Change in Psychiatric Nursing Staff Levels of Aggression as Attributed to Knowledge about Patients Violence

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Abstract

Violence is more common among people with mental illness as compared with the general population. Psychiatric nursing staff has to deal, manage and control violent behavior of psychiatric patients. Therefore preparation of psychiatric nurses to effectively evaluate /manage violent patient is crucial. Also, they need to be assisted to understand the nature of violence and its contributing factors as well as levels of aggression within themselves. The purpose of this study is to examine the relationship between levels of aggression among psychiatric nursing staff and their levels of knowledge about violence after receiving an educational training program. The study sample consisted of 60 psychiatric nurses recruited from Helwan Mental Hospital. Two instruments were used for data collection before and after the educational training program. Violence Assessment Tool (VAT) to assess and compare nurses knowledge and practical skills of managing mentally ill patient's violent behavior. The Arabic version of personality Test for Aggression (PTA) by ***(Farag 1970).*** The research findings showed that psychiatric nurses were lacking acceptable levels of knowledge and skills that equip them to understand and safely manage mentally ill violent patients. Also, high levels of aggression among these nurses were found. The devised educational training program helped these nurses to improve their skills to acceptable levels in both areas of management of violence and reduction of personal aggression.

Introduction:

Violence can be defined as the production of the interaction between individual and the environment that includes biological, psychological and social factors ***(Beck, et.al1991)***. A number of studies have emphasized that violence is more common among people with mental illness as compared with the general population ***(Swanson et. al., 1990, Hodgins, 1992).***

Reasons for increased risk of violence associated with mental illness is not ***known (Hodgins, 1992),*** yet its comorbedity in subgroups of mentally ill patients is prevalent. Factors such as substance abuse ***(Torrey, 1994)***, personality disorder ***(Gudjonsson & Petursson, 1990),*** psychiatric symptoms ***(Robkin, 1979)*** age of adolescents ***(Fulwiler et.al. (1997),*** hospitalization ***(Stueve &Link, 1998***), and schizophrenia ***(Nijman & Rector ,1999)*** were all found to be linked with increased rate of violence.

Although violence is not a diagnosis, managing violent behavior is one of the most difficult problems facing today's nurse. Violence of psychiatric patients represents a serious threat to the safety of both patients and staff members ***(Nijman, etal. 1997***). Threats of violence and disruptive behavior are frightening and can occur so rapidly that staff must react with little time for the prevention and management of such violent behavior. Safety precautions and methods of intervention should be established and practiced well in advance ***(Haven & Piscitello, 1989).***

Psychiatric nursing staff has to deal, manage, and control violent behavior of psychiatric patients, therefore, preparation of psychiatric nurses to effectively evaluate / manage violent patients and as well promote the safety of psychiatric patients and members of staff is crucial. ***Tardiff (1996)*** reported that about 40% of hospital staff have been assaulted at least once during their career life. In the same time, violent patients may be exposed to counter-violence from staff members who then would face the acquisition of patients abuse ***(Shaheen, 1998)***. Psychiatric nurses, consequently need to be equipped with knowledge and skills necessary to assist them understand the nature of violence and its contributing factors as well as levels of aggression within themselves.

Aim of study:

The purpose of this study is to examine the relationship between levels of aggression among psychiatric nursing staff and their levels of knowledge about violence after receiving an educational training program.

Subjects and Methods:

The study sample consisted of 60 psychiatric nurses, (40 females and 20 males). They were recruited from Helwan Mental hospital. Their ages ranged between 19- 35 years old. Their years of experience of working with psychiatric patients in a mental hospital varied between 1-17 years.

Their Qualifications were Diploma nursing.

Data collection of this study was conducted using two instruments:

First: the Arabic version of Personality Test for aggression (PTA) by Faraag (1970) ,original version by Guilford (1959).

Second: A Self–designed assessment tool of basic knowledge about violence developed by the researchers and was given the name Violence Assessment Tool (VAT).

The Personality test for aggression is a Two point scale consisting of 38 statements of (Yes /No) responses. The scoring system of this tool designate 1 grade for each correct response, with a total score of 38 grade.

The self- designed assessment tool of the basic knowledge about violence (VAT) was developed in Arabic language. It was used to assess and compare nurses' Knowledge and practical skills of managing mentally ill patients' violent behavior. It was administered to nurses constituting the study subjects to test their understanding and practical skills of managing their mentally ill violent behavior before and after the educational /training program.

The theoretical background of this instrument is based on ***(Ramos 1996)*** and ***(Hamolia 1998)*** work as well as personal clinical experience.

The VAT assessment tool consisted mainly of three subsections:

1- Demographic information about the sample subjects as well as their previous experience with violent patients and its severity.

2- Knowledge section: consisted of 20 multiple choice questions about:
   *Reasons of violence
   5 grades
   *Differential Diagnoses
   6 grades
   *Methods of prevention in hospital
   5 grades
   *Early warning signs
   5 grades
   * Methods of restraining
   5 grades

*Nursing Management
6 grades
*Medication of controls
3 grades
* Characteristics of psychotherapeutic environment 4 grades
*Types and purposes of therapeutic activities 6 grades
The total score is
45 grades

3-An open-ended question about staff nurses personal experience with a violent mentally ill patients

Validation & reliability testing:

The instrument was reviewed for face validity by a panel of experts consisted of :
1-Nurse director at Helwan Mental hospital.
2-Medical director of Helwan Mental hospital.
3-Professor of psychiatric nursing at faculty of nursing, Cairo university.
Reliability was tested on 10 nurses volunteered for the test.
The pilot study was conducted for this instrument on the same group of volunteered nurses working in the hospital and not included in the program. The final version of the tool had a Chronbach`s alpha of 0.82, indicating high reliability.

Procedure of Data Collection:

First: All nurses in the sample were interviewed by the researchers prior to the training program to brief them about the purpose of the study, the duration of the program and the official arrangements made with the nurse director to free them at the time of the lectures every week.

Second: All participants received the two instruments prior to the educational program, i.e., The Personality test for Aggression and the Violence Assessment Tool. These two instruments were used to assess nurses` knowledge base and their starting personal aggression levels. Responding system of each tool was explained to all participants.

Third: A six weeks educational program covering all the basic information about violent behavior tested in the Violence Assessment Tool was delivered on weekly bases by the researchers to all nurses in the sample. Nurses in the sample group were divided into two equal subgroups of both male n= 10 and female = 20 nurses.

The weekly sessions consisted of lectures and group discussion for 90 minutes to allow free discussion of personal learning experience and free expression of feelings of aggression against mentally ill patients.

After completion of the educational program all nurses were assessed once again with regard to changes in their knowledge about violence and changes in their levels of personal aggression towards mentally ill patients.

Statistical Methods

Statistical analysis was done using SPSS9 for windows. Reliability testing was done by calculation of Chronbach`s alpha. Generally, an alpha > 0.75 indicates high reliability.

Data are summarized using percentages for categorical variables, and means and standard deviations for quantitative variables. Comparison of means was done by the 1-tail student`s t-test for independent and dependent samples. The threshold of significance was fixed at the 5 % level.

Results:

Content analysis of nurses responses to the open ended questions about problems faced while dealing with violent patients showed

that physical harm constituted the most common complain of 80% of them, followed by inability to control violent patients representing 46.6 %. Destruction of properties, lack of seclusion room, and lack of medication

Were of less frequency amounting to 26.6 %. The problem of lack of enough nursing staff was mentioned by only eight nurses i.e., 13.33 % (table 1).

Types of physical harm and its severity as caused by violent mentally ill patients are described in table 2. Wounds and biting were the most frequent severe physical harm reaching a percentage of 53.33 % and 46.66% respectively. Fractures occurred in 13.33 % of all nurses in the sample group. Physical harm of moderate severity included 33.33 % for each of bruises and beating, while hair pulling was present in 26.66 % of sample. Mild physical harm as reported by nurses in the sample was limited to spiting and insults in 26.66% of the sample.

Comparison of male and female nurses` mean score of knowledge about violence among mentally ill patients prior to the educational program showed higher scores among male nurses than female nurses, nevertheless, this difference proved to be statistically insignificant (table 3). On the other hand, difference in the mean score of both males and females nurses pre/post receiving the educational/training program was statistically highly significant at p. value = <0.0001. This result indicated that both male and female nurses` knowledge level have significantly improved as a result of the program

High levels of aggression in both male and female nurses in the sample were found prior to the program (table 4). Aggression mean scores reached 22.70 and 23.55 respectively in males and females psychiatric nurses of the sample i.e., over 50%, which indicate high levels of aggression according to Guilford (1959). A highly significant decrease in these levels of aggression at a p. value = < .0001 has been achieved after the program.

Table (1) Frequency of problems faced while dealing with violent mentally ill patients.

Problems	No.	%
Physical harm	48	80
Inability to control patients	28	46.6
Destruction of properties	16	26.6
Lack of seclusion room	16	26.6
Lack of medication	16	26.6
Lack of staff	8	13.3

Table (2) Frequency of types of physical harm caused by violent patients to nursing staff at Helwan mental hospital.

Types of harm	No.	%
Severe:		
Wounds	32	53.33
Biting	28	46.66
Fractures	8	13.33
Moderate:		
Bruises	20	33.33
Beating	20	33.33
Hair pulling	16	26.66
Mild:		
Spitting &insulting	16	26.66

Table (3) Comparison of mean score of knowledge in pre- and post –test of male and female psychiatric nurses.

Items	Pre-test		Post- test	
	Mean	S.D.	Mean	S.D.
Male (n = 20)	13.05	3.85	23.75	3.61
female (n = 40)	12.18	3.25	23.68	2.98

Total score of violence assessment tool for knowledge = 45

Table (4) Comparison of mean scores of aggression in pre- and post –test of male and female psychiatric nurses.

Item	Pre-test		Post-test		Comparison	
	Mean	S.D.	Mean	S.D.	t.	p.
Male (n = 20)	22.70	2.94	18.35	3.12	5.74	<.0001
female (n = 40)	23.55	3.30	19.35	2.29	10.7	<.0001

Total score of personality test for aggression = 38

Table (5) Comparison of means scores of knowledge and aggression of male psychiatric nurses before and after the program.

Items	Before X	After X	t.	p.
Knowledge	13.05	23.75	17.25	<0.0001
Aggression	22.70	18.35	5.74	<0.0001

Table (6) Comparison of means scores of knowledge and aggression of female psychiatric nurses before and after the program.

Item	Before X	After X	t.	p
Knowledge	12.18	23.68	21.09	<0.001
Aggression	23.55	19.35	10.74	<0.0001

Discussion

In the present study researchers tried to both assess and improve nurses' levels of knowledge and experience in the management of violent mentally ill patients. To fulfill this objective researchers introduced an educational training program to psychiatric nurses working at Helwan mental hospital. It was hypothesized that such educational training program would improve these nurses awareness of violence and increase their self-awareness of their personal levels of aggression against violent patients. Various problems of control and management of violent patients were reported by both male and female nurses (table 1).

Accidents including injuries as bruises, fractures, and other types of assaultive behaviour were all reported to occur to nurses (table 2). Reliance on old, unsafe measures by these nurses to control violent behaviour was seen to be the result of "public perception" which strongly associated mental disorders with violence (Steadman et.al.1998). This perception ought to be changed as violent patients may be exposed to physical harm as well as members of the staff.

Number of female nurses attended the educational training program was 100% higher than male nurses n= 40 & 20 respectively. However, pre-program knowledge assessment (Table 3) showed that both male and female nurses working at Helwan Mental Health Hospital were significantly lacking acceptable levels of both knowledge and practical skills to control or manage safely violent patients. In-spite of these critical findings, only a total of 60 male and female nurse continued actively attending the educational training program. This result indicated that male psychiatric nurses working at Helwan Mental Hospital were less compliant with the program than females nurses, despite of their poor knowledge of safe management of violent patients.

One explanation of this result could be related to the perception of male nurses to rely on their physical strength to resolve problems of violent patients by physical restraints and punishment. This was clearly reflected in their reports of previous exposure to violent experiences.

Assessment of levels of personal aggression of nurses in the sample before and after the program were found to be significantly different. Contrary to expectations, female nurses' personal aggression levels before the program were higher than that of male nurses (Table 4) but this difference was not statistically significant. This may be due to feelings of threats experienced by female nurses that have made them more aggressive as a mechanism of self –defense.

On the other hand, male nurses had better physical competence than female nurses, which could be a reason for demonstrating lower levels of personal aggression. This explanation come in accordance with Phillips and Rudestam (1995) who found that male nurses with lower levels of physical competence in a nonviolent defensive skills demonstrated behaviors that were significantly more aggressive than male nurses with higher levels of physical competence.

Correlation between nurses' knowledge and aggression in the present study showed that they have achieved significant improvement at both levels of knowledge and personal aggression after completing the six weeks educational training program. Achieved levels of knowledge mean scores for male nurses, improved from 13.05 to 23.75 and the difference was statistically significant at P < 0.0001. For female nurses, the knowledge mean scores improved from 12.18 to 23.68 at P. value = < 0.0001. Nonetheless, this improvement was within a score of average performance (i.e., pass mark) as the total score of knowledge test was 45 grade. At the same time, levels of personal aggression have decreased from 22.70 to 18.35 in male nurses and from 23.55 to 19.35 in female nurses. (Tables 3&4)

These results showed that improved levels of knowledge and practical skills have positively reduced levels of personal aggression among those nurses. Several studies suggest the use of such training programs to provide staff with behavioral skills to reprogram the hospitals social environment to reduce reinforcement of violent behavior (Wong,et. al., 1988).

Another study found that thoughtful discussion of staff – patient relationship would improve the link between clinical understanding of violent behaviour and verbal and physical skills in prevention or control of violence (Thackrey 1987). Phillips and Rudestam (1995) found that subject given didactic and physical training demonstrated significantly increased physical skills and significantly decreased behavioral aggression after training. Similar to the present study, their findings suggested strong correlation between increased physical skills and successful performance in a situation involving physical aggression.

In summery results of this study showed significant improvement in male nurses' levels of knowledge and aggression at p. = < 0.0001 (table 5). As for female nurses improvement in levels of knowledge was at a p. value = <0.001 and decreased levels of aggression at a p. value = <0.0001 (table 6). Hence these results indicate the effectiveness of this educational /training program in supporting both male and female nurses in the management of violent psychiatric patients.

Conclusion

The conclusion that can be drawn from this research pinpoint a number of significant findings:

Nurses (males and females) did lack acceptable levels of knowledge and skills that should equip them to understand and safely manage /control mentally ill violent patients.

High levels of personal aggression among these nurses corresponded negatively with the identified lack of knowledge and skills i.e., aggression increases with lack of knowledge or skills.

The devised educational training program helped these nurses to improve their skills to acceptable levels in both areas of management of violence and reduction of personal aggression.

This educational training program has also helped these nurses to recognize the lack of organizational and environmental factors, which could have contributed to their increased rate of exposure to severe assaults.

Recommendations:

1 – Nurses working in mental hospitals need periodical in service educational training programs about methods of prevention and management of violent behaviour.

2 – Nurses working in mental hospitals should improve their self-awareness of personal aggression and recognize its impact on mentally ill patients' behavior.

3 – Legal and environmental safety precautions should be introduced to guard nurses against patients' violence.

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التغير في مستوى العدوانية لدى هيئة التمريض النفسيين بالنسبة إلى معرفتهم عن عنف المرضى

يعد العنف اكثر شيوعا بين المرضى النفسيين مقارنة بعامة الناس و على هيئة التمريض النفسيين التعامل و السيطرة على السلوك العنيف للملارضى النفسيين لذلك اعداد هيئة التمريض للتعامل مع العنف بين المرضى النفسيين هام جدا و ايضا مساعدتهم على فهم طبيعة العنف و علاقته بمستوى العدوانية داخلهم و كان الغرض من البحث هو ايجاد العلاقة بين مستوى العدوانية لدى هيئة التمريض النفسيين و مستوى المعرفة عن العنف بعد برنامج تعليمى و تدريبى و تتكون العينة من ٦٠ ممرض و ممرضة من مستشفى حلوان للصحة النفسية و تتكون ادوات البحث اداة لقياس المعرفة عن العنف و كذلك المهارات العلمية عند التعامل مع المرضى النفسيين في نوبات عنفهم و مقياس العدوانية لفرج ١٩٧٠ و اظهرت النتائج نقص في المعلومات و المهارات اللازمة لدى هيئة التمرض الخاصة بالتعامل مع المرضى النفسيين اثناء نوبات العنف و كذلك ارتفاع مستوى العدوانية لديهم و قد لوحظ ان البرنامج التدريبى التعليمى ساعد المشتركين في البحث عن طريق التحسن في مستوى المعرفة لديهم و كذلك تقليل مستوى العدوانية.

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