Psycho-Educational Program for Psychiatric Nurses to Protect Themselves and Others from the Incidence of Acute Psychiatric Inpatients Aggression

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Abstract

Background: Patients aggression acts are a part of the average working day for psychiatric nurses. Identifying the risks in practice & adapt knowledge are the first steps in developing safe work practices and enhance positive attitude toward patient aggression. **Aim**: this study aimed to evaluate the effect of psycho-educational program for psychiatric nurses to protect themselves and others from the incidence of acute psychiatric inpatients aggression. **Research design**: A quasi-experimental design two groups control and study groups was utilized in this study. **Setting:** the study was conducted at the Psychiatric Mental Health Hospital in Banha City. **Sample:** A purposive sample of 100 nurses was constituted the study subjects, which divided into two groups study and control group (pre/post/ test) 50 nurses for each group. Five tools were used for data collection, **Tool (1)**: A structured interviewing questionnaire consisting of two parts: to assess Socio-demographic data for nurses. **Tool (2)**: Attitudes Towards Aggression Scale. **Tool (3)**: Knowledge Questionnaire about aggression. **Tool (4)**: Skills Questionnaire about dealing with patient aggression. **Tool (5)**: The Perception of Prevalence of Aggression Scale. **The Results**: of this study revealed that the majority of study sample had positive attitude, adequate knowledge, competent skills and highly level of perception of aggression post program compared with pre educational program. **Conclusion**: There is positive significant correlation between skills, attitude and knowledge of study group at post the educational program. **Recommendation**: Aggression-management training programs should be given to all psychiatric nurses to enhance their confidence, knowledge and skill on management of patients aggression.

Key words: Aggression, Knowledge, Skills, Attitude, Perception, Nursing.

Introduction:

Aggression can be defined as a behavior that is intended to harm another person who is motivated to avoid that harm. It is expressed in many forms, ranging from relatively minor acts, for example, verbal abuse, to unprovoked serious to severe acts, for example, physical attacks (**Al-Omari et al., 2019**). Patient aggression on staff remains a challenge and poses consistent complications to inpatient psychiatric hospitals and staff. Patient aggression has been described as one of the greatest concerns faced by nurses in psychiatric hospitals. Both verbal and physical aggression may result in physical or emotional harm to the staff. This harm may be in the form of physical injury, hurt feelings, or damaged social relationships (**Ezeobele et al., 2019**).

Aggression of psychiatric patients is viewed as a major challenge locally and internationally. Aggression against nurses was consistently high with up to 86% of nurses affected by violent and aggressive behavior of patients (**Al-Omari et al., 2019**) & (**Bekelepi, 2015**). In acute care psychiatric settings, healthcare workers especially the nurses are often exposed for the different types of aggressive behavior, such as verbal assault (46.0% to 78.6%), threats (43.0% to 78.6%), and sexual harassment (9.5% to 37.2%) As a consequence, Staff nursing may suffer from The common risk factors for aggression against nurses, including:, patient characteristics such, as(having a severe mental disorder, a history of aggressive behavior or substance abuse); situational factors such as (delays in service); and staff-related factors such as (young age, low qualification and little work experience nurses' gender lack of empathic communication skills) because the nurses with inadequate communication skills are more likely to be targets of aggression,

physical injuries emotional damage depression, posttraumatic stress disorder (PTSD), anxiety, sleep disorders, and burnout due to the aggressive behavior also has a negative detrimental impact on staff work performance (**Lantta et al.,2020**). work overload and long working hour (**Pekurinen et al., and Yagil & Dayan, 2019**).

Recent perspectives for Management of aggression support the use of integrative models that emphasize preventive methods of management and the use of non-restrictive interventions. This approach emphasizes the use of non-physical methods and acknowledges the role of the healthcare worker in providing effective communication, and de-escalation techniques. In high-income countries, management of aggression has largely moved towards the use of non-coercive methods, and training nursing staff in management of aggression skills (e.g. de- escalation) has been associated with reduction in the use of restraint (**Coneo et al., 2019**).

Increasing nurses knowledge, skills and improve positive attitude toward patient aggression and its care is very important (**Maguire et al., 2019**).So Aggression Prevention Program was designed to assist nurses to make decisions about the most suitable aggression prevention interventions

most likely because poor communication increases anger and anxiety in patients, environmental factors such as (heavy workloads; Problems in psychosocial work environments example, (a lack of social support, interpersonal conflict, poor relationships with superiors, job insecurity, low participation in decision making, a lack of control over one's work, The programs of education and training for high risk workers in order to prevent workplace aggression, generally aim to help workers

develop skills to better recognize and react to aggressive situations, and to better cope with their consequences. Comprise any of a broad range of techniques to enhance knowledge and understanding of risk assessment and control strategies" 35 studies conducted among nurses that assessed the effectiveness of workplace aggression education and training programs. Their results showed that the majority of these programs decreased aggression and violence, improved knowledge and help to increased positive attitude **(Guay et al., 2016)**.

The nursing staff has played an essential role in the mental health since well-trained nurses with both theoretical knowledge and practical experience can perform assessments, provide assistance as to clinical and psychosocial aspects of individuals, as well as help develop health policies in their own country .In the area of psychiatric nursing care is seen as vital in the delivery of safe care. Improving patient safety is serious to enhance health care delivery **(El-Azzab & El-Aziz, 2018)**.

Significance of the study

The prevalence of aggression varies between countries. In Egypt, the prevalence of verbal abuse and physical abuse towards nurses was 69.5% and 9.3% respectively, in Saudi hospitals, more than two-thirds 67.4% of health care workers reported they were victims of violence and nurses were more likely to be exposed to work place violence than physicians, In Jordon, 75% of nursing staff exposed to work place aggression. The prevalence of aggression between psychiatric inpatients ranges from 6.1% to 35%. A many of international studies reported an incident rate of aggression is over 32% in psychiatric hospitals which aggression prevalence in it

about 18%, meaning that almost 1 out of 5 patients committed a violent act while admitted to an acute psychiatric ward. However, in forensic psychiatry settings, which reported that of 58% of aggressive incidents, although up to 70% of staff in forensic psychiatry, have reported being assaulted by psychiatric patients *(Ezeobele et al., 2019)*.

Aim of the study:

This study aimed to evaluate the effect of psycho-educational program for psychiatric nurses to protect themselves and others from the incidence of acute psychiatric inpatients aggression.

Research hypothesis:

- Psycho-educational program will improve knowledge, attitude and skill of psychiatric nurses regarding prevention and management of aggression.

- Increase knowledge, attitude and skills of psychiatric nurses about prevention and management of aggression will minimize the incidence of acute psychiatric inpatients aggression.

Subject and Methods

Research design:

A quasi-experimental design two groups control and study group was utilized in this study.

Setting: This study was conducted at the Psychiatric Mental Health Hospital in Benha City, Qalubia Governorate, which is affiliated to General Secretariat. It has 6 inpatient (4 males, 1 female and 1 department for addiction) and outpatient. The hospital with a capacity of 211 beds. It works 24 hours per day, 7 days per week.

Sample:

A purposive sample of 100 nurses divided into two equal groups the first 50 nurses included in study group and second 50 nurses was included in control group divided by lottery method, (pre/post/ test) was utilized to achieve the aim of the study. The sample size has been calculated using the following equation:

$n= (N×P (1-p))/([[N-1× (d^2÷ z^2)]+p(1-p)])$ at power 80% and CI 95%

Tool (1): Structured Interview

Socio-demographic data for nurses:-

This tool was developed by the researcher based on pertinent literature and guidance of supervisors to elicit data

about the personal characteristics such as age, sex, marital status & level of education, residence and data related his/her work such as the job, number of years of experience in nursing field, number of years of experience in psychiatric nursing field, department of work of psychiatric hospital & number of attendance of any training about managing of aggression.

Tool (2): Attitudes Towards Aggression

Scale (Finnema etal.,1994)

Structured interview questionnaire Attitudes Towards Aggression Scale (ATAS), This tool was developed by *Finnema etal., (1994)* and updating jury by *Wafa, (2009)*.used to measure attitudes towards aggression consisting 32 items is presenting and representing three types of attitudes towards aggression. Aggression as harming reaction, normal reaction and functional reaction. Every statement was given a likert- type scale ranging from, agree (equal = 3), slightly disagree (equal =

2) and disagree (equal = 1) and reversed in negative questions.

Scoring system of attitude scale

❖ Negative attitude toward patient aggression less than 75% equal ≥72 degree.

❖ Positive attitude toward patient aggression from 75% and more equal ≤ 72 degree.

Tool (3): Knowledge Questionnaire (Bekelepi, 2015)

Self administrated questionnaire which was developed by *Bekelepi, (2015)*, consists of 37 closed ended questions, Yes equal (1), No equal (0) It is relating to the knowledge of nurses about aggression of patient in the following points causes of aggression, Environmental factors causing aggression, Signs of aggression, Patient factors contributing to aggression, Factors preventing patient aggression, Management of patient with aggression

Scoring system of knowledge

❖ Inadequate knowledge about patient aggression less than 75% equal less than 56 degree.

❖ Adequate knowledge about patient aggression from 75% and more equal ≤ 56 degree.

Tool (4): Skills Questionnaire (Bekelepi, 2015)

Self administrative questionnaire which was developed by *Bekelepi, (2015),* consisted of 11 questions closed ended questions, Yes equal (1), No equal (0) that related to the skills and training of nurses to manage aggression of patient in the following points Skills items to identify patients with aggression, awareness of policies and procedures of managing

aggression. Training items pertaining to aggression.

Scoring system of skills

- ❖ Incompetent skills for dealing with patient aggression less than 75%.
- ❖ Competent skills for dealing with patient aggression from 75% to 100%.

Tool (5): The Perception of Prevalence of Aggression Scale (POPAS) questionnaire

The questionnaire was developed by *Oud et al., (2000)*. This scale used to measure the nurses perceptions of the prevalence of aggression, The POPAS is consisted of a 17 items such as verbal aggression, humiliating aggressive behavior, threatening physical aggression, destructive aggressive behavior, The response options ranged from never equal (1), sometimes equal (2) and frequently equal (3).

Scoring system was consisted of:

- ❖ Nurses perceptions of the prevalence of aggression is low if the score less than 75%.
- ❖ Nurses perceptions of the prevalence of aggression is moderate from 75%.
- ❖ Nurses perceptions of the prevalence of aggression is high from ≤ 75%.

Pilot study

A pilot study was carried out on on 10 of nursing staff in the Psychiatric Mental Health Hospital who met the inclusion criteria to ensure the clarity, applicability and feasibility of the study tools, and necessary modifications were done. Such as made modification in perception scale that excluded the question asked for nurses about sexual rape (To what extent have you been confronted with sexual assault/rape during the last year in the course of your work?) due to that was no significant level, So that scale became 16 items after modified. On the basis of the pilot results some modification in the tools such as changed scoring system for Attitude Towards Aggression Scale &The Perception of Prevalence of Aggression Scale (POPAS) to made nurses options included between three degrees instated five degrees, made adaptation of Arabic translation to became easy understandable for nurses.

Content validity:

The validity of tools had done through three expertise professors of Psychiatric & mental Health Nursing Specialties, from different Faculties of Nursing. The tools were modified based on their guidance and views.

Reliability:

All tools for data collection were tested for its reliability using test retest reliability and all tools were proved to be strongly reliable.

Ethical considerations

- Anonymity, confidentiality and privacy of the nurses were assured.
- Voluntary participation and right to refuse to participate in the study was emphasized to the subjects.

Field work:

The current study was carried out in three phases; assessment phase, implementation, and evaluation phases.

Part (1): Assessment phase:-

- The researcher selects the studied subject (nursing staffs) who meet the inclusion criteria.

- Nursing staff oral consent for participation in this study was obtained.

- The purpose of the study was explained

- Dividing the selected staff nurses into the study group and control group - They were randomly assigned to two equal groups' one control group and the other was the study group using coin tossing .

-The control group (50) who do not receive the educational program and the study group (50) who receive the educational program

- Data was collected from nursing staff (control group and study group) by using study tools (pre-test) & (post – test).

Part (2): Planning phase:-

- An extensive literature related to the study area was done including electronic dissertations, available books, articles, research papers and periodicals.

-Based on the review of the related literature using the electronic dissertation, available books, and articles, doctoral dissertation, researches. The researcher developed the plan to be followed in the psycho-educational program.

-The researcher plan articulates for describing the aim of the study to

participants, the actual collection of data and recording information. A guide booklet was prepared by the researcher and reviewed by a jury.

Part (3): Implementation phase: -

❖ Data collection (pre - test)

Data collected in this study was being carried out at the Psychiatric Mental Health Hospital in Benha City; the researcher introduced herself to the nursing staff then explained the aim of the study to every one of them. An individual interview to collect the necessary data by using the tools for data collection was conducted for every nurse who met the inclusion criteria and accepted participation in the study. The data was collected from the both control and study groups from 1 / July – 31 August- 2020 the researcher attempted to collect data more early but delayed due to corona virus circumstances. The pre-test collected from each subject two days / week , 6 nurses in each day , 12 nurses each week except last two week of each month collect data from 14 nurses per week, the time needed for each nurse to fulfill the tools was approximately 15 to 20 minutes .

❖ Implementation of the program

- The study group (50 nurses) were divided into five large groups each group contain 10 nurse . The researcher divided the implementation phase of the program into two parts which included 7 sessions (2) theoretical or cognitive sessions & (4) practical or skillful sessions and the last session focus on revision main point of the program. The main focus of program sessions around that the

following:-

Session (1) overview about aggression, session (2) factors contributing to aggression. session (3) coping strengthen with aggression. session (4) seclusion and restraint. session (5) communication skills, session (6) environmental intervention for aggression. session (7): revision of the program sessions content. The researcher was implemented the program to the nursing staff from 2/ September to 13th December, in the morning shift 8 A.m.: 2 P.m. in teaching room, two days in a week(Sunday & Wednesday) Each Session implemented for 45 - 60 min /day . Each subgroup was attending a total of 7 sessions. Each group was taken 6 session of the program in 3 weeks, two sessions pre week.

-This was achieved through several teaching methods such as lecture, discussions, brain storming, and demonstration, re- demonstration, giving examples & modeling. Data show, video, pictures and booklet were used as media to facilitate explanation and to be a reference for them.

-At the end of each session, summary, feedback, further clarifications were done for vague items and the researcher give the nurses homework.

-All groups were finished program session at total period of 16 weeks (three months & 10 days).

Part (4):- Evaluation phase:

This phase aimed at estimation of the effect of psycho-educational program for psychiatric nurses to protect themselves and others from the incidence of acute psychiatric inpatients aggression. This was done at the end of the program by using study tools (post-test).

Statistical analysis:

All data collected were organized, tabulated and analyzed using appropriate statistical testes. The data were analyzed using the Statistical Package for Social Sciences (SPSS) version 21. In which data were presented using descriptive statistics in form of number and percentages, mean, standard deviation. As well as test statistical significance and associations by using Chi-square test (x^2) and linear correlation coefficient (r) and matrix correlation to detect the relation between variables (p- value).

Results:

Table (1): reveals that less than half of the two groups (control & study) (44.0%), (40.0%) their age range from 28 years also less than 38 years. Their mean age are (34.88 ± 7.72, 35.5 ± 8.66). Three quarter of study group (72.0%) and more half of control group (64.0%) are female. More than half of study group (58.0%) and two thirds of control group (66.0%) are married. More than one third of two groups (40.0%) are at bachelor level, Regarding residence more than half of control group (54.0%) live in rural area, While the half of study group (50.0%) live urban area.There are no statistical significance difference between study and control group regarding all items of their socio-demographic characteristics.

Table (2) show that three quarters (74.0%), (76.0%).of study and control group have nine years and more of experience. There is one half (50.0%), (52.0%) of study and control group work as nursing staff. Less than half (42.0%) of study group compared to (32.0%) from control group work in female department. There is slightly more than three quarters (76.0%) of study group compared to two thirds (66.0%) from control group have attend a number of workshop about aggression. More than half of both study and control group have 1<3 training work shop about aggression. There is no statistical significant difference between study and control group regarding all items related to occupation and experience.

Table (3) shows that there is positive significant correlation between skills used for management of patients aggression and attitude toward patients aggression of study group post\program. While there is positive significant correlation between knowledge about patients aggression and skill used for management of patients aggression among control group post the educational program in which p – value .000.

Figure (1): represent that there is no statistical significant difference between study and control group regarding positive or negative attitude toward patient aggression pre\program. While there is statistical significant difference between study and control group regarding positive and negative attitudes toward patient aggression post program.

Figure (2): reveals that there is no statistical significant difference between study and control group regarding their level of knowledge pre\program. While there is a statistical significant difference between study and control group regarding level of knowledge post program .The percentage of adequate knowledge increase from (22.0% to 86.0%) among study group post program than pre program.

Figure (3) reveals that there is no statistical significant difference between study and control group regarding their competence skill for managing patient aggression pre\program. While there is a statistical significant difference between study and control group regarding competence skill for managing patient aggression post program .The percentage of competence skill increase from (20.0% to 84.0%) among study group post program than pre\program. in study and control groups (84.0%, 22.0%) respectively.

Figure (4): reveals that there is no statistical significant difference between study and control group regarding their perception about the prevalence of patients aggression pre\program. While there is a statistical significant difference between study and control group regarding perception about prevalence of patient aggression post program. The high percentage of perception level increase from (62.0% to 88.0%) among study group post program than pre\program.

Table (1): Distribution of socio demographic characteristics of the studied nurses study and control group (N=50 for each group).

Socio- demographic characteristics	Study Group (n = 50)		Control Group (n = 50)		X^2	p-value
	No	%	No	%		
Age						
18< 28 years	12	24.0	10	20.0	0.777	.855
28 < 38 years	20	40.0	22	44.0		
38 < 48years	11	22.0	13	26.0		
48 years - and more	7	14.0	5	10.0		
Mean ± SD 34.88 ± 7.72			35.5 ± 8.66			
Sex						
Male	14	28.0	18	36.0	0.735	.391
Female	36	72.0	32	64.0		
Marital status						
Single	5	10.0	8	16.0	3.509	.320
Married	29	58.0	33	66.0		
Divorced	8	16.0	6	12.0		
Widowed	8	16.0	3	6.0		
Level of education						
Diploma	12	24.0	19	38.0	3.541	.316
Nursing institute	16	32.0	9	18.0		
Bachelor	20	40.0	20	40.0		
Postgraduate studies	2	4.0	2	4.0		
Residence						
Rural	25	50.0	27	54.0	0.160	.689
Urban	25	50.0	23	46.0		

Table (2): Distribution of occupational data of the studied nurses (study and control group) (N=50 for each group).

Occupational data	Study Group (n = 50)		Control Group (n = 50)		X^2	p-value
	No	%	No	%		
Years of experience in nursing field						
3 < 6 years	5	10.0	2	4.0	1.521	.467
6 < 9 years	8	16.0	10	20.0		
9 years and more	37	74.0	38	76.0		
Mean ± SD	14.86 ± 7.87		14.86 ± 8.46			
Years of experience in psychiatric nursing field						
3 < 6 years	5	10.0	3	6.0	0.722	.697
6 < 9 years	8	16.0	10	20.0		
9 years and more	37	74.0	37	74.0		
Mean ± SD	2.68 ± 0.58		2.64 ± 0.66			
Occupational position						
Nurse	25	50.0	26	52.0	0.040	.841
Nursing supervisor	25	50.0	24	48.0		
Department						
Male department	29	58.0	34	68.0	1.073	.300
Female department	21	42.0	16	32.0		
Do you take work shop about how to deal with aggressive patient						
No	12	24.0	17	34.0	1.214	.271
Yes	38	76.0	33	66.0		
Number of work shop on dealing with aggressive patient						
	(N=38)		(N=33)		2.138	0.830
1< 3 workshop	22	57.9	17	51.5		
3 < 5 workshop	11	28.9	11	33.3		
5 workshop and more	5	13.2	5	15.2		
Causes of non-attendance workshop	(N=12)		(N=17)		2.49	.646
Non availability of workshop at work.	3	25.0	5	29.4		
Work situation not allow attendance that workshop.	0	0.0	2	11.8		
No time.	5	41.7	4	23.5		
No need to attend any workshop.	2	16.7	2	11.8		
Other	2	16.7	4	23.5		

Table (3): Correlation between skills used for management of patients aggression and both of attitude, and perception about the prevalence of inpatient aggression among the studied nurses at post the educational program(study & control)

Correlation Skills	post program (study)			post program (control)		
	Attitude	knowledge	Perception	Attitude	knowledge	Perception
r	.514**	-.260-	.046	.167	.560**	.108
P-value	.000	.068	.751	.245	.000	.456
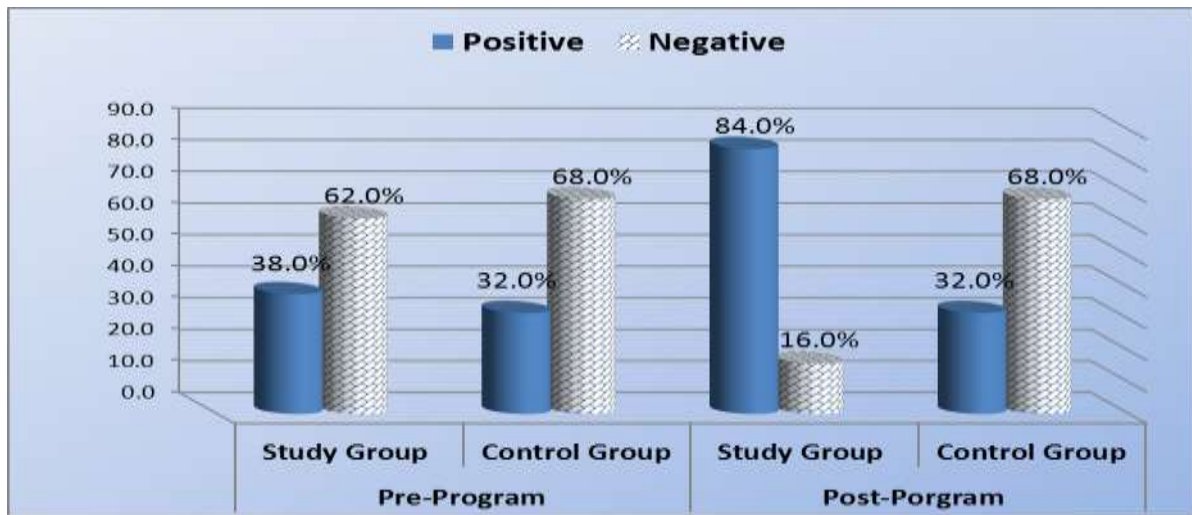
Figure (1): Distribution of the attitude toward patients aggression among (study and control group) of the studied subject at pre and post the educational program (N=50) for each group.
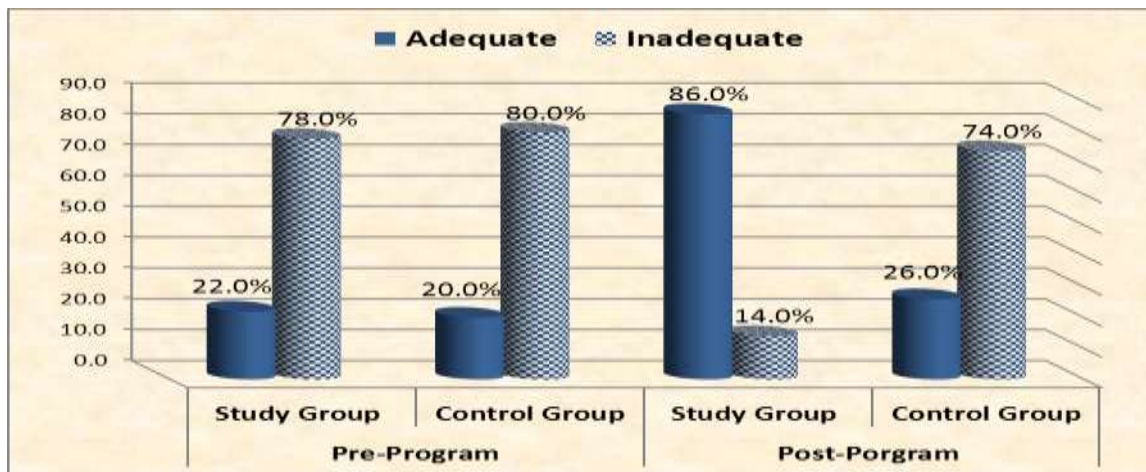
Figure (2): Distribution of level of knowledge among the (study and control group) of the studied nurses at pre and post the educational program (N=50) for each group.

Figure (3): Distribution of the level of competent skill used for management of patient aggression among (study and control group) at pre and post the educational program (N=50) for each group.
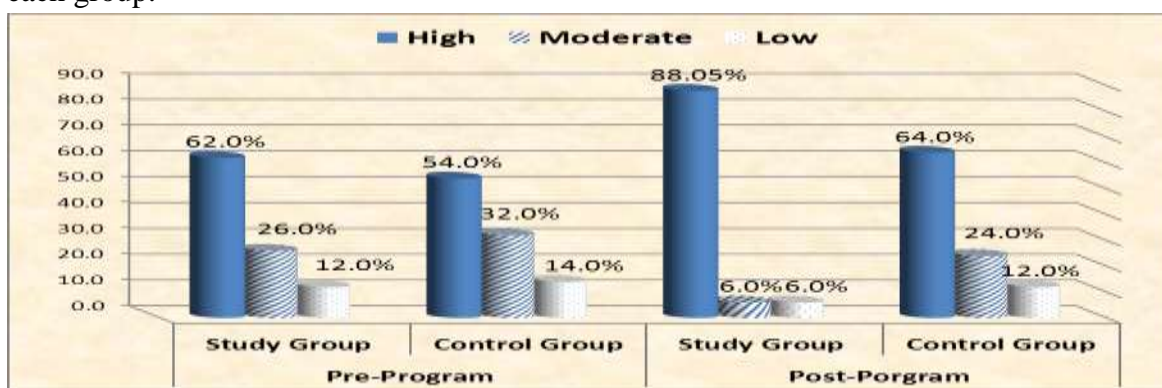
Figure (4): Distribution of the (study and control group) of the studied subject perception about the prevalence of patients aggression at pre and post the educational program (N=50) for each group.

Discussion:

The result of the present study revealed that mean age of two groups (study & control) is 34.8 ± 7.72 & 35.5 ± 8.66 respectively. The researcher see that this could be could due to the staff in this level of age more responsive to changes in their knowledge and had more motivation to improve their skills and attitude toward dealing and caring of patient this finding is inconsistent with the study of *Hallett & Dickens, (2020)* which reported that approximately one third staff participants their age range from 25–34 years. One the other hand the result consistent with the study of *Cheung et al., (2017)* which revealed that about nearly half of his study sample falling in an age range between 25 and 39 years old.

As for sex, the current study revealed that slightly more than three quarter of study group and more half of control group are female. The researcher see that this could be due to the majority of nursing staff had nursing institute and bachelor degree in which this degrees not available for male nurses in the past but become available recently in which the faculty of nursing & nursing institutes receive male and female students together. This result congruent with study of *Cheung et al., (2017)* which revealed that more than three quarter of study respondents were female. On the other hand the result disagree with the study of *Hallett & Dickens, (2020)* which represent that less than half of staff participants were female. Similarly un consistent with the study of *Konttila et al., (2020)* which

revealed that most of the participants were male.

Concerning the marital status, the present study revealed that more than half of study group and two thirds of control group are Married, The researcher see that this could be due to the staff at the youth age and this is the marriage age & child bearing period of females according to social and cultural standard. This result agree with the study of *Cheung et al., (2017)* which revealed that more than half of study nurses were married. One the other hand the result inconsistent with the study of *Cavalcanti et al., (2018)* which represented that more than two thirds of study sample married.

As regards to the educational level, the result of the present study revealed that more than one third of two study groups had bachelor in nursing science. The researcher see that this could be due to the psychiatric and mental disorders required more qualified nurses at the high level of knowledge and skills for providing nursing care and dealing with patient psychiatric symptoms with good practice the result agree with the study of *Bekelepi, (2015)* which revealed that more than one third of study participants had an advanced nursing psychiatry qualification that equal baccalaureate degree. On the other hand the result contradictive with the study of *Al- Awawdeh et al., (2016)* which showed that less than of the study participants has a baccalaureate degree

Regarding residence the result of present study showed that the half of study group live in urban area while more than half of control group live in rural area. The researcher see that this could be due to the patients of psychiatric disorders required nurses with high educational level of knowledge and skills in order to be aware of nature of psychiatric disorder and having ability for dealing with it. The result consistent with the study of *Konttila et al., (2020)* which near to the half of study sample live in urban areas.

Regarding to occupational data of the studied nurses, the result of current study showed that three quarters of study and control group at mean of 14.86 ± 7.87, 14.86 ± 8.46 respectively had nine years and more of experience. The researcher see that this could be due to less than half of study group their age ranged from 28 to less than 38years and work in their occupation more than nine years this result consistent with the study of *Bekelepi, (2015)* which represent of nearly three quarters of participants had nursing experience more than ten years. On the other hand the study un congruent with the study of *Pazvantog et al., (2017)* which revealed that more than one third of study participants had experience at psychiatric work field less than five years.

According to occupational position the result of present study showed that one half of study and control group work as nurse. The researcher see that this could be due to there is more than half of study and control group had diploma

and nursing institute and this level of education work as nurse at the psychiatric hospital, on the other hand more than one third of two study groups are at bachelor level and the minority postgraduate of two study groups work as nurse supervisor. This result disagree with the study of *Cavalcanti et al., (2018)* which showed that the majority of study sample were specialists due to professional experience of them and less than one quarter of study sample working as a nurse with experience eleven to fifteen years.

Regarding work department for nurses the result of present study showed that less than half of study group compared to one third of control group work in female department. The researcher see that this could be due to there this one female department in the hospital with capacity not less than forty female patients in which needed many female nursing staff for close observation and caring this result disagree with the study of *Al-Awawdeh et al., (2016)* which revealed that regarding to the ward of work, less than fifth of study participants work at the female admission unit. But one quarter of the study participants work at the male admission unit.

According to attending training workshops on dealing with aggressive patient the result of present study represent that slightly more than three quarters of study group have attend a number of training work shop about aggression this workshops. The researcher see that could in shape of revision of what is aggression, its

causes not focus on how to deal with aggressive patient in acute state in correct manner, so that nurses need to educational program to provide them with update knowledge about coping with aggressive patient especially in acute stage.

The result of present study revealed that there is statistical significant difference between study and control group regarding positive and negative attitudes toward patient aggression post program. The researcher see that this indicate the effectiveness of the program session and content which enhance positive attitude of study group this result contradictive with the study of *Al- Awawdeh et al., (2016)* which noted that no significant differences in attitudes toward all scales for the attitudes to acceptable normal reaction, violent reaction, functional reaction, offensive, communicative, and destructive. And the result congruent with the study of *El-Azzab & Abd El-Aziz, (2018)* which showed that more than two thirds of the studied nurses had negative attitudes towards psychiatric patients' aggressive behavior.

As regarding level of knowledge, the result of present study revealed that there was no statistical significant difference between study and control group regarding their level of knowledge pre\program. While there was a statistical significant difference between study and control group regarding level of knowledge post program, in which the percentage of

adequate knowledge increase among study group post program than pre program. The researcher see that this could be due to the effect of the program session, content and method of teaching which was within their needs and interests of the participant. This result congruent with the study of *El-Azzab & Abd El-Aziz, (2018)* which revealed that more than half of nurses had sufficient knowledge., Concerning the nurses' total knowledge there was more than three quarter of the studied nurses had sufficient knowledge towards the psychiatric patients" safety from aggressive behavior after complete the training program.

As regarding to skills of two groups there was no statistical significant difference between study and control group regarding their competence skill for managing patient aggression pre\program. While there is a statistical significant difference between study and control group regarding competence skill for managing patient aggression post program in which the percentage of competence skill increase among study group post program than pre\program. The researcher see that this could be due to the willingness of study nurses to practice of new skills during period of program implementation that result to increase to accept skills for dealing of aggressive patient lead to carry out of skills efficiently. This result consistent with the study of *Tomagová et al., (2016)* which determined a statistically significant difference in the frequency of experience of patient aggression in nurses who had completed educational training focusing on patient aggression

and its management and those who had not. On other hand the result disagree with the study of *Sim, et al., (2020)* which Participants in this study pointed out that in the process of nursing a patient, suddenly turned into a violent state and exerted physical aggression. While using these forced restraints to stop these behaviors and protect the nurses themselves from danger, the nurses explained that they experienced beatings, kicking, biting, and even touching and hitting the entire body from the patient. In spite the nurses had the training courses for dealing with patient aggression.

According to perception of prevalence of patient aggression, There is statistical significant difference between study and control group regarding perception of inpatients aggression post program. The high percentage of perception level increase among study group post program than pre\program. The researcher see that this could be due to increase awareness of study group about prevalence of patient aggression through the educational program sessions that change vision of nurses toward patient aggression compared with control group. This result consistent with the study of *Tomagová et al., (2016)* which revealed that the majority of nurses working on psychiatric wards experienced inpatient aggression.. A statistically significant difference in the perception of patient aggression was detected between the groups of nurses who took part in educational training focusing on patient aggression.

As regard correlation between skills used for management of patients aggression and both of attitude toward patients aggression , knowledge about patients aggression and perception about the prevalence of inpatient aggression among the studied nurses (study & control) group at post the educational program. The result of present study showed that there was positive significant correlation between skills used for management of patient's aggression and attitude toward patient's aggression of study group post\program. The researcher see that this because the positive effect of educational program in improving nurses skills post implementation on nurses attitude toward patients aggression. This result contradictive with study of *Sim, et al., (2020)* which the participants experienced difficulties in controlling their emotions in aggressive situations that nurses either kept their temper or, in the worst cases, ended up engaging in verbal and physical aggression with patients. In such situations, the participants tried to stay calm. Which revealed correlation between skills of nurses for management of patients aggression and their attitude toward patients aggression so that nurses considered medical treatment and restraint as critical methods for managing aggressive patients in the acute stage. They also mentioned that it is crucial to have a face-to-face conversation after the patient has eased his/her anger.

Conclusion:

From the result of the present study it was conclude that:

There is a statistical significant difference between study and control group regarding level of knowledge post program. The majority of study sample had positive attitude, adequate knowledge, competent skills and high level of perception of aggression post program compared with pre educational program. There is positive significant correlation between attitude toward patient aggression and the skills used for managing patients aggression, while there is a statistical significant difference between study and control group regarding perception about prevalence of patient aggression post program.

Recommendations

Based on the previous findings of the present study, the following recommendations are suggested*:*

1- Aggression-management training programs to enhance nurses' confidence, as well as the need to strengthen current induction programs.

2- Training programs to reorient the opinions of nurses in relation to inpatient aggression.

3- Periodical educational programs to make and keep nurses aware of and sensitive to the positive attitudes to aggressive client behavior.

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