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Table and figures are permitted to be used by authors.

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Title of manuscripts:

It should be concise not more than 15 words and include the name of the authors(s) professional title and institution affiliation.

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It should not exceeding 200 words, it should state the aim of the study , subjects and methods and important findings and conclusion. Below the abstract provide and identify 3 to 10 key words or short phrases for indexing according to the contemporary subject headings. A list of all used abbreviations should be provided after the abstract. Abbreviations are not placed in parentheses at first use in the text.

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It should include relevant literature related to the problem. Abbreviations should be spelled out the first time they are used. Symbols, others than standard statistical symbols, should be identified the first time used.

Subject and methods:

It should include the study design, setting where the study was done, subjects of the study and criteria for selection, tools for data collection, methods of data analysis and procured.

Results:

Tables, figures or graphs should be typed or drawn on one page and relative placement should be noted in the text.

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Summaries the key findings, outcomes or information in your report.

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Are the actions you are suggesting should take place bearing in mind your conclusion.

References:

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Effect of Educational Program about Dental Problems on Health Related Quality of Life for Children.

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Abstract:

Back ground: Oral health related quality of life (OHRQOL) reflects people's comfort when eating, sleeping, and engaging in social interaction. Poor oral health affects social activities and child quality of life, such as attending school and interacting with other people. **Aim of this study** was to determine the effect of educational program about dental problems on health related quality of life for children. **Subjects and Method:** A Quasi experimental research design was used at pedodontic clinic, Faculty of Dentistry, Tanta University. A convenient sample of 60 school age children with dental problems. **Tools:** Three tools were used to collect the required data Structured interview schedule (Tool I): to assess child knowledge and practice regarding to oral health and dental problems. Oral Assessment Scale (OAS) (Tool II): to assess oral health of school age children. Oral health related to quality of life scale (Tool III): to assess the effect of oral health on children quality of life . **Results** showed that, before program 56% had poor knowledge and practice about oral health and dental problems while after program 66.7% had good knowledge and practice. Regarding child quality of life, nearly two third (65 %) of children had poor quality of life pre- program while as half of them (51.6 %) had good quality of life after three months of program implementation. **Conclusion:** The educational program has a positive effect on improving childrens knowledge, practice and their quality of life. **Recommendations:** Establish continuous educational programs for mothers and their children as well as nurses working in dental clinic to improve their information. School curriculum should be containing information about oral health and dental problems to improve awareness of school age child about it .

Key words: Educational Program, Dental problems, Quality of Life

Introduction

Oral Health is the standard of oral and related tissue health that enables individuals to eat, speak, and socialize without active disease, discomfort, or embarrassment and contributes to general wellbeing. their self-esteem; and satisfaction with respect to oral health. OH is the result of interaction among oral health conditions, social and contextual factors, as well as the rest of the body^(1,2).

Oral health related quality of life has no strict definition. However, there is general agreement that it is a multidimensional concept⁽³⁾.

School age children have 20 primary teeth sometimes called “baby” or “milk” teeth that begin erupting around 6 months of age and continue to erupt through about 2 years of age. Primary teeth are essential for good nutrition, language development, self-esteem, and as placeholders for permanent teeth⁽⁴⁾.

Inadequate dental care results in the most common dental problems such as dental caries, malocclusion, gingivitis and Trauma, especially tooth avulsion^(5,6). Good oral and dental hygiene help prevent bad breath, tooth decay ,gum disease and tooth loss. It can keep the teeth as the child gets older⁽⁷⁾.

The impact of oral diseases on the quality of life is very obvious. The psychological and social impact of such diseases on daily life is easily comprehensible which makes them of considerable importance. Any disease that could interfere with the activities of daily life may have an adverse effect on the general quality of life. Therefore the notion of oral health related quality of life (OHRQOL) is the product of many observations and research^(8,9).

The nurse has historically been the one to receive a child in pain, determines the source of the discomfort, renders care as appropriate and makes the necessary referral. The nurse can enhance dental and oral health by increasing parental information about the importance of sound of nutrition practices, regular dental check up, proper oral hygiene at varying age⁽¹⁰⁾.

The aim of this study was to: determine the effect of educational program about dental problems on health related quality of life for school age children.

Subjects and Method

Research Design:

A quasi experimental research design was used in this study

Setting:

The study was conducted at pedodontic clinic, Faculty of Dentistry, Tanta University.

Subjects:

A convenient sample of 60 school age children with dental problems and their mothers were included from the previously mentioned setting. They were attended for dental management.

Tools of data collection:

Three tools were used to collect the necessary data.

Tool (I): Structured interview schedule:

It was developed by the researcher after reviewing the related literature to assess child knowledge and practice regarding to oral health . It includes three parts:

Part (1): Demographic characteristic of:

- a- **Children such as:** age, sex, birth order and educational level.
- b- **Mothers such as:** educational level, occupation, monthly income and family size.

Part (2): childrens' knowledge about :

- a- Dental health: definition of oral health, types, numbers and importance of healthy teeth and harmful behaviors related to child teeth.
- b- Dental problems such as: dental caries, gingivitis, bad breath, teeth bleeding, dental injury and discoloration of teeth.
- c- Preventive measures to avoid dental problems .

Scoring system for children knowledge for each question:

- Correct and complete answers were scored 2.
- Correct and incomplete answers were scored 1 .
- Incorrect or no answers were scored 0 .

Total scores for children knowledge:

- Less than 50% were considered poor knowledge.
- From 50% to less than 70% were considered fair knowledge.
- 70% and more were considered good knowledge.

Part (3): children reporting practice related to oral health hygiene includes:

frequency and importance of tooth brushing, periodical dental checkup and dietary habits .

Scoring system for children reporting practice:

- Reporting done correctly and completely were scored 2 .
- Reporting done correctly but incomplete were scored 1 .
- Incorrect or not done were scored 0 .

Total scores for children reporting practice:

- Less than 50% were considered poor practice.

- From 50% to less than 70% were considered fair practice.
- 70% and more were considered good practice.

Tool II: Oral Assessment Scale (OAS) :

This scale was adopted by Ullman 2009⁽¹¹⁾ and used twice by the researcher before and after three months of program implementation to assess oral health of school age children .It includes five items (lips, tongue, saliva, oral mucosa and teeth). It was done on three point Likert scale (3-2-1) and analyzed as continuous rang from (5-to 15). It was categorized as following:

- mild dysfunction if it was 5-7 .
- Moderate dysfunction if it was 8-11.
- sever dysfunction if it was 12 -15.

Tool III: Oral health related to quality of life scale (OHRQoL):

It was adopted by Slade, 1997⁽¹²⁾ and modified by the researcher .it was used twice before and after three months of program implementation to assess the effect of oral health on children quality of life. It consists of fourteen items (has problem pronouncing words, feel the sense of taste worsened, has painful aching in the mouth, find uncomfortable to eat any food to be self-confidence, feel tense, has an unsatisfactory diet, has to interrupt meals, find difficult to relax to be a bit

embarrassed, to be irritable with other people, has difficulty in school achievement, feel that life in general was less satisfactory, and to be totally unable to function).

- Responses was done on 3 point Likert scale . Each item was given three different scores ranging from never (1) to often (3).The total scores range from 14 to 42. scores of 21 or more has been associated with oral impact on quality of life.

Method

-The study was carried out after getting an official permission from the responsible authorities.

- Ethical considerations:-

Children and their mothers were informed about the purpose of the study .consent was obtained for the participation. privacy and confidentiality were considered. mothers reassured that, the collected information were used only for the purpose of the study and they have the right to withdraw at any time.

- A pilot study was carried out on 10% of the study sample. It was done before starting data collection to verify the applicability, feasibility, and clarity of the study tools.

-Tools of the study were tested for content validity by 5 jury experts in the field of

pediatric nursing, Faculty of Nursing, and Pedodontists, Faculty of dentist, Tanta university.

-Three tools were used for data collection.

A structured interview schedule (Tool I) to collect:

-Demographic characteristics of children and their mothers, children knowledge related to oral health, and dental problems and children reporting practice related to oral hygiene.

- Oral Assessment Scale (OAS) (Tool II).

It was used twice by the researcher before and after three months of program implementation to assess oral health of school age children related to their lips, tongue, saliva, oral mucosa and teeth. using lickert scale.

Oral Health Related to Quality of Life Scale (OHRQOL)(Tool III). It was used two times by the researcher. Each child was asked about the frequency that he or she experienced an impact on 14 daily activities. Responses were done on a 3-point Likert scale ranging from never (1) to often (3) .

-total score from 14 to 42.

-scores of 21 or more has been associated with oral impact on quality of life.

- Each child interviewed individually or with care giver in the dental clinic to

collect the required data using **tool I part 1 and 2**. The time required for each interview was about 30- 45 minutes.

- Children reporting practice related to oral hygiene were assessed twice Before and after Three months of program implementation using **tool I part 3**.

- Oral assessment scale (**Tool II**) was used twice by the researcher before and after Three months of program implementation to assess five item of oral health (lips, tongue, saliva, oral mucosa and teeth) .

- The effect of oral health on children quality of life was assessed twice by the researcher before and Three months after program implementation using **OHRQoLscale (tool III)**. It contain 14 item.

- Three point lickert scale was used never (1) ,occasionally (2), and often (3). The total score was calculated from 14-42 .The total scores of 21 or more it had been affect quality of child life.

- program constricttion

Based on children needs the program was developed. Five sessions were conducted in the pediatric dental clinic using different teaching strategies such as lecture, group discussion, pictures, posters, role play and demonstration .

Session I :

Definition of dental health, structure of the oral cavity.

Session II :

Focused on: definition of dental caries, stages, clinical manifestation, and how to prevent this problem.

Session III :

About: definition and clinical manifestation of gingivitis and how to avoid this problem.

Session IV :

Concentrated on: definition, causes, and prevention of dental injury and trauma.

Session V :

Includes oral hygiene using tooth brush correctly, and how to use msiwak.

- The program was evaluated immediately and after three months of program implementation using the same tools of pre test.

Statistical analysis:

The collected data were organized, tabulated and analyzed using SPSS software. For quantitative data, mean and standard deviation were calculated. For qualitative data, using Chi-square test (χ^2). For comparison between means of two groups of parametric data Z value of Mann-Whitney test was used. For comparison between more than two means of parametric data, F value of ANOVA test

was calculated. For comparison between more than two means of non-parametric data, Kruskal-Wallis (X^2 value) was calculated. Correlation between variables was evaluated using Pearson's correlation coefficient (r).

Results

Table (1) shows percentage distribution of studied children regarding to socio demographic characteristics. It was found that, more than half of the studied children (55 %) their age 9 years, about one quarter (23 %) 7 year and 22 % from 11 to 12 years. Regarding to their sex , it was noticed that, more than half of them (53,3 %) were females and 46,7% were male .

It was found that, 40 % of studied children were the second children in the family , 20% were first one and 25 % were the third one .All of them in primary education . It was observed that, nearly two third (65%) of children from rural area , while the rest 35% from urban area.

Figure(1) presents total scores of children knowledge about oral health and dental problems pre , immediate and after three months of program implementation .It was noticed that, there was an improvement in total scores of children knowledge immediately and after three months of program implementation as (85%) and (81,67%) respectively had good scores

while as pre program most of them (88,33%) had poor scores. with statistical significant difference.($P < 0,05$)

Figure (2) illustrates total scores of children reporting practices before and after three months of program implementation. it was found that pre program nearly two third of children (63,4%) had poor practice while as two third (66,7%) had good practice after three months of program implementation with statistical significant difference.($p = 0,05$).

Figure (3) shows Correlation between total scores of children knowledge and practice before and after three months of program implementation. It was noticed that, before program slightly more than half (55%) had poor knowledge and practice about oral health and dental problems while after program two third (66,7%) had good knowledge and practice.

Table (2) and figure(4)demonstrates Total scores of oral health assessment using oral assessment scale. it was observed that , nearly same percentage of children pre and post program had mild dysfunction 41,67% and 40% respectively . while as, 56,67% and 58,33 respectively had moderate dysfunction and the same percentage had sever dysfunction 1,67% . No statistical significant .

Figure (5) presents total scores of children quality of life before, and after three months of program implementation. It was clear that, pre program nearly two third (65,00%) of children had poor quality of life compared by half of them (51,6 %) had good quality of life after three months of program implementation.

Figure (6) Correlation between total scores of children knowledge , practice and oral health related to their quality of life before and three months after program implementation. It was observed that, there were an improvement in children knowledge and practice and their quality of life, no statistical significant difference between children knowledge , practice, oral health and child quality of life.

Table 1: Percentage distribution of studied children regarding to their socio demographic characteristics.

Socio Demographic characteristic	Studied children (60)	
	Number (No)	Percentage (%)
Age in years		
7-	14	23.0
9-	33	55.0
11-12	13	22.0
Mean±SD	10.42±1.40	
Sex		
-Male	28	46.7
-Female	32	53.3
Birth order		
-First	12	20.0
-Second	24	40.0
-Third	15	25.0
-Fourth	6	10.0
-Fifth and more	3	5.0
Educational level		
-Primary	60	100.0
Residence		
	-Urban	21 35.0
	-Rural	39 65.0

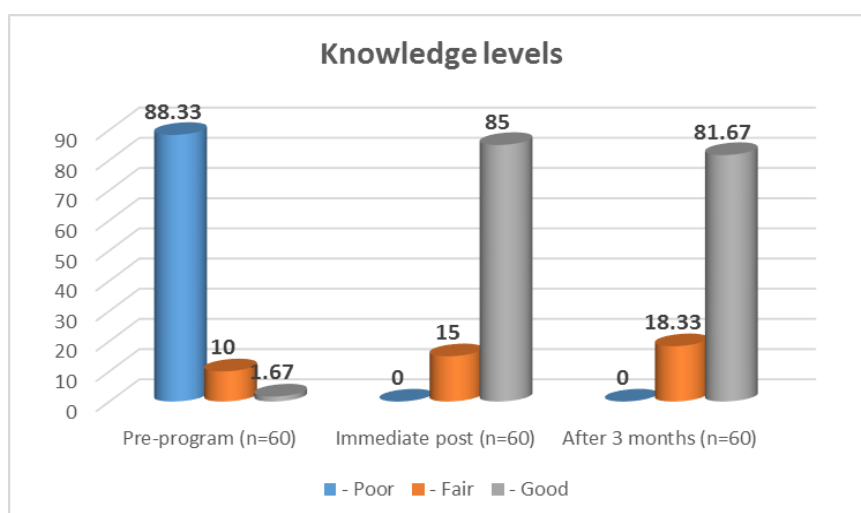


Figure 1: Total scores of children knowledge pre , immediate and after three months of program implementation .

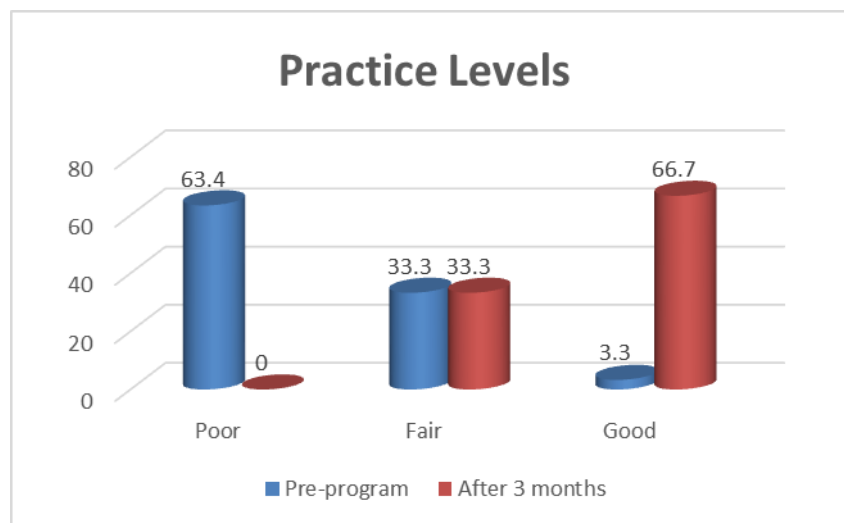


Figure 2: Total scores of children reporting practice before and after three months of program implementation.

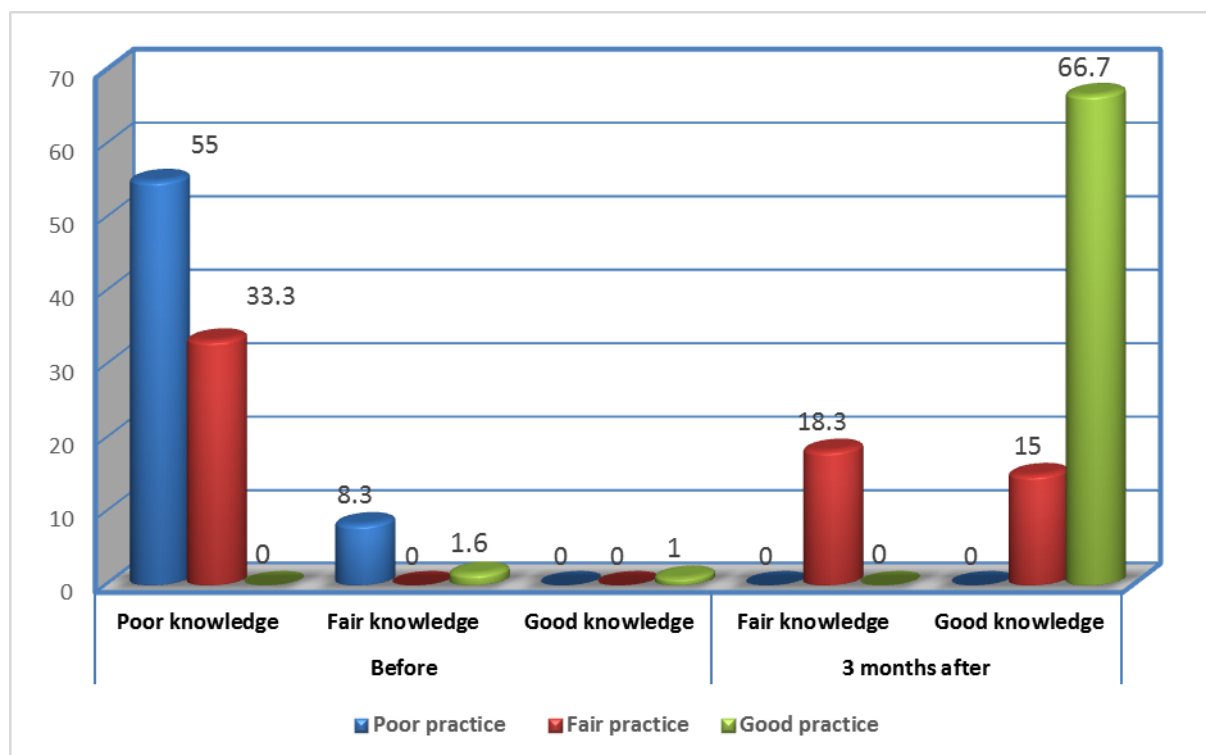


Figure 3 : Correlation between total scores of children knowledge and reporting practice before and after three months of program implementation.

Table 2: Total scores of oral health assessment for studied children using oral assessment scale before and after three months of program implementation.

Items of assessment	Pre-program (N=60)		After 3 months (N=60)		χ^2	P value
	No	%	No	%		
-Mild dysfunction (5-7)	25	41.67	24	40.00	0.035	0.983
-Moderate dysfunction (8-11)	34	56.67	35	58.33		
-Severe dysfunction (12-15)	1	1.67	1	1.67		
Mean +SD	7.82±1.21		7.88±1.26		.100P value = t = -1.66	

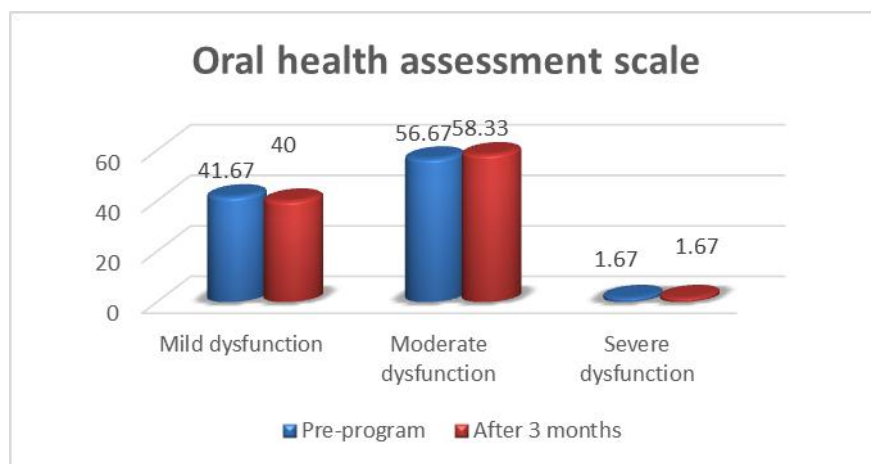


Figure (4) Total scores of oral health assessment before and after three months of program implementation.

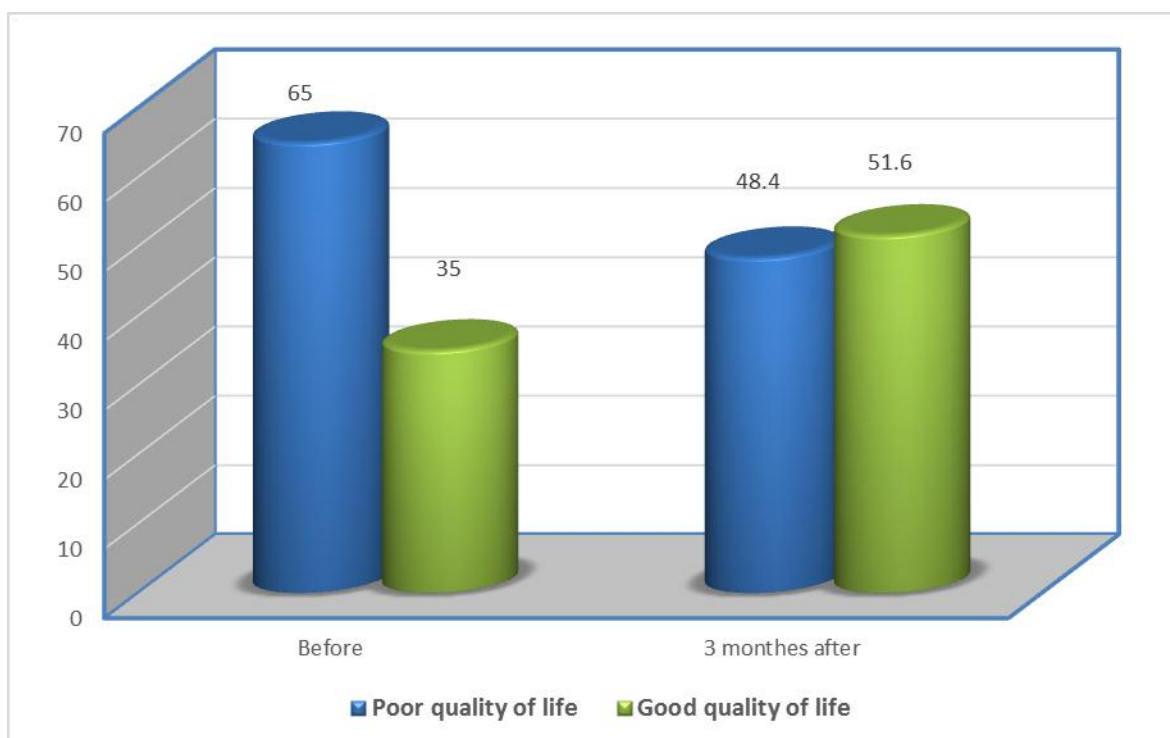


Figure (5) Total scores of children quality of life before, and after 3 months of program implementation

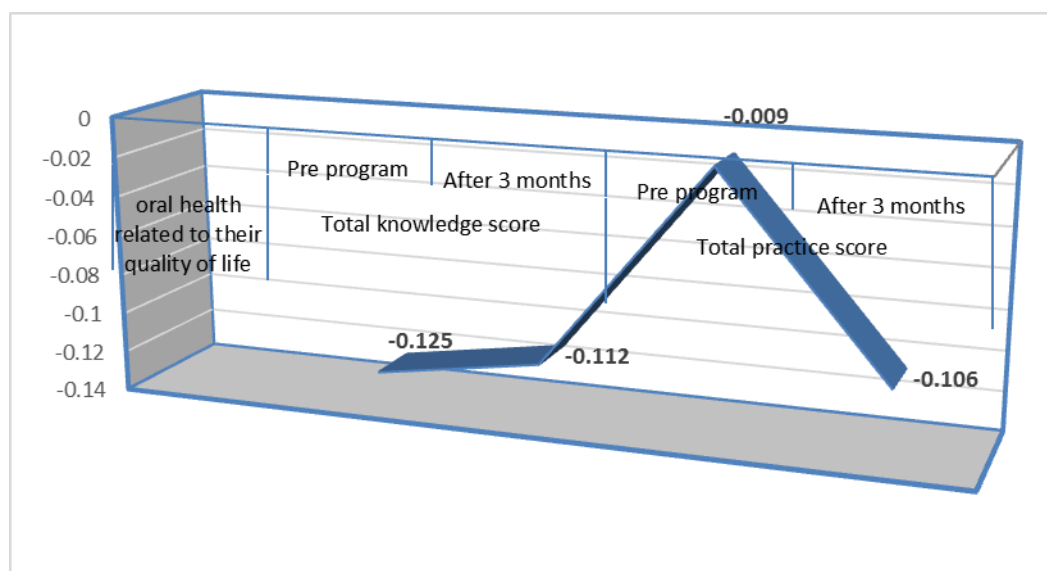


figure (6): Correlation between total scores of children knowledge , practice and oral health related to their quality of life before and three months after program implementation.

Discussion

OHRQoL is defined as a multidimensional construct that reflects children's comfort when eating, sleeping, and engaging in social interaction; their self-esteem; and their satisfaction with respect to their oral health.

Regarding child age affected by dental problems, the present study revealed that, more than half of the studied children with dental problems their age range from 9 to 11 years and it was more among female children than male and rural areas more than urban area. This result was contradicted with sudha 2005⁽¹³⁾ who found that, dental problems were higher at 5 to 6 years compared by 8 to 10 years and 11 to 13 years age group and Abd Elaziz (2011)⁽¹⁴⁾ who reported that, more than half of children with dental problems came from urban areas and the most common affected age were from 8 to 9 years. It could be due to increase awareness of oral hygiene among those children at this age or it may be explained that the permanent teeth which were erupted during this stage more resistant to caries process and other dental problems than the primary teeth.

on the other hand it was in harmony with Sanic & Hasangie (2008)⁽¹⁵⁾ who reported that, dental state of permanent teeth in children aged from 7 to 9 years show a significant differences between the

children from rural and urban areas. From my point of view it could be explained that, children in rural areas had more untreated dental problems reflecting difficulty accessing dental care in these places.

Regarding child knowledge about oral health and dental problems, the findings of the present study revealed that, pre program the majority of studied children had poor knowledge in all items of oral health. while as after program implementation their knowledge were improved. This may be attributed to the effect of good education, communication and interaction of children during session in addition child during this stage had the curiosity to learn and willing to communicate and interact with others. it was observed that after three months of program implementation children knowledge improved but slightly reduced. This retention of knowledge might be explained by the fact that knowledge retention is usually affected by time.

Concerning total scores of children knowledge about dental problems and oral health, the majority of children had poor scores pre program meanwhile children had fair and good scores after program. This could be attributed that the content of program was developed based on child needs, the clarity and simplicity of the

content using attractive audio visual aids, availability of the researcher for more clarification, using simple language. All these factors play important role in facilitating child understanding

scLina et al (2010) ⁽¹⁹⁾ studied children knowledge about oral health and reported that, children knowledge still need to be improved, thus the present study suggested that the awareness about the importance of oral health needs to be enhanced among school age children through continuous implementing regular program with follow up .

The present study emphasized that, children with dental problems who received the instructions of designed program had significantly improvement of their health related to quality of life compared by pre program. The improvement includes, child had less toothache, abilities to eat also sleep and daily function were improved. In addition their school function and attendance were improved.

On the same line some studies reported that oral clinical indicator should be associated with oral health related quality of life out come. Kuposova et al⁽²⁰⁾ and Malden et al ⁽²¹⁾ reported , dental problems affects children's oral health related their quality of life with a significant reduction

problems reported with physical, mental, and social functioning.

WHO 2005⁽²²⁾ reported, oral health affects general health caused by pain and changing what people eat, taste food, look, speech, enjoying life and their social interaction with others. On the same line Cunnion 2010 ⁽²³⁾ stated that , toothache is usually caused by dental problems, moreover Biazevic et al 2008 ⁽²⁴⁾ reported that prevalence of oral disease, physical and psychological influence of these aggravating circumstances of children life, concerning the joy of living, possibility of speaking and social interaction. Children who had good knowledge had good practice and gain good quality of life .Contentious educational program to child and their mothers and continuous regular follow up play an important role in improving child quality of life.

Conclusion:

Based upon the finding of the present study, it can be concluded that:

The educational program had a positive effect on improving children knowledge; reporting practice as well as their quality of life.

Recommandations

based upon the finding of the present study the following recommendations were suggested;

- Establish continuous educational programs for mothers and their children as well as nurses working in dental clinic to improve their informations .
- School curriculum should be contained information about oral health and dental problems to improve school age child awareness about it.

References:

1. US Department of Health and Human Services, National Institute of Dental and Craniofacial Research. National Institutes of Health.2000. <http://www.nidcr.nih.gov/DataStatistics/SurgeonGeneral/sgr/chap1.htm>. Accessed 21 July 2013.
2. Petersen P, Alekes J, Christen L, Eriksen H, Kalo I, Oral health behavior and attitudes of adults in Lithuania. *Journal Acta Odontol Scand* 2012;58(5):243-248.
3. Taji S, Seow W. A literature review of dental erosion in children. *Aust Dent J* 2010;55(4):358-67.
4. Wright J. anatomy and development of the teeth .up to date,2009.Available from: www.Uptodate.com(accessed March,2010).
5. Wong, L. *Maternal and Child Nursing Care*.3rd ed, Philadelphia: Mosby Co., 2012; 1468-71.
6. **Watt** R. Strategies and approaches in oral disease prevention and health promotion. *Bull World Health Organ.* 2015;83(6):711-8.
7. Wong D. *Essential of Pediatric Nursing*. 2nd eddition Philadelphia: Mosby Co., 2009; 960-66.
8. Carll J . oral health policy development since the surgeon general's report on oral health. *Acad pediater* .2009;9(5):476-82.
9. Liu Z , Grath C, Hagg U. The impact of malocclusion/orthodontic treatment need on quality of life. *Asystematic review. Angle orthod.*2009;79(43):585-91.
10. Abd Elaziz A. Predisposing factors of dental problems among school age children. Master thesis, faculty of nursing. Benha University,2008;1.
11. Ullman A. Oral health of critically ill children. Master thesis, School of Nursing and Midwifery. Queensland University of Technology,2009.
12. Slade G. Derivation and validation of a short form oral health impact profile. *Community Dent Oral Epidemiol.*1997;25 (7):284-90.
13. Sudha p , Bhasin S,Anegundi R. Prevalence of dental caries among 5-13 years old children of Mangalore city. *J India Soc Pedod Prev Dent* .2005;23(5):74-9.
14. Abd Elaziz A. effect of educational intervention on quality of life of school age children with dental problems. Ph

- thesis, faculty of nursing. Benha University,2011.
15. Sanic B, Hasangie M. Risk factors for caries control and prevention. *Medicin Ski Glasnik*. 2008; 5(2):1-14.
 16. Rai B, Jain R, Duhan J, Anand S. Relation ship between dental caries and oral hygiene status of 8-12 years old school age children. *The Internet Journal of Epidemiology*.2007; 4(1):1-13.
 17. Do L, Spencer A. Oral health related quality of life of children by dental caries and fluorosis experience. *J Public Health Dent*. 2007;67(5):123-139.
 18. Schroth R, Smith P, Whalen J, et al. prevalence of caries among preschool aged children in Norther M anitoba Community. *Jcan Dent Assoc* .2005;71(8):27-33.
 19. Lina C, Phing T, Chat C, Shin B. Oral health knowledge , attitude and practice among secondary school student in Kuching Sarawak. *Archives of Orofacial Sciences*. 2010;5(1):9-16.
 20. Kopusova N, Widstrom E, Eisemann M, et al. oral health and quality of life in Norwegian and Russian school children: Apilot study. *Stomatolog Baltic Dent Maxillofac J* .2010; 12(8) 10-16.
 21. Malden P, Thomson W, Jokovic A,et al. Changes in parent assessed oral health related quality of life among young children following dental treatment under general anaesthetic *Community Dent Oral Epidemiol* .2008;36(9):108-17.
 22. WHO. Oral health, general health and quality of life .2005; 83(9):641-720.
 23. Cunnion D, Spiro A, Jones J,et al. pediatric oral health related quality of life improvement after treatment of early childhood caries: A prospective multisite study. *Jdent child*. 2010;77(8):4-11.
 24. Biazevic M, Rissotto, Michel Crosato E,et al. Relationship between oral health and its impact on quality of life among adolescents.*Braz Oral Res*. 2008;22(1):.24-36

Quality of El-Menshawey General Hospital Infrastructure among Nursing Staff

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Abstract

Background: According to the World Health Organization, every citizen of the world has the right to healthy and safe work; a right to a work environment that enables him or her to live a socially and economically productive life. The hospital infrastructure is the total of all physical, technical and organizational components or assets that are prerequisites for the delivery of health care services. **Aim of the study:** Assess quality of El-Menshawey General Hospital infrastructure among nursing staff. **Research design:** Descriptive research design was used in this study. **Setting:** The study was conducted at El- Menshawey General Hospital departments. **Subject:** All (530) available nursing staff at the time of data collection. **Tools:** **Tool I:** Nursing staff perception regarding quality of El Menshawey General Hospital infrastructure questionnaire, **Tool II:**Quality of El-Menshawey General Hospital infrastructure observational checklist. **Results:** According to them the majority of Nursing staff showed high level of perception regarding neonatal intensive care unit. Also, above fifty percent of nursing staff showed high level of perception regarding emergency room infrastructure, intensive care unit, the facilities and its management, operative room infrastructure, dialysis infrastructure, respectively. According to researcher observation the actual level of quality is high in information technology, neonatal intensive care unit and dialysis infrastructure. Moderate level of quality in technical medical equipment, operative room and facility and its management. While low level of quality in supply facility system. **Conclusion:** There was significant positive correlation between facility and its management and information technology. Also there was significant positive correlation between disposal system and outreach services. **Recommendations:** Activation of hospital committee role (quality committee, health and occupational safety committee, infection control committee and continuous training committee), Provide continuous training program for all nursing staff that improve their performance, increase their knowledge and skills, and motivate them to perform quality patient care.

Key wards: Quality, Infrastructure, Nursing Perception, Nursing staff

Introduction

Quality was defined as the extent to which health services provided to individuals, patients, and population to improve desired health outcomes. Quality health care is “the right care for the right person at the right time, the first time.” The Institute of Medicine has identified six aspects of high-quality care. Health care should be safe, timely, effective, efficient, equitable, and patient-centered. Improved quality outcomes are not, however, delivered by health-service providers alone⁽¹⁾. Healthy work environments have both direct and indirect impacts on patient safety. Healthy work environments have been linked to increased nurse and health care worker retention, recruitment, job satisfaction and have decreased stress and burnout, which subsequently leads to safer patient practices⁽²⁾.

The term ‘infrastructure’ is used in manifold ways to describe the structural elements of systems. In the context of a health care system and in reference to health care facilities. The seven major components of the infrastructure of a health care facility include: the facility and its management, the physical infrastructure, the supply facility system, the disposal system, technical medical equipment, information and

communication technology, and the outreach services⁽³⁾.

Facility management covers a wide field of activities related to workplace, facility, support services, property, corporate real estate and infrastructures. There are different classifications proposed by the academic researchers. One classification of facility management scope is premises, support services and information technology. The classification seems to emphasize the facility management function to physical infrastructures rather than to cover all the facility management activities⁽⁴⁾.

Physical Infrastructure refers to structures, systems, and facilities serving the economy of a business, industry, country, city, town, or area, including the services and facilities necessary for its economy to function. It is typically a term to characterize the existence or condition of costly 'technical structures' such as storage chambers, electrical capacity, fuel tanks, cranes, overhead clearances, or components of water supplies, sewers, electrical grids, telecommunications and so forth⁽⁵⁾.

Health care waste is defined as the total waste stream from a healthcare establishment, research facilities, laboratories, and emergency relief donations. Health care waste includes

several different waste streams, some of which require more stringent care and disposal including sharps (e.g. needles, razors, scalpels), pathological waste, other potentially infectious waste, pharmaceutical waste, biological waste, and hazardous chemical waste⁽⁶⁾.

Medical technology is a broad field where innovation plays a crucial role in sustaining health. Areas like biotechnology, pharmaceuticals, information technology, the development of medical devices and equipment, and more they have all made significant contributions to improving the health of people all around the world⁽⁷⁾. Outreach services are used to describe any type of health service that mobilizes health workers to provide services to the population or to other health workers, away from the location where they usually work and live. Outreach services are one of the possibilities to enhance access to health workers and to improve overall retention at country level⁽⁸⁾.

Significance of the study

Nursing staff in healthcare have a legal and moral obligation to ensure a high quality of patient care and to strive to improve care. They are in a prime position to mandate policy, systems, procedures and organizational climates. Accordingly, it is evident that healthcare nursing staff

possess an important and obvious role in quality of care and that it is one of the highest priorities of healthcare managers⁽⁹⁾. Nursing staff perceive that they are providing high quality nursing care and would recommend that family and friends use the hospital for their health care. To establish this atmosphere there must be assess the quality of infrastructure within hospital⁽¹⁰⁾.

Aim of the study

The aim of the study is to:-

Assess quality of El-Menshawey General Hospital infrastructure among nursing staff.

Research question:-

- 1-What are the levels of nursing staff perception regarding quality of el-Menshawey General Hospital infrastructure?
- 2-What are the actual levels of quality of el-Menshawey General Hospital?

Materials

Research design:

Descriptive research design was used in this study.

Setting:

The study was carried out at El- Menshawey General Hospital at Gharbia Governorate that is affiliated to Ministry of Health and Population. El Menshawey General Hospital consists of three building and contains 20 units with 258 beds.

Tools: **Tool 1:** Nursing staff perception regarding quality of El Menshawy General Hospital infrastructure questionnaire.

Tool II: Quality of El-Menshawy General Hospital infrastructure observational checklist.

Methods

1. **Official permission** was obtained from El Menshawy General Hospital to obtain the approval and assistance to collect the data.
2. **Ethical consideration:** Nursing staff consent was obtained from the participation after exploration of the nature and purpose of the study confidentiality of the information's obtained from and the right to withdrawal is preserved.
4. **The questionnaire sheets** were submitted to five experts for testing the content and face validity.
6. **Reliability of tool** was tested using Crombachs Alpha Coefficient Test, its value= 0.899.
7. **Pilot study** was carried out after the expert's opinion and before starting the actual data collection. The aim of pilot study was to test the sequence of items, clarity, applicability, and relevance of questions. Pilot study also served to estimate the time required for filling the questionnaire sheet. The estimated time

needed to complete the questionnaire items from nursing staff were 10-15 minutes . It was carried out on a sample 10% (n=53) of nursing staff .These sample was excluded from the main study sample during the actual collection of data. Necessary modification was done.

8. **Data collection phase:** The data was collected from the identified subject by the researcher . The researcher met the nursing staff in small groups during their work shifts to distribute the questionnaire. The nursing staff recorded the answers in presence of the researcher to ascertain that all questions were answered.

Results

Table (1) Personal characteristics of nursing staff (n=530)

Variables	N	%
Age		
> 30 years	216	40.75
30 - > 40 years	270	50.94
<40 years	44	8.30
Range	22-46	
Mean \pm SD	31.928 \pm 5.757	
Level of education		
Nursing diploma	42	7.92
Nursing technical	185	34.91
Bachelor of nursing	303	57.17
Years of experiences		
>5 years	70	13.21
5 - >10 years	231	43.58
<10 years	229	43.21
Range	1-26	
Mean \pm SD	11.253 \pm 6.044	
Unit of work		
ICU Infrastructure(intensive care unit)	112	21.13
ER Infrastructure(emergency room)	108	20.38
Dialysis Infrastructure	99	18.68
NICU Infrastructure(neonatal intensive care unit)	120	22.64
OR Infrastructure(operative room)	91	17.17
Training courses related to quality		
Yes	208	39.25
No	322	60.75
Graduation title		
Supervisor nurse	329	62.08
Staff nurse	201	37.92

Table (1): illustrates personal characteristics of nursing staff such as : age, educational level ,years of experiences, , unit of work , previous training courses and job title. The age of nurses ranged from 22- 46 years old with mean age 31.94 \pm 5.77 . More than half (57,17%) of nursing staff had Bacalerote in nursing, while 7,9% of nursing staff had Nursing Diploma in the nursing profession. About 43,58% of nursing staff had an experience between 5-10 years in nursing profession . While (13,21%) of them had an experience less than 5 years in the working area respectively. Nearly one quarter (22,6%) of nursing staff are working at neonatal Intensive Care Unit and (21,1%) of them are working at intensive care unit. About (39,4%) of all nurses had previously course on quality. About (62,1%) of nursing staff are supervisor nurse according to graduation title, while (37,9%) are staff nurse, respectively.

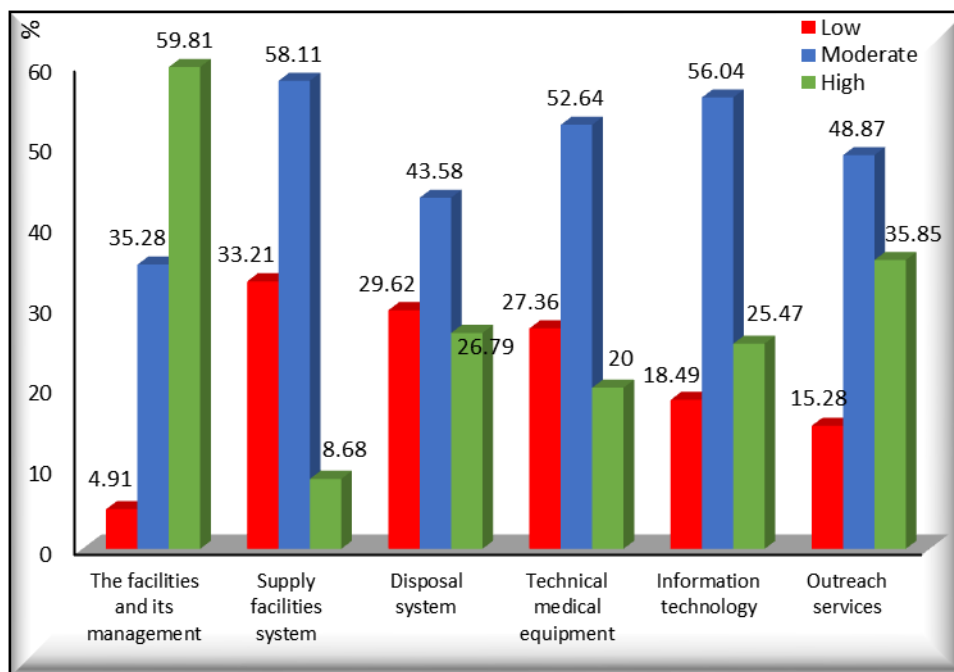


Figure (1): Levels of nursing staff perception regarding hospital infrastructure quality (n=530)

Figure (1) reveals levels of nursing staff perception regarding hospital infrastructure quality. Above fifty percent (58,11% , 56,04% , 52,64%) of nursing staff had moderate level of perception regarding supply facility system, information technology and technical medical equipment, respectively. About 59,81% , 35,85% of the nursing staff had high level of perception regarding the facility and its management and outreach services, respectively. About 33,21% , 29,62% , 27,36% of the nursing staff had low level of perception regarding supply facility system , disposal system and technical medical equipment, respectively.

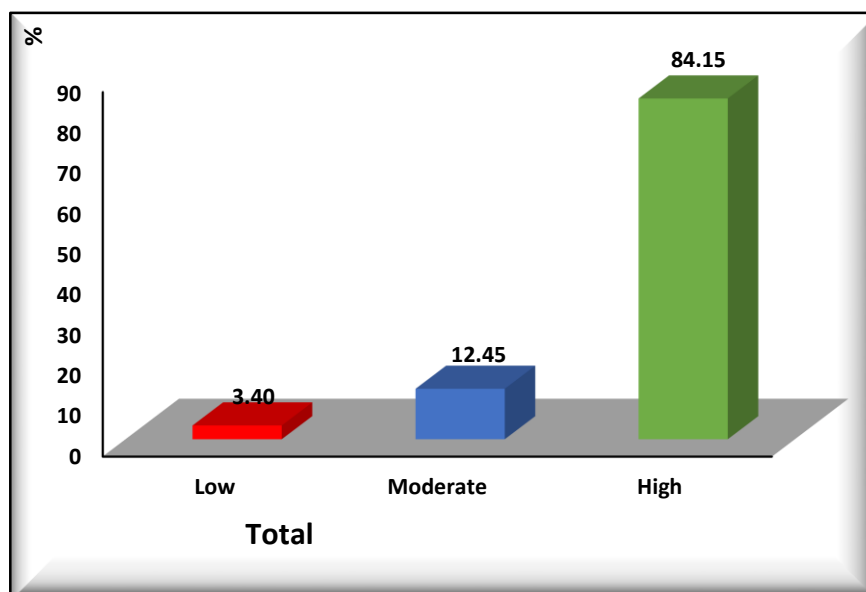


Figure (2): Levels of nursing staff perception regarding hospital infrastructure quality (n=530)

Figure (2) reveals levels of nursing staff perception regarding hospital infrastructure quality. The majority (84,15%) of nursing staff had high level of perception. While (12,45%) of the nursing staff had moderate level of perception . On the other hand, (3,40%) of the nursing staff had low level of perception regarding hospital infrastructure quality.

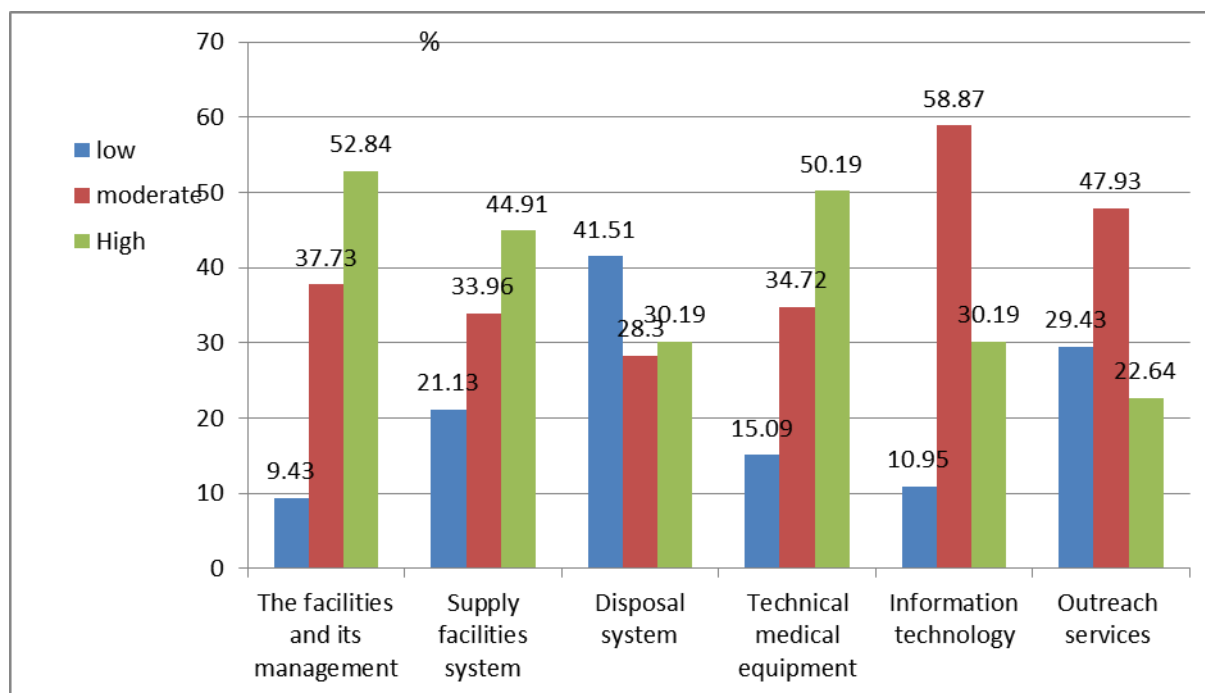


Figure (3): Actual level of quality of El Menshawy General Hospital according to researcher observation (n=530)

Figure (3): reveals actual level of quality of El Menshawy General Hospital according to researcher observation. The actual level of quality in information technology is high (58,87%) and above (50%) in technical medical equipment and the facilities and its management. The quality of supply facility system is (21%) , respectively.

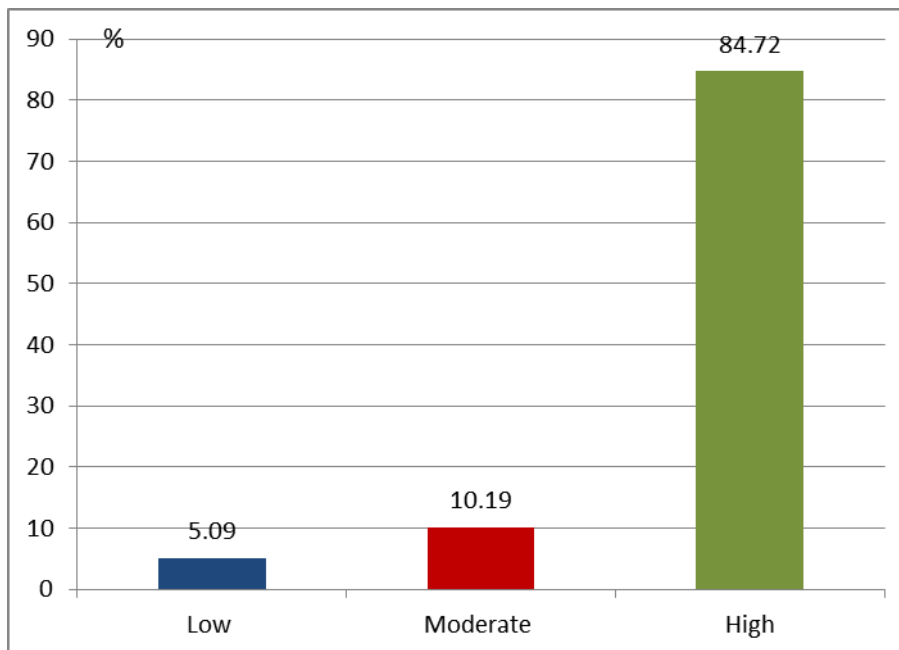


Figure (4): Actual level of quality of El menshawy general hospital according to researcher observation (n=530)

Figure (4): reveals actual level of quality of El menshawy general hospital according to researcher observation. The level of quality was high in about (84,72%). While moderate level of quality was about (10.19%). On the other hand low level of quality is about (5,09%) regarding the hospital infrastructure quality.

Table (2) Correlation between nursing staff perception and researcher observation regarding hospital infrastructure quality related to quality dimensions (n=530)

Quality dimensions		The facilities and its management	Supply facilities system	Disposal system	Technical medical equipment	Information technology
Supply facilities system	R	0.487				
	P-value	<0.001*				
Disposal system	R	0.479	0.441			
	P-value	<0.001*	<0.001*			
Technical medical equipment	R	0.366	0.526	0.501		
	P-value	<0.001*	<0.001*	<0.001*		
Information technology	R	0.260	0.322	0.354	0.421	
	P-value	<0.001*	<0.001*	<0.001*	<0.001*	
Outreach services	R	0.212	0.225	0.155	0.355	0.283
	P-value	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*

Table (2) illustrate correlation between nursing perception regarding hospital infrastructure quality related to quality dimensions .There was a significant positive correlation between the facility and its management and information technology(P=0.001). Also there was significant positive correlation between nursing staff perception and researcher observation regarding hospital infrastructure quality.

Discussion

The concept of infrastructure is an indirect measure quality of care⁽¹¹⁾. Infrastructure includes the tangible features of a service delivery, which is related to equipment, furniture, physical appearance of the hospital, facilities, availability of resources, and environment⁽¹²⁾. It is also referred to as manmade organization's physical facility or services which include interior attributes such as design, layout, and equipment⁽¹³⁻¹⁴⁾.

According to personal characteristics the finding of the present study revealed that the minority of total nursing staff (figure 5) received training courses related to quality, this could be due to training initiatives are not always prioritized by hospital administration. Supervisor nurse more than half of total nursing staff, and it is generally believed that more experienced nurse provide higher quality, efficient care (Table, 1). Coyle et al.,(2012)⁽¹⁵⁾ and Buckley et al., (2010)⁽¹⁶⁾ suggested that training courses related to quality is associated with improvements in clinical outcomes and direct benefits for service users or care systems.

Levels of nursing perception regarding hospital infrastructure quality

In the present study offer that more than eighty percent of the nursing staff in relation to quality of hospital infrastructure

specifically in perception regarding neonatal intensive care unit infrastructure this may due to more experienced supervise nurse and continuous training and supervise the nursing staff about neonatal intensive care unit standards and making training courses for nursing staff. While, more than fifty percent in perception regarding emergency room, intensive care unit, operative room, dialysis Infrastructure and the facilities and its management and these from nursing staff opinions, this could due to the more specialized departments require high qualified nursing staff and had more training courses. But less than fifty percent of the studied nurses in relation to perception regarding the disposal system, technical medical equipment, information technology, and outreach services this could be due to lack of specialized reviewing committee for these departments about following the quality standards in introducing the patient care and lack of training courses according to quality standards .

Actual level of quality of El- Menshawy General Hospital

According to researcher observation According to researcher observation, The level of quality is high in neonatal intensive care unit infrastructure and this also may due to well trained supervise

nurse which reflect on the nursing staff skills about neonatal intensive care unit standards and making training courses for nursing staff. The level of quality in dialysis infrastructure was high, this may be due to more daily supervision and continuous on job training. Moderate level of quality is in information technology. Regarding low level of quality infrastructure founded in disposal system and emergency room infrastructure, this may be due to lack of continuous supervision and the nursing staff not aware about quality standard implementation.

Oliver S, Morse J (2015)⁽¹⁷⁾ show that nurses often function as the 'protector' in the NICU aiming to prevent additional stress to the infant and families. Neonatal nurses recognize the importance of quality standard in the NICU, which has allowed for successful advanced medical interventions, including the use of surfactant and continuous positive airway pressure. However, nurses are responsible for many facets of care in the NICU.

Finally, the findings of the study suggest that inadequacies in hospital infrastructure limit access to health care and contribute to poor quality of care outcomes. It can be seen as a major component of the structural quality of a health care system. The built environment dimension is determined by the interplay of four features: accessibility;

constructability; functionality; and materials⁽¹⁸⁾.

In a comprehensive literature review conducted by **Ulrich et al. (2008)**⁽¹⁹⁾, the authors found evidence that the quality of the aesthetic aspects of the physical design (e.g. ward layout, window view, floor and furniture coverings, ventilation and water supply systems) not only influences the quality of clinical spaces (e.g. air quality; cleanliness of floors, walls, furniture, etc.) but has also an impact on clinician's behaviors, thus impacting on the clinical quality of care provided and care outcomes (e.g. hospital-acquired infections, patient falls, length of stay).

Evidence based design is a current trend in facility infrastructure where relevant and proven design innovations that optimize patient safety, quality of care and satisfaction as well as work place safety⁽²⁰⁾.

Conclusion

The majority of nursing staff showed high level of perception regarding neonatal intensive care unit infrastructure. Also, above fifty percent of the nursing staff showed high level of perception regarding emergency room infrastructure, Intensive Care Unit infrastructure, the facilities and its management, operative room infrastructure, dialysis infrastructure. About less than fifty percent of nursing staff showed moderate level of perception

regarding supply facility system and information technology . According to researcher observation the actual level of quality is high in information technology , neonatal intensive care unit and dialysis infrastructure. Moderate level of quality in technical medical equipment, operative room and facility and its management. While low level of quality in supply facility system and emergency room infrastructure.

Recommendations

At the nursing staff:

- Increase the nursing awareness about the importance of implementation of quality standards that lead to quality and low cost services.
- Provide continuous training program for all nursing staff that improve their performance , increase their knowledge and skills , and motivate them to perform quality patient care.
- Nursing supervisor need to be aware of infrastructure quality standards and its impact on quality of patient care.
- Activation of hospital committee role (quality committee, health and occupational safety committee, infection control committee and continuous training committee).

References

1. *Institute of Medicine (2015)*. Keeping patients safe: transforming the work environment of nurses. Washington, DC: National Academy Press.
2. *Spence Laschinger HK, Finegan J, Wilk P(2011)* . Situational and dispositional influences on nurses' workplace well-being: the role of empowering unit leadership. *Nurse Res.* 60(2):124-31.
3. *, Ngoli B (2015)*.Rapid assessment of infrastructure of primary health care facilities a relevant instrument for health care systems management.*BMC Health Services Res.* 15:183.
4. *Stichler JF.(2012)* Creating a healthy, positive work environment: A leadership imperative. *Nursing for Women's Health*, 13(4): 341-346.
5. *Das RC.(2017)* Handbook of Research on Economic, Financial, and Industrial Impacts on Infrastructure Development. *Advances in Finance, Accounting, and Economics* IGI Global.
6. *Imdad S, Anwar S, Shoukat MS (2013)* .Healthcare Waste: Evaluation of its Generation Rate and Management Practices in Tertiary Care Hospitals of Lahore. *Annals.* 19 (4): 2013; 274-81.
7. *Mitchell PH, Heinrich J, Moritz P, et al(2013)*. Outcome measures and care delivery systems: Introduction and

- purposes of the conference. *Medical Care*. 35(11):NS1-5.
8. **National Quality Forum.(2014)** National consensus standards for nursing- sensitive care: an initial performance measure set. Washington, DC: National Quality Forum; 2014.
 9. **Parand A, Dopson S, Renz A,(2014)**. The role of hospital managers in quality and patient safety: a systematic review. *BMJ Open*. 4(9):e005055.
 10. **Purdy N, Laschinger HK,(2010)** .Olivera: Effects of work environments on nurse and patient outcomes. *Journal of Nursing Management*, 18, 901-913.
 11. **Jooyeon H and Soocheong J. (2012):** The effects of dining atmospherics on behavioral intentions through quality perception", *Journal of Service Marketing* 1(26): 262-272.
 12. **Zeithaml A, Bitner J. &Gremler D. (2015)**. Services marketing: integrating customer focus across the firm. 5thed. New York.
 13. **Chassin M, LoebJ.(2011)**The Ongoing Quality Improvement Journey: Next Stop, High Reliability. *Health Affairs*. 30 (4): 559–68.
 14. **IslamF, Halim A, Rahman A, Dalal K(2015)**. Assessment of quality of infrastructure and clinical care performance of HCPs during MNH services at district and sub-district level government hospitals, Bangladesh. *Health MED*. (12): 500-10.
 15. **Coyle YM, Mercer SQ, Murphy-Cullen CL et al(2012)**. Effectiveness of a graduate medical education program for improving medical event reporting attitude and behaviour. *Quality and Safety in HealthCare* 14:383-388
 16. **Buckley JD, Joyce B, Garcia AJ et al (2010)**. Linking residency training effectiveness to clinical outcomes: a quality improvement approach. 36 (5):203-208
 17. **Oliver S, Morse J(2015)** Developmental care and quality assessment program at Scott and White Memorial Hospital .
 18. **Enoch M.(2016)** Sustainable transport, mobility management and travel plans. Routledge .
 19. **Ulrich S, Zimring C, Zhu X, Du Bose J(2013) A**. A review of the research literature on evidence-based healthcare design. *HERD: Health Environments Research & Design Journal*. 61–125.
 20. **Stantec Consulting Ltd. (2016)** Advanced Hospital Design: Roadmap for the Development of a Sustainable Hospital Complex.

Effect of Training Program on the Nurses' Attitude and Perception of Caring Behavior toward Substance Use Disorder Patients

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Abstract

Nurses are responsible for the holistic care of substance use disorder patients, which encompasses the psychosocial, developmental, cultural, and spiritual needs of the individual, and helped to manage physical needs, prevent illness, and treat health conditions, they consider the vital caregiver for SUD patients. To do this important role, they need to have good knowledge, positive attitude and caring behavior skills toward these patients. **Aim of the study:** This study was aimed to determine the effect of training program on the nurses' attitude and perception of caring behavior toward substance use disorder patients. **Subjects of study:** Sample consisted of 50 nurses who were chosen by convenient sampling. **A quasi-experimental design** was utilized. **Tools of the study:** Two tools were used for data collection; Substance Abuse Attitudes Survey (SAAS) designed to measure nurses' attitudes towards substance use disorder and Caring Behavior Assessment Tool (CBA) aims to assess nurse' perception regarding caring behavior toward substance use disorder patients. **Result of the study:** The results revealed that there was statistically significant improvement in nurses' attitude and perception of caring behavior skill regarding substance use disorder patients before and after implementing of the training program. **Conclusion, recommendation:** The study **concluded** that training program about substance use disorder enhancing the nurses' attitude and perception of caring behavior skills toward substance use disorder patients. According to these results, the study **recommended** that hospital policies must encourage nurses to attend in-service training program about attitude and caring behavior skills toward substance use disorder patients.

Key words: Attitude, Caring Behavior, Substance Use Disorder

I-Introduction:

Substance use disorder is one of the major social, mental, legal, and public-health challenges in the world; it is the major burden in 21st century that impacts families and society on multiple levels, directly or indirectly. Substance use disorder can result in wide range of psychological and social problems and it is a tremendous toll on society at many levels it impacts the individual, family, and community, as it plays a role in many major social problems, such as violence, stress, child abuse, homelessness, crime, and family disruption and missed work. Productivity, relationship and physical health are also affected and are considered cause of preventable illnesses and premature death in society. ^(1,2)

It is a chronic pattern of behavior that is characterized by the repeated use of substances or behaviors despite significant ongoing harms associated with use, where the harms over the benefits. It is difficult to control or cease the use of the substances due to physical or psychological dependence. Substance use disorder generally takes a- period of time to develop and follow a chronic and relapsing course and therefore require ongoing support and treatment. At the International level, The World Health Organization (WHO, 2015) estimated that 600 million people in the

world suffer from mental or neurological disorders and psychosocial problems that occur with substance use disorder ^(1,3,4)

Also drug misuse accounts for 33.4% of the burden of disease, 12.4% of all death globally and drug misuse was cited as constituting the third highest risk factor to health in the developed world. At the national level, the Ministry of Health (2016) stated the percentage of substance use disorder patient in Egypt reached to 6% from total population and percentage of substance users in Algharbia government reached to 6.9% from total population of government ^(5,6)

Because of the nurses are responsible for the holistic care of substance use disorder patients, which encompasses the psychosocial, developmental, cultural, and spiritual needs of the individual, and helped to manage physical needs, prevent illness, and treat health conditions, they consider the vital caregiver for SUD patients. To do this important role, they need to have good knowledge and positive attitude, caring behavior skills toward these patients. ^(2,7,8)

A positive attitude in nurses can impact on nurses' actual job performance, in the form of dealing with stressors of the job, crafting creative solutions to problems, managing effective interpersonal relationships with others and also

enhancing nurse's ability to be more productive.⁽⁹⁾ On the other hands negative and pessimistic attitude of the nurse can adversely adversely effect on the therapeutic nurse-patient relationship, resulting in suboptimal patient care, so the nurses must have positive attitude toward those patients.^(7, 10)

A significant percentage of nurses have false ideas or gaps in their knowledge and caring behaviors skills toward substance use disorder, which causes them to behave toward SUD patients inappropriately, so that nurses must have knowledge and skills that enable them to behave in a manner that meets patients need.⁽¹¹⁻¹³⁾ Nurses play a key role in many aspects of substance use disorder management, planning and implementation, so insufficient knowledge and negative attitudes towards patients with substance use disorder and its treatment can result in lack or improper implementation of management leading to poor patients' outcome.^(5, 14-16)

In this regard it has been observed that specific training of nurses in this field as communication skill, humanistic skill, learning and teaching, supportive skill and stress management skills have positive consequences and enable them to work effectively with those patients.⁽¹⁷⁻²⁰⁾

II Aim of the study

The aim of this study was to:

Determine the effect of training program on the nurses' attitude and perception of caring behavior toward substance use disorder patients.

Research hypothesis:

The attitude and perception of caring behaviors of the nurse who will attend the training program toward substance use disorder patients expected to be changed positively..

III Subjects and Method

Research design:

A quasi -experimental research design was used in the current study.

Research setting:

The study was conducted at Shopra kas center for addiction, the center is affiliated to the General Secretariat of Mental Health. The capacity of the center is 30 beds and it provides health care services to Gharbya, Menofia, Sharkia, Dakahelia and Kafr-ilsheikh governates.

Subjects:

According to (Epi- Info program) the subjects of this study consisted of 50 nurses .The subjects were selected by convenient sample and were fulfilling the following inclusion criteria:-

- Both sex.
- Nurses who provide direct care to substance dependent person.
- Agree to participate in the study.

Tools of the study

The data of this study was collected by using the following two tools:

Tool I: Substance Abuse Attitudes Survey (SAAS); It was developed by Chappel et al., 1985⁽¹²¹⁾. It divided into two parts:-

Part 1: Socio Demographic and clinical characteristic of nurse:

It was used to assess the socio demographic data about nurses it will included 6 demographic data (age, gender, educational level, years of experience in nursing, years of experience in care of substance use disorder patient, and having work shop related to substance use disorder.

Part 2: Substance Abuse Attitudes Survey (SAAS); It consisted of 27 items, designed to measure nurses' attitudes towards substance abuse and it composed of five subscales: permissiveness, treatment intervention, non-stereotypes, treatment optimism, and non-moralism attitudes.

- **Permissiveness subscale :**(from 1 to 8) 8 questions implied accepting substance use within a continuum of normal human behavior. Like

statement "Cannabis should be legalized".

- **Treatment intervention subscale:** (from 9 to 13) 5 questions, this subgroup related to an individual's orientation towards perceiving substance use/misuse in the context of treatment and intervention. Like statement "Family involvement is a very important part of the treatment drug dependence".
- **Non stereotypes subscale:** (from 14 to 17) 4 questions relates to persons non reliance on popular societal stereotypes of substance use and substance users. Like statement "People who use cannabis usually do not respect authority".
- **Treatment optimism subscale:** (from 18 to 22) 5 questions related to an optimistic perception of treatment and the possibility of a successful outcome. Like statement "Drug dependence is a treatable illness".
- **Non-moralism subscale:** (from 23 to 27) 5 questions was linked to an individual's absence or avoidance of moralistic perspective when considering substance use and substance users. Like statement "Street dealers are the initial source of drugs for young people".

Scoring system : Each item is scored on a 3-point Likert scale ranging from 1 (strongly disagree) to 3 (strongly agree). The minimum score is 27 and maximum score is 81. Scoring system of these questionnaires was as followed:

- < 50% = Poor attitude
- 50 – 75% = Neutral attitude
- > 75% = Good attitude

Tool II: Caring Behavior Assessment

Tool (CBA). The caring behavior assessment tool was developed by **Cronin and Harrison (1988)**⁽¹²²⁾

It adapted to assess nurse' perception regarding caring behavior toward substance abuse patients . The caring behavior assessment tool (CBA) is a 63 item questionnaire that used a 5 likert scale to reflect the degree to which each nursing behavior reflects caring. It was ascending scale from 1=little importance to 5= much importance. It ordered in seven subscales, the subscales with their respective items numbers

- **Humanism / faith – hope/sensitivity** from (1 to16) 16 questions, this subgroup related to human rights of substance use disorder patients as a human being .Like statement" Treat the patient as an individual".
- **Helping trust** from(17 to 27) 11 questions, this subgroup related to provide trust from nurse to substance

use disorder patients. like statement "Really listen to the patient when talk".

- **Expression of positive /negative feelings** from(28 to 31) 4 questions, this subgroup related to help substance use disorder patients to express his feeling freely without fear. Like statement "Encourage the patient to talk about how he feels".
- **Teaching / learning** from (32 to 39) 8 questions, this subgroup related to provide substance use disorder patients some skills that help him to be independent person. Like statement "Help the patient set realistic goals for his health".
- **Supportive, protective- corrective environment** from (40 to 49) 10 questions, this subgroup related to provide substance use disorder patients support to prevent relapse. Like statement "Explain safety precautions to the patient and his family".
- **Human needs assistance** from (50 to 60) 11 questions, this subgroup related to assist substance use disorder patients in his need. Like statement "Check the patient condition very closely".
- **Existential /phenomenological / spiritual forces** from (61 to 63) 3

questions, this subgroup related to assist substance use disorder patients to improve self-stem .Like statement "seem to know how the patient feel".

Scoring system, each nurse can receive score ranging from 63 to 315 grades. Scoring system of this questionnaire was as follow:

- < 50% = Poor caring behavior skill
- 50 – 75% = Neutral caring behavior skill
- > 75% = Good caring behavior skill

Method

1. An official letter was issued from faculty of nursing, Tanta University to study setting to obtain his permission for data collection.
2. Ethical consideration:
 - a. consent for voluntary participation was obtained from all nurses participating in the study.
 - b. The subjects were informed about the aim of the study and reassured the study subjects that the confidentiality and privacy of any obtained information were ensured and used only for the purpose of the study.
 - c. Respecting the right of the study subjects to refuse to participate or to withdraw from the study at any phase was emphasized.
 - d. The nature of study not produces harm for subject.
3. Tools of the study were translated into Arabic language by the researcher and were tested for content validity by a jury of five experts in the field of psychiatric nursing to ascertain the appropriateness of items for measuring what they are supposed to measure and both tools were proved to be valid.
4. A pilot study was carried out before embarking in the field of work on 10% from total subjects to ascertain the clarity and applicability of the study tools. Also it served to estimate the approximate time required for filling study tools as well as to identify obstacles that might be faced during data collection. After collecting pilot study, it was found that each nurse took 25-30 minutes to fulfill tools of the study and no modification was done on study tools. The pilot subjects were excluded later from actual study sample.
5. Internal consistency of the study tools were done by means of Cronbach's Alpha coefficient which yielded values of $r=0.924$ – $r=0.941$ respectively.
- 7- **Actual study:** The actual study was divided into the four phases;

I) Phase one: - Assessment phase (pretest)

- Tools of the study were distributed on the study subjects in individual basis and the subjects were asked to fill the questionnaire in the presence of researcher for any clarification and filling of the questionnaire ranged from 25 to 30 minutes, this phase aimed to determine the study subject's needs as a base line of training program.

II) Phase two: - Development of the training program

- Training program was developed by the researcher based on reviewing of the recent related literatures ^(1, 2, 27, 29, 39,101-9) and the result of phase one.
- The general object of training program was aimed to improve the nurses' attitude and their perception of caring behavior toward substance use disorder patients. The training program consisted of theoretical and practical parts in which each one of them has set of specific objectives. The objective of theoretical part of training program was providing studied nurses with theoretical knowledge about substance use disorder like (definition, causes, types and treatment) and attitude like (concept, type, impact of positive and

negative attitude). Meanwhile the objective of practical part of the program was providing study subjects with skills to improve their attitude and caring behavior skills like humanistic skills, teaching and learning skills, supportive skills.

- The prepared program was written into a simplified Arabic language by the researcher and revised by the supervisors to ascertain its content and appropriateness and applicability. Accordingly, the required modifications and corrections were carried out.

III) Phase three: - Implementation of The training Program.

- The training program was implemented on 16 sessions, the first one is introductory session and six of them were theoretical sessions, eight of them were practical sessions and the final session was summery for all previous sessions.
- The studied nurses classified into 8 subgroups. Each sub group composed of 5-7 nurses. Each sub group attended sixteen sessions, these sessions were scheduled as 2 sessions per week for duration of 8 week. The time for each session was about (45-60 m).
- The training program was carried out in the training room of study setting on

small group basis. This room was prepared specifically by the hospital for continuing teaching and training nurses.

- Lecture, hand out, power point, role play were used as teaching method in implementation of training program.
- The data collection took about seven months from July 2017 to January 2018.
- **In implementation of the program, as a general,** the researcher was the initiator, provider and encourage of exchange knowledge between studied nurses and researcher, and encouraged exploration of their responses, issues or concepts and their attitude. The researcher also acted as a group leader who operated as a facilitator, teacher, and trainer. Clinical experiences of nurses were taken into consideration during teaching-training sessions. All over the sessions, nurses were motivated to share in the discussion with symbolic reward (by giving them paper notes, pens, and offering tea breaks), and emotionally reward by positive comments and appreciation.
- At the end of the program for each subgroup, printed booklet of the training program was given to all studied nurses.

- **Specifically**

- **The theoretical sessions** was implemented by using lecture interwoven with discussion and sometimes demonstration method. Group discussion was used to enhance interest and promote active involvement of nurses. In addition to the examples, and illustrations which provided by the researcher for assuring understanding and the subjects also provided additional examples from their professional experiences. Lecture was given in clear, simple manner using attractive power point presentations which prepared by the researcher in a simplified and meaningful Arabic language for the study subjects and appropriate for allocated time.
- Lecture, group discussion were used as method of teaching ,meanwhile the hand out , power point and posters were used as a media of teaching.
- **In the practical sessions,** The researcher used mainly role play, demonstration and re demonstrations as method of teaching also used lecture and group discussion, visual aids, video .Role play was carried out between studied nurses themselves and studied nurses with researcher. Handout papers

about simulated situations and scenario were distributed to all studied nurses at the beginning of each session. In each practical session, simulated nurse, patient situations presented by the researcher through data show and then discussed with the studied subjects.

- Firstly, the researcher allowed nurses to think critically and give wide range of their own responses to the situations and analyze each one, after that the most therapeutic responses were presented at the end of each situation's discussion in addition to giving rationale and analysis to each choice.
- In most of the sessions, nurses brought clinical situations which also discussed with them. Also role playing for simulated scenario was used as a teaching method in showing therapeutic response to the clinical situations and such method help the nurses to know how they convey the appropriate response. Also after each session, nurses were given a homework in which each nurse writes other situations with its therapeutic response and this will be discussed in the following session.

IV phase four (Evaluation phase):-

- This concerned with the evaluation of the implemented training program. The tools of the study were reapplied

twice on all study subjects on an individual basis.

- Immediately after implementation of the training program.
- Three months later after completion of the training program.

Statistical analysis

The collected data were organized, tabulated and statistically analyzed using SPSS software statistical computer package version 16. For quantitative data, the range, mean and standard deviation were calculated. For qualitative data, comparison was done using Chi-square test (χ^2). For comparison between means, student t-test was used. For comparison between more than two means, the F-value of analysis of variance (ANOVA) was calculated. Correlation between variables was evaluated using Pearson's & Spearman correlation coefficient r . A significance was adopted at $P < 0.05$ for interpretation of results of tests of significance..

IV Results.

Table (1): illustrate the effect of training program on the total mean score of studied nurses regard substance abuse attitude survey pre, post and follow up the implementation of training program .The results revealed that there is highly statistically significant relation between total mean score of studied nurses regard substance abuse attitude survey before,

immediately after, and after three month from implementation of the training program in which (P-value=0.000*). This mean that studied nurses had total mean score regard substance abuse attitude survey before program (32.180± 3.691), and then this level became high immediately and three months after program (48.320±3.159& 46.280±3.540 respectively).

Table (2): clarifies distribution of the studied nurses in relation to their mean score of non-stereotypes attitude subscale, The results revealed that there is highly statistically significant relation between nurses non-stereotypes attitude subscale before, immediately after implementation of the training program in which (P-value=0.000*). Where there isn't statistically significant relation between nurses non-stereotypes attitude subscale post program and at follow (after implementation of the training program three month ago) in which (P-value=0.159)

Table (3): illustrate the effect of training program on the total mean score of studied nurses regard caring behavior skill pre, post and follow up the implementation of training program .The results revealed that there is highly statistically significant relation between total mean score of studied nurses regard

caring behavior skill before, immediately after, and after three month from implementation of the training program in which (P-value=0.000*). Where studied nurses had total mean score regard caring behavior skill before program (32.180 ± 3.691), while this level became high immediately and three months after program (48.320±3.159& 46.280±3.540 respectively).

Table (4): show distribution of the studied nurses in relation to their mean score of caring behavior subscale (Humanism .faith -hope) skill, The results revealed that there is highly statistically significant relation between nurses caring behavior subscale (Humanism .faith -hope) skill before, immediately after, and after three month from implementation of the training program in which (P-value=0.000*). Where studied nurses had mean score of caring behavior subscale (Humanism .faith -hope) skill before program (20.620 ±3.613), while this level became high immediately and three months after program (27.900±3.512& 27.760±3.467 respectively)

Table (1): The Effect of Training Program on The Total Mean Score of Studied Nurses Regarding Substance Abuse Attitude Survey Pre, Post and Follow up The Implementation of Training Program

Items					Comp.	Difference		Paired T-test	
		Mean	±	SD		Mean	SD	t	P-value
Substance abuse attitude survey SAAS	Pre	32.180	±	3.691	Pre-Post	-16.140	4.436	-25.730	0.000
	Post	48.320	±	3.159	Pre-Follow up	-14.100	4.841	-20.594	0.000
	Follow up	46.280	±	3.540	Post-Follow up	2.040	2.603	5.542	0.000

* Significant at P < 0.05

Table (2): Distribution of The Studied Nurses in Relation to Their Mean Score of Non-Stereotypes Attitude Subscale Pre, Post and Follow up The Implementation of Training Program.

Items					Comp.	Difference		Paired T-test	
		Mean	±	SD		Mean	SD	t	P-value
Non stereotypes Attitude	Pre	4.180	±	1.535	Pre-Post	-2.920	2.049	-10.078	0.000
	Post	7.100	±	1.035	Pre-Follow up	-2.880	2.076	-9.807	0.000
	Follow up	7.060	±	1.018	Post-Follow up	0.040	0.198	1.429	0.159

* Significant at P < 0.05

Table (3): The Effect of Training Program on The Total Mean Score of Studied Nurses Regarding Caring Behavior Skill Pre, Post and Follow up The Implementation of Training Program.

Items					Comp.	Difference		Paired T-test	
		Mean	±	SD		Mean	SD	t	P-value
Caring behaviors skill	Pre	68.980	±	11.578	Pre-Post	-37.280	12.615	-20.896	0.000
	Post	106.260	±	10.913	Pre-Follow up	-35.640	12.657	-19.911	0.000
	Follow up	104.620	±	10.913	Post-Follow up	1.640	2.248	5.160	0.000

* Significant at P < 0.05

Table (4): Distribution of The Studied Nurses in Relation to Their Mean Score of Caring Behavior Subscale (Human Needs Assistance) Skill Pre, Post and Follow up The Implementation of Training Program.

Items					Comp.	Difference		Paired T-test	
		Mean	±	SD		Mean	SD	t	P-value
Human needs assistance skill	Pre	11.400	±	4.252	Pre-Post	-6.860	5.071	-9.566	0.000
	Post	18.260	±	2.813	Pre-Follow up	-6.640	5.082	-9.239	0.000
	Follow up	18.040	±	2.941	Post-Follow up	0.220	0.887	1.753	0.086

* Significant at P < 0.05

V: Discussion

Substance use disorder is a major problem that the world is facing. Substance use disorder not only ruins the social fabric of society but it contributes significantly towards disease and violence.

Emerging result of the present study revealed that the training program has positive effect on nurse attitude toward substance use disorder patients immediately and after three month from implementation of the training program. This result may be due to training program development which mainly based on the studied nurses' needs in addition to its clarity, simplicity, frequent repetition, and motivating staff to participate in both practical and theoretical sessions of the training program. **(Table 1)**

This enhancement of the nurses' attitude also may be due to the way of implementation of training program in which researcher used role play and simulation as a method of teaching. This method help nurses to be more self-awareness for their attitude toward patients particularly their negative attitude .Additionally role play and simulation as a method of implementing of program give the researcher opportunity to demonstrate positive attitude that mainly helped in replacing negative attitude by positive one .

Additionally the researcher gave subjects nurses homework as post simulation activity that enhanced nurses' attitude as this homework provide them opportunity to be more explore to their attitude toward SUD patients and become more self-awareness about their attitude which leads to personal and professional growth. In theoretical sessions the researcher gave it by using lecture interwoven with group discussion. Group discussion was used to enhance interest and promote active involvement of nurses. Additionally the researcher was very keen to implement program in a warm and friendly environment which helps nurses to share and express their negative attitude freely.

This result is supported by *Rawat (2009)*⁽²³⁾ in his study found that there were significant improvements in nurse attitude after intervention than before .In the same line *Tierney (2013)*⁽²⁴⁾ showed significant improvements for nurses' attitude toward patients with substance use disorder after program implementation

Society has the tendency to label and stereotype people who are abusing drugs. There is a stigma that is attached to these people. Nurse as a member of society also follows the views of society and stigmatize those SUD patients. This leads to poor attitude and poor quality of nursing care

with consequent harm to the patient.

(Table 2)

This study was carried out with the hope of eradicate nurses stigma toward SUD patients, at the same line the result of presented study improved that there was positive change on nurse attitude toward SUD patients .this improvement may be due to the implementation of the program. For example in one of the session concerned with stigma. This success was due to during implementing session one of the nurse said that they saw SUD patients as unacceptable person, dangerous and drug seeker, as the result of what has been said the researcher intended to change myths and mis- concepts about SUD patients by revealing real-life experiences of stigma ⁽²⁵⁾, like statement" SUD patients aren't drug seeker". "Drug abusers are acceptable patients". "SUD like any other disorder can be treated and prevented" change of this stigmatized view of patients lead to improved nurses' attitude toward those patients. This result was in line with, *Mansour (2011)* ⁽²⁵⁾ in their study observed that there was statistical significant relation of non-stereotypes attitude subscale before and after program.

Caring is a central concept to psychiatric nursing and the nurse is vital in caring with substance use disorder patients so that the nurses must be understand that substance

use disorder patients are unique and their needs are urgent and therefore their intervention should cater for their needs, this require from nurse to be more self-confidence, more self-autonomy. This refers to the topical importance of training of caring behavior skills which enable nurses to provide effective care for those patients. (Table 3)

In the consistent with this current study the result pointed out the caring behavior skills of nurses shaped positively after the implementation of training program. This result may be due to successful effect of training program which consist of seven practical training sessions about different caring behaviors such as (humanistic skills, supportive skills, self-dependent skills, teaching and learning skill in order to enhance caring behavior skills of nurses.

The researcher used mainly role play, demonstration and re demonstrations as method of teaching also used lecture and group discussion, visual aids, video and role play was carried out between studied nurses themselves and studied nurses with researcher. Handout papers about simulated situations and scenario were distributed to all studied nurses at the beginning of each session.

For example the researcher implement communication skills like active listening skills, silence, open end question, proud

opening, and assertiveness. Another example in implementation of teaching and learning skills as mental preparation skills, diversifying stimuli skills, and stimulating motivation skills, positive and negative reinforcement, after the researcher provide all knowledge about these skills by using attractive power points and after listening video or scenario to qualified nurses when deal effectively with patients and use effective caring behavior skills. the researcher played role of nurse and studied nurses played role of patients to make role play of effective and therapeutic response between nurse and patients while giving care to substance use disorder patients.

This result was supported by *Cristina et al., (2013)*⁽²⁷⁾ in their study who observed that there were significant improvements in nurse caring behavior skills after intervention than before. Additionally *Hunter(2018)*⁽²⁸⁾ in his study support the same result. While *Justin & Sleeper (2013)*⁽²⁶⁾ in their study revealed that there was poor quality of nursing caring behavior skills toward substance use disorder patients and this require more improvement to deal effectively with those patients.

Nursing is a profession committed to the promotion of human beings. It takes into consideration their freedom, uniqueness and dignity, therefore communication

plays an important role within the nursing process and its results, and it is also a fundamental component of the treatment. Alongside with that this study intended to promote nurse humanistic skill, in consistent with this result, it was notice that there was significant increase in mean score of (humanism, faith -hope) skill of studied nurses' toward substance use disorder patients immediately after and after three months of implementation of the training program compared with before the implementation of the training program. **(table4)** This result may be related to the effort made from researcher in order to provide wide knowledge for nurses about humanistic skills and make effective role play about humanistic skills (empathy, sharing hope skill) that help nurses to practice them effectively.

This coincides with *Mousa's study (2015)*⁽²⁹⁾ that showed that all nurses achieved high level of humanistic skills following the completion of theoretical and practical contents of the training program. Similarly, a study done by *Kahriman et al (2016)*⁽³⁰⁾ revealed the same result for *Mousa's study.*⁽²⁹⁾ This finding was contradicted with *Williams & Stickley (2010)*⁽³¹⁾ in his study who stated that humanistic skills are a personality trait that cannot be easily taught, in the same line the results of the current study contradicted

with *Nunes et al., (2011)* ⁽³²⁾ which found that nurses' levels of humanistic skills did not change or were more likely to decrease after intervention.

VI Conclusion and Recommendations

Based on the results of the present study. The findings confirmed the importance of nurses' attitude and nurses caring behavior skills in management of substance use disorder, and also confirmed the effect of the training program on enhancing the nurses' attitude and perception of caring behavior toward substance use disorder patients. It can be concluded that the majority of studied nurses had a high level substance use disorder attitude and caring behavior skills that enable them to deal effectively with SUD patients after the implementation of this training program. Total score of attitude and caring behavior skills before intervention was significantly different from immediately after and at follow up.

Based on the previous findings of the present study and conclusion, the following recommendations are suggested

- Introduction of effective nursing attitude and caring behavior skills related to substance use disorder patients in students curriculum.
- Purposeful training workshop about positive nurse attitude toward SUD patients.
- Hospital policies must encourage nurses to attend in-service training program about new health issues and its trends related to SUD.

References

1. **Keltner N.** Psychiatric Nursing. 6th ed. U.S.A: Mosby Co.), 2011; 361-396.
2. **Boyd M.** Psychiatric Nursing Contemporary Practice. 5th ed. Philadelphia: Lippincott, 2012;588-616.
3. **World Health Organization (WHO).** As Burden of Mental Disorders Looms Large. Countries Report Lack of Mental Health. Programs Accessed June <http://www.who.int/inf-pr>; 2015.
4. **Insurance Program** Administered by Lockton Affinity, LLC© 2016 Copyright by Lockton Affinity, LLC. All rights reserved.
5. **Hamad A.** Percentage of Addiction in Egypt . minister of health ,2015Avialable at <http://alwafddicd.org>
6. **Connolly J.** The Illicit Drug problems. Health Research Board, 2010; 40 (10). 18-22.
7. **Mohr w.** Psychiatric Mental Health

- Nursing. 7th ed., Philadelphia: Lippincott Co.)2014; 89 -90.
8. **Sullivan E.** Nursing Care of Clients with Substance Abuse, Philadelphia: St. Louis Mosby Co.)2008;8-18.
 9. **Vidbeck S.** Psychiatric Mental Health Nursing. 6thed. USA: Lippincott Williams, Co.) 2014; 509.
 10. **Chappel J& Schnoll N.** Physician Attitudes. effect on the treatment of chemically dependent patients. 2011; 2318-19
 11. **Boyd M.** Psychiatric Nursing, Contemporary practice 5th ed. Philadelphia: Lippincott .2015;24-28.
 12. **Miller S.,saitz R .** principles of addiction medecine. 5th ed. Philadelphia: wolters Kluwer 2014; 50.
 13. **Chung J & Changh J .**Nurses' Attitude towards Alcoholic Patient in accident and emergency department. Hong Kong Journal of emergency Medicine, 2013; 10(2): 104-12 .
 14. **Happell B & Taylor C .**Negative Attitudes towards clients with drug and alcohol related problems. New Zealand. Journal of Mental Health Nursing. 2012; (10) 87-96.
 15. **Barbara G& Faltz V.** Substance Use Disorders.7th ed : Lippincott Co.)2017;116.
 16. **Boyd M.** Psychiatric Nursing Contemporary Practice. 5th ed. Philadelphia: Lippincott, 2014;588-616.
 17. **Rassool G.** The Responses of health care professionals to Substance use and misuse Journal of Mental Health Nursing .2010 ;13 (5). 68-80.
 18. **Howard H & Chung l .** Nurses Attitudes toward Substance misusers. Substance Use and Misuse 2009 ;35(3). 347-365
 19. **Connell O Elizabeth & Margaret L,** "The Importance of Critical Care Nurses' Caring Behaviours as Preceived by Nurses and Relatives." Intens Crit Care Nurs 24 (2016): 349–58.
 20. **Essen V & Sjoden L.** "The Importance of Nurse Caring Behaviors as Perceived by Swedish Hospital Patients and Nursing Staff." Int J Nurs Stud 40 (2013): 487–97.
 21. **Chappel J& Krug R.** The Substance Abuse Attitude Survey. An instrument for measuring attitudes. Journal of Studies on Alcohol 1985; 46 (10): 48-52.
 22. **Cronin S & Harrison B.** Caring Behaviors Assessment Tool. Assessing and measuring caring in nursing and health science. New York: Springer Co,) 1988; 724-725.
 23. **Rawat,F .** Attitudes of nurses and health practitioners towards substance abuse and their attitudes

- towards intervention at primary health level Medical journal. 2009; 17 (12): 154 – 157.
24. **Tierney, M.** Improving nurses' attitudes toward patients with substance use disorders. 2013; 7 (1): 140.
25. **Mansour et al.,** change of this stigmatized view of patients lead to improved nurses' attitude toward those patients. Jordan The National Academies Press. 2011 ; 15 (4): 26-28.
26. **Justin A & Sleeper1** "Stigmatization by nurses as perceived by substance abuse patients. Addiction Journal. 2013; 14 (2): 122-125.
27. **Cristina, S & Margarita, B etal.** Nurses' training on dealing with alcohol and drug abuse .Impact of drug abuse . Addiction Journal . 2013 ; 18 (1): 6-8.
28. **Hunter,E.** Multidisciplinary care in the management of substance misuse and mental health problems. Journal of Pshychiatric Nursing 2018 ; 8 (2): 122.
29. **Mousa , M.** Empathy toward Patients with Mental Illness among Baccalaureate Nursing Students: Impact of a Psychiatric Nursing and Mental Health, Journal of Education and Practice, 2015;6(24) :98-105.
30. **Kahrman et al.** Emphatic Skill Levels of Primary Health Care Workers. Journal of Pshychiatric Nursing, 2016; 3(1): 6-12.
31. **Williams & Stickley .** Humanistic skills are a personality trait that cannot be easily taught . Journal of Education and Practice 2010; 44(2): 16-22.
32. **Nunes,P. Williams, S & Stevenson,K.** empathy decline in students from five health disciplines during their first year of training. International Journal of Medical Education, 2011; 2:12-17.

Effect of Psycho- Educational Program about Violence on Nurses' Knowledge and Practice

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Abstract

Background: Violent behavior of psychiatric patients is a public health problem. It presents obvious risks of injuries or death of assailants and their victims. **Aim:** this study aimed to evaluate the effect of the psycho-educational program about violence on nurses' knowledge and practice. **Design:** A quasi- experimental research design was utilized in this study. **Setting:** The study was conducted at Tanta Psychiatric and Mental Health Hospital affiliated to ministry of health and population. Tanta city, Algharbya Governorate, Egypt. **Subject:** A sample of 50 randomly selected psychiatric nurses were recruited for this study. **Tools:** Two tools were used to collect data; **tool I part1:** socio-demographic characteristics for nurses, **part2:** Structured Nurse's Knowledge Questionnaire. **Tool II:** Observational Checklist for Nurses' Practice Related to Patient Violence. **Results:** The main result of this study revealed, highly significant improvement in nurses' level of knowledge and practices toward violent patient after implementation of psycho-educational program. Also, there were statistically significant positive correlation between nurses' level of knowledge and level of practice related to psychiatric patients' violence immediately after and 3 months after implementation of the educational program where ($r = 0.861$, $P = 0.019$) ($r = 0.418$, $P = 0.003$) respectively. But, there were no statistically correlation between nurses' level of knowledge and practice related to violence before implementing the program as $r = 0.180$, $P = 0.211$. **Conclusion:** The present study concluded that, the educational program sessions played an important role in improvements of nurses' level of knowledge and practices toward violent patient. **Recommendations:** This study recommended implementing further educational program for nurses concerning the pattern of communication and behavioral management for violent patients is very important. **Key words:** Educational Program, Violence, Nurses' Knowledge, Nurses' Practice.

Introduction

Violence is one of the most difficult problems facing psychiatric nursing in recent years. Violent behavior has been identified as a national health concern and a priority for intervention in the United States, where occurrences exceed 2 million per year⁽¹⁻³⁾. Psychiatric nurses have a higher chance of being the first professionals in contact with violent patient. Thus they should be able to identify them and discontinuing the cycle of violence⁽⁴⁾.

Violence has been defined as any act, word, even attitudes such as an intimidating facial expression, that creates fear or negative feelings, leading to physical or psycho-social unwanted results. Violence also can be defined as any actions, or inaction, premeditated and done consciously or unconsciously, with the intention to harm, whether physically, emotionally, psychologically, or spiritually⁽⁵⁾. It is a multifaceted problem, which may take on several forms such as verbal abuse, physical assaults, aggression, harassment, bullying, intimidation, threatening⁽¹⁾. Physical, verbal violence and sexual harassment are the major types of violence reported in psychiatric setting^(6,7).

Regarding the risk factors for violence, it was founded that, the risk of future violence increases linearly with the

number of past violent events, a history of impulsivity, male gender, young adulthood, lower intelligence, history of head trauma or neurological impairment, dissociative states, history of military service and weapons training. Also, diagnoses of major mental illness, persecutory delusions, command hallucinations, treatment non adherence, and also, depression, hopelessness, suicidality and\ feasibility of homicidal plan are risk factors for violence⁽⁸⁾.

Studies of violence in psychiatric hospitals indicate that violence in healthcare settings is significant and needs to be stopped⁽⁹⁾. It is vital to nurses that, hospitals adopt prelisted protective factors for violence⁽¹⁰⁾. These factors includes providing security, assessment and documenting the risk of violent behavior of patients, alarm systems⁽¹¹⁾, providing fair assignments, and restricting public access during providing care for patients; improving security systems and measures, restricting public access, and controlling visiting times⁽¹²⁾ security officers, camera systems, a closed-door policy; and adequate staff numbers are very helpful in dealing with violence^(6,12,13).

There are numerous consequences of violence on nurses, most of these consequences considered psychological consequences, that may include becoming

suspicious, feeling anger, (11, 14) embarrassment, depression, lack of nurses' safety all the time in the work place; fear or stress; becoming anxious; being super-alert or watchful and on guard; and post traumatic stress disorders symptoms (12, 15-17).

Psychiatric nurses are the first clinical staff to make contact with patients and their families, and keep close relationships with them. Accordingly, the nurses should have the knowledge and skills of emergency care, as well as evaluate the precise circumstances, and determine cases of physical, sexual, or violent behavior and injury and provide appropriate nursing, and legal services to the patients (18). Also, nurses should be particularly sensitive to the violent client's need to feel safe, secure, and in control of his or her body. They should take care to maintain the client's personal space, assess the client's anxiety level, and ask permission before touching him or her for any reason, and nurses should apply these cautions to all clients in the mental health setting (2,3).

Many nurses have not been trained to manage explosive situations. So, violence threatens the welfare of the psychiatric patients, staff and visitors alike (19). Accordingly, psychiatric nurses need to be skillful in violence assessment to assist in prevention and implementation of various strategies, identify indicators of violence at

patients' first point of contact with the health system, learn breakaway techniques to promote personal safety, self-defense techniques, and ways to avoid provoking patients. Other essential skills include assessment of the environment for hazards, (20-24) escape routes, effective communication strategies and skills, assertiveness techniques, conflict resolution, stress and anger management (12,25,26). Therefore, this study provides the baseline data, based on the psycho educational program for nurses can be developed to correctly identify violent situations and provide effective intervention.

Aim of the study: The aim of this study was to evaluate the effect of the psycho - educational program about violence on nurses' knowledge and practice.

Research hypothesis: Level of knowledge and practice of psychiatric nurses' increased after implementing the psycho-educational program about violence.

Subjects & Method

Research design:

A quasi- experimental research design was used in this study.

Research setting:

The study was conducted at Tanta Mental Health Hospital affiliated to the Ministry of Health and Population. It has a capacity of 65 beds divided into four wards two

wards for females and two wards for males. It also provides health care services to three governments, namely Gharbya, El-Menofeya, and Kafr- El-sheikh. Tanta city, Algharbya Governorate, Egypt. It works 7 days/ week, 24hrs/ day.

Subjects:

A sample of 50 psychiatric nurses (calculated using Epi- Info software) 20 of them work in female ward, and 30 nurse works in male ward, they were selected randomly for this study. These subjects fulfilling the following criteria:

- Willing to participate in the study.
- Provide direct care to psychiatric patients.
- Have previous experience in psychiatric field.
- Both sex.

Tools of the study:

The data of this study was collected using the following tools:

Tool I: Structured Nurse's Knowledge Questionnaire, it divided into two parts

Part one: Socio-demographic characteristics for nurses: Which includes, nurses' name, age, sex, level of education, years of experiences, marital status, residency.

Part two: Structured Nurse's Knowledge Questionnaire:

This questionnaire was developed by *Mohammed (2001)⁽²⁷⁾* to assess nurse's

knowledge regarding psychiatric patients' violence. The validity and reliability of this tool was done by the original researcher it was (0.97%). The questionnaire consisting of 23 questions, there are three responses for each question: incorrect (0), partially correct (1), and completely correct (2). It includes group of questions to assess the nurse's level of knowledge related to:

- Knowledge about nature of violence, it included: the meaning, high risk factors and knowledge about most common diseases associated with violence (4 items),
- Knowledge about behavior, and predictable signs of violence (3 items),
- Knowledge about patient's needs and methods of prevention of violence (4 items),
- Knowledge about treatment of violence: types, indications, and purposes (4 items),
- Identifying the role of nurse towards therapeutic environment, seclusion and restraint (7 items),
- Information related to basic items in recording violence (1 items).

Scoring system:

Evaluation of this questionnaire was as follows:

- Less than 50% = Poor knowledge about violence

- From 50 – 75% = Fair knowledge about violence
- More than 75% = Good knowledge about violence⁽²⁷⁾

Tool II: Observational Checklist for Nurses' Practice Related to Patient Violence.

It was developed by the researcher^(2, 28-32) to assess the nurse's practice in dealing with patients' violence. There are two responses for each question: done (1) not done (0). The questionnaire includes 30 items grouped into 5 subscales, namely:

- Acceptance of the patient as a human being (8 items),
- Use of therapeutic communication skills (9 items),
- Reduce environmental stimuli (2 items),
- Maintain safety environment (5 items),
- Help patient to learn self-control behavior (6 items).

Scoring system:

Every nurse can receive scores ranging from minimum (0), and maximum (30) grades classified as follows:

- Less than 65% = unsatisfactory practice in dealing with patients' violence.
- More than 65% =satisfactory practice in dealing with patients' violence.

Method

The following steps were followed in this study:

1. This study was approved by the research and ethical committee at faculty of nursing, Tanta University.
2. An official letter was obtained from faculty of nursing, Tanta University to the director of Tanta Mental Health Hospital to obtain his permission for data collection. The director was informed about the goal of the study, the date and time of data collection before permission.
3. **Ethical consideration.**
 - Informed consent to participate in the study was obtained from the nurses after explanation of the purpose of the study.
 - Assure the participants about their privacy and confidentiality of the obtained data, and it used only for the purpose of the study.
 - The participants were informed that they have the right to withdraw from the study at any time if they want.
4. **Preparation of tools**
 - Observational Checklist for Nurses' Practice Related to Patient Violence (Tool II) was developed by the researcher after reviewing the literature,^(2, 28-32) and was translated

into Arabic language by the researcher.

- Tool (II) was tested for content validity by a jury of five experts in the field of psychiatric nursing and was proved to be valid.
- Before embarking in the actual study, a pilot study was carried out on 10% of the subjects (5 nurses) after taking their oral approval and explanation the purpose of the study to ascertain the clarity and applicability of the study tools and to identify obstacles that might be faced during data collection. After collecting pilot study, it was found that each nurse require 25-30 minutes to fulfill study tools and no modification was done for all tools .It was applicable and clear to nurses in pilot study. Those subjects were selected randomly and they were excluded later from the study sample.
- Internal consistency of tool (II) was assessed using Cronbach's Alpha coefficient which yielded values of ($r = 0.801$).

5. **Actual study:** it was divided into the following phases:

i. Assessment Phase: -

- The researcher selected 50 nurses who meet inclusion criteria.
- The selected nurses undergo a pre-test using tool I (Structured Nurses'

Knowledge Questionnaire) and then they were asked to fill it as pre intervention assessment. This was done as a self report in an individual basis, and in the presence of the researcher. This was completed in around 25-30 minutes, and tool II (Observational Checklist for Nurses' Practice Related to Patient Violence) which applied by the researcher through indirect observation to each nurse during their contact with violent patients. The time of observation was at least 25 minutes in the morning shift because the number of nurses are more available in the morning shift than other shifts. This phase aimed to determine the study subject's needs as a base line of training program.

ii. Planning Phase: -

- The psycho-educational program was developed by the researcher based on data from the assessment phase and reviewing of the recent related literatures.^(2, 3, 32-35) The prepared program was translated into a simplified Arabic language by the researcher and revised by the supervisors to ascertain its content and appropriateness and applicability. Accordingly, the required modifications and corrections were carried out.

- The educational program aimed to improve nurses' knowledge and practice about violence of psychiatric patients. The program was achieved through theoretical and practical parts in which each one of them has set of specific objectives. The theoretical part of educational program aimed to provide studied nurses with theoretical knowledge about psychiatric patients' violence. The practical part of the program aimed to provide them with skills required for dealing with violence of psychiatric patients.

iii. Implementation Phase:-

- The training program was carried out in the training room at Tanta Mental Health Hospital on small group basis. This room was prepared specifically by the hospital for continuing teaching and training nurses and consisted of 12 chair arranged in a circle shape, portable laptop and data show.
 - The study subject (50 nurses) was divided into several subgroups (10 nurses for each). each subgroup received nine session (one session / day / three days / per week /for 3 weeks). All sessions was given at the morning shift. The time of each session take about two hours.
- The educational program was implemented on 9 sessions represented as follow:
 1. **Session 1:** Include introductory session, establishing relationship, obtain verbal consent, explain aim of the program and its' schedule.
 2. **Session2:** Involve teaching about definition of terms related to violence, high risk factors of violence.
 3. **Session 3:** Include teaching about the most common disease associated with violence, predictable signs of violence, patients' needs (physical, psychological).
 4. **Session 4:** Include discussing different ways of violence de escalation and prevention.
 5. **Session 5:** Include discussing psychiatric nurse's role toward patients' violence including process of assessment and intervention.
 6. **Session 6:** Include teaching treatment modalities that may be used for violent patients (psychopharmacological treatment).
 7. **Session 7:** Include teaching, training about behavior therapy regarding violence.

8. **Session 8:** Include discussing and training about the therapeutic communication skills, and the therapeutic environment for managing violence.
9. **Session 9:** Include training about physical treatment e.g. seclusion & restraint, termination of the program, and immediate posttest.

Regarding giving program content:

Generally

- In both theoretical and practical sessions, the researcher was the initiator, provider of knowledge between studied nurses and researcher, and encouraged exploration of their responses, issues or concepts. The researcher also acted as a group leader who operated as a facilitator, teacher, and trainer. Nurses' individual differences and level of understanding, their clinical experiences were all taken into consideration during teaching-training sessions. All over the sessions, nurses were always motivated to share in these sessions either externally (by rewarding them with giving them paper notes and pens, and offering tea breaks), and internally by positive comments and satisfying their needs for knowing by answering their questions, and expressing their emotions.

- At the end of each session, nurses were asked questions on what was presented at the session to assess their understanding. This was followed by summarization of the main points discussed in each session.
- At the end of the program for each subgroup, printed booklet of the educational program was given to all study subjects.

Specifically

- **The theoretical sessions** was given using lecture interwoven with discussion and sometimes demonstration method. Group discussion was used to enhance interest and promote active involvement of nurses. In addition to the examples, and illustrations which provided by the researcher for assuring understanding and the subjects also provided additional examples from their own personal and professional experiences. Lecture was given in clear, simple manner using attractive power point presentations which prepared by the researcher in a simplified and meaningful Arabic language for the study subjects and appropriate for allocated time.
- **In the practical sessions,** the researcher used mainly role play, demonstration and re demonstrations

as method of teaching also, used lecture, group discussion, visual aids and video. Role play was carried out between studied nurses themselves and studied nurses with researcher. Handout papers about simulated situations and scenario were distributed to all studied nurses at the beginning of each session. In each practical session, simulated nurse, patient situations presented by the researcher through data show and then discussed with the studied subjects.

- **Firstly**, the researcher allowed nurses to think critically and give wide range of their own responses to the situations and analyze each one, after that the most therapeutic responses were presented at the end of each situation's discussion in addition to giving rationale and analysis to each choice.
- In most of the sessions, nurses brought clinical situations which also discussed with them. Also, role playing for simulated scenario was used as a teaching method in showing therapeutic response to the clinical situations and such method help the nurses to know how they convey the appropriate response. Also, after each session, nurses were given a homework in which each nurse writes other situations with its therapeutic

response and this were discussed in the next session.

- **for example** in implementation of communication skills and teaching and learning skills like positive and negative reinforcement, behavior contract and application of seclusion and restraint after the researcher provide all knowledge about this skills by using attractive power points and after listening video or scenario to qualified nurses during dealing effectively with violent patients and use effective skills, the researcher played role of nurse and studied nurses played role of patients to make role play of effective and therapeutic response between nurse and patients while giving care to violent patients.

iv. ***Evaluation Phase:***

The evaluation of the implemented program was done by reapplying of tool I, tool II to psychiatric nurses and perform as same as pre- test. This was done as follows:

- Immediately after implementation of the program.
- Three months later after program implementation.
- The study was conducted in July 2017 and finished in January 2018.

Statistical analysis:

- The collected data was organized, tabulated, coded, and statistically analyzed using SPSS software statistical computer package version 16.0
- Statistical presentation and analysis of the present study was conducted using frequency, percentage, arithmetic mean, standard deviation, the linear correlation coefficient, chi-square, analysis of variance [ANOVA] tests, and Paired t-test.

Results:

Table 1: Presents the distribution of studied nurses according to their socio-demographic and work characteristic. The results revealed that, (54%) of studied nurses were < 30 years with the mean age (30.720 ± 6.2826) years, the majority of them were female (66%). Regarding their marital status, (70%) of nurses were married and (52%) of nurses come from urban areas. In relation to their educational level, (44%) of studied nurses had bachelor of nursing. Regarding experience year in nursing as a general, (40%) of them had experience >10 years, and (38%) of studied nurses had experience less than 5 years in psychiatric nursing with mean, (8.102 ± 4.66032) years.

Figure 1: shows studied nurses' total score of knowledge about violence before and after educational program. The results

showed that, 8% of studied nurses had a good level of knowledge regarding patients' violence before the educational program. While it increased to reach 82% to fall in the same category immediately after the educational program implementation compared with 78% of nurses fall in the same category three months after the educational program implementation.

Table 2: Represents distribution of the studied nurses in relation to their mean score of knowledge about violence before, immediate, after educational program. it can notice that studied nurses had mean score of knowledge about violence before program (40.4200 ± 8.15185) while this level became (61.9200 ± 9.48864) immediately after program then descends after three month to become (61.1400 ± 11.04353). The results revealed that, there were statistically significant differences between nurse's knowledge about violence before and immediately after the educational program while P-value = 0.000. but, there were no statistically significant differences between mean score immediately after and three months after the educational program implementation where ($t = .369$, P-value = 0.714).

Table 3: Presents the distribution of the studied nurses in relation to their mean

score of practice related to patients' violence before, immediate and three months after educational program. The results revealed that, in relation to "accepting the patient as human being " (section I) there were statistically significant differences between mean score before the program and immediately after the program as ($t= 2.432$ at P value= 0.019) and also, there were statistically significant differences between mean score before and three months after the program implementation at ($t= 4.563$, P value= 0.000). While there were no statistically significant differences between mean score immediately after the program and three months after the program implementation where($t= 1.387$, P value= 0.172).

Regarding, nurses' skills about "Use therapeutic communication skills" (section II), the results showed that, there were statistically significant differences between mean score before the program, immediately after and three months after the program implementation at **P value** <0.05 .

Concerning, "reduce environmental stimuli" (section III) the results illustrates that, studied nurses mean score before program was($2.5200 \pm .67733$), whereas this level became($3.8000 \pm .49487$) immediately after program then descend after three month to become ($3.2200 \pm$

$.84007$) and this differences were statistically significant as **P value**= 0.000

In relation to, maintain safety environment (section IV), the results revealed that, there were statistically significant differences between mean score before the program, immediately post and three months after the program implementation at P value = 0.000 .

Regarding, helping patient to learn self-control behavior (section V), the results revealed that, nurse's ability to learn patient self-control behavior was improved after program as there were statistically significant differences between mean score before the program, immediately post and three months after the program while P value <0.05 .

Finally, regarding the total mean score of studied nurses' practice related to patient violence, the results revealed that, there were statistically significant differences between mean score before the program and immediately after at ($t= 13.931$, P value= 0.000) as well as between mean score before and three months after the educational program implementation at ($t= 7.502$, P value= 0.000), also, there were statistically significant differences between mean score immediately after the program and three months after the program at ($t= 2.995$, P value= 0.004).

Table 4: illustrates the correlation between psychiatric nurses' level of knowledge and level of practice related to psychiatric patients' violence. The results revealed a statistically significant positive correlation between nurses' level of knowledge and level of practice related to psychiatric patients' violence immediately after and 3 months after implementation of the educational program where ($r= 0.861$, $P\text{-value}= 0.019$) ($r= 0.418$, $P\text{-value}= 0.003$) respectively. But, there were no statistically correlation between nurses' level of knowledge and level of practice related to psychiatric patients' violence before implementing the educational program as $r= 0.180$, $p\text{-value}= 0.211$.

Table (1): The Distribution of the Studied Nurses According to Their Socio-Demographic and Work Characteristics

Socio-demographic Characteristics	Studied nurses (n=50)	
	No.	%
Age in years:		
< 30	27	54.0
30 – 40	18	36.0
> 40	5	10.0
Mean \pm SD	30.720 \pm 6.2826	
Sex:		
Males	17	34.0
Females	33	66.0
Marital status:		
Single	11	22.0
Married	35	70.0
Divorced	4	8.0
Residence:		
Urban	26	52.0
Rural	24	48.0
Educational level:		
Nursing diploma	14	28.0
Bachelor of nursing	22	44.0
Technical nursing institute	14	28.0
Experience at general nursing in years		
< 5	13	26.0
5 – 10	17	34.0
> 10	20	40.0
Experience at psychiatric nursing in years		
< 5	19	38.0
5 – 10	16	32.0
> 10	15	30.0
Mean \pm SD	8.102 \pm 4.66032	

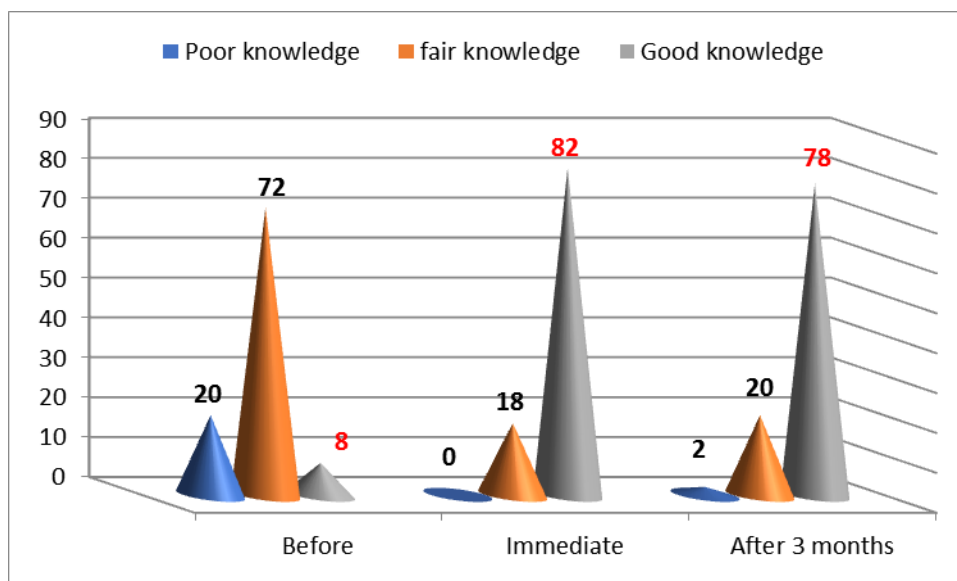


Figure (1) Comparison of Studied Nurses' Total Score of Knowledge About Violence Before, Immediate and Three Months After Implementation of The Educational Program.

Table (2) Distribution of the studied nurses in relation to their mean score of knowledge about violence before, immediate and three months after implementation of the educational program.

Educational program	Studied nurses' knowledge about violence (N = 50)		Paired T-test		
	Mean	± SD	Comparison	T	P-value
Before	40.4200	± 8.15185	Before – Immediate	13.308	.000*
Immediate	61.9200	± 9.48864	Before -After 3 months	10.719	.000*
After 3 months	61.1400	± 11.04353	Immediate-After 3 months	.369	.714

*Statistically significant

Table (3) Distribution of the studied nurses in relation to their mean score of practice related to patients' violence before, immediate and three months after educational program.

Items		Mean ± SD			Comparison	Paired T-test	
		Mean	±	SD		T	P-value
I. Accept the patient as human being	Before	13.6000	±	2.16654	Before -Immediate	2.432	.019*
	Immediate	14.8200	±	2.40484	Before -After 3 months	4.563	.000*
	After 3 months	15.3200	±	1.25259	Immediate-After 3 months	1.387	.172
II. Use therapeutic communication skills	Before	12.3600	±	2.13580	Before -Immediate	11.914	.000*
	Immediate	16.5200	±	1.46022	Before -After 3 months	6.206	.000*
	After 3 months	15.3400	±	2.46287	Immediate-After 3 months	2.852	.006*
III. Reduce environmental stimuli	Before	2.5200	±	.67733	Before-Immediate	11.186	.000*
	Immediate	3.8000	±	.49487	Before-After 3 months	4.249	.000*
	After 3 months	3.2200	±	.84007	Immediate-After 3 months	4.529	.000*
IV. Maintain safety environment	Before	7.6200	±	1.56349	Before-Immediate	8.648	.000*
	Immediate	9.7600	±	.82214	Before-After 3 months	3.846	.000*
	After 3 months	8.8400	±	1.47579	Immediate - After 3 months	3.968	.000*
V. Help patient to learn self-control behavior	Before	7.2000	±	.92582	Before-Immediate	21.929	.000*
	Immediate	10.5600	±	1.03332	Before-After 3 months	7.136	.000*
	After 3 months	9.4800	±	1.86526	Immediate-After3 months	3.356	.002*
Total performance	Before	43.3000	±	5.00714	Before-Immediate	13.931	.000*
	Immediate	55.4600	±	3.55832	Before-After 3 months	7.502	.000*
	After 3 months	52.2000	±	6.02037	Immediate-After 3 months	2.995	.004*

*Statistically significant

Table (4): Correlation Between Nurses' Knowledge and Level of Practice Related Patients' Violence

Nurses' level of knowledge about psychiatric patients' violence	Nurses' level of practice related to psychiatric patients' violence	
	R	P
Before intervention	0.180	0.211
Immediately after	0.861	0.019 *
After 3 months	0.418	0.003*

Discussion

Nurses serve as the frontline care providers in the country's health system particularly the mental health system. These nurses, face the huge challenge of providing nursing care to violent psychiatric patients. Patients' violence is a global issue, and major problem in both developed and developing countries which represented in the use of physical force, verbal abuse, threat or intimidation, which can result in harm, hurt or injury to self or to another person. Fear from patients' violence affects the performance of Health Care Providers (HCPs) and decreases their responsiveness to healthcare needs of the patients. ⁽³⁶⁻⁴⁰⁾

Thus, it is required for nurses to have the necessary knowledge and skills to manage mentally ill, violent patients without being hurt in the process. In order to do this, psychiatric nurses need to be educated and trained in understanding patient's violent behavior to increase the confidence of psychiatric nurses when confronted with violent patients and to be able to reduce the risk of injuries to both psychiatric nurses and patients.

The present study aimed to evaluate the effect of the psycho - educational program about violence on nurses' knowledge and practice.

Regarding knowledge of studied nurses about patients' violence, the present study

represented improvement in the total knowledge level immediately after and after three months from implementation of the educational program compared with before the implementation of the educational program. Such result can be relatively understood in the light of the immediate effect of educational program sessions which were based on nurses' needs besides its clarity, simplicity. Additionally, at the end of each session nurses were asked questions on what was presented at the session to assess their understanding and this was followed by summarization of the main points discussed in each session. The positive impact of the training program may also be explained by the fact that this program meets the recommendations formulated in the literature regarding staff training to prevent violence ^(41- 43). For instance, The program also includes recommendations made by *Abu Al Rub et al.(2010)* ⁽⁴⁴⁾, according to whom a training program should include the recognition of verbal and nonverbal signs of aggression, risk assessment and management, de-escalation tactics, and post-incident support. Also, in review of the literature on this subject, *Beech and Leather (2009)* ⁽⁴⁵⁾, reported that a good training program should contain theory (understanding aggression and violence in the workplace), prevention

(assessing danger and taking precautions), interaction (with aggressive people), and post-incident action (reporting, investigation, counseling, and other follow up).

In this line, the result of the present study come in agreement with the study done by *Arguvanli S. et.al.(2015)*⁽⁴⁶⁾, who revealed that, aggression management training program (AMTP) was found to increase knowledge level of nurses and led to positive changes at their aggression perceptions. Similarly, *Kollipara S. et.al. (2015)*⁽⁴⁷⁾, revealed that, the significant effect of training program was found on knowledge scores of the staff nurses regarding management of patient with violent behavior. In contrast to this finding, *Bekelepi N. (2015)*⁽⁴⁸⁾, founded that, the majority of participants had not received any kind of training in the management of violence and the training that is provided, is not effective to equip them with the knowledge and skills to manage in-patient violence.

In relation to, nurses' level of practice related to patients' violence, the result of the present study illustrate that, there were statistically significant differences between nurses' level of practice before and after implementation of the educational program. This may be due practical sessions which allow nurses to effectively

practice violence prevention and management over a period of time by given a simulated clinical situations. In addition to the homework that was given to nurses, as post simulation activity enhanced nurses' practice toward patients' violence. As such homework increases their motivation to improve their skills which leads to personal and professional growth. At the same time during practical sessions, the researcher used the role playing as a teaching method in showing effective response to the clinical situations and such method help the nurses to know how they convey the appropriate response in effective manner. This result is in accordance with study done by *Fathy Sh.(2012)*⁽⁴⁹⁾, who founded that there were highly statistically significant differences between nurses' level of skills pre/ post counseling.

In the same direction, *Baig, L. et.al. (2018)*⁽⁵⁰⁾, proved that, the intervention group had higher perceived confidence levels and coping skills to deal with aggression when compared with the control group. In contrast to this finding, *Tema et al. (2011)*⁽⁵¹⁾, reported that, nurses felt that they did not receive enough training in order to gain enough knowledge and be skilled in handling violent patients. However, *Letlape H. (2012)*⁽⁵²⁾ asserts that psychiatric nurses who attend in-service

training and are empowered with latest psychiatric knowledge and skills are more effective when dealing with violent psychiatric patients and are able to reduce the risk of injuries to both nurses and patients.

Finally, regarding correlation between psychiatric nurses' level of knowledge and level of skills to deal with psychiatric patients' violence. The results of the present study revealed that there is a statistically significant positive relationship between nurses' level of knowledge and level of skills to deal with psychiatric patients' violence. This result indicated that when nurse's knowledge about violence increased, in return, the psychiatric nurses' level of skills to deal with the violent patient increase. This results may be interpreted by the fact that "in order to deal effectively with violent patient nurses must have sufficient knowledge data base that help them to understand everything about patients' violent behavior". Furthermore, the educational program cover all necessary knowledge about violence of psychiatric patients that needed to intervene effectively with violent patient and also the researcher motivate the studied nurses to apply learned knowledge in clinical field during dealing with violent patient. This result is contrary to *Fathy Sh.(2012)*⁽⁴⁹⁾, who showed that, there were

no correlation between psychiatric nurses' level of knowledge and level of skills to deal with psychiatric patients' violence.

Conclusion and Recommendations

Conclusion:

Psychiatric inpatient aggression and violence is commonly reported emergency that requires immediate, prompt nursing interventions to reduce and prevent its negative consequences on both patients and staff in inpatient psychiatric settings. Based on the findings of the present study, it can be concluded that the implementation of the educational program sessions showed highly statistically significant improvements in nurses' level of knowledge about violence, and nurses' practices toward violent patient. Additionally, there is a statistically positive relationship between nurses' level of knowledge about violence and their level of practice toward violent patient. Accordingly, when nurses' level of knowledge about violence increased, their ability to deal with violent patient improved.

Recommendations:

Recommendations regarding education:

- Adding a qualitative research approach that enrich the nurses' theoretical and practical background concerning psychiatric patient violence management.

- Implementing further educational program for nurses concerning the pattern of communication and behavioral management for violent patients.
- Generalize the application of the educational programs for all psychiatric nurses to provide a better understanding about violence of psychiatric patient and how to deal effectively with them.
- Continuous In-service training programs need to be implemented for nurses to provide necessary knowledge and skills about violence of psychiatric patient in clinical practice area.
- Establish workshops and holding seminars to help the nurses refresh their knowledge about violent patient and discuss their daily problems facing them in workplace.

Recommendations regarding hospital administration:

- Provide ways of accessing information to nursing staff as internet unit, library books and digital library to be able to know new trends about assessment and management of violence of psychiatric patient.
- Developing in-service an educational department to help in preparing nurses prior to work to

upgrade their knowledge and skills regarding violence periodically.

References:

1. **Stevenson K., Susan M., Jack S., Mara L. and LeGris J.** Registered nurses' experiences of patient violence on acute care psychiatric inpatient units: an interpretive descriptive study, *BMC Nursing*, 2015; 14:35
2. **Stuart G.** Principle and Practice of Psychiatric Nursing. by mosby ELSEVIER, 10th ed. 2013; 572-593, 735-750.
3. **Vide beck S.** Psychiatric Mental Health Nursing. Philadelphia. Lippincott Williams and Wilkins Company. 5th ed. 2011; 180-203.
4. **Franz S.** Aggression and violence against health care workers in Germany – a cross sectional retrospective survey. *BMC Health Services Research*, 2010; 10(3): 1–8.
5. **Bimenyimana E.** The Lived Experience of Aggression and Violence in a Gauteng Psychiatric Institution. Unpublished MC Psychiatric Nursing Mini-dissertation. Johannesburg: University of Johannesburg. 2009; 4-13.
6. **Farrell G., Shafiei T. and Chan S.** Patient and Visitor Assault on Nurses and Midwives: An Exploratory Study

- of Employer Protective Factors. *International journal of Mental Health Nursing*, 2014; 23(1): 88-96.
7. **Balamurugan G. and Jose T.** Patients' Violence Towards Nurses: A Questionnaire Survey *International Journal of Nursing*, 2012 ; 1(1): 1-7.
 8. **Rueve M. and Welton R.** Violence and mental illness. *Psychiatry*, 2009; 5(5): 34-46.
 9. **Cornaggia CM., Beghi M., Pavone F. and Barale F.** Aggression in psychiatry wards: A 20 systematic review. *Psychiatry Research*, 2011; 189:10-20.
 10. **Wolf L., Delao A. and Perhats C.** Nothing Changes, Nobody Cares: Understanding the Experience of Emergency Nurses Physically or Verbally Assaulted While Providing Care. *Journal of Emergency Nursing*. 2014; 15(2): 1-10.
 11. **Truman A., Goldman M., Lehna C., Berger J. and Topp R.** Verbal Abuse Of Pediatric Nurses by Patients and Families. *Kentucky Nurse*.2013; 2(4): 24- 30.
 12. **Pai H., and Lee S.** Risk Factors for Workplace Violence in Clinical Registered Nurses in Taiwan. *Journal of Clinical Nursing*, 2011; 20(9-10): 1405-12.
 13. **Abou-El Wafa S., El-Gilany H. and Abd-El-Raouf E.** Workplace Violence Against Emergency Versus Nonemergency Nurses in Mansoura University Hospitals, Egypt. *Journal of Interpersonal Violence*, 2015; 30: 857- 72.
 14. **El-Gilany A., El-Wehady A. and Amr M.** Violence Against Primary Health Care Workers In Al-Hassa, Saudi Arabia. *Journal Of Interpersonal Violence*, 2010; 25(4): 716-34.
 15. **Zampieron A., Galeazzo M., Turra S. and Buja A.** Perceived Aggression Towards Nurses: Study in Two Italian Health Institutions. *Journal of Clinical Nursing*, 2010; 19(15-16): 2329-41.
 16. **Esmailpour M., Salsali M., and Ahmadi F.** Workplace Violence Against Iranian Nurses Working in Emergency Departments. *International Nursing Review*, 2011; 58(1): 130- 7.
 17. **Pinar R. and Ucmak F.** Verbal And Physical Violence Inemergency Departments: A Survey of Nurses in Istanbul, Turkey. *Journal of Clinical Nursing*, 2011; 20(3-4): 510- 7.
 18. **Drach-Zahavy A., Goldblatt H., Granot M., Hirschmann S. and Kostintski H.** Control patients' aggression in psychiatric settings. *Qual Health Res.* 2012;2(2):43–53.
 19. **Zun L.** Care of Psychiatric Patients: The Challenge to Emergency Physicians. *Western Journal of Emergency Medicine*. 2016; 17(2): 173–176.
 20. **Hegney .D, Tuckett A., Parker D. and Eley R.** Workplace Violence:

- Differences in Perceptions of Nursing Work Between Those Exposed and Those Not Exposed: A Cross sector Analysis. *International Journal of Nursing Practice*, 2010; 16(2): 188-202.
21. **Ahmad M.** Validation of The Cognitive Appraisal Health Scale With Jordanian Patients. *Nursing & Health Sciences*, 2010; 12 (1): 74-9.
 22. **Hahn S., Müller M., Needham I., Dassen T., Kok G. and Halfens R.** Factors Associated with Patient and Visitor Violence Experienced by Nurses in General Hospitals in Switzerland: A Cross-Sectional Survey. *Journal of Clinical Nursing*, 2010; 19(23-24): 3535-46.
 23. **McCullough K.** Violence Towards Remote Area Nurses: A Delphi Study to Develop A Risk Management Approach. 2011.
 24. **Hinchberger P.** Violence against Female Student Nurses in The Workplace. Paper Presented at The Nursing Forum. 2009.
 25. **Itzhaki M., Peles-Bortz A., Kostitsky H., Barnoy D., Filshinsky V. and Bluvstein I.** Exposure of mental health nurses to violence associated with job stress, life satisfaction, staff resilience, and post-traumatic growth. *Int J Ment Health Nurs*, 2015; 24(5): 403-12.
 26. **Harwood P.** How to deal with violent and aggressive patient in cute medical settings. *Journal of the Royal College of Physicians of Edinburgh*, 2017; 47(2): 176–82.
 27. **Mohamed A.** The Effect of Violence Management Program on Psychiatric Nurses' Knowledge and Practice. M.D. Thesis. Faculty Of Nursing, Ain Shams University. 2001.
 28. **Chambers M.** Psychiatric and Mental Health Nursing The craft of caring, Routledge, 3rd ed. 2015; chapter 25.
 29. **Parker P.** Psychiatric and Mental Health Nursing The craft of caring, by Edward Arnold. 2nd ed. 2009; 231-236
 30. **Hermansteyne K., and Mangurian C.** Behavioral strategies to mitigate violent behavior among inpatients: a literature review. *Psychiatr Serv*. 2015; 66(5): 557-8.
 31. **Pipa M. and Jaradat M.** Assertive Communication Skills. *Annales Universitatis Apulensis Series Oeconomica*, 2010; 12 (2):1-8.
 32. **Morrison M.** foundation of mental health care, Printed in Canada. ELSEVIER. 6th ed. 2017; pp 286- 313.
 33. **Hu C., Xu C. and Zhang H.** Research progress on workplace violence in psychiatric nurses. *J Qilu Nur*, 2015; 21(1):52–53 (In Chinese).

34. **Price O. and Baker J.** Key components of de-escalation techniques: A thematic synthesis. *International Journal of Mental Health Nursing*, 2012; 21: 310–319.
35. **Heckemann B., Zeller A., Hahn S., Dassen T., Schols J. and Halfens R.** The effect of aggression management training programmes for nursing staff and students working in an acute hospital setting. A narrative review of current literature. *Nurse Educ Today*. 2015; 35(1): 212-219.
36. **Zafar W., Siddiqui E., Ejaz K., Shehzad M., Khan U. and Jamali S.** Health care personnel and workplace violence in the emergency departments of a volatile metropolis: results from Karachi, Pakistan. *J Emerg Med*. 2013;45(5):761-72.
37. **Kuehn B.** Violence in health care settings on rise. *Journal of the American Medical Association*, 2010; 304:511–512.
38. **Flannery R., LeVitre V., Rego S. and Walker A.** Characteristics of staff victims of psychiatric patient assaults: 20-year analysis of the Assaulted Staff Action Program. *Psychiatr Q*. 2011;82(3):11-21.
39. **Al-Omari H.** Physical and verbal workplace violence against nurses in Jordan. *Int Nurs Rev*. 2015; 62(1):111-118.
40. **Kitaneh M., and Hamdan M.** Workplace violence against physicians and nurses in Palestinian public hospitals: a cross-sectional study. *BMC Health Serv Res*. 2012;12(1):469.
41. **Paterson B., McIntosh I., Wilkinson D., McComish S. and Smith I.** Corrupted cultures in mental health inpatient settings. Is restraint reduction the answer? *Journal of Psychiatric and Mental Health Nursing*, 2013; 20(3): 228–235.
42. **Sadock B., Sadock V. and Ruiz P.** *Comprehensive Textbook Of Psychiatry*. Wolters Kluwer company, 10th ed. 2017; 2430- 2470.
43. **Price O., Baker J., Bee P. and Lovell K.** Learning and performance outcomes of mental health staff training in de-escalation techniques for the management of violence and aggression. *Br. J. Psychiatry*, 2015; 206(4): 447–455.
44. **AbuAlRub R., Khalifa M. and Habbib M.** Workplace violence among iraqi hospital nurses. *J. Nurs. Scholarsh*. 2010; 39(3): 281–288.
45. **Beech B. and Leather P.** Workplace violence in the health care sector: A review of staff training and integration

- of training evaluation models. *Aggress. Violent Behav.* 2009; 11(2): 27–43.
46. **Arguvanli S., Karataş N., Başer M., And Zararsiz G.** Effect of aggression management training program on knowledge and attitudes of nurses working at psychiatric clinics. *Anatolian Journal of Psychiatry.* 2015; 16(5):323-328.
47. **Kollipara S. and Baruah A.** Effectiveness of planned training program on knowledge regarding management of patient with violent behavior among staff nurses of selected Hospitals of Sonitpur District, Assam. *International Journal of Advanced Research.* 2015; 7(3): 985-992.
48. **Bekelepi N.** Knowledge and skills of professional nurses in managing aggressive patients in a psychiatric hospital in the western cape. Master degree in the School of Nursing, University of the Western Cape, 2015.
49. **Fathy Sh.** The Effect of Counseling Intervention Sessions for the Mental Health Nurses on their Reactions Toward Patients' Violent Behaviors. *Journal of American Science,* 2012;8(8): 953- 960.
50. **Baig L., Tanzil S., Shaikh S., Hashmi I., Khan M., Polkowski M.** Effectiveness of training on de-escalation of violence and management of aggressive behavior faced by health care providers in public sector hospitals of Karachi. *Pakistan Journal of Medical Sciences.* 2018;34(2):294-299.
51. **Tema T., Poggenpoel M. and Myburgh C.** Experience of psychiatric nurses exposed to hostility from patients in forensic ward. *Journal of Nursing Management,* 2011; 19(4): 915- 924.
52. **Letlape H.** The exploration of in-service training needs of psychiatric nurses. Unpublished Master thesis. North-West University: South Africa, 2012.

The Effect of Internal Disaster Management Intervention Program on Nursing Staff Knowledge and Skills

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Abstract:

Background: Disaster is unforeseeable event that destroys lives and affects people, ruins possessions and disturbs environment. Nursing staff play a vital role in dealing with the victims of such events, so, it is essential for nursing staff to be prepared in facing the consequences of disasters. **Aim:** Identify the effect of internal disaster management intervention program on nursing staff knowledge and skills. **Design:** A quasi- experimental design was used. **Setting:** The study was conducted at Tanta Emergency Hospital, Tanta University. **Subject:** sample of 35% of total nursing staff (n = 175) were included. **Tool:** nursing staff knowledge regarding internal disaster management was used included part I: Characteristics data of nursing staff, part II: Nursing staff knowledge regarding internal disaster management, and part III: Nursing staff perceived skills about procedures dealing with internal disaster management. **Results:** Preprogram, majority of nursing staff had poor knowledge, while post program, more than two-thirds of nursing staff had good level of knowledge with statistical significant improvement on nursing staff levels about internal disaster management pre than post program. As well as, preprogram, more than half of nursing staff had low level of perceived skills, while, post program about two-thirds of nursing staff had high level of perceived skills with statistical significant improvement in nursing staff skills dealing with internal disaster management pre than post program. **Conclusion:** Nursing staff knowledge and skills was improved after implementation of disaster program. **Recommendation:** Nursing staff need continuous courses and training for disaster management and incorporate emergency care and disaster management skills into undergraduate curricula.

Keywords: Internal disaster management, Intervention program, knowledge and skills, Nursing staff.

Introduction

A disaster is a situation or event which overwhelms local capacity necessitating a request to a national or international level for external assistance. Hospitals and other health care facilities classify disasters as either internal or external.⁽¹⁾ Internal disasters cause disruption of normal hospital functions due to injuries or deaths of hospital personnel or damage. External disasters are those that do not affect the hospital infrastructure but do tax hospital resources due to numbers of patients or types of injuries. An effective response to disaster begins with effective planning and programming, but must include many other steps. Each of these steps depends on the strength of other links in the disaster management chain.

An important goal of disaster management is building a culture of awareness that preparation is not only possible, but also, will greatly reduce the consequences from disasters in terms of human and economic loss.⁽²⁾ Internal disaster management is based upon four distinct phases: mitigation, preparedness, response and recovery.⁽³⁾ First: Mitigation phase is the action taken to reduce both human suffering and property loss resulting from extreme natural phenomena.⁽⁴⁾ This phase is focused on taking precautionary measures before an actual disaster or

emergency takes place to reduce its scope. Mitigation includes the process of danger identification, assessment of life and property threat in order to limit potential causalities, and adverse impact of natural and technological hazards.⁽⁵⁾

Second: Preparedness phase is targeted on preparing activities to be taken when a disaster occurs i.e. planning preparedness measures proper maintenance and training of emergency services, developing and exercise of emergency population warning methods combined with emergency shelters and evacuation plans, stocking piling of supplies and equipment.⁽⁶⁾ Third: Response phase includes activities during and immediately following the disastrous event. It is a period of triage, stabilization, emergency care and evacuation.⁽⁷⁾ Fourth: recovery phase which aims to ensure hospital activities and systems return to normal functioning. Disaster management phases are complimentary phases to prevent, prepare, respond and recover from effects of disaster.⁽⁸⁾

It is evidence that there is a lack of written emergency hospital plans, as a result many nursing staff are not aware of their responsibilities and roles during disasters and therefore confusion is bound to arise. Thus, hospital preparedness plan should be a part of every hospitals fundamental operational plan as it can prepare the

hospital and its nursing staff for small and large scale accidents and humanitarian disasters.⁽⁹⁾

Significance of the study

Nursing has always been a profession that required currency of knowledge and clinical skills through continuing education input, because of the rapidly changing knowledge base and innovative treatment regimens. An intervention program was developed, implemented and evaluated to inform the education of nursing staff about disaster preparedness and response and to gauge their willingness to volunteer in a disaster before and after the intervention program. The intervention program utilized a pre- and post-survey method to evaluate the effect of the education on nursing staff. These changes are occurring at an increasingly rapid rate, particularly in disaster care.⁽¹⁰⁾ Nursing staff need to be educated in potential disasters.⁽¹¹⁾ It is essential to ensure that all nursing staff understand the implications of disasters.⁽¹²⁾ The warning system may be the only difference between stocking up on needed supplies and protection and facing the disaster wholly unprepared. Nursing staff warning and alert system has immense value to a disaster management system. It provides nursing staff with awareness of an impending hazard event before it occurs and allows them to prepare themselves

fully or even avoid the disaster altogether.⁽¹³⁾

Aim of the study

The aim of the study was to:-

Identify the effect of internal disaster management intervention program on nursing staff knowledge and skills.

Research hypothesis:

Nursing staff attended internal disaster management intervention program expected to had knowledge and skills regarding internal disaster management.

Subjects and Method

Subjects

Research design:

A quasi- experimental study design was used in the present study.

Setting:

The study was conducted at Tanta Emergency Hospital, Tanta University. Tanta Emergency Hospital capacity 465 beds.

Methods

1. **Official permission** to conduct the study was obtained from responsible authorities.
2. **Ethical consideration:** Nursing staff informed consent was obtained after explaining of the nature and purpose of the study. Confidentiality of the information was maintained and the right to withdrawal is reserved.

3. After reviewing of the related literature and different studies in this field, the study tool was developed and translated into Arabic.
4. Tool was reviewed with the supervisors and then was presented to a jury of 5 Experts to check content validity of its items. The experts were three: one Professor and two Assistant Professor of Nursing Services Administration Faculty of Nursing, Tanta University. One Professor of Nursing Services Administration and One Assistant Professor of Nursing Services Administration in Menoufia University.
5. The experts responses were represented in four points rating scale from ranging from (4-1);4=strongly relevant 3=relevant 2=not relevant 1=strongly not relevant. Necessary modifications were done including; clarification and simplifying work related words. The content validity value for part II was 93.21% and for part III was 94.23% **(appendix III)**
6. **A pilot study** was conducted on 10% of nursing staff (n= 18). They were excluded from the subject. It was done to test tool's clarity and applicability. Then needed correction was done. The estimated time needed to complete the questionnaire items was approximately 20-30 minutes.
7. **Reliability of tools** was tested using Cronbach's Alpha which was its value 0.936 & 0.854.

8. **Data collection:** Program sessions for nursing staff on usable knowledge for part II and perceived skills for part III of internal disaster management was implemented.

The intervention program:

- The intervention program about internal disaster management was designed by the researcher after reviewing recent relevant literature and based on assessed need
- This program was conducted in four phases: Assessment phase, development of the educational intervention phase, implementation of the educational intervention phase, and finally evaluation phase.

Aim of the educational intervention was to evaluate the effect of internal disaster management intervention program on knowledge and skills of nursing staff.

Objectives of the educational intervention:

At the end of the sessions nursing staff have to be able understand knowledge and demonstrate skills regarding internal disaster management as follow:

- Disaster concepts and plan.
- Internal disaster and internal disaster management.
- Phases of disaster management
- Dealing with procedures of fire, explosion, gas leakage. Infection and food poisoning

Results

Table (1): Percentage distribution of nursing staff according to personal characteristics (n=175)

Variables personal characteristics items	The studied nursing staff (n=175)	
	N	%
Age in years:		
20-30	63	36.0
30-40	76	43.4
>40	36	20.6
Gender:		
Male	8	4.6
Female	167	95.4
Qualification:		
Diploma degree in nursing	80	45.7
Technical Institute of nursing	61	34.9
Bachelor degree in nursing	34	19.4
Experience in years:		
0-5	41	23.4
5-10	25	14.3
10-15	26	14.9
>15	83	47.4
Job title:		
-Staff nurse	141	80.6
-Head nurse	29	16.6
- Nurse supervisor	5	2.9
Attending training courses:		
Yes	24	13.7
No	151	86.3
If yes, name of courses:		
- Fire courses.	10	41.7
- Courses of emergency, infection control and CPR.	3	12.5
-Courses of CPR and infection control.	9	37.5
-Courses of infection control ,fire courses and poisons types.	2	8.3

CPR=Cardiopulmonary resuscitation

Table (1) shows percentage distribution of nursing staff characteristics. More than forty (43,3%) of nursing staff were from age 30-40 years old, while, more than one-fifth (20.6%) of them aged 40 or more years old. Majority (95.4%) of nursing staff were female. More than forty (45.7%) of nursing staff had diploma degree in nursing, and more than one-third (34.9%) of them had technical institute of nursing while, minority (19.4%) of nursing staff had bachelor degree in nursing.

As regard years of experience, more than forty (47.4%) of nursing staff had more than 15 years experiences. Majority (80.6%) of nursing staff were staff nurses. Majority (86.3%) of nursing staff were not attend training course, from those attended courses, more than forty (41.7%) of nursing staff attended training courses about fire and more than one -third (37.5%) of them had training courses in CPR and infection control, while, minority (8.3%) of them were attend infection control, fire and poisons training courses.

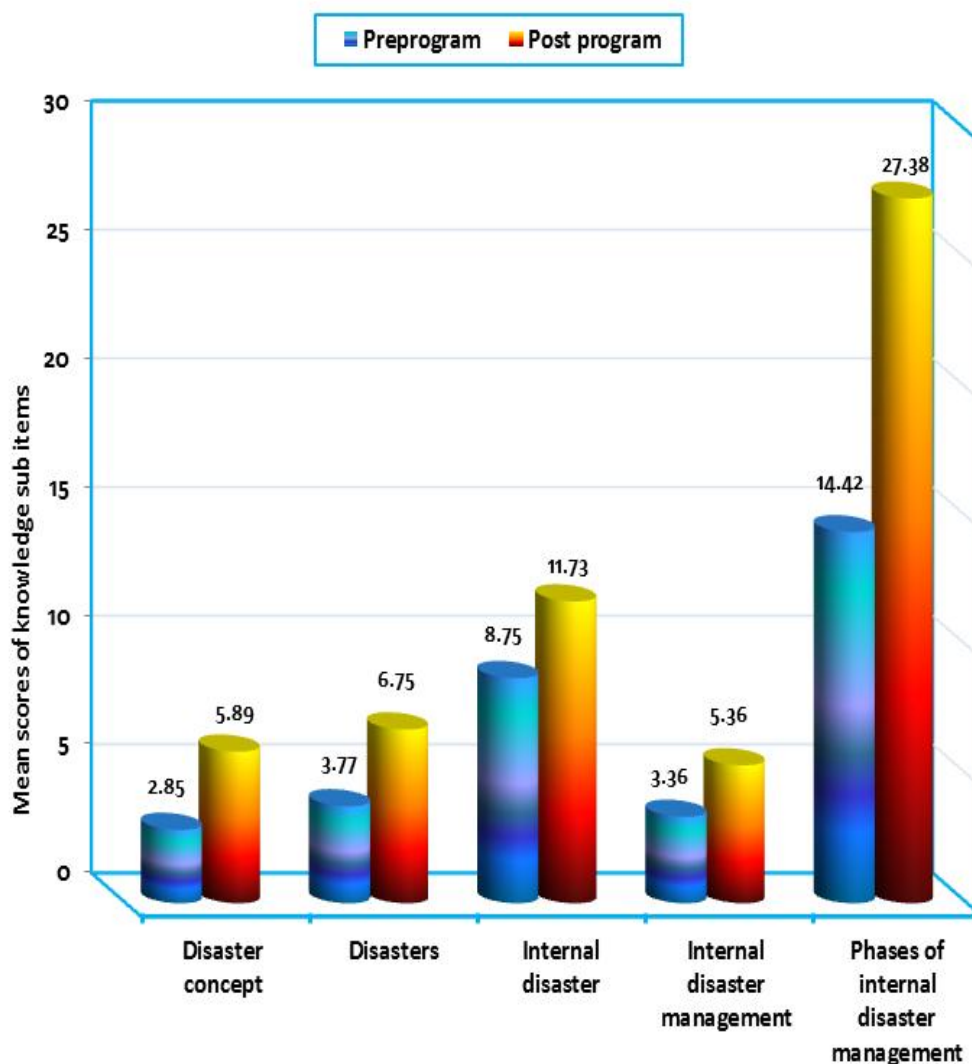


Figure (1): Mean scores of nursing staff knowledge about internal disaster management pre and post program intervention (n=175)

Figure (1) show mean scores and mean percent of nursing staff knowledge about internal disasters management pre and post program intervention. There were statistical significant differences on nursing staff knowledge mean scores pre than post program ($p=0.0001$) as evidence in the table. The total nursing staff mean score knowledge preprogram was 33.15 ± 8.37 with mean percent 46.04% which increased to 57.11 ± 13.1 post program with mean percent 79.3%. Preprogram, the highest mean percent (62.5%) was for nursing staff knowledge in internal disaster types, coding system and initial identification with mean score 8.75 ± 2.30 followed by internal disaster management (definition-importance-process-team) (48%) with mean score 3.36 ± 1.50 . Post program the highest (84.4%) mean percent was for nursing staff knowledge on disaster types, causal factors, plan, dimensions with mean score 6.75 ± 1.55 followed by concepts of disaster (84.1%) with mean score 5.89 ± 1.51

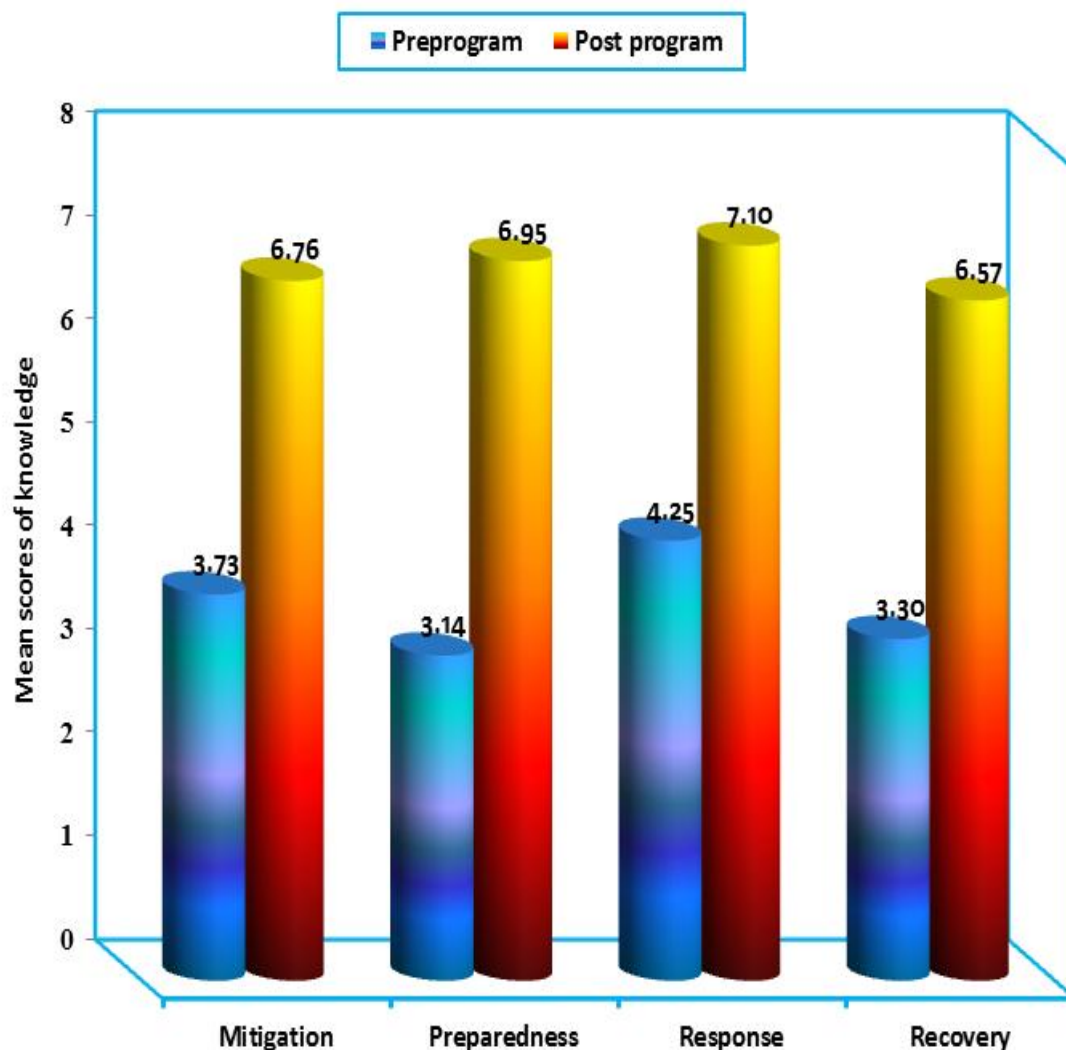


Figure (2): Mean scores of nursing staff knowledge about phases of internal disaster management pre and post intervention program (n=175)

Figure (2) show mean scores and mean percent of nursing staff knowledge about internal disasters management pre and post program intervention. Response phase was scored the highest (47.2%) with mean score 5.00 ± 1.68 but the lowest (34.9%) nursing staff knowledge about phases was for preparedness while, post program response phase was scored the highest (78.9%) with mean percent 9.30 ± 2.59 .

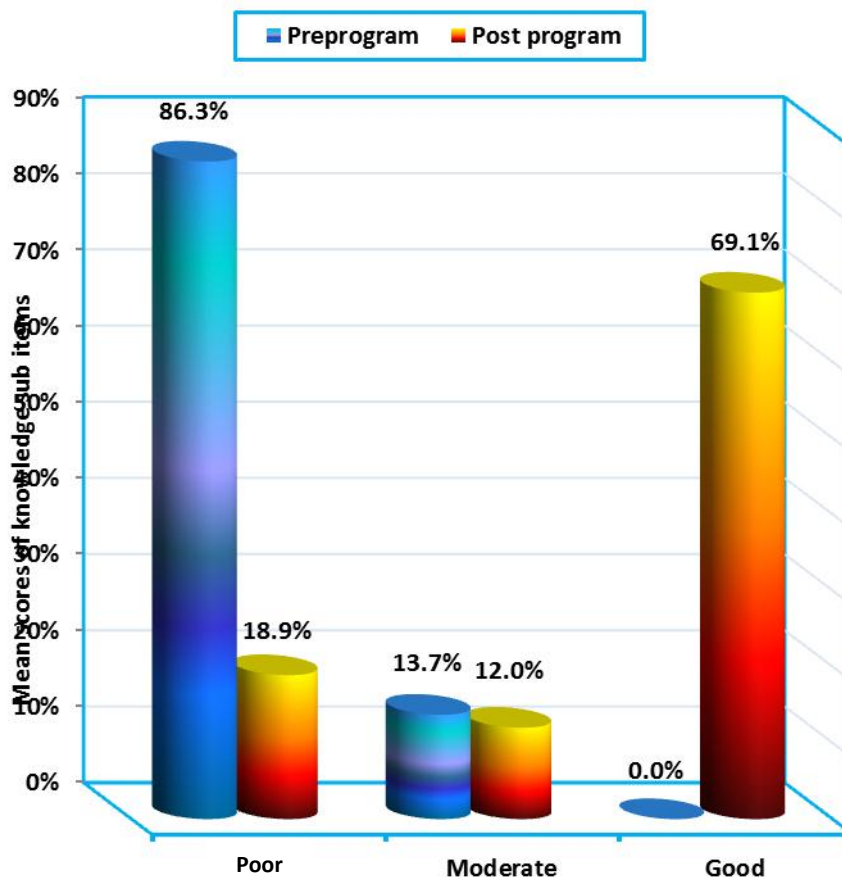


Figure (3): Distribution of nursing staff total levels of total knowledge about internal disaster management pre and post intervention program (n=175)

Figure (3) shows distribution of nursing staff levels, change and improvement of total knowledge about internal disaster management pre and post program intervention. Preprogram, majority (86.3%) of nursing staff had poor knowledge, while post program, more than two-thirds (69.1%) of nursing staff had good level of knowledge with statistical significant improvement (84.14%) on nursing staff levels about internal disaster management pre than post program($p=0.0001$).

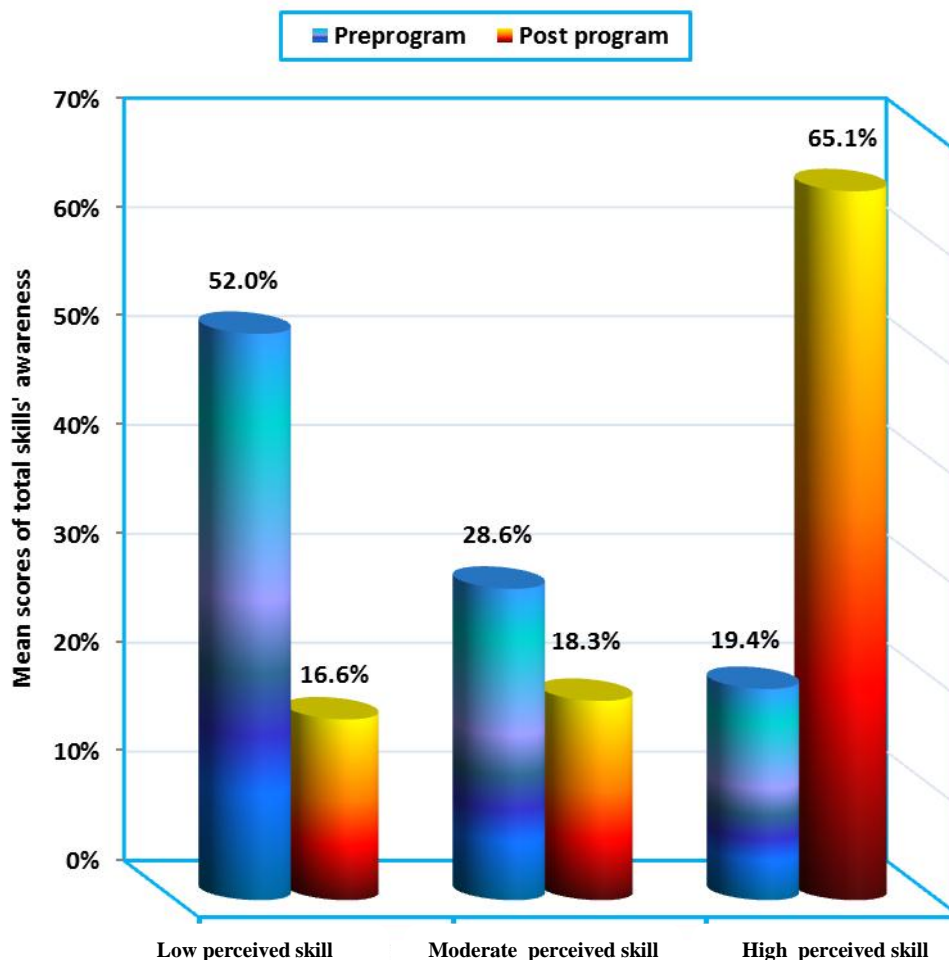


Figure (4): Distribution of nursing staff levels of total perceived skills about procedures dealing with internal disaster management pre and post program intervention (n=175).

Figure (4) illustrates distribution of nursing staff levels, change and improvement percent of total perceived skills about internal disaster management pre and post program intervention. There were statistically significant differences on nursing staff levels and mean scores of perceived skills about procedures for dealing with internal disaster management pre than post program ($p < 0.05$) as evidence in the table.

Preprogram, more than half (52%) of nursing staff had low level of perceived skills, while post program about two-thirds (65.1%) of nursing staff had high level of perceived skills about dealing with internal disaster management with statistically significant improvement (35.36%) in nursing staff perceived skills dealing with internal disaster management pre than post program ($p < 0.05$).

Table (2): Relationship and correlation between nursing staff levels of total knowledge and total perceived skills regarding internal disaster management pre and post program intervention(n=175)

Total nursing staff perceived skills	Levels of total knowledge of nursing staff preprogram				χ^2	P		
	Poor (n=151)		Moderate (n=24)					
	N	%	N	%				
Levels of awareness about skills: Low perceived skill Moderate perceived skill High perceived skill	81	53.6	10	41.7	14.598	0.001*		
R P	-0.123 0.106							
Total nursing staff skills	Levels of total knowledge of nursing staff post program						χ^2	P
	Poor (n=33)		Moderate (n=21)		Good (n=121)			
	N	%	N	%	N	%		
Levels of perceived skills: Low perceived skill Moderate perceived skill High perceived skill	5	15.2	6	28.6	18	14.9	2.692	0.611
R P	0.021 0.787							

*Significant (P<0.05)

Table (2) shows relationship and correlation between nursing staff levels of total knowledge and total perceived skills regarding internal disaster management pre and post program intervention. Preprogram, there was statistically significant difference between level of nursing staff total knowledge and total perceived skills (P= 0.0001). More than half (53.6%) of nursing staff who had poor level of total knowledge also had low level of perceived skills regarding internal disaster management, while more than half (58.3%) of nursing staff who had moderate level of total knowledge had moderate level of perceived skills. Post program, more than two thirds (66.9%) of nursing staff had good level of knowledge and high level of perceived skills, followed by 63.6% of nursing staff who had poor knowledge with high perceived skills, while, more than half (57.1%) of nursing staff who had moderate level of total knowledge had high perceived skills on internal disaster management.

Discussion

Internal disaster management is the range of activities designed to maintain the control over disaster and emergency situations and to provide a framework for helping persons at risk, avoid or recover from the impact of the disaster.⁽¹⁴⁾ Disaster management is an integrated process of planning, organizing, coordinating and implementing measures that are needed for effectively dealing with its impact on people.⁽¹⁵⁾

Nursing staff knowledge about internal disaster management

Preprogram, analysis of the present results revealed that the majority of nursing staff had poor total knowledge about internal disaster management. In fact, majority of nursing staff had wrong answers to concepts of disaster, disaster types, causal factors, plan and dimensions in preprogram (table 2,3&4). These results reflect the absence of training courses regarding disaster management as evidenced in (table 1), majority of nursing staff not attended training courses. **Berhanu (2016)**⁽¹⁶⁾ found that a considerable number of professionals had limited opportunities for training.

In the same line with the present result **Jeanne(2017)**⁽¹⁷⁾ who revealed that nurses do not possess the necessary knowledge disaster and hospital disaster preparedness.

Diab and Mabrouk (2015)⁽¹⁸⁾ revealed that the nurses had poor knowledge regarding disaster and hospital disaster preparedness at pretest. Also, **Abo-gad (2014)**⁽¹⁹⁾ found that majority of nurses had poor knowledge about internal disaster management at preprogram. Similarly, **Chimenya and Ncube (2011)**⁽²⁰⁾ found that majority of had poor knowledge about disaster management. Meanwhile, **Sandmann (2009)**⁽²¹⁾ revealed that majority of nurses had poor knowledge regarding disaster preparedness.

Preprogram, nurses' knowledge on concepts of disaster, disaster types, causal factors, plan and dimensions. Present study results revealed that nurses had low mean percent because majority of nurses gave wrong answers to concepts of disaster, disaster types, causal factors, plan and dimensions (table 2,3&4). This result is confirmed with **Abo-gad (2014)**⁽¹⁹⁾ **Abd Elazeem et al.,(2011)**⁽²²⁾ who revealed that there was a lack of knowledge about the disaster plan, and its related items is quite alarming.

Post-program, the current study result revealed that the majority of nursing staff had good knowledge about concepts of disaster, disaster types, causal factors, plan and dimensions of internal disaster management (table 2,3 &4) with high mean percent. This result reflects the effect

of the intervention program about internal disaster management since, the majority of nursing staff gave correct answers to its items in the post program. Education can help nurses adopt preparatory measures by improving their knowledge of the relationship between preparedness and disaster risk reduction. Moreover, educated nurses have better understanding of what preparedness measures to take.

The current study result is confirmed by **Hoffmann and Muttarak (2017)**⁽²³⁾ who mentioned that education can enhance the acquisition of knowledge about disaster, values and priorities, as well as, the capacity to plan for the future and to allocate resources efficiently. Also, **Diab and Mabrouk (2015)**⁽¹⁸⁾ found that there was statistical significant improvement in knowledge of nurses regarding disaster after application of the guidance booklet post-test compared to pre-test. As well as, **Abo-Gad (2014)**⁽¹⁹⁾ who revealed that most nurses had good total knowledge on internal disaster management post-program.

Nursing staff perceived skills about procedures dealing with internal disaster management pre and post program

Preprogram, present study result revealed that more than half of nursing staff perceived skills about all procedures

dealing with internal disaster management were low (table 11). Possible explanation of this result may be that because nursing staff perceived themselves as not well-prepared and had low level of knowledge regarding disaster management. So that, the result may enable the organizations and their staff to review their existing plans and make improvements where required.

In the same line with the present results was **Shabbir and Afzal (2017)**⁽²⁴⁾ **Jeanne (2017)**⁽¹⁷⁾ who found that practices of the majority of participants in study were very poor regarding the emergency and disasters situations and preparedness. Also, **Diab and Mabrouk (2015)**⁽¹⁸⁾ revealed that the studied nurse had unsatisfactory awareness regarding disaster and hospital disaster preparedness at pretest. As well as, **Alice and Olivia (2014)**⁽²⁵⁾ found that there was a lack on awareness of disaster preparedness and responses among Hong Kong nurses. Moreover, **Burnrock (2014)**⁽²⁶⁾ results indicated that nursing students had low response to engage in preparedness, and not to be willing to respond pre course. **Sandmann**⁽²¹⁾ (2009) found that nurses had lack of awareness related to disaster preparedness and management.

Present study results revealed that about two-thirds of nursing staff had high level of perceived skills about total procedures

dealing with internal disaster management post-program (Table 11). It is an important issue to determine nurses' disaster preparedness level as well as factual information about the occurrence of disasters in creating disaster awareness. This results reflects that the intervention program to nursing staff helped them know how to deal with internal disaster and subsequently increase their ability to face any procedure.

Along with the present results, **Pinar (2017)⁽²⁷⁾** who showed that creating disaster awareness and encouraging positive behaviors in every part of the organization is one of the ways of being least affected by the threats that may occur and minimizing the loss of life and property. Also, **Abo-Gad (2014)⁽¹⁹⁾** who revealed that nurses awareness improved post program. As well as, **Moghaddan et al., (2014)⁽²⁸⁾** showed that continuous education could affect nursing practices effectively and that disaster aid education can decrease mortality rates, improve health indices, and decrease disaster expenses.

Conclusion

The acquired results of the present study and mean score for each subset revealed that there were statistically significant improvement on nursing staff knowledge and perceived skills about internal disaster

management post than pre-program. Preprogram, majority of nursing staff had poor knowledge regarding internal disaster management, while post program, more than two-thirds of nursing staff had good level of knowledge with statistical significant improvement on nursing staff levels about internal disaster management pre than post program. As well as, preprogram, more than half of nursing staff had low level of perceived skills about internal disaster management, while post program about two-thirds of nursing staff had high level of perceived skills with statistical significant improvement in nursing staff skills dealing with internal disaster management pre than post program.

Recommendations

On the basis of the findings that have been established, the following recommendations are made:

For nursing management:

- Developing policies for disaster management and pay more attention to the problem of internal disaster and prepared for its management
- Establishing continuous education and training for nursing staff in disaster care to respond in effective and rehearsed manner.

For faculty:

- Incorporate mass casualty care and disaster management skills into under graduate curricula, as student nurses have served as first responders to disasters even at the risk of personal sacrifice.

For nurses:

- Every member of nursing staff needs to know their roles, responsibilities and their functions through participating in hospital's drill.
- Ensured developing a plan is the key for ensuring that efforts in preparedness, response, and relief of disaster. So, involve staff nurses in developing plans and previously existing plans updated in light of experience gained in the disaster.

References

1. **International Federation of Red Cross (IFRC)**. Disaster and crisis management. 2011. <https://www.ifrc.org/PageFiles/91314/1209600-DM-Position-Paper-EN.pdf>.
2. **Veenema T.G.** Disaster Nursing and Emergency Preparedness for Chemical, Biological and Radiological Terrorism and other Hazards. 3 edition Foreword. Springer publishing company, New York. 2012, 2013 & 2014; chapter 1. p:4,9.
3. **Seroney G.** The role of a nurse in disaster management at Kapsabet to district hospital. Maseno University. Baraton Interdisciplinary Research Journal. 2015;5(special issue), pp 91-101.
4. **Stanhope, M. & Lancaster, J.** Public health nursing: Population-centered health care in the community. (7th ed). Philadelphia, USA: Mosby Elsevier. 2008.
5. **Civaner M.M, Vatansever K and Pala K.** Ethical problems in an era where disasters have become a part of daily life: A qualitative study of healthcare workers in Turkey. A Peer-Reviewed, Open Access Journal. 2017; 12(3): e0174162.
6. **Coppola.D.** Introduction to international disaster management. 3rd edition. El Sevier company. London. 2015; chapter 5&1 preparedness, p.292&34.
7. **Sundar L & Sezthiyan T.** Disaster management. Sarup & Sons company. Newdelhi. 2007. chapter 1. p5.
8. Stages of disaster management. 2016. <http://www.fp7-sector.eu/?p=578>
9. **Dasgupta R.** Disaster management and rehabilitation. Krishan mittal company. Newdelhi. India. 2007. www.mittalbooks.com.
10. **Show R.** Disaster risk reduction methods, approaches and practices. Kyoto University. Springer company. Japan. 2015.
11. **Warkentin M.** Trends & research in the decision sciences. Best paper from the 2014 Annual Conference. Mississippi State University. USA. 2015.

12. **Kathmandu.** Amass casualty management trainer's manual. World Health Organization. Nepal.2006. p.5,7.
13. **Aitken L, Marshall A & Chabyer W.** Critical Care Nursing. 3rd edition. Elsevier Australia, Australian. 2015; Chapter 2,p.31.
14. **Dasgupta R.** Disaster management and rehabilitation. Krishan mittal company. Newdelhi.India.2007.www.mittalbooks.com
15. **Sundar L & Sezthiyan T.** Disaster management. Sarup & Sons company. Newdelhi. 2007. chapter1.p5.
16. **Berhanu N.** Knowledge, experiences and training needs of health professionals about disaster preparedness and response in South West Ethiopia. Ethiopian Journal of Health. 2016;26(5);415-426.
17. **Jeanne T.** A guide to emergency preparedness and disaster. Nursing Education Resources, 2017;4,12-25.
18. **Diab G & Mabrouk S.** The effect of guidance booklet on knowledge and attitudes of nurses regarding disaster preparedness at hospital. Journal of Nursing Education and Practice. 2015;5 (9);p,17.
19. **Abo-Gad R.A.** Effect of educational program on nurses' knowledge and awareness of internal disaster management. Mansoura Nursing Journal.(MNJ):1(2)2014.
20. **Chimenya G.N & Ncube A.** Hospital emergency and disaster preparedness. A study of on Andjokwe Lutheran hospital. Disaster management Training and Education Center for Africa. Northern Namibia.2011.
21. **Sandmann A. E.** "Nurses [sic] Knowledge of mass causality emergency situations, disasters and related laws regulating nursing practice in michigan and ohio". Published Senior Honors Theses. Eastern Michigan University.2011. Paper 211
22. **Abd Elazeem H, Adam S., and Mohamed G.** Awareness of hospital internal disaster management plan among health team members in Ain shams University Hospital. Life Science Journal. 2011; 8(2),pp 42-52.
23. **Hoffmann R. & Muttarak R.** Learn from the past, prepare for the future. Impacts of education and experience on disaster preparedness in the Philipinnes and Thailand and Roman. 2017. <http://pure.iiasa.ac.at/id/eprint/14520/1/1-s2.0-S0305750X15312559-main.pdf>
24. **Shabbir R,& Afzal M.** Nurses knowledge and practices regarding disaster management and emergency preparedness. 2017.<http://scholarsmepub.com/sjimps>
25. **Alice Y and olivia.** Nurses competencies in disaster nursing implications for curriculum development and public

health. International journal of environmental research and public health and Olivia Wai Man. 2014.pp.....

26. **Burnock S.N.** Educating Nursing Students on Emergency Preparedness: A pilot program. Rhode Island College. Published. Digital commons@RIC, Master of science in Nursing.2014; 3.
27. **Pinar A.** What is secondary school students: Awareness on disasters? A case study review of international geographical education on line (RIGEO). Necmettin Erbakan University. Konya. Turkey. 2017.
28. **Moghaddan M, Saeed S & Arab M.** Nurses requirements for relief and casualty support in disaster: A qualitative study. National Institute of Health.2014.

Effect of Implementation of a Teaching Program about Immediate Postpartum Care on Nurses' Knowledge and Practice.

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Abstract: Immediate postpartum period refers to the care provided to the parturient woman and her newborn in the first two hours following the full expulsion of the placenta, after the baby is born. These hours are the initial and/or acute phase of the postpartum period. It is a very vulnerable period for both the mother and the newborn. **The aim of this study:** was to determine the effect of implementation of a teaching program about immediate postpartum care on nurses' knowledge and practice. **Subjects and method:** The study was conducted at the postpartum units of Tanta University Hospital, El-Menshawy and El-Mabara Hospitals affiliated to the Ministry of Health. All nurses (40 nurses) who were working in the previously mentioned study settings and provided care to women with normal vaginal delivery were assigned. Two tools were used for collection of data; **Tool (I): Structured Questionnaire socio-demographic data and knowledge assessment.** It comprised the following parts: **Part I: Socio-demographic characteristics of nurses** and **Part II: Structured Questionnaire of nurses' knowledge about immediate postpartum care.** **Tool (II):** It was developed to assess nurses' performance of immediate postpartum care .It comprised the following parts. **Part I: Immediate Postpartum Care Nurses' Observation Checklist (for women)** and **Part II: Immediate Postpartum Care Nurses' Observation Checklist (for newborn).** **Results:** The mean knowledge score of nurses regarding immediate postpartum care and newborn care was increased immediately after implementation of the program with a significant statistical difference $P < 0.05$. The mean performance score of nurses regarding immediate postpartum care and immediate care of the newborn was higher immediately after implementation of the program with a significant statistical difference $P < 0.05$ compared to pre-program. **Conclusion and recommendations:** The findings of present study revealed that after implementation of teaching program immediately and 3 months later the post program, there was a significant improvement of knowledge as well as performance among the studied nurses regarding the immediate postpartum care and the immediate newborn care compared to preprogram. Planned in-service training programs for all nurses working in the postpartum wards regarding the importance of the first 2 hour immediately postpartum must be conducted in order to improve their knowledge and performance and ultimately improving the quality of health care.

Keywords: Immediate postpartum care.

I. Introduction

Immediate postpartum period is the period beginning immediately after the delivery of the placenta and extending up to the first two hours after delivery. During the immediate postpartum period, the mother and newborn, within the context of their family or personal support, should be viewed as a unit. The fourth stage of labor is the first 2 hours after the birth of the baby. It is a crucial time for the mother and the baby⁽¹⁻³⁾. Puerperium is the period following childbirth during which the body tissues, specially the pelvic organs revert back approximately to the pre-pregnant state both anatomically and physiologically. The period is arbitrarily divided into immediate within 24 hours, early up to 7 days and remote up to 6 weeks. The “fourth stage of labor” is termed as “immediate postpartum period,” which represents the period of the first two hours after expulsion of the placenta when close observation is desirable to avoid or detect postpartum hemorrhage, signs of sepsis or hypertension, and when breast feeding is initiated^(4,5).

The Maternal Mortality Ratio (MMR) in developing countries is estimated at 440/100,000 live births with 46 countries having an MMR greater than 500/100,000 live births. Between 11% and 17% of such deaths happen during childbirth and 50%

to 71% in the postpartum period. Most of the postpartum deaths occur immediately after delivery and during the first week of postpartum period⁽⁶⁾. The objectives of immediate postpartum care are to help the mother adjust to the changes that have occurred as a result of pregnancy, delivery, and childbirth, assess health status of mother and newborns, provide guidance and information about breastfeeding and care of the newborn, as well as to provide immunization for the mother including postpartum rubella or RH prophylaxis if indicated^(7,8).

It is vitally important that midwives have the knowledge and skills to determine when to be proactive and undertake specific observations and nursing interventions when there are indications to do so. Therefore, the midwife needs to be knowledgeable and recognize what are normal expected outcomes following birth and also be able to identify signs of what is not normal and when to instigate care that will involve further investigation, tests and to call support of other health professionals. Then midwife's responsibility is to be competent and able to undertake further necessary education and training required to provide extended care^(9,10).

Nurses should provide competent nursing care during early (immediate) postpartum

period. This critical time requires nurses to be open-mindedness and patient. This skill set requires that nurses should perceive that the first 2 hours after delivery are of significant concern. Thus, they should provide competent care to postpartum women and their families taking into considerations their beliefs, experiences and environment and respecting their human rights and dignity. The nurse's role in labor, birth and immediate postpartum period is a privileged one, as childbirth is one of the most vulnerable times in women's life. Thus, the nurse should focus on supporting, protecting, advocating and empowering women during this time⁽¹¹⁾.

Aim of the study

The aim of this study was to determine the effect of implementation of a teaching program about immediate postpartum care on nurses' knowledge and practice.

Research Hypothesis:

Nurses' knowledge and practice are expected to be improved post implementation of a teaching program regarding immediate postpartum care for the mother and her newborn immediately and 3 months later.

II. Subjects and Method:

i. Study design:

A quasi-experimental design was adopted to conduct this study.

ii. Setting:

The study was conducted at the postpartum units of Tanta University Hospital, El-Menshawy and El-Mabara Hospitals affiliated to the Ministry of Health.

Subjects:

All nurses (40 nurses) who were working in the previously mentioned study settings and provided care to women with normal vaginal delivery were assigned and classified as follow:

- Nurses who were working at Tanta University Hospital (22 nurses).
- Nurses who were working at EL-Menshawy Hospital (10 nurses).
- Nurses who were working at EL-Mabara Hospital (8 nurses).

iii. Tools of data collection:

Tools of data collection were developed by the researcher based on relevant literature and used to collect data about the study subjects as follows:-

Tool (I): Structured Questionnaire socio-demographic data and knowledge assessment. It comprised the following parts:

Part I: Socio-demographic characteristics of nurses such as name, age, workplace, educational qualification, years of experience and previous training and courses regarding the immediate

postpartum care and **Part II: Structured Questionnaire of nurses' knowledge assessment about immediate postpartum care.** It included (The general physiological changes, psychological changes, local physiological changes, nurses' knowledge regarding postpartum care and instructional guidelines given to mothers before discharge from the hospital as well as care of their newborns).

Tool (II): It was developed by the researcher to assess nurses' performance of immediate postpartum care. It comprised the following parts:

Part I: Immediate Postpartum Care Nurses' Observation Checklist (for women): It included the immediate postpartum nursing care and procedures provided by nurses to women during the immediate postpartum period (the first 2 hours after delivery) and **Part II: Immediate Postpartum Care Nurses' Observation Checklist (for newborn):** It included the immediate newborn care as (maintenance of clear airway and body temperature, assessment of Apgar score at 1 and 5 minutes after delivery, care of umbilical cord stump, detection of any abnormalities as well as identification and prevention of hemorrhage through administration of vitamin K).

Method

The study was conducted according to the following steps:-

- 1) Official permissions were obtained to conduct the study from the responsible authorities at the faculty of Nursing and the studied hospitals.
- 2) Ethical and legal considerations:
 - The nurses have been met prior to their participation in order to explain the purpose of the study.
 - An informed consent for participation in the study was obtained from the entire sample.
 - The study subjects were notified that the nature of the study will not cause any harm or pain.
 - Confidentiality and privacy was considered regarding the data collected and nurses rights to withdraw from the study at any time.
- 3) Review of the relevant recent literature using available local and international books, magazines was done to plan for the development of the study tools and the contents of the educational program.
- 4) Tool I was developed in Arabic and Tool II was developed in English after reviewing recent literature and they were tested for content and construct

validity by a jury of 3 experts in the Obstetric and Gynecological Nursing.

- 5) Tool I and Tool II were applied three times, the first one pre-test and the second post-test immediately after implementation of the program and the third after 3 months post program implementation.
- 6) A pilot study was carried out on 10% (4 nurses) of the proposed sample after taking their approval in order to test the feasibility, and applicability of the developed tools and to determine the obstacles that may be encountered during the period of data collection. Accordingly, some statements of tool I and II were rephrasing.
- 7) Data collection was conducted in four months period from the 1st of December 2017 to the 1st of April 2018, 2-3 days per week during the morning, afternoon and evening shifts. Data collection started at Tanta University Hospitals, then EL-Mabara Hospital and finally EL-Menshawy Hospital.
- 8) **The study was conducted into 4 phases:**

Assessment phase:

- This phase was done before giving sessions. The researcher met with nurses at morning, afternoon and evening shifts at postpartum ward or on the counter shifted between the three hospitals. Nurses were asked to participate after explaining the aim of the study. **Tool I Part I** was used to assess socio-demographic characteristics of nurses and fulfilled by them.
- Nurses' pre-test was conducted at the beginning of the session by using **Tool I Part II** to assess nurses' knowledge regarding immediate postpartum period during the first 2 hours after delivery in the presence of the researcher for necessary clarification. **Tool II part I** and the observational checklist for the mother and the newborn were used to assess nurses' performance immediately postpartum (during the first 2 hours after delivery) used before, immediately and 3 months later after implementation of the program.
- Nurses' knowledge was assessed individually for each nurse by an interview lasted 15 minutes for each nurse. In the first and second day 16 nurses were assessed and 8 nurses in the third day (the last day). Totally the researcher took 4 hours daily for the first 2 days and 2 hours in the last day.
- Nurses' performance was assessed by the researcher. At least six procedures were assessed individually for each

nurse at a rate of 4 nurses every day for 10-13 days.

Planning phase:

- The educational program was developed by the researcher based on data from the assessment phase and literature review. Priorities of goals and expected outcome criteria were formulated. The researcher prepared the instructional materials (posters, videos, pictures and power point presentation) to be used in the educational program. Colored booklet was also developed and distributed to every nurse for enforcement and as a reference.

Implementation phase:

- The educational program was implemented by the researcher after reviewing of related literatures.

First Session:

- The researcher explained the definition of immediate postpartum period, physiological (general, local) and psychological changes during immediate postpartum period during the first 2 hours after delivery, importance of postpartum care, rest, position, postpartum exercises, breast care, breast feeding, bladder care, episiotomy and vaginal care, prevention of postpartum hemorrhage and prevention of infection, followed

by break time for 30 minutes, then the researcher explained instructional guidelines given to mothers before discharge from the hospital that included breast feeding, maternal nutrition, postpartum exercises, family Planning methods, sexual intercourse, postpartum follow up visits and postpartum danger signs.

Second Session:

- This session included the implementation of immediate postpartum nursing care during the first two hours after delivery through demonstration and re-demonstration of procedures that included: **assessment of vital signs, uterus and lochia (uterine height, location, consistency and lochia flow) and perineal care.**

Third Session:

- This session included the implementation of immediate postpartum nursing care during the first two hours after delivery through demonstration and re-demonstration of **breast care, bladder care, bowel care, episiotomy care and infection control measures** before, during and after performing procedures that included **(Use aseptic technique, hand washing, wear sterile gloves, discard disposable equipment and**

sterilization of the reusable equipment).

Fourth Session:

- The researcher explained demonstrated and re-demonstrated **immediate newborn care which included** maintenance of clear airway and body temperature, Apgar score assessment at 1 and 5 minutes after delivery, assessment of vital signs, umbilical cord stump care, and detection of any abnormalities and prevention of hemorrhage through administration of vitamin K followed by break time for 30 minutes. Then the researcher explained **health education** given to mothers before the hospital discharge **regarding newborn care which included:** eyes care, cord care, baby Bath, immunization, anthropometric measurements, circumcision care and newborn danger signs.
- The educational program was implemented on small group basis. Each sub group was encompassing 5 nurses. Each sub group was attending a total of 4 sessions. These sessions were scheduled as 2 sessions per week for each hospital. Totally the numbers of sessions were 4 sessions for 4 weeks. The duration of each session

was 1.5 to 2 hours. This phase took 12 days.

- The educational program was presented through open discussion, demonstration and re-demonstration between the researcher and nurses, visual aids, power point presentation, video presentation, self-learning module, and actual situation.
- In each session a theoretical part was given at first then demonstration of postpartum procedures by the researcher of the above mentioned practices and the re-demonstration by nurses.

Evaluation phase:

The evaluation of the implemented program was done by:

- Assessment of nurses' knowledge and performance was done (three times), before implementation of nursing intervention and teaching sessions by using **Tool I part II and Tool II part I and II** then immediately and after three months post sessions using the same tools (pre, posttests techniques).
- Nurses were distributed (individually) for self-filling to assess their knowledge using **Tool I part II (knowledge assessment)**.
- Each nurse was observed individually three times to assess their performance

while conducting immediate postpartum care (during the first 2 hours after delivery) for the mother and her newborn using **Tool II part I and II (observation checklist)**.

- Comparison was done regarding nurses' knowledge and performance before, immediately and 3 months after implementation of program to identify the effect of the teaching program on their knowledge and performance regarding immediate postpartum care

9) Data analysis:

Data was collected, coded and analyzed and then organized into tables using the statistical package for social science (SPSS 22)

III. Results:

Table (I): Shows that nurses' age ranged from 20-55 years, with a mean age of 33.72 ± 9.894 . Regarding their educational level, more than one third (40%) of nurses had completed 3 years nursing diplome. The table also shows that, 37.5% of the studied nurses had 10-20 years of experience. In relation to training courses, it was observed that three quarters (75%) of nurses didn't take any training courses. Regarding time of the last training courses, 20% of the studied nurses have taken the last training courses since less than 5 years duration. As regards to the place of the

previous training courses, 20% of the studied nurses have taken training courses at Ministry of Health.

Figure (I): Shows that about (10%) of nurses had good level of knowledge regarding immediate care of the newborn preprogram. While immediately after program, the percentage increased to (97.5%) then became (90%) 3 months post program implementation.

Figure (II): Represents that about (15%) of nurses had good level of knowledge regarding immediate postpartum care preprogram. While it increased to (92.5%) immediately after program, and decreased to (80%) 3 months post program implementation.

Figure (III): Demonstrates that about (32.2%) of nurses had satisfactory practice regarding immediate postpartum newborn care preprogram implementation. While the percentage increased to (69.7%) immediately after program, and (63.4%) 3 months post program implementation.

Figure (IV): Illustrates that (37.5%) of the nurses had satisfactory practice regarding immediate postpartum care of the mother preprogram implementation. While the percentage increased to (95%) immediately after program implementation and (80%) 3 months post program implementation.

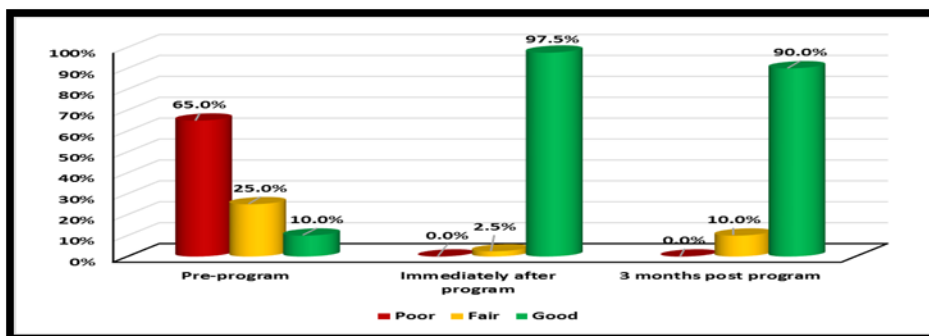
Table (II): Shows a significant correlation was found between the total score of

knowledge and nurses' age immediately after program and 3 months post program where $r=0.541$ and $P=0.010^*$ and $r=0.623$ and $P=0.020^*$ respectively. There was also a significant correlation between the total score of knowledge and educational level immediately after program and 3 months post program where $r=0.611$ and $P=0.001^*$ and $r=0.451$ and $P=0.001^*$ respectively. Moreover, a significant correlation was noticed between the total score of performance and nurses' age immediately after program and 3 months post program in where $r=0.643$ and $P=0.001^*$ and $r=0.587$ and $P=0.001^*$ respectively. There was also a significant correlation between the nurses' educational level immediately after program and 3 months later where $r=0.589$ and $P=0.021^*$ and $r=0.487$ and $P=0.011^*$ respectively.

Table (1): Distribution of the studied nurses according to their socio-demographic characteristics.

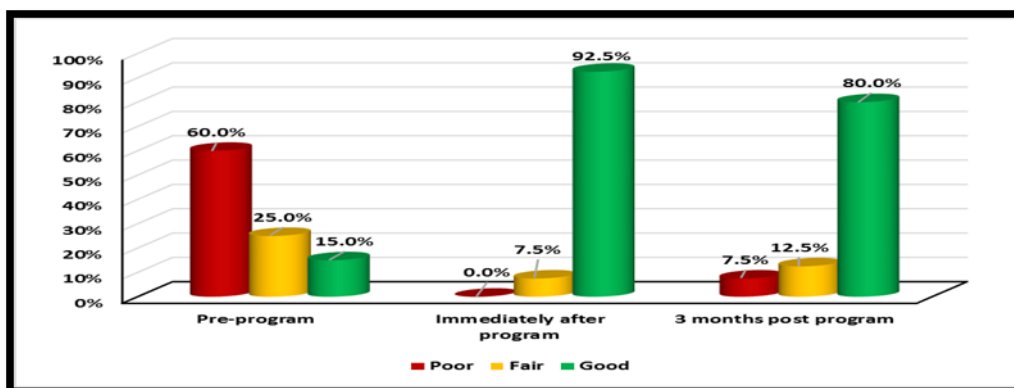
Socio-demographic Characteristics	The studied nurses (n=40)	
	N	%
Age (years)		
≤ 30 years	16	40.0
31-40 years	14	35.0
41-50 years	8	20.0
> 50 years	2	5.0
Range	20-55	
Mean±SD	33.72±9.894	
Educational level		
3 years nursing diplome	16	40.0
3 years diplome & Obstetric diplome	11	27.5
Technical institute	9	22.5
Nursing bachelor	4	10.0
Experience (years)		
<5 years	10	25.0
5-10 years	5	12.5
10-20 years	15	37.5
>20 years	10	25.0
Range	3-36	
Mean±SD	14.906±10.46	
Training courses		
None	30	75%
< 5 courses.	9	22.5%
≥ 5 courses.	1	2.5%
Time of the last training courses		
None	30	75%
< 5 years	8	20%
≥ 5 years	2	5%
Place of the previous training courses		
None	30	75%
Ministry of Health	8	20%
University	1	2.5%
Other	1	2.5%

Fig (1): Total score level of overall knowledge among studied nurses regarding immediate care of the newborn pre, immediately and 3 months post program



*Significant or $P < 0.05$

Fig (2): Total score level of the studied nurses' overall knowledge regarding immediate postpartum care pre, immediately and 3 months post program



*Significant or $P < 0.05$

Fig (3): Total score level of the studied nurses' overall performance regarding immediate newborn care pre, immediately and 3 months post program

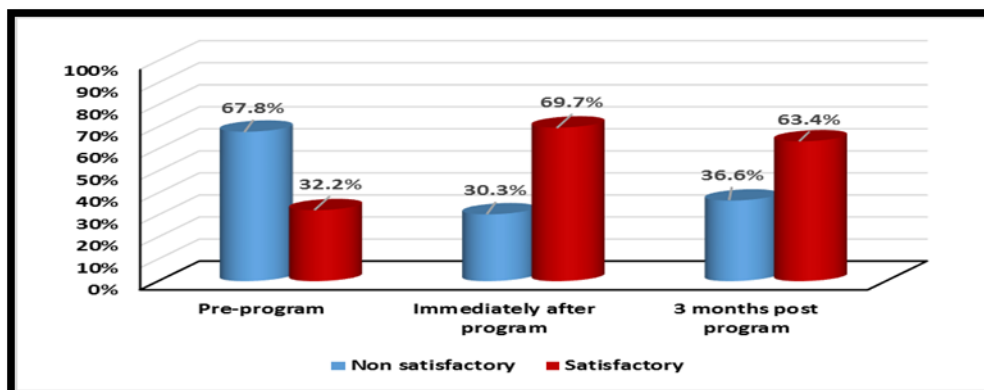
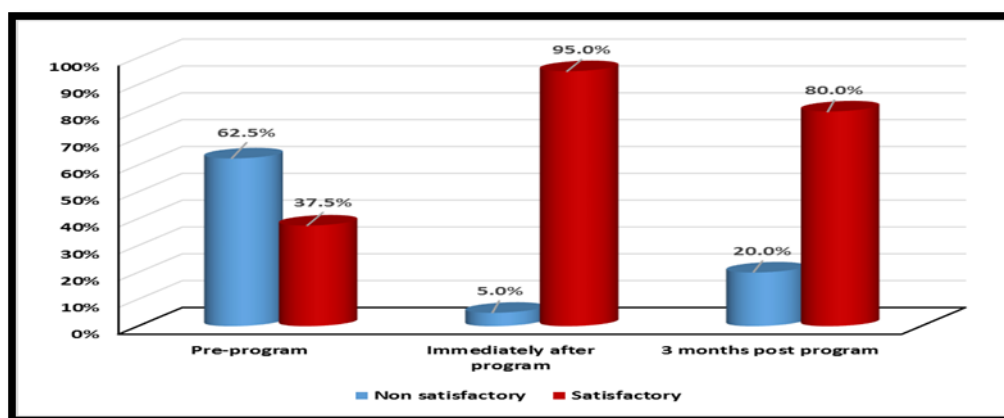


Fig (4): Total score level of the studied nurses' overall performance regarding immediate postpartum care of the mother pre, immediately and 3 months post program



*Significant or $P < 0.05$

Table (2): Correlation between the total score level of knowledge and total score level of performance among studied nurses regarding immediate postpartum care and their socio demographic characteristics.

Socio demographic characteristics	Total knowledge score			Total performance score		
	Pre-program	Immediately after program	3 months post program	Pre-program	Immediately after program	3 months post program
	r P	r P	R P	r P	R P	r P
Age	-0.059 0.716	0.541 0.010*	0.623 0.020*	-0.113 0.487	0.643 0.001*	0.587 0.001*
Educational level	0.124 0.574	0.611 0.001*	0.451 0.001*	-0.213 0.671	0.589 0.021*	0.487 0.011*
Experience	-0.117 0.471	-0.146 0.369	-0.080 0.622	-0.109 0.505	0.108 0.506	0.143 0.378
Training course number	0.084 0.608	0.029 0.861	0.204 0.207	0.222 0.168	0.260 0.106	0.183 0.258

* Significant at $P < 0.05$.

r = correlation coefficient.

IV. Discussion:

Immediate postpartum period refers to the first 2 hours after delivery. These hours are the initial or acute phase of the postpartum period. The World Health Organization (WHO) describes the immediate postnatal period as the most critical and yet the most neglected phase in the lives of the mothers and their babies; most maternal and/or newborn deaths occur during the postnatal period. The fourth stage of labor is a crucial period of labor process, because many life threatening complications can accompany this stage of labor. So, it is vital to provide the nurses with a full-fledged knowledge and training for the management of the fourth stage of labor^(2, 12, 13, 14).

As regards to the socio-demographic characteristics of the studied nurses, the findings of the present study revealed that more than one third of the studied nurses were equal or less than 30 years old, had 3 years nursing diploma and more than one third had worked between 10 to 20 years of experience. This finding is similar to **Kaur et al., (2014)**⁽¹⁵⁾ who found that the majority of the subjects were in the age group of 26-30 years.

On the other hand, they found that **Hashem (2012)**⁽¹⁶⁾ and **Hassan et al., (2016)**⁽¹⁷⁾ findings also disagreed with this study. They found that less than two thirds

had Bachelor science of nursing and forty percent of the subjects had experience of 6-10 years. **Hashem (2012)**⁽¹⁶⁾ found that the majority of the studied nurses were more than 40 years old and all of them had diploma degree with more than ten years of experience. Again **Hassan et al., (2016)**⁽¹⁷⁾ found that more than half of the studied nurses also aged between 25 and 29 years old.

Moreover, the results of the present study revealed that three quarters of the studied nurses didn't attend any training courses about the immediate post-partum nursing care, likewise **Hashem (2012)**⁽¹⁶⁾, mentioned that, almost all the studied nurses didn't attend any in-service training program about the quality of immediate postpartum nursing care. This finding was dissimilar to **Hassan et al., (2016)**⁽¹⁷⁾ who found that more than half of the studied nurses attended training courses about immediate postpartum nursing care this may be related to the different characteristics of the study subjects.

With regard to nurses' knowledge regarding immediate care of the newborn, the study results revealed a good score level of knowledge immediately after and 3 months post program implementation compared to only (10%) of them pre program. This finding is in accordance with **Aschalew (2016)**⁽¹⁸⁾ who illustrated

that about (55.3%) of the study participants had good knowledge about immediate newborn care. This finding also is in congruent with **Shinde (2015)** ⁽¹⁹⁾ who found that less than half of the staff nurses had knowledge regarding immediate newborn care.

Therefore, the present study revealed improvement in the total knowledge score level immediately and 3 months post program implementation compared by pre implementation of the educational program. This result may probably be due to the immediate effect of the educational program sessions supported by the provided booklet about immediate postpartum care which was helpful as ongoing reference. However, 3 months later, the nurses' scores were somewhat reduced but still significant which may probably be due to the absence of the continuing training and education and work overload. By meaning of that improvement of knowledge post program in the current study may be attributed to the ability and interest of the nurses to gain and update their knowledge.

As well concerning overall performance regarding immediate newborn care, there was a significant improvement immediately and 3 months post program compared to preprogram (Fig 3). This finding is consistent with the study of

Berhe et al., (2017) ⁽²⁰⁾ who found that (76%) of health care providers carried it out regularly. Meanwhile inconsistent with **Chaudhary et al., (2015)** ⁽²¹⁾ who stated that the majority of staff nurses had good practice about overall immediate newborn care.

After implementation of the educational program most of the studied items of care were obviously and significantly improved in comparison with the findings before implementation of the educational sessions. This might be due to lack of knowledge, the neglecting part of nurses, and shortage in the number of nurses, shortage of necessary equipment and supplies and also poor documentation system. On the other hand, the finding is dissimilar to **Simbar et al., (2017)** ⁽²²⁾ whom their study demonstrated that the quality of care was weak among (12.95%) of nurses regarding many of domains of postpartum care.

Moreover, working nurses didn't have the privilege of continuing educational program which can highly increase their knowledge and improve their skills. Lack of continuous supervision and annual evaluation of their performance, lack of motivation, absence of job specification plus shortage in staffing all lead to overlapping when it comes to providing some items of care and neglecting the

others. In addition, early discharge after delivery decreases the time needed to provide the instructions and advices necessary for parturient women. Last but not least, it cannot be ignored that working nurses are overloaded with administrative duties beside their duties as health care providers.

The correlation between the total knowledge, total performance scores and socio demographic data among the studied nurses regarding immediate postpartum care in the present study revealed that, there was a positive statistically significant correlation between nurses' total knowledge score and between their age and educational level immediately and 3 months post program implementation. This study finding is compatible with the finding of **Ibrahim & Abdel-Menim (2016)** ⁽²³⁾, **Abd El-Fattah and Zein El-Dein (2012)** ⁽²⁴⁾ who disclosed a positive statistically significant correlation between nurses' total knowledge score and their educational level.

In relation to correlation between the total knowledge, total performance scores and socio demographic data among the studied nurses regarding immediate postpartum care, the present study revealed that, there was also a positive statistically significant correlation between nurses' total performance score and between their age

and educational level immediately and 3 months post program implementation than preprogram.

Furthermore, the present finding is in harmony with the study of **Jaber and Abbas (2011)** ⁽²⁵⁾. They reported positive statistically significant correlation between the studied nurses knowledge score and their educational level. This means that nurses' level of knowledge and practices is better with young ages and years of experience. Obvious improvements of total nurses' knowledge as well as performance scores were documented with significant statistically differences regarding immediate postpartum care immediately and 3 months post program compared to preprogram. From the researcher point of view, this improvement might be related to the fact that the majority of the nurses were young ages (less than or equal 30 years), more than one third of them had 10 to 20 years of experience and nearly one quarter of them had received training courses about immediate postpartum care. This might be due to that the older nurses delegated nursing activities to the younger nurses and have a little role of assigned clients beside their administrative roles.

V. Conclusion:

Based on the findings of the present study, it can be concluded that before implementation of the teaching program

regarding the effect of immediate postpartum care on nurses' knowledge and performance. There was an obvious lack of nurses' knowledge regarding the importance of the first 2 hours after delivery of the baby as well as unsatisfactory performance of the immediate postpartum care provided for the mothers and the baby before implementation of the teaching program. The findings of present study also revealed that after implementation of the teaching program immediately and 3 months later post program, there was a significant improvement of knowledge as well as performance among the studied nurses compared to preprogram.

VI. Recommendations

This study recommended conduction of planned in-service training programs for all nurses working in the postpartum wards regarding the importance of the first 2 hour immediately postpartum in order to improve their knowledge and performance and ultimately improving the quality of health care. In addition, further research studies are needed regarding the immediate as well as the general postpartum care to identify and overcome the gaps in the knowledge and performance among different health care providers.

VII. References

1. **Elfikky A, Tawab N and et al.** Clinical guidelines for integrating family planning into postpartum and post abortion care. 1st ed., Arab Republic of Egypt, Ministry of health and population, 2008; 2-5.
2. **Johnson J.** Maternal-newborn nursing demystified. 1st ed., Mexico, McGraw-Hill Co., 2010; 208-20.
3. **Amr J.** Basic Essential Obstetric Care: Protocols for Physicians. 1st ed., Arab Republic of Egypt, Ministry of health and population, 2009; 236-50.
4. **Dutta D and Konar H.** Text book of obstetrics, 6th ed., India, New Central Book Com., 2009; 145-54.
5. **Maville J and Huerta C.** Health promotion in nursing. 3rd ed., Brazil, Delmar Cengage Learning Com., 2013; 172-80.
6. **Mridha M and Koblinsky M.** Policy perspective on integrated community based postpartum care. Available at <http://www.un.org/millenniumgoals/index.Html>. Retrieved on 18-8-2018.
7. **Davis R.** Healthy Mother and Healthy Newborn Care: Postnatal Care. 1st ed., New York, Boston Women's Health Book Collective Com., 2009; 51-68.

8. **Macdonald S and Cuerden J.** Mayes' Midwifery, 14th ed., New York, Bailliere Tindall Com., 2011; 730-52.
9. **Marshall J and Raynce M.** Myles textbook for midwives. 16th ed., London, Churchill Livingstone Com., 2014; 501-7.
10. **Lynna Y, Gibbs L and Joan C.** Maternity Nursing Care. 2nd ed., London, Delmar Cengage Learning Com., 2013; 622-57.
11. **Ricci S, Kyle T and Carman S.** Maternity and pediatric nursing. 3rd ed., New York, Wolters and Kluwer Com., 2017; 524-557.
12. **Monahan F.** Review for the NCLEX-RN examination. 1st ed., Boston, McGraw-Hill Com., 2008; 96-106.
13. **Cashion L.** Maternity nursing. 9th ed., Canada, Mosby Com., 2012; 467-89.
14. **Datta P.** Pediatric nursing. 4th ed., London, Jaypee Com., 2018; 225.
15. **Kaur N and et al.** Skill development of nurses in managing the fourth stage of labor. Nursing and midwifery research journal, 2014; 10 (1): 16-25.
16. **Hashem S.** Assessing the quality of immediate postpartum nursing care provided to women after cesarean section in Tanta city. Master thesis, 2012; 99-106.
17. **Hassan M, El-Seman A and et al.** Re-Audit of immediate normal postpartum nursing care at woman's health university hospital. Assiut, Egypt. Journal of Nursing and Health Science, 2016; 5(1):52-65.
18. **Aschalew Z.** Knowledge, attitude and practice of newborn care among postnatal mothers at governmental health centers. Addis Ababa, Ethiopia, Master Thesis. 2016; 34.
19. **Shinde S.** knowledge staff nurses in immediate care of newborn baby and their implications. Ethiopia, Bulletin Pharmaceutical Research, 2015; 5(3):108-11.
20. **Berhe and et al.** Knowledge and practice of immediate newborn care among health care providers in eastern zone public health facilities. Tigray, Ethiopia, Biomed central pediatrics journal, 2017; 17(157):4-8.
21. **Chaudhary G.** Singh V and Kumar D. A study to evaluate the efficacy of self-instructional Module (SIM) on knowledge and practice regarding newborn care among staff nurses working in selected hospitals of Delhi NCR. Journal of Nursing and health Science, 2015; 4(2):68-69.
22. **Simbar M, Dibazari A and et al.** Assessment of quality of care in postpartum wards of Shaheed Beheshti medical science university hospitals.

International Journal of Health Care,
2017; 18(5):336-39.

23. Ibrahim H and Abdel-Menim S.

Improving maternity nurses' performance regarding prevention and control of postpartum hemorrhage. International Journal of Novel Research in Health Care and Nursing, 2016; 3(3):101-15.

24. Abd Elfattah N and Zein El-Dein N.

Assessment of quality of nursing care provided immediately after birth at university hospital. Life Science journal, 2012; 9(4): 2115-124.

25. Jaber A and Abbas M.

Assessment of licensed indigenous midwives' knowledge concerning prevention and management of postpartum hemorrhage in Baghdad city. Iraqi National Journal of Nursing Specialties, 2011; 24(2):1-12.

Effect of Nurse's Therapeutic Communication and Protecting Patient's Rights on Patient's Satisfaction

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Abstract:

Back ground; Emphasis puts today's on nurse's therapeutic communication as a key variable to relieve patients from psychological stress, and familiarize them with hospital environment.

Aim; determine the effect of nurse's therapeutic communication and protecting patient's rights on patient's satisfaction. **Setting;** Assiut University Main Hospital. **Subjects;**

Convenient sample of nurses (No.=172) and representative number of patients (No.= 200) based on formula to calculate study subjects. **Tools;** 1) Structure questionnaire sheet

consisted of a) Demographic characteristics b) Communication skills, c) Patients right and 2) Patients satisfaction scale **Results;** nurses achieve highest mean score in understanding the

emotions, and feelings they experienced in hospital environment with their illness, and the needs they want to satisfy and the lowest mean score for attention to patients verbal and non

verbal expressions. There were a highly statistical significant difference regarding departments, years of experience, residence and nurse's therapeutic communication skill and

protecting patient's right. The majority of patients were satisfied regarding nurse's communication skill and protection of their right. **Conclusion;** the majority of nurses were

communicate in therapeutic way. The majority of patients were satisfied regarding nurse's therapeutic communication skills but patients admitted to private sector were achieve highest

satisfaction score. **Recommendations:** based on research results the following recommendations are drawn; in-services training for nurses who not communicate in

therapeutic way. Orient patients to increase their awareness regarding their rights.

Key Words: Therapeutic Communication, nurses, Patient's, Rights, Satisfaction

Introduction

Communications skills is a very important concept in all life areas, but therapeutic communication is the needed one for medical and nursing professions even with all staff working at any health care agency because patients and customers has physical pain as well as spiritual emotions, and psychological discomfort from change their familiar environment by hospital environment, so if nurses and health care teams are communicate in therapeutic way the optimal health care outcomes can be attainable easily¹.

Therapeutic communication can be defined as the exchange of ideas, health instructions, information, a choice of care and feelings to achieve desirable objectives and strengthen interpersonal relationships with patients / customers and health care providers². In therapeutic communication process; nurses should clarify the meanings of the message to her/his patients /customers, and be sure that this meaning was understood by them using multiple strategies like clarifying expectations, direct questions, and repeating what they said³. In the health care organization therapeutic communication can be achieved if the information shared between its members enhances achieving both patients, customers, health care team and organizational objectives⁴.

When peoples communicating with each other's the focus was putted on what peoples should say. However, in therapeutic communication the focus more putted on listening to the patients and customer's needs, ideas, and thought^{5&6}. Good listening means not only understanding the words or the information patients and customers said but also understanding the emotions, and feelings they experienced in hospital environment with their illness, and the needs they wants to satisfy so, health care team especially nurses who spend a long time with patients try to convey this feelings, and emotions into here/his care priority which can be displayed by nurses with respecting and achieving patient's needs⁷.

Therapeutic and effective communication actually affect patient progress positively, patient compliance to health care team instructions, and treatment plan^{8&9}. Intelligent nurses can read and understand their patients emotions as well as their superiors and peers so, she/he can communicate in therapeutic way which will reflect appreciations from others so, nurses become satisfied with work environment which was reflect positive attitude toward her/his patients from this point patients satisfaction and compliance with treatment provided will be increased¹⁰. If health care team

communicate with patients and customers in therapeutic way it mean that they have emotional intelligence as they become able to understand and recognize patients emotions and become able to cope with their patients as well as their colleges¹¹.

Non therapeutic communication can has negative effect on patient's satisfaction, safety, and quality of care, and has adverse effects on patient's compliance with recommended treatment regimens. Also lack of use of therapeutic communication skills may influence patients' participation in his/her treatment plans that will inversely affect the nurses' ability to manage patients' needs effectively. Therapeutic relationship is the core of quality nursing care and patient's satisfaction^{12,13,14}.

Patient's satisfaction can be defined as the patients reaction to all aspects of services provided which they experienced from health care members. If a patient's perception of their hospital experience meets or exceeds patient's expectation, there will be equal degree of satisfaction¹⁵. Patients satisfaction refers to what patients think about their treatment plan, evaluating past experience which has focus on the presence of protocol of care coordination, communication with caregivers, and staff responsiveness¹⁶.

The ability to develop a compassionate, therapeutic communication with patients nurses engage patients as partners is critical aspect as healthcare standards to day require all patients to be fully informed and active participants in self-care management¹⁷. To improve patient's satisfaction regarding nurse's therapeutic communication skills and make patients more adhere to follow-up care plan nurse's awareness regarding therapeutic communication and how to protect patient's rights should be spread among all nurses¹⁸

Human being has mental, physical, and spiritual dimensions and hold rights during the health and illness people have to differentiate between human rights and rights to health. The rights of patients are the expectations that must be observed in every health care service. These encompass his/her physical, mental, spiritual and social needs which are manifested as standards, and rules¹⁹. With advancing technologies patient's education, and awareness regarding to their rights has been increased²⁰.

Important talent of nursing is respecting and protecting the human rights and dignity of all patients. The priority of healthcare organizations must be protection of patient's rights. The patient's

bill of rights was created in order to defend human rights, preserve patients' dignity, and ensure that in case of sickness, and especially in emergencies, patients will receive competent care without discrimination²¹.

Therefore, if the patient's rights and welfare at risk, it is necessary that a nurses undertake their protection. Protection of patient is defined as the process of informing patients who seek health care, but there are still ignore the methods nurses' learned regarding their role to protect him/her²². Nurses must protecting patients against unethical and illegal acts was only a part of patient advocacy, although supporting the patients is a major goal of nurses and all health care professionals^{23,24}.

Significance of the study:

Therapeutic communications has important role in improving patients emotional, and psychological status which in return can affect patients progress and outcomes so, studying nurses therapeutic communication skills and to what extend nurses protect patient's rights is very essential and if it has effect on patient's satisfaction will give an insight about its importance. No studies were done about the three variables together nationally and internationally

Aim of the study: This study aimed to determine the effect of nurse's therapeutic communication skills and protecting patient's rights on patient's satisfaction.

Specific objectives

- 1- Determine nurse's therapeutic communication skills.
- 2- Measure to what extend nurses protects patient's rights.
- 3- Assess patient's satisfaction regarding nurse's therapeutic communication skill and protecting his/her rights.

Research Questions:

- 1- What are nurse's communication skills?
- 2- Are nurses protecting patient's rights?
- 3- Are patients satisfied with nurse's therapeutic communication skills?

Subjects and Methods

Technical design:

a- Research design: Descriptive study design was used in the present research.

b- Setting: The present study was conducted at Assiut University Main Hospital at private sector and general in patients departments (medical & surgical).

C-Subjects: Convenient sample of nurses (No.=172) and representative number of patients (No.= 200) based on²⁵ formula to calculate study subjects which were required randomly selected .

$$(2n^2)^2 p (1-p)$$

$$N = \frac{\dots}{D^2}$$

Where:

N=sample size

P= 0.50

D= 0.50x10% =0.005

The selected participant distributed as follows

Unit	Nurses No.	Patient No.
General medical units	44	70
General surgical units	55	70
Private sector	73	60

d- Tools of data collection: It consisted of two tools

-Tool one structure questionnaire sheet which developed ²⁶ and modified by²⁷ which includes three main parts; *part one*, nurses demographic characteristics to gather data regarding; name of the department, gender, age, marital status, years of experience, and residence.

Part two Nurse's therapeutic communication skills which includes 16 items classified into four dimensions as follow; Preliminary relationship includes (4items), Attention (4 items), understanding (4 items), and job duties (4 items)

Scoring interpretation the evaluator (head nurses) will give a score for the nurse based on three points Likert scale ranged from 1= disagree to 3= agree, all scores will summed up from > 60% and above, the nurse communicate in therapeutic way and below < 60% nurse not communicate in therapeutic way. *part three* nurses protection of patient's right which consists of (14 items) **Scoring interpretation** the evaluator (head nurse) will give a score for the nurse based on three points Likert scale ranged from 1= not protecting patients right to 3= protecting patient's rights. Every nurse score will be totaled or summed up from

60% and above mean that the nurse protect patient's rights and below 60% mean that the nurse not protect patient's rights.

-Tool two structure questionnaire sheet which developed by¹ it includes two main parts: ***part one*** patients personal data which gather data regarding; gender, age, marital status, and numbers of patient hospitalization. ***Part two*** patient's satisfaction regarding nurses communication skills which includes 20 statements all of them will be assessed using three point Likert scale ranged from satisfied = 3 to dissatisfied = 1

scoring interpretation will be varying according to the 20 statements, highest score possible equal 60 and the lowest score equal 20. The researcher ask for patient's responses which will be summed up and if the patients obtain from 20-35 considered dissatisfied and if obtained from 36-60 considered satisfied.

IV. Administrative Design: An official permission was obtained from the dean of Nursing Faculty- Assiut University, medical and nursing directors at Assiut University Main Hospital, and all departmental heads of all selected departments.

V. Operational Design: This design explains the steps of actual implementation of the study, including preparatory phase, pilot study, and the field work.

Preparatory phase: This phase took about two months from October to November 2017 this period used to review the available literature concerning to the study topic, also study tools were prepared, and translated. The draft of the questionnaire was reviewed for face validity by taking experts opinions to revise comprehension of each statement through a jury which comprised from 5 experts (2 professors from Nursing Administration Department and 2 professors from Community Health Department and 1 professor from Psychiatric Nursing Department,) Faculty of Nursing Assiut University. Also content validity was tested using confirmatory factor analysis and all items of the tools used were confirmed and obtain score 1.9 and more.

Pilot study: Was conducted to detect the obstacles and problems that may be encountered during data collection phase. Also it helps to estimate time needed to fill the questionnaire form. It was carried out on 10% of patients (20 patients) and (nurses No. =17) every questionnaire took from 20 minutes to half an hour to be filed. The total period for collection of data in the pilot study takes about 5 days the participants chosen for the pilot study were excluded from the total study sample

Reliability was ensured by measuring

internal consistency using Cronbach's Alpha Coefficients methods and its result revealed that all statements of study questionnaire α were ≥ 0.88

Fieldwork: After ensuring the clarity and understandability of the study tools, the actual data collection was started in December 2017 up to February 2018. Patient's satisfaction with nursing therapeutic communication skills was filled by the researchers through patient interview one at a time after explaining the purpose of the study. Each interview took about 20 minutes. Also researchers met with all participated head nurses at Nursing Administration Office affiliated to Assiut University Main Hospital. 10 head nurses were interviewed at a time for a day to explain the purpose of the study and then all items of the tool were explained and discussed with them to clarify how head-nurses can evaluate nurse's therapeutic communication skill and how head-nurses can assess to what extend nurses protecting patient's rights from her/his observation and past experience using the predetermined tool and then the researchers distributed the questionnaire form for head nurses and the researchers were available during distributing and receiving the questionnaire, the questionnaires were given to only head nurses who expressed interest in

participation. All study tools were filled in the morning shift.

Ethical considerations: The researchers obtaining approval from the ethical committees at Faculty of Nursing Assiut University. Oral agreement was obtained from all participants after informing them about their rights to participate, refuse, or withdraw at any time. Total confidentiality of any obtained information was ensured. The steps of the study could not entail any harmful effects on participants.

Statistical design: collected data were verified before computerized data entries were done using statistical software package for social science (SPSS v.g. 20). Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables. Mean and standard deviation for quantitative variables, Pearson correlation analysis and multiple regression analysis were used for assessment of the inter-relationships and ANove test were used $P \leq 0.05$ (Significance).

Results:

Table (1): Distribution of Nurses Demographic Data at Assiut University Main Hospital (No. = 172)

Nurses Demographic data		No. (172)	%	Mean ± SD	
Age	< 30	47	27.3	34.49 ± 8.18 Range (19.0 – 56.0)	
	30 - 40	73	42.5		
	> 40	52	30.2		
Gender:	Male	20	11.6		
	Female	152	88.4		
Department:	General Medicine	44	25.5		
	General Surgery	55	32		
	Private sector	73	42.5		
Marital status	Single	31	18		
	Ever Married	141	82		
Years of exp.	≤10	30	17.4		15.60 ± 7.7 (Range 1.0 – 35.0)
	> 10	142	82.6		
Residence:	Rural	116	67.4		
	Urban	56	32.6		

Table (2): Distribution of Nurse's Therapeutic Communication Dimensions for at Assiut University Main Hospital (No. = 172)

Dimensions	Therapeutic		Non Therapeutic		Mean±SD
	No	%	No	%	
• Preliminary relation	134	77.9	38	22.1	10.24 ± 1.87
• Attention	112	65.1	60	34.9	9.59 ± 2.06
• Understanding	141	82.0	31	18.0	10.33 ± 1.92
• Job duties	139	80.8	33	19.2	10.30 ± 1.72

Table (3): Distribution of Nurses Demographic Data and Communication Skills at Assiut University Main Hospital (No.= 172)

Personal characteristics		Communication skills				P-value
		Therapeutic		Non Therapeutic		
		No	%	No	%	
Gender	Male	16	9.3	4	2.3	0.48
	Female	132	76.7	20	11.7	
Age	< 30	37	21.5	10	5.8	0.29
	30 - < 40	66	38.4	7	4.1	
	≥ 40	45	26.1	7	4.1	
Department	General Medicine	31	18	13	7.5	0.003**
	General Surgery	49	28.5	6	3.6	
	Private sector	68	39.5	5	2.9	
Marital status	Single	27	15.7	4	2.3	0.781
	Ever married	121	70.3	20	11.7	
Years of ex.	≤10	20	11.6	10	5.8	0.003**
	> 10	128	74.4	14	8.2	
Residence	Rural	98	56.9	18	16.4	0.002**
	Urban	50	29.1	6	3.6	
Total Communication		148	86.0	24	14.0	0.000**

(*) significance difference (**) highly statistical significance difference (***) highly statistical significance difference

Table (4): Distribution of Nurses Demographic Data and Protection of Patient's Right at Assiut University Main Hospital n= 172

Personal characteristics		Patients				P-value
		Protect		Ignore		
		No.	%	No.	%	
Gender	Male	14	8.2	6	3.5	0.083
	Female	133	77.3	19	11	
Age	< 30	35	20.3	12	6.9	0.40
	30 - < 40	66	38.4	7	4.1	
	≥ 40	46	26.8	6	3.5	
Department	General Medicine	27	15.7	17	9.9	0.000***
	General Surgery	48	27.9	7	4.1	
	Private sector	72	41.9	1	0.5	
Marital status	Single	26	15.1	5	2.9	0.781
	Ever married	121	70.4	20	11.6	
Years of ex.	≤10	23	13.4	7	4.1	0.003**
	> 10	124	72.1	18	10.4	
Residence	Rural	100	58.2	9	5.2	0.005**
	Urban	47	27.3	16	9.3	
Protect patient rights total		147	85.5	25	14.5	0.000**

(*) significance difference (**) highly statistical significance difference (***) highly statistical significance difference

Table (5): Distribution of Patients Personal Characteristics at Assiut University Main Hospital (No.= 200)

Personal characteristics		No.	%
Gender	Male	92	46.0
	Female	108	54.0
Age	< 40	81	40.5
	40 - < 50	34	17.0
	50 and more	85	42.5
Department:	General Medicine	70	35.0
	General Surgery	70	35.0
	Private sector	60	30.0
Marital status	Single	35	17.5
	Ever Married	165	82.5
No. of admissions	1 st admission	112	56.0
	2 nd admission and more	88	44

Table (6): Distribution of Patients Personal Data and Satisfaction regarding nurse's therapeutic communication skills at Assiut University Main Hospital (No.= 200)

Personal data		Patients Satisfaction				P-value
		Satisfied		dissatisfied		
		No.	%	No.	%	
Gender:	Male	82	41	10	5	0.33
	Female	84	42	24	12	
Age	< 40	65	32.5	16	8	0.353
	40 - < 50	31	15.5	3	1.5	
	50 and more	70	35	15	7.5	
Departments	General Medicine	58	29	12	6	0.000** *
	General Surgery	48	24	22	11	
	Private sector	60	30	0	0	
Marital status	Single	31	15.5	4	2	0.334
	Ever-married	135	67.5	30	15	
Admissions no.	1 st admission	94	47	18	9	0.537
	2 nd admission and more	72	36	16	8	
Total satisfaction		166	83	34	17	0.000** *

(*) significance difference (**) highly statistical significance difference (***) highly statistical significance difference

Table (7): Correlation Matrix between Nurse's Therapeutic Communication Skills, and Protecting Patient's Rights and Patient's Satisfaction at Assiut University Main Hospital (No.= 172)

Therapeutic communication dimension		Preliminary relation	Attention	Understanding	Job duties	Communication skills score	Protect Patient Rights
Preliminary Relation	r-value	1					
	P-value						
Attention	r-value	0.571	1				
	P-value	0.000*					
Understanding	r-value	0.526	0.624	1			
	P-value	0.000*	0.000*				
Job duties	r-value	0.590	0.561	0.619	1		
	P-value	0.000*	0.000*	0.000*			
Communication skills score	r-value	0.798	0.843	0.840	0.832	1	
	P-value	0.000*	0.000*	0.000*	0.000*		
Protect Patient rights	r-value	0.483	0.514	0.616	0.450	0.624	1
	P-value	0.000*	0.000*	0.000*	0.000*	0.000*	

Table(8): Multiple Linear Regression Analysis between Patient's Satisfaction, Nurse's Therapeutic Communication Skills, and Protecting Patient's Right at Assiut University Main Hospital (No.=200)

Therapeutic communication dimension	Unstandardized coefficients		Standardized coefficients	t	P-value	95.0% CI	
	B	SE	Beta			Lower	Upper
Preliminary relation	0.713	0.612	0.120	1.164	0.246	-0.496	1.921
Attention	0.251	0.529	0.051	0.475	0.635	-0.792	1.295
Understanding	-0.002	0.617	0.000	-0.003	0.997	-1.219	1.215
Job duties	0.390	0.583	0.071	0.668	0.505	-0.762	1.541
Patient rights	0.041	0.255	0.016	0.162	0.871	-0.462	0.544

Dependent Variable: Patient satisfaction score

Table (1); Showed that highest percentage (**42.5%**) of nurses aged from (30- 40) years old and working at private departments. The majority of study subject were female, married, and had more than ten years of experience (**88.4%, 82%, and 82.6%**) respectively. Also more than two third of nurses were lived in rural area (**67.4%**).

Table (2); Displayed that nurses working at Assiut university Main hospital achieve highest mean score for understanding dimension and the lowest mean score for attention dimension.

Table (3); Revealed that there were a highly statistical significant difference regarding departments, years of experience, residence and nurse's therapeutic communication skill (**0.003****, **0.003****, **0.002**** and **0.000****) respectively.

Table (4); Ddisplayed that there were a statistical significant difference regarding department, years of experience, residence, and nurse's protection of patient's rights (**0.000*****, **0.003****, **0.005****, **0.000****) respectively.

Table (5); Illustrated that, more than half of patients were female and admitted to the hospital for the first time (**54.0%**, **56%**) respectively. Less than half of them aged less than 40 years old, the majority of them were married and more than two third of

them admitted to general medical and surgical units(**70%**).

Table (6); Revealed the majority of patients (**83%**) were satisfied with nurse's therapeutic communication skills. There were a statistical significance difference regarding departments and patient's satisfaction

Table (7); Depicted that there are positive correlation between nurse's therapeutic communication dimensions as follows; (Preliminary relationship, attention, understanding, and job duties), protection of patient's rights and patient's satisfaction with highly significant difference (**P-value 0.000***).

Table(8): Illustrated the order of nurse's therapeutic communication dimension and protecting patient's rights which impacted positively on patient's satisfaction as follow highest satisfaction level with preliminary relationship followed by job duties, attention, patient rights, lastly understanding (**P-value 0.246**, **0.505**, **0.635**, **0.871**, **0.997**) respectively.

Discussion:

Most studies focused entirely on the nurse's perception regarding their therapeutic communication skills and neglecting the patients' perception of the nurses' communication skills²⁸. Although nurses had the clinical and practical

competencies, patients still complaints of communication failure with nurses' because nurses were given patient care but experienced inability to adequately convey a sense of care ²⁹. A lot of nurses not interesting in protecting patient's rights in health care facilities ¹⁸.

There are certain factors nurses may encounter which makes them communicate in non-therapeutic way such as heavy workload, hard and complex nursing tasks, lack of recreation at work, cultural in compatibility, and sex differences between nurses and patients successful and effective healing process requires that all health care team especially nurses who spend the majority of time with patients must develop and maintain therapeutic relationship with patients and must protect patient's rights from any violence ³⁰.

The present study results revealed that the highest percentage of nurses aged from (30- 40) years old and working at private sectors (**42.5%**). Also the majority of nurses were female, married, and had more than ten years of experience (**88.4%**, **82%**, **and 82.6%**) respectively. Finally more than two third of them were lived in rural area (**67.4%**). More than half of patients were female and admitted to the hospital for the first time (**54.0%**, **56%**) respectively. Less than half of them aged less than 40 years old, the majority of them

were married, and more than two third of them admitted to general medical and surgical units (**70%**).

As shown in the present study results regarding nurses therapeutic communication dimensions nurses' achieve the highest mean score for understanding dimension while lowest mean score for attention dimension this result go in the same line with ³¹ who found that greater understanding were present between nurses and patients with highly significant effect on nurses and patient satisfaction also ⁷ agreed with this finding as they found that nurses achieve highest mean score in understanding what patients said and lowest mean score for giving full attention to patients problems and demands.

This result in contrast with study done by ³² as they concluded that nurses achieve highest mean score in demonstrating attending behavior and lowest mean score with preliminary relationship.

The results of the present study may be due to nurses try to understand patient's complains, culture, values and needs by a combination of the following behavior; asking patients about well-being, become a good listener to the patient's words, emotion, and body language focuses on the patient perception and preference, not try to judging them, and try to understand his/her needs and problems,

According to the present research finding there were statistical significant effect of departments where nurses works in, nurses years of experience, and nurses residence on nurse's therapeutic communication skills, and protecting patient's rights (table 3,4) this result was congruent with³³ who found that from factors that affect nurses protection of patient rights was years of experience, and work position. Also ³⁴ agreed with the present study as he examined therapeutic communication experienced by nursing students and found that place of residence has significant effect on student's therapeutic communication. Similarly,³⁵ they founded that hospitals department (private and non-private) in Tehran (Iran) have significant statistical differences in protecting patient's rights.

Also this result inconsistent with study done by³⁶as they found that only sex difference between nurses and patients has negative significant effect on nurse's therapeutic communication skills⁸ was in-agreement with the present study as he founded that only culture has significant effect on nurses protection of patient's rights

The results of the present study may due to there's a different in nurses personality at Assiut University Main Hospital as depicted by the present study the more the

years of experiences nurses have the more therapeutic communication skills were developed as nurses become more wiser and good relationship with hospital staff makes nurses satisfied, which in return was reflected in dealing with patients also nurses in private sector achieve higher score than other nurses in developing therapeutic communication skills and protecting patient's rights this may due to in private sector nurses deals with upper and middle social class so they needs special strategies when dealing with them, also regulations and rules which were applied in private sector, finally work load in private sector less than non-private sector, as regard place of residence nurses comes from rural areas communicate more therapeutically and protecting patient's rights than nurses come from urban areas.

As indicated by the research findings there was statistical significant differences regarding departments and patient satisfaction this finding was consistent with ^{37,38} as they founded that patient satisfaction in government hospitals at primary, secondary, and tertiary level less than patient satisfaction in private hospitals. Those finding may due to nurses supervisors and head nurses regularly assess patients satisfaction level in private sector so nurses modify behavior which not acceptable by patients' as any patient

complaint will be considered also, nurses work load were less when compared with non-private sector (free sector) in which nurses experienced high work load which may leads to neglecting patients emotions leads to lower patient satisfaction rate than private sector.

The present study results depicted that there were positive correlation between nurse's therapeutic communication dimensions, protection of patient's rights and patient's satisfaction with highly significant difference. Found that there were congruent with the present study findings as they found nurse's therapeutic communication affect patient's satisfaction with highly statistical significant difference³⁹. Also the result go in the same line with the present study as the author found that there is a positive correlation between nurse's therapeutic communication skills and patient's satisfaction in the emergency unit of the Islamic Hospital Surabaya with highly significant difference⁴⁰. Nurse's therapeutic communication affect positively patient's satisfaction with highly statistical effect⁴¹.

Similar findings by⁴² which were consistent with the present study findings as they found that there were positive correlation between nurse's protection of

patient's rights and patient's satisfaction with highly significant difference.

Conclusions; In the light of the study results, the following conclusions can be drawn:

- As regard nurse's therapeutic communication dimension highest mean score related to understanding and lowest mean score related to attention.
- There were significant effects of the department in which nurse's works in, years of experience, and residence on nurse's therapeutic communication skills.
- There were significant effects of the department in which nurses' works in, years of experience, and residence on nurse's protection of patient rights.
- The majority of patients were satisfied but patients admitted to private sector were achieving highest satisfaction score.
- There were positive correlation between nurse's therapeutic communication, protection of patient's rights and patient's satisfaction with highly significant difference.
- By ordering highest nurse's therapeutic communication dimension that will affect patient's satisfaction was preliminary relationship and the

lowest was understanding

Recommendations; Based on the forgoing conclusions, the following recommendations are proposed:

- Educational programs are necessary to counsel health-care professionals with regard to language, health literacy, and empathetic communication needs
- In-services training for nurses who not communicate in therapeutic way
- Orient patients to be increase their awareness about their rights
- Research report will be given to authorized person At Assiut University Main Hospital

References

- 1- **Laschinger, J. Mcgillis, H., Pedersen, K. & Almost, E.:** Patient satisfaction with nursing care quality questionnaire Journal of Human psychology 2015: 11(2):P.p.18-20.
- 2- **Nkeng, M.:** Guide lines for promoting effective therapeutic communication in nursing. retrieved on 2016:Jan 25, 2012 From [Http://Ezinearticles .Com/?Guidelines-For-](http://Ezinearticles.Com/?Guidelines-For-).
- 3- **Robbin, P.Stephen T.:** Organizational behavior, Prentice Hall of India, New Delhi, 2017:P.p. 210-220.
- 4- **Aswathappy, K.:** Organizational Behavior, Himalaya Publishing House, Mumbai Journal of Human Psychology 2017:2(3P.p.12-18.
- 5- **Park, E.,and Song, M.:** Communication Barriers Perceived by Older Patients and Nurses. International Journal of Nursing Studies; 2005:42 (2): P.p. 159 –166.
- 6- **Ayman, M., Ahmad, E., Imad, and Anani, R.:** Patient's satisfaction about nurses' competency in practicing communication Skills Life Science Journal 2014:11(3)P.p. 23-34.
- 7- **Lawrence, R., Jeanne, S. and Melinda, S.:** Effective communication help guide.org reprint. prentice hall last updated: October 2017 P.p.233-238.
- 8- **Jegede, A.:** African culture and health. Book Wright Publishers. Ibadan. 2013: P.p. 100-134.
- 9- **Owumi, B.:** Society and health, social pattern of illness and medical care. in readings in medical sociology. E.A. Oke. and B.E.Owumi. Eds. Resource Development and Management Services 2013, Pp196- 208.
- 10- **Kehoe, D.:** Effective communication skills the great course [Http://www. Atspotcafe.Com/Ebook/Effective%20c ommunication2014%20skills](http://www.Atspotcafe.Com/Ebook/Effective%20communication2014%20skills)
- 11- **Daniel, G.:** Working with emotional intelligence sighted in Effective communication skills the great courses corporate headquarters 2017:P.p.20-22.
- 12- **Fawcett J.:** Contemporary nursing knowledge: Analysis and evaluation of

- nursing models and theories (2nd ed.). Philadelphia: davis company. 2015:P.p. 24-27.
- 13- **Peplau, H.:** Interpersonal relations in nursing. (1st ed.). New York, NY: Putnam Prentice Hall.2016: P.p. 690-696.
- 14- **Marshelle,T.:** Improving nurse-client relationships by developing a communicating plan. 2017: 19 (3): P.p.213-215.
- 15- **Torcson, P.:** Patient satisfaction: The hospitalist's role.[http:// www.article/2015/PatientsatisfactionHospitalists_Role.html](http://www.article/2015/PatientsatisfactionHospitalists_Role.html).
- 16- **Maat, S.:** Doctors increasingly shutout of hospitals' patient experience efforts <http://www.amednews.com/article/2016/business>
- 17- **Pelletier, L. and Stichler, J.:** Patient-centered care and engagement. the journal of nursing administration, 2014: 44(9), P.p.473-480.
- 18- **Molina, Y., Hohl, S., Rodriguez, E., and Beresford, S.:** Understanding the patient –provider communication needs and experiences of latina and non-latina white women following an abnormal mammogram. Journal of Cancer Education. 2014: April 22 Available @ <http://www.ncbi.nlm.nih.gov/pubmed/>
- 19- **Nejad, E., Begjani, J., Abotaleb, G., Salari, A. and Ehsani, S.:** Nurses awareness of patient's rights in a teaching hospital; journal of medical ethics and history of medicine 4: 2. Published online Feb 26. 2011.
- 20- **Rathor, M., Rani, A., and Shah, A.:** Hospitalized patients' awareness of their rights: a cross-sectional survey from a tertiary care hospital on the east coast of peninsular malaysia. Singapore Med J. 2016: 50(5):P.p. 494-9.
- 21- **Ali, F. &Taheri, H.:** Scrutinizing the Level of Patients' Rights charter from the working nurses' points of view in educational hospitals. Abstracts of the second international conference on Iran medical ethics, Tehran university of medical science, 2-3. retrieved November,10:2016.
- 22- **Ingram, R.:** The nurse as the patient advocate university of Portsmouth. department of humanities: school of social and historical studies, august@2010.<http://www.richard.ingram.nhspeople.net/student/files/advocacypd>.
- 23- **Ware, L., Bruckenthal, P., Davis, G., O'Conner,V.:** Factors that influence patient advocacy by pain management nurses: for pain management nursing survey 2011:12(1): P.p. 25–32.

- 24- **Oliveira, C.:** Barriers of patient advocacy role in clinical nursing practice: an integrative review of the. 2015: literaturereviewcontent.cgi retrievedfromhttp://via.library.depaul.edu/cgi/viewcontent.cgi?article=1002context=son-research-synthesis
- 25- **Schleselman, J.:** Case-control studies. oxford university press, New York . 2012:102(21):Pp. 30-32.
- 26- **Marhamati, S., Amini, M., Mousavinezhad, M., and Nabeiei,P.:** Design and validating the nurse-patient communication skills questionnaire Journal of Health Management and Informatics. 2016:3 (2): P.p.57-63.
- 27- **Farsapoor, A.:** Necessity of observing patient's rights: A Survey on the attitudes of patients, nurses and physicians, journal of medical ethics and history of medicine,1 mar;(2016: 5: (2) P.p.19-23.
- 28- **Shattell, M.:** Nurse–Patient Interaction: a review of the Literature. Journal of Clinical Nursing 2009; 13: P.p.714 –22.
- 29- **Wilkinson, S. Gambles, M., Roberts, A.,:** The essence of cancer care: the impact of training on nurses' ability to communicate effectively. Journal of advanced nursing 2002; 40: P.p. 731–738.
- 30- **Fakhr, A., Salsali, M, Negharandeh, R., Rahnavard, Z.:** Qualitative content analysis of nurse–patient communication in Iranian nursing. international nursing review 2011; 58: P.p. 171–80.
- 31- **Jason, H.:** Communication skills are vital in all we do as educators and clinicians. education for health. 2000;13(4): P.p. 157–160.
- 32- **Macdonald, L., Stubbe, M., Tester, R.:** Nurse-patient communication in primary care management bio med central nursing ltd.2013:P.p. 12-20.
- 33- **Limjaroen, K.:** Perceived patients, rights by health care worker and patients at bamrasnaradura institute, publication thesis. 2004: P.p.125-130.
- 34- **Unal, S.:** Evaluation the effect of self-awareness and communication techniques on nurses' assertiveness and self-esteem. contemporary nurse. 2012: 43(1), P.p. 90-98.
- 35- **Farsinejad M, Bazmi S, Teymouri B, Resane S.:** Comparison of patient satisfaction from observing patients' rights in selected public and private hospitals in Tehran. med ethics. 2012; 6(3) :99–112.
- 36- **Anoosheh M, Zarkhah S, Faghihzadeh S, Vaismoradi M.:** Nurse–patient communication barriers in Iranian nursing.

- International Nursing Review; 2009;56 (2): 243–9. 18.
- 37- Sodani, P., Kumar, R., and Srivastava, J.:** Measuring patient satisfaction: a case study to improve quality of care Indian journal of community medicine. 2010;35(1): P.p52-56.
- 38- Goel, S., Sharma, D., and Bahuguna, P.:** Predictors of patient satisfaction in three tiers of health care facilities of north India. Journal of community medicine & health education. 2014;13(2) P.p.100-102
- 39- Iannuzzi, J., Kahn, S., Zhang, L., & Monson, J.:** Getting satisfaction: drivers of surgical hospital consumer assessment of health care providers Journal of Surgical Research. 2015;197(3), P.p. 155-161
- 40- Sulistyorini S.:** Correlation between applications of therapeutic communication with patient satisfaction in emergency room Islamic hospital Surabaya international health conference. 2017: July 13-14.
- 41- Abyaneh, S. and Rezaei, P.:** Assess patient's satisfaction of nurse's performance. SM J Nurs. 2017; 3(1) P.p.1006-1010.
- 42- Farzianpour, F., Foroushani, A. and Nosrati S.:** Relationship between patient's rights charter' and patients' satisfaction published online Sep 2016;16(1): P.p.476-469.

تأثير التواصل العلاجي للممرضات وحماية حقوق المريض على رضا المرضى

لمحة عامة : التركيز في هذه الايام وبشكل اساسي على التواصل العلاجي للممرضات كمتغيرات أساسية لحماية المرضى من الإجهاد النفسي ، وتعريفهم ببيئة المستشفى. **الهدف من الدراسة :** تحديد تأثير الاتصالات العلاجية للممرضة ، وحماية حقوق المريض على رضا المرضى . **مكان إجراء البحث :** أجريت هذه الدراسة في المستشفى الرئيسي بجامعة أسيوط **العينة:** واشتملت العينة المستهدفة من هذا البحث علي: كل ما هو متاح من التمريض وعددهم (172) ممرض كما تم اختيار عينة ممثلة عشوائيا من المرضى وعددهم (200) مريض. **ادوات البحث :** تم استخدام عدد 2 استبياناه الاولي استبانة مكونة من ثلاثة أجزاء. تضمنت **الجزء الأول:** استمارة البيانات الشخصية للممرض. **الجزء الثاني:** التواصل العلاجي للممرضات. **الجزء الثالث:** حماية حقوق المريض. الاستبانة الثانية مكونة من جزئين . تضمن **الجزء الأول:** استمارة البيانات الشخصية للمرضى. **الجزء الثاني:** رضا المريض. **النتائج الرئيسية :** حققت الممرضات أعلى متوسط حسابي لفهم مشاعر وأحاسيس المرضى والذي لديهم خبرة في بيئة المستشفى مع معاناة المرض . وكذلك لتلبية احتياجاتهم . كما حققت أقل متوسط حسابي للانتباه لتغيرات المرضى اللفظية والغير لفظية. هناك فروق فردية ذات دالة احصائية بين الاقسام , سنوات الخبرة , محل الإقامة , مهارات التواصل العلاجي و حماية حقوق المرضى. كان أغلب المرضى يشعرون بالرضي في مهارات التواصل لدي الممرضات وحمايتهن لحقوقهم. **الاستنتاجات :** يتواصل معظم الممرضات بطريقة علاجية وأغلب المرضى يشعرون بالرضا عن التواصل العلاجي للممرضات لكن أعلى معدل رضا حققه المرض بقسم العلاج الخاص. **التوصيات :** بناءا علي نتائج البحث يوصي بالاتي: التدريب أثناء الخدمة للممرضين والممرضات لتطوير مهارات الاتصال العلاجي لمن لم يتواصلوا بشكل علاجي. توجيه المريض لزيادة وعيهم بحقوقهم.

الكلمات الأساسية: التواصل العلاجي ، الممرضات ، حقوق المرضى ، رضا المرضى .

رقم الايداع
(207) لسنة 2012