 5-10 years	**25.72±4.63**		
▪ >10 years	**26.37±4.12**		

Table (6): Relation between personal characteristics and organizational innovation among nurses (N=300).

Variables	Total organizational innovation among nurses	Test of sig.	P value
	Mean±SD		
Age / years			
▪ <25 years	**37.34±16.25**	F 32.658	.001**
▪ 25-35 years	**53.45±16.84**		
▪ >35 years	**39.29±18.09**		
Marital status			
▪ Married	**44.58±13.76**	F 86.284	.001**
▪ Unmarried	**34.56±15.66**		
Sex			
▪ Male	**34.46±16.82**	t-test	
▪ Female	**53.16±15.78**	-9.543	.137
Educational qualifications			
▪ Nursing diploma	**42.75±3.72**		
▪ Associated degree in nursing	**47.18±20.42**	F	
▪ Bachelor degree in nursing	**45.35±8.46**	.500	.607
Years of experience			
▪ <5 years	**37.49±16.10**	F 32.502	.001**
▪ 5-10 years	**53.69±17.03**		
▪ >10 years	**40.59±17.48**		

Discussion

Organizational silence behaviors among nurses are the most important and significant barriers that influence organizational effectiveness and efficiencies. The propensity of nurses to maintain silent would be affecting the provision of safe care and quality of patient care versus their willingness to speak up about patient adverse events and medical errors. Thus, nurse managers must consider the effect of workplace silence behavior on nurses learning and performance, patient and organization outcomes in health care settings (Bordbar et al., 2021).

Regarding level of organizational silence, study findings revealed that near to two thirds of studied nurses had a high level of organizational silence, from the investigators perspectives this is due to nurses tend to remain silent fearing of being fired or not getting promoted, in order not to be seen as a complaining person and so that their social relations are not damaged also unhealthy work environment and lack

of communication channels at Menofia University Hospital.

The present study finding is line with Badran and Hassan, (2022) who found that more than half of studied staff nurses had high level of organizational silence. Meanwhile, more than one quarter of them had low level of organizational silence. Hence, had moderate level of organizational silence.

In disagreement with present study results Atalla et al., (2022) revealed that nearly two-thirds of staff nurses had moderate level of organizational silence due to subordinates being more sensitive to the risks of talking more than the benefits, believing that talking about work problems might deprive them of their jobs or upgrade to higher positions within the organization, avoiding disagreements with others, lack of management support, fear of breaking their relationships with their colleagues, avoiding potential conflict that may escalate and fear of being ignored.

Regarding causes of organizational silence, the current study results revealed that the highest percentage of silence causes was for official authority and in first rank while the lowest percentage was for support of supervisor for silence and in last rank. From the investigators perspectives, this result might be due to nurses' fear of official authority and fear from losing their jobs and subordinates believes that the supervisor has the ability to resolve any problem or issue related to work because they finds it useful to talk in the presence of a supervisor who has the powers to solve work problems within the organization.

At the same line Erdogdu, (2020) revealed that near to two thirds of studied sample agreed that nurses fear of authority, fear from losing the job, and mostly keep silent for "Administrative and organizational reasons", for this reason, it is important for managers in healthcare organizations to consider these matters in their evaluation of the risks that are caused by organizational silence.

Present study results at in disagreement with Achieng and Owuor, (2020) who reported that the majority of studied sample agreed that factors which causing organizational silence are related to lack of communication opportunities and channels as nurses don't speak up on critical issues in organization because of losing ways of communication.

Regarding to silence types study findings revealed that the highest type of silence that face nurses is prosocial silence and in first rank while the lowest percentage of organizational silence types among studied nurses was defensive silence and in last rank . From investigators perspectives, it is due to nurses withholding work-related ideas, information and opinions with the goal of benefiting other people also nurses who decides to remain silent is not by themselves but the external factors affect them.

In agreement with current study results Adnan, (2022) revealed that prosocial silence is the highest type of organizational silence types and had an impact on continuance commitment. In other words, when nurses' perception of prosocial silence increases, it also causes an increase in continuance commitment behavior.

In contrast with current study results Kose, (2021) found that major of organizational silence behaviors are acquiescent not prosocial silence. In addition, Van Dyne, et al., (2019) found that defensive silence is the highest type of organizational silence, which as nurses' deliberate omission of work related information based on fear of reprisal as they intended to protect the self from external threats.

Regarding to level of organizational innovation study findings revealed that near to two thirds of studied nurses had a low level of organizational innovation. From the investigators perspectives, this is due to negative work environment and lack of motivation at Menofia University Hospital.

In agreement with current study results lin, (2019) revealed that more than half of nurses had low organizational innovation and low capability to embrace an organization-wide atmosphere that is willing to accept diverse ideas and is open to newness, and that encourages to think in novel ways

In disagreement with current study results Noor and Dzulkifli, (2020) who revealed that more than one third of nurses had high organizational innovation and recognize opportunities to make positive difference in work and make difference in work as an objective for their life.

The study findings revealed that the highest type and in first rank of innovation types is technical innovation while the lowest percentage of organizational innovation types among studied nurses was administrative innovation and in last rank . From the investigator perspective, this because of continuous improvement of old services and raising quality of new services as technical innovation is specialized with work procedures but there is shortage at introducing managerial and administrative innovations as computer-based administrative innovations, new nurse reward/training schemes,etc.

These study findings in compatible with Burgleman,(2022) who found that technical innovation is the most important type of organizational innovation because the consistently successful organizations use a combination of 'induced' and 'autonomous' processes in strategy making to bring about organizational renewal.

In contrast with current study findings , Kelly and Kranzberg, (2021) in a study about technical innovation revealed that administrative innovation is important as technical innovation as innovation requires not only technical skills but also considerable social and managerial , administrative skills and occasionally also some formal or informal power.

Regarding to correlation between organizational silence and organizational innovation study findings revealed that there was a statistical negative correlation between organizational silence and organizational innovation. From the investigators points of view this may be due to silence leading to many negative results that weaken the ability to innovate at the level of the organization, which not only affects nurses but also the organizational level because silence diminishes the nurses'

readiness to express their concerns,creative ideas, and constructive suggestions which results in a decrease in performance levels due to interruption of communication, loss of trust and respect between nurses and managers, and reduced opportunities for growth and development which represent an obstruction to the processes of organizational learning,

Moreover,this result agreed with Alheet, (2020) who reported that there was statistically significant negative correlations among all organizational silence and organizational innovation of nurses and in contary with current study results , Brown and Duguid, (2022) stated that organizational silence can have appositive effect on organizational innovation and help in knowledge creation through which new problems are defined and new knowledge is developed to solve them.

Regarding to relation between personal characteristics and organizational silence, study findings revealed that there is highly significant relationship between organizational silence and personal characteristics (age, marital status, sex and experience). From the investigators perspectives, this is due to that older nurses are different from young ones, as they tend to calm down rather than experience conflicts and differences with others and believe that they had presented their opinions before and nothing has changed. Also, men behave more comfortably than women when expressing their ideas, as women prefer still silent instead of speaking up their thoughts.

At the same line with current study results Pinder and Harlos, (2019) specify that men prefer expressing their thoughts than women in groups where women and men are together. At the same line Van Dyne, (2019) demonstrated that men behave more comfortably than women when expressing their ideas as women prefer still silent instead of speaking up their thoughts. Adversely Aslan, (2022) revealed that there was no statistically significant difference between gender differences, highlighting that female teachers and male teachers exhibit similar silence behaviors.

Regarding to relation between personal characteristics and organizational innovation study findings revealed that there is highly significant relationship between organizational innovation and personal characteristics (age, marital and experience). From the investigators perspectives, this is due to that female nurses had high innovation level than male nurses. Also regarding to age younger nurses had high innovation level than older nurses.

In agreement with current study results Rogers, (2021) found that married nurses had lower levels of organizational innovation than single nurses. Also regarding to gender females have high level of organizational innovation than males. Adversely Frohman, (2021) revealed that There is no significant relationship between organizational innovation and nurses age, marital status and experience.

Conclusion

Regarding to personal characteristics of studied nurses it can be concluded that more than half of studied nurses had their age between 25-35 years, near to two thirds of sample were females,

more than half of the nurses had (5-10) years of experience, the majority were holding associated degree in nursing and near to half of nurses were married. Regarding to level of organizational silence study results concluded that two thirds of studied nurses had a high level of organizational silence and the highest organizational silence type that face nurses was prosocial silence while the lowest type was defensive silence. Regarding to organizational silence causes study results concluded that the highest cause was "official authority" while the lowest cause was "support of supervisor for silence".

Regarding to level of organizational innovation study results concluded that more than half of studied nurses had a low level of organizational innovation and the highest organizational innovation type that face nurses was technical innovation while the lowest type was administrative innovation.

Regarding relation between organizational silence, organizational innovation and personal characteristics study results concluded that there was statistical significant relationship between organizational silence, organizational innovation and personal characteristics (age, marital status and experience).

Recommendations

workshops should be conducted for staff nurses about organizational silence prevention, nurses should be encouraged to learn new trends and empower their critical thinking, Replication of the study is required on large sample size and different settings and Further researches are also needed to assess the relationship between organizational silence and organizational innovation.

References

Achieng, M., & Owuor, K. (2020). Effect of Organizational Justice behaviors on Organizational Silence and Cynicism: A Case Study of Safaricom Call Center. United States International University- Africa. 12(2), 21.

Adnan, M. (2022). Impact of Nurse Silence and Perceive Organizational Support on Organizational Commitment in banking sector of Pakistan. Fourth International Conference on Advances in Social Science, Management and Human Behaviour-SMHB; Rome, Italy, 13(5), 6-10.

Alheet, A. (2020). The Impact of Organizational Silence Causal Factors on organizational innovation of Health Center Nurses in the Jordanian Capital City (Amman). Academy of Strategic Management Journal, 18(3), 1- 13.

Atalla, A., Elamir, H., & Abou Zeid, M. (2022). Exploring the relationship between organizational silence and organizational learning in nurses: A cross-sectional study. Journal of Nursing Management, 30(3), 702-715.

Berwick, D. (2020). Disseminating Innovations in Health Care, 289, 1969-1975.

Bordbar, G., Shad, F. S., Rahimi, E., & Rostami, A. (2021). Effect of Organizational Silence on Nurses Productivity. International Journal of Management, 5(1), 11-20.

Bogosian, R. (2020). Engaging Organizational Voice: A Phenomenological Study of Employee's lived Experiences of Silence in Work Group Settings", the Faculty of Graduate School of Education and Human Development of the George Washington University, 15(3), 62-64.

Brunet, F. (2020). 'innovation en santé: réfléchir et agir: Ed. du CHU Sainte-Justine. "Get Talking", Entrepreneur 25, 26-30.

Burgleman, E.A. (2022). 'Intra organizational Ecology of Strategy Making and Organizational Adaptation: Theory and Research'. Organization Science, 2(3), 239-262.

Dzulkifli.R.. (2022). 'Staffing the innovative technology-based organization', Sloan Management Review, Spring, Culture of Silence in an Organization and how it Effect the Organization and Nurses performance 12(6)12-18

Erdogdu, M. (2020). Effect of Organizational Justice Behaviors on Organizational Silence and Cynicism: A Research on Academics from Schools of Physical Education and Sports. Universal Journal of Educational Research, 6 (4), 733-741.

kelly, P. &Kranzberg, M. (2021) 'Technical innovation: a critical review of current knowledge: Volume 1 (The Ecology of Innovation), Georgia Tech, Atlanta.8 (4,) 331-369.

KoseE.A. (2021). 'Intra organizational Ecology of Strategy Making and Organizational Adaptation: Theory and Research'. Organization Science, 2(3), 239-262.

Lin, Y. (2019). An Examination of the Relationships between Organizational Learning Cultures, Structure, Organizational Innovativeness and Effectiveness: Evidence from Taiwanese Organizations. (Unpublished doctoral dissertation). University of Minnesota, USA. 82, 160-177.

Pinder , C., & Harlos, H.(2020). Employee Silence: Quiescence and acquiescence as response to perceived injustice, Research in Personnel and Human Research Management, 20, 331-369.

Power and waddell, (2020). Effects of hospital nurses' internalized dominant values, organizational silence, horizontal violence, and organizational communication on patient

safety. Research in Nursing & Health, 43(5), 499-510.

Rogers, M. (2021) Diffusion of innovations, The Free Press, New York. 8(1), 33-44.

Frohman, A. (2021). 'The performance of innovation: managerial roles', Californi Management Review, 20(3), 5–12.

Yalçın, B. & Baykal, U. (2019).The subjects of and reasons for nurses' remaining silent in private hospitals and relative factors, Journal of Education and Research in Nursing, 9(2):42-50.

Van Dyne, L., Ang, S., & Botero, I. (2019). Conceptualizing nurse Silence and nurse voice as multidimensional construct, Journal of Management Studies, (40), 135-139.

Weber, P. (2020). Changes in employee perceptions during organizational change, Leadership and Organization Development Journal, 22, 291-300.

Weerawardena, J (2020). The role of the market sub-system and the socio-technical sub-system in Innovation and firm performance: A dynamic capabilities approach. Journal of the Academy of Marketing Science. , 5(4), 20-30.