

# Impact of educational program for psychiatric nurses on the use of successful practice strategies toward patient with psychotic disorders

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## Abstract

**Background:** In particular, psychiatric nurses need continuous training and should be seen as a priority as they tend to have the most contact with patients, especially when they are at their worst. **Aim of this study:** Examine the impact of educational program for psychiatric nurses on the use of successful practice strategies toward patient with psychotic disorders. **Research design:** quasi-experimental research design with pre-post assessment. **Setting:** This study was conducted at the Benha Governmental Hospital for Mental Health in Benha City, Qalubia Governorate. **Subjects:** 60 nurses from the hospital's inpatient department. **Tools of data collection:** Nurses characteristics data form and nurses self-reported practice questionnaire regarding management of patients with psychotic disorders. **Results:** There was significant differences between pre and post-program phases in total nurses' performance mean score, it showed statistically significant decreases in the mean score of communicating own perception from  $14.2 \pm 3.5$  to  $5.0 \pm 1.7$  ( $p < 0.001$ ), and increases in the mean score of changing patient view from  $7.7 \pm 2.3$  to  $16.5 \pm 4.1$  ( $p < 0.001$ ) and no significant changes in the mean scores of confirming patient view ( $p = 0.97$ ), or using resources ( $p = 0.91$ ). At post-program, confirming patient view mean score were significantly lower among younger age nurses, with bachelor qualifications, and less experience years in nursing and psychiatric nursing ( $p < 0.001$ ), while at the pre-program, the changing of patient view and using resources mean score were significantly higher among younger age nurses with bachelor qualifications, and less experience years in nursing and psychiatric nursing at post program. Additionally, there was no significant relation between nurses' demographic characteristics and their mean score of communicating own view while, post-program, the mean score was higher in diploma nurses compared to bachelor degree ones. **Conclusion:** The educational program led to significant improvement of the studied psychiatric nurses' total practice mean scores which showed significant decrease in mean score of communicating own perception and increase in mean score of changing patient view. Their total practice mean score regarding confirming and changing patient view were influenced by nurses age, qualifications, experience years in nursing and psychiatric nursing. **Recommendations:** The heads of psychiatric departments must subject nurses to educational programs, while nurses need to continually upgrade and update their skills by reading and attending seminars and workshops specializing in this field.

**Keywords:** educational program, psychiatric nurses, practice strategies, psychotic disorders.

## Introduction

Nursing has been known to be one of the most stressful professions. In particular, psychiatric nurses who use them as therapeutic tools compared to nurses from other specialties. Nurses in the psychiatric unit have a high level of

work stress compared to nurses in other areas. (Bentall et al., 2007 and Zaki, 2016). When their patients face regular relapses, chronicizations, and multiple hospitalizations, mental health nurses often experience more stress and elevated work demands than nurses do in general wards. Furthermore, psychiatric nurses are often

powerless and qualified to care for psychiatric emergencies, such as patients who appear to injure themselves and others. (NICE, 2014 , Millstein& Huffman,2017).

Psychiatric nurses are responsible for taking action to restore the mental balance of patients when it comes to self-harm and misbehavior. Psychiatric nurses are exposed to high levels of burnout. Burnout in a health care setting not only leads to reduced efficacy at work, but may also restrict the perception of the individual, affect the judgment of the individual and reduce the quality of care. (Ventura et al.,2015). Working with chronic and severely mentally ill patients is therefore challenging and those working with this patient group can have a significant impact on their mental status and on their ability to cope with this behaviour. (Fatemi and Clayton,2008 and Gumley et al., 2015).

People with mental health problems are vulnerable and usually unpredictable, and many of the respondents felt unsafe, threatened, frustrated, and unable to communicate with others. Being able to build a relationship and to communicate with such people is a challenge for nurses. Responding to these challenges requires skills, knowledge, and insight to discern what will be most helpful to these clients and their loved ones. At the same time, working with those in emotional distress can be very rewarding for nurses when they know that their clients feel, understand, care for, and are better able to cope with their unique situations. Efforts to improve the working environment, improve their performance strategies and change the internal factors of the mental health nurses themselves are therefore essential (Boyd , 2008a, Ibrahim, 2009 and Taruna et al., 2020).

As the World Health Organization estimates, mental illness is prevalent in some 25% of the world's population in both developed and developing countries. (WHO, 2013). In addition to the emotional needs of patients who are a critical part of nursing care, it is common knowledge that mental patients are ill-treated by nurses and sometimes by doctors; the majority of staff are not qualified or trained to deal with mental patients (O'Brien et al., 2008, Boyd 2008b and Yim et al., 2017).

Nursing staff need ongoing education and training to improve the standard of patient care

and to achieve objectives and drive performance. The educational program is considered an important means of providing nurses with the theoretical and technical information needed to acquire the skills and competences needed to continually improve nursing practice. (Sooyeong & YoungRan, 2020).

In this regard, it is very important for this group of nurses to equip them with the relevant knowledge and skills for management of patient in acute and chronic phases of their mental illness in inpatient psychiatric settings. (Rosdahl and Kowalski 2008 and Yang et al.,2018). The guidance published by policy makers in the United Kingdom also suggests that the provision of specialized and rigorously evaluated staff training programs that address the attitudes, knowledge and skills of all staff may be one element that can improve the quality of inpatient psychiatric services. (Wang et al., 2015).

Psychosocial Intervention Training Programs (PSIs) are early courses for nurses that soon became multidisciplinary. (Ghavidel et al.,2019). Evaluations of these training programs have shown that, for qualified mental health professionals, they result in increased knowledge about psychosis, improved attitudes towards service users and increased confidence in practice (Hayes& Rockwood, 2017). In addition, PSI-training for the students allowed them to undertake clinical work with improved outcomes of care, including improvements in psychotic symptoms and social functioning. (Ghavidel et al., 2019).

Continuous education increases the ability of nurses to be consistent with and supportive of hospital philosophy and goals, and increases their sense of belonging and appreciation to others. It also contributes to patient care, to keep nurses acquainted with recent advances in their specialty and to maintain their speed and effectiveness in carrying out their respective activities. As a result, the quality of care and morals will improve, resulting in a high level of job satisfaction. (Ramirez-Baena et al., 2019).

In addition, many studies have shown that training results in reduced levels of clinical burnout in staff. The evidence base for the benefits of training for qualified mental health professionals is therefore encouraging. (Taruna et al., 2020). Nurses have always played an

important role in the management of people with mental illness; this role is increasingly important. However, few studies have been published describing training programs for psychiatric nurses. (Sooyeong & YoungRan, 2020). It was therefore necessary to carry out this study, which aims to examine the impact of educational program for psychiatric nurses on the use of successful practice strategies toward patient with psychotic disorders.

These study findings may be used as a basis for interventional studies that focus on equipping nurses with appropriate performance strategies. This will fundamentally improve their performance, reduce job stress and burnout, reduce turnover and help to improve individual psychological well-being and the quality of nursing care.

### **Aim of the study:**

The aim of this study was to examine the impact of educational program for psychiatric nurses on the use of successful practice strategies toward patient with psychotic disorders.

### **Specific objectives:**

1. Examine to what extent the educational program effect on the studied nurses' practice and using of management strategies with psychiatric patients
2. Explore the relation between the nurses' practice and their demographic characteristics.

### **Research hypotheses:**

It is assumed that psychiatric nurses will significantly improve their practice following the implementation of the program.

### **Subjects and Methods**

#### **Research design**

An intervention quasi-experimental research design with pre-post assessment was utilized in this study.

#### **Study setting**

The research was performed at the Benha Government Hospital for Mental Health. It was one of the largest government hospitals in Benha District, Qalubia Governorate, offering free and paid services for addicted, acute and

chronically mentally ill patients. A number of governorates, such as Qalubia, Dakahlia, Menoufia, and Gharbia, were covered by the hospital. The total beds number was 150 beds.

#### **Study subjects:**

A convenient sample of 60 full-time staff nurses (inpatient department ) was selected from the previously mentioned Benha Government Hospital for Mental Health to be involved in the study .Out of 141 nurses, a sample size of 60 is needed with 95% confidence level and 5% confidence interval; they were recruited regardless of age, sex, or qualifications.

#### **Tools of data collection**

##### **Data has been collected using the following tools:**

1. Nurses Characteristics Data Form: developed by researchers to collect data on the demographic characteristics of the nurses under study such as age, gender and professional characteristics such as years of nursing and psychiatric nursing experience and nursing qualifications.
2. Nurses self-report practice questionnaire for management of patients with psychotic disorders: This tool was developed by **Berkowitz and Heintz (1984)** to measure the strategies used in the management of symptoms and difficult behaviors in mental illness. The tool listed 32 problematic situations, which were categorized into five main domains:

**Fist domain:** Positive symptoms (delusions and hallucinations) included questions 4-8;

- Second domain: Negative symptoms (withdrawal and lack of energy) included questions 1-3, 9-16, 22-24;

- Third domain: Problems of control (situations in which the patient had to be restrained, e.g. violent behaviors) included questions 17-21;

- Fourth domain: Reactions of despair (suicide and helplessness) included questions 25-27

- Fifth domain: Nurse's own reactions (feelings of anger, irritability and helplessness) included questions 28-32.

For each of these questions, the responding nurse had to describe briefly how best she/he

would deal with each situation. There were four possible response categories of strategies as follows:

- Category A: Confirming the patient's view of him/herself. As the scores of category A increased, this indicated that staff were encouraged to listen to patients' views and show empathy and understanding.
- Category B: Communicating nurses own perspective. As the scores of category B decreased this, indicated that staff used warm, non-critical approach. As the scores increased this, indicated that staff used judgmental critical hostile approach, which led to criticism of the client.
- Category C: changing in an attempt to bring A and B, that was the nurse's and patient's perspectives closer in a more complex and comprehensive way than in the categories outlined above. The nurse, by one of the following responses indicated that she/he was able to assimilate knowledge about specific skills, and equipped to put them into practice for enhancing her/his performance.

As the scores of category C (changing patient view) increased this indicated that staff were able to assimilate knowledge about specific skills and were equipped to put them into practice for enhancing their performance. One of the most important aims of the training program had therefore been achieved. The more use of this category mean that staff used more strategies involving an attempts to effect change when dealing with problematic situations within their hostel settings or on the ward.

- Category D (Resources): As the scores of category D (Drawing upon other resources) increased this indicated that participant nurses were more able to accept their own limitations and those of clients they worked with, and were more able to use the resource facilities to cope with different management problems.

**Scoring:** The number of hypothetical situations where the staff member used a particular category was recorded, giving an overall score for each category in each of the five domains. The mean, standard deviation, and median for each were calculated.

The questionnaire was translated into Arabic by researchers using a retranslation procedure to ensure its validity. The tool was rigorously reviewed by a panel of experts (three psychiatric nursing experts from the Faculty of Nursing, Benha University) to validate the tool and tested for relevance and comprehensiveness, as well as test clarity, applicability and ease of implementation. The reliability of the performance checklist was tested by measuring its internal consistency. It demonstrated a good level of reliability as follows. Cronbach Coefficient Alpha = 0.62.

### Pilot Study

A pilot study was conducted on 10% of psychiatric nurses to test the applicability of the tools and the clarity of the questions included, as well as to estimate the average time needed to fill out the sheets. Nurses who participated in the pilot study were not included in the main study sample.

**Study maneuver:** The study was carried out through assessment, planning, implementation, and evaluation phases.

**Assessment phase:** After obtaining the institutional consent and the official permissions and consents of the hospital directors using the relevant channels, the researchers met with the head nurse, explained the purpose and procedure of the study, and coordinated with her on the presence of the nursing staff in the program without interference with their daily work and in the same time maintain the safety measures against COVID-19, after which the nursing staff were interviewed to explaining the purpose of the study and its role in the implementation of the program. Those who gave their consent were provided with a data collection form to fill it in. The researchers were always available to provide explanations for any difficulty in interpreting the questionnaire items. Responses were considered as a pre-test for each participant to be compared with the post-test.

**Planning phase:** Researchers were divided the studied subjects into three groups of 20 nurses for each to facilitate the implementation of the program and to take security measures for COVID-19, and each researcher was met with each nurses group in separate (three session each week for the total sample). Researchers designed

and defined the contents of the training program based on the review of related literature. It consisted of the following 11 sessions.

**Session I:** General orientation to the program purpose and objectives, as well as the procedures and rules, and overview about Mental health and psychiatric disorders.

**Session II:** The focus of this session was providing knowledge related causes, clinical manifestation of schizophrenia and nursing care.

**Session III:** The focus of this session was to provide knowledge related to treatment modalities

**Session IV:** Definition and elements of communication, and verbal and nonverbal methods of communication. The researcher prepared a script and encouraged the participants to role play it. The script contained a situation in which one participant took the role of a nurse that uses positive and negative body language, and the other participant took the role of a patient, reflecting his response.

**Session V:** communication techniques and communication barriers. The researcher prepared a script and encouraged the participants to role play it. The script contained a situation in which two participants communicate using communication techniques, and other situation in which two participants communicate using communication barriers.

**Session VI:** The focus of this session was enhancing nurses' performance when dealing with positive symptoms of schizophrenic patient (delusions and hallucinations). The researcher prepared a script and encouraged the participants to role-play it. The script contained a situation in which one participant took the role of a patient with delusions and hallucinations and the other participant took the role of a nurse that manages these symptoms.

**Session VII:** The focus of this session was enhancing nurses' practice when dealing with negative symptoms of schizophrenic patient (impaired social interaction, self-

care deficit, and ineffective coping). The researcher trained participants using real situations in the presence of real patients experiencing withdrawal and lack of energy. The researcher began to deal with the patient in a therapeutic manner; then the participants dealt with the patient using the same manner imitating the researcher.

**Session VIII:** The focus of this session was enhancing nurses' practice when dealing with aggressive patient (prevention of agitation and managing an agitated patient). The researcher prepared a script and encouraged the participants to role-play it. The script contained a situation in which one participant took the role of an aggressive patient and the other participant took the role of a nurse that manages these symptoms.

**Session IX:** The focus of this session was enhancing nurses' practice when dealing with suicidal patient. The researcher prepared a script and encouraged the participants to role-play it. The script contained a situation in which one participant took the role of a patient with suicidal ideation and the other participant took the role of a nurse that manages these symptoms.

**Session X:** The focus of this session was explaining recommended coping strategies for staff nurses towards their own feelings (feelings of anger, irritability, and helplessness). The researcher prepared some relaxation techniques and did these techniques in front of the participants, and the participants began to imitate the researcher.

**Session XI:** This session was a termination of the training program sessions for psychiatric nurses and for post assessment. The researcher acknowledged the participants role.

**Implementation phase:** The educational program was applied over a period of 12 weeks, (one week for the pre assessment phase and 10 weeks for the program application, and one week for post assessment and termination of the program) in a one-hour weekly session for each study group (three study groups each one with

one researcher), with total program hours = 36 hours at the end of the program. The content of the program was derived from the amalgamation of related psychiatric concepts in the light of the study objectives. It was given in the form of mini-lectures, group discussions and interactions. Data collection lasted 12 weeks, in April, May, and June 2020.

**Evaluation phase:** At the end of the program, its effectiveness was tested through a post-test using the same scales on the data collection form.

**Ethical considerations:** The study protocol approved by the Research and Ethics Committee of the Faculty of Nursing, Benha University. Official approvals obtained from the authorities concerned. Since the participants were minors, institutional consent was obtained from the hospital directors and the consent of the head nurse and staff nurse. They were reassured that participation was voluntary, that they could withdraw at any time, and that their responses were confidential. The study maneuver could not have any harmful effects on the participants

**Statistical analysis:** Data entry and statistical analysis were carried out using the SPSS 22.0 statistical software package. Data were presented using descriptive statistics in the form of frequency, percentage, mean and standard deviations for quantitative variables. Quantitative continuous data were compared using the Student t-test for comparisons between two groups. If the normal distribution of the data could not be assumed, the non-parametric Mann-Whitney test was used instead of the Student t-test. Qualitative categorical variables were compared using chi-square test. Whenever the expected values in one or more of the cells in a 2x2 tables was less than 5, Fisher exact test was used instead. Statistical significance was considered at  $p$ -value < 0.05.

## Results:

**Table 1:** Showed that the age of the studied nurses ranged from 20 to 47 years with mean  $\pm$  SD  $31.3 \pm 7.0$  years. More than half of them (60.0 %) were females. As far as their nursing qualifications were concerned, slightly more than two thirds (66.7%) had secondary diploma, while

only less than one third had a bachelor's degree in nursing (30.0 %). Slightly more than half of the nurses had less than ten years of nursing experience (55 %) and (65.0 %) had five or more years of psychiatric nursing experience.

**Table 2:** showed statistically significant differences between nurse's practices mean scores toward their own reactions (feelings of anger, irritability and helplessness) to psychiatric symptomatology at pre-and post-program phases. Significant decreases in-patient view confirming mean scores (from  $0.8 \pm 0.9$  to  $0.2 \pm 0.5$ ,  $p < 0.001$ ) and communication own perception mean scores (from  $1.0 \pm 1.0$  to  $0.5 \pm 0.6$ ,  $p = 0.01$ ) were shown. Conversely, the change in patient view mean scores increased from  $1.2 \pm 1.0$  to  $2.1 \pm 1.0$ ,  $p < 0.001$ ).

**Table 3:** Showed that, regarding positive symptoms, there were statistically significant decreases in the mean scores of communicating own perception from  $1.7 \pm 1.4$  to  $0.7 \pm 0.6$  ( $p < 0.001$ ), and increases in the mean scores of changing patient view from  $1.3 \pm 1.1$  to  $2.2 \pm 1.0$  ( $p < 0.001$ ). A similar pattern was observed as regards negative symptoms, where the scores of communicating own perception decreased from  $7.5 \pm 2.1$  to  $1.8 \pm 1.4$  ( $p < 0.001$ ), while changing patient view increased from 4.0 to 8.9 ( $p < 0.001$ ).

**Table 4:** Showed that, regarding nurses' practice with problems control there were statistically significant decreases between pre and post program mean scores of confirming patient view from  $0.8 \pm 0.7$  to  $0.6 \pm 0.9$  ( $p = 0.01$ ), and communicating own perceptions from  $3.4 \pm 1.0$  to  $1.6 \pm 1.3$  ( $p < 0.001$ ). On the contrary, the mean scores of changing patient view increased from  $0.4 \pm 0.5$  to  $2.1 \pm 1.6$  ( $p < 0.001$ ). As for nurses' practice with reactions of despair, there were statistically significant increases between pre and post program mean scores of confirming patient view from  $0.5 \pm 0.5$  to  $0.8 \pm 0.7$  ( $p = 0.01$ ), and changing patient view from  $0.9 \pm 0.6$  to  $1.1 \pm 0.7$  ( $p = 0.04$ ). Conversely, the mean scores of communicating own perceptions decreased from  $0.6 \pm 0.5$  to  $0.3 \pm 0.5$  ( $p < 0.001$ ), and the use of resources from  $1.0 \pm 0.7$  to  $0.7 \pm 0.9$  ( $p = 0.01$ ).

**Table 5:** Described the significant differences between pre and post-program phases in overall nurses' practice mean scores. It showed statistically significant decreases in the mean scores of communicating own perception from  $14.2 \pm 3.5$  to  $5.0 \pm 1.7$ , ( $p < 0.001$ ) and increases in the mean scores of changing patient view from

7.7±2.3 to 16.5±4.1, ( $p<0.001$ ). No statistically significant changes could be found in the mean scores of confirming patient view ( $p=0.97$ ), or using resources ( $p=0.91$ ).

**Table 6:** Showed no statistically significant relation with any of the demographic characteristics of nurses and confirming the patient's view at pre and post program stage. In post-program phase, mean scores 3.1±1.7 were significantly lower among younger nurses ( $p<0.001$ ), with bachelor qualifications ( $p<0.001$ ), fewer years of nursing experience < 10 years ( $p<0.001$ ) and psychiatric nursing experience < 5 years ( $p<0.001$ ).

**Table 7:** Showed that there was no statistically significant relation between the demographic characteristics of the studied nurses and their ability to communicate their own views at pre-program stage. Meanwhile, post-program phase, there was only one statistically significant relation with the nursing qualification ( $p=0.02$ ). It can be seen that the mean score was higher

among Diploma Nurses compared to Bachelor Nurses.

**Table 8:** Pointed to there was statistically significant relation at pre-program between changing patient view and experience years in psychiatric nursing ( $p=0.01$ ). Meanwhile, at post-program, the nurses mean score of changing patient view were significantly higher among younger age nurses ( $p=0.01$ ), with bachelor qualification ( $p=0.001$ ), less experience years in nursing < 10 years ( $p=0.02$ ), and in psychiatric nursing < 5 years ( $p=0.007$ ).

**Table 9:** Showed statistically significant relations between nurses' demographic characteristics and total mean scores of their using resources at pre-program phase. As a result, higher scores were seen among younger age nurses ( $p<0.001$ ), with bachelor degree qualifications ( $p=0.008$ ), less experience years in nursing < 10 years ( $p<0.001$ ), and in psychiatric nursing < 5 years ( $p=0.01$ ). Meanwhile, at post program, there was no statistically significant differences ( $p>0.05$ ).

**Table 1.** Frequency and percentage distribution of demographic characteristics of the studied nurses (n=60)

Items	NO	%
Age (years):		
<30	37	61.7
30+	23	38.3
Range	20-47	
Mean±SD	31.3±7.0	
Gender:		
Male	24	40.0
Female	36	60.0
Nursing qualification:		
Secondary diploma	40	66.7
Technical institute diploma	2	3.3
Bachelor	18	30.0
Experience in nursing (years):		
<10	33	55
10+	27	45
Range	<1-24	
Mean±SD	11.6±7.8	
Experience in psychiatric nursing (years):		
<5	21	35.0
5+	39	65.0
Range	<1-24	
Mean±SD	9.8±7.5	

**Table 2.** Comparison of studied nurses' pre-post-program mean scores of practice related to their own reactions toward psychiatric symptomatology (n=60)

Items	Time		Mann Whitney Test	p-value
	Pre (n=60)	Post (n=51)		
<b>Confirm patient view:</b>				
Mean±SD	0.8±0.9	0.2±0.5		
Median	0.50	0.00	20.25	<0.001*
<b>Communicate own perception:</b>				
Mean±SD	1.0±1.0	0.5±0.6		
Median	1.00	0.00	6.56	0.01*
<b>Change patient view:</b>				
Mean±SD	1.2±1.0	2.1±1.0		
Median	1.00	2.00	19.23	<0.001*
<b>Use resources:</b>				
Mean±SD	1.1±1.2	1.2±0.7		
Median	0.00	1.00	1.18	0.28

(\*) Statistically significant at p<0.05

**Table 3.** Comparison of nurses' pre-post-program mean scores of practice related to positive and negative symptoms of psychotic patients (n=60)

Items	Time		Mann Whitney Test	p-value
	Pre (n=60)	Post (n=51)		
<b>Positive symptoms</b>				
Confirm patient view:				
Mean±SD	1.5±1.1	1.3±0.8		
Median	1.00	1.00	0.04	0.84
Communicate own perception:				
Mean±SD	1.7±1.4	0.7±0.6		
Median	1.00	1.00	19.34	<0.001*
Change patient view:				
Mean±SD	1.3±1.1	2.2±1.0		
Median	1.50	2.00	15.24	<0.001*
Use resources:				
Mean±SD	1.5±0.9	1.8±0.7		
Median	1.50	2.00	2.86	0.09
<b>Negative symptoms</b>				
Confirm patient view:				
Mean±SD	1.2±0.8	2.1±2.3		
Median	1.00	1.00	1.30	0.25
Communicate own perception:				
Mean±SD	7.5±2.1	1.8±1.4		
Median	7.00	2.00	81.24	<0.001*
Change patient view:				
Mean±SD	4.0±1.3	8.9±2.8		
Median	4.00	8.00	70.35	<0.001*
Use resources:				
Mean±SD	1.3±1.7	1.2±1.0		
Median	0.50	1.00	0.88	0.35

(\*) Statistically significant at p<0.05



**Table 4.** Comparison of nurses' pre-post-program scores of practice related to control problems and reactions of despair of psychotic patients (n=60)

Items	Time		Mann Whitney Test	p-value
	Pre (n=60)	Post (n=51)		
<b>Control problems</b>				
Confirm patient view:				
Mean±SD	0.8±0.7	0.6±0.9		
Median	1.00	0.00	6.43	0.01*
Communicate own perception:				
Mean±SD	3.4±1.0	1.6±1.3		
Median	3.50	2.00	38.23	<0.001*
Change patient view:				
Mean±SD	0.4±0.5	2.1±1.6		
Median	0.00	3.00	31.23	<0.001*
Use resources:				
Mean±SD	0.5±0.7	0.7±0.8		
Median	0.00	0.00	1.92	0.17
<b>Reactions of despair</b>				
Confirm patient view:				
Mean±SD	0.5±0.5	0.8±0.7		
Median	0.50	1.00	6.08	0.01*
Communicate own perception:				
Mean±SD	0.6±0.5	0.3±0.5		
Median	1.00	0.00	10.57	<0.001*
Change patient view:				
Mean±SD	0.9±0.6	1.1±0.7		
Median	1.00	1.00	4.07	0.04*
Use resources:				
Mean±SD	1.0±0.7	0.7±0.9		
Median	1.00	1.00	6.65	0.01*

(\*) Statistically significant at p<0.05

**Table 5.** Comparison of the studied nurses pre-post-program total mean scores of practice regarding the following used strategies for management of psychiatric patients (n=60)

Total	Time		Mann Whitney Test	p-value
	Pre (n=60)	Post (n=51)		
Confirm patient view:				
Mean±SD	4.6±1.9	5.0±3.0		
Median	4.00	5.00	0.00	0.97
Communicate own perception:				
Mean±SD	14.2±3.5	5.0±1.7		
Median	14.00	5.00	82.61	<0.001*
Change patient view:				
Mean±SD	7.7±2.3	16.5±4.1		
Median	8.00	17.00	76.55	<0.001*
Use resources:				
Mean±SD	5.4±3.1	5.6±2.4		
Median	6.00	5.00	0.01	0.91

(\*) Statistically significant at p<0.05

**Table 6.** Relation between the studied nurses pre- and post-program total mean scores of confirming patient view and their demographic characteristics (n=60)

Items	Confirm patient view score (pre)			Confirm patient view score (post)		
	Mean±SD	Mann Whitney Test	p-value	Mean ± SD	Mann Whitney Test	p-value
Age (years):						
<30	4.0±1.2			3.1±1.7		
30+	5.2±2.1	2.15	0.14	6.7±2.9	20.36	<0.001*
Gender:						
Male	4.6±1.8			5.3±2.1		
Female	4.7±2.0	0.32	0.57	4.7±3.6	2.49	0.11
Qualification:						
Diploma	4.8±2.1			6.1±2.9		
Bachelor	4.4±1.0	0.03	0.87	2.7±1.6	17.02	<0.001*
Experience in nursing (years):						
<10	4.0±1.1			3.3±2.0		
10+	5.3±2.2	3.56	0.06	6.7±2.9	17.09	<0.001*
Experience years in psychiatric nursing:						
<5	4.0±1.2			3.1±1.7		
5+	5.1±2.1	1.84	0.18	6.2±3.0	14.91	<0.001*

(\* ) Statistically significant at  $p < 0.05$

**Table 7.** Relation between the studied nurses pre-program total mean scores of communicating own view and their demographic characteristics (n=60)

Items	Communicate own view score (pre)			Communicate own view score (post)		
	mean±SD	Mann Whitney Test	p-value	mean±SD	Mann Whitney Test	p-value
Age (years):						
<30	13.0±2.6			5.0±2.2		
30+	15.0±3.9	3.60	0.06	4.9±1.1	0.01	0.92
Gender:						
Male	14.8±4.6			5.3±1.3		
Female	13.8±2.6	0.00	0.96	4.7±1.9	1.46	0.23
Nursing qualification:						
Diploma	14.6±3.8			5.3±1.2		
Bachelor	13.3±2.7	0.55	0.45	4.3±2.3	5.24	0.02*
Experience in nursing (years):						
<10	13.2±2.5			5.0±2.2		
10+	15.1±4.0	2.27	0.13	4.9±1.0	0.00	0.96
Experience years in psychiatric nursing:						
<5	13.6±2.5			4.6±2.2		
5+	14.5±4.0	0.10	0.75	5.1±1.2	1.22	0.27

(\* ) Statistically significant at  $p < 0.05$

**Table 8.** Relation between the studied nurses pre- and post-program total scores of changing view and their demographic characteristics (n=60)

Items	Change view score (pre)			Change view score (post)		
	Mean±SD	Mann Whitney Test	P-value	Mean±SD	Mann Whitney Test	p-value
Age (years):						
<30	7.7±1.4			17.9±3.8		
30+	7.7±2.8	0.66	0.42	15.2±4.0	6.47	0.01*
Gender:						
Male	6.9±2.6			16.5±3.4		
Female	8.3±2.0	2.53	0.11	16.4±4.6	0.05	0.83
Nursing qualification:						
Diploma	7.8±2.6			15.2±3.7		
Bachelor	7.5±1.6	1.78	0.18	19.3±3.6	11.31	0.001*
Experience in nursing (years):						
<10	7.9±1.4			17.6±3.8		
10+	7.5±2.9	0.00	0.96	15.2±4.1	5.21	0.02*
Experience years in psychiatric nursing:						
<5	7.8±1.6			18.4±4.0		
5+	7.7±2.7	0.48	0.49	15.3±3.8	7.21	0.007*

(\* ) Statistically significant at  $p < 0.05$

**Table 9.** Relation between the studied nurses pre-and post program total mean scores of using resources and their demographic characteristics (n=60)

Items	Use resource score (pre)			Use resource score (post)		
	Mean±SD	Mann Whitney Test	p-value	mean±SD	Mann Whitney Test	P-value
Age (years):						
<30	7.2±2.5			6.0±2.4		
30+	4.1±2.9	16.83	<0.001*	5.3±2.3	1.11	0.29
Gender:						
Male	5.7±2.8			4.9±2.3		
Female	5.2±3.4	0.01	0.93	6.1±2.3	3.24	0.07
Nursing qualification:						
Diploma	4.8±3.0			5.5±2.3		
Bachelor	6.8±3.0	7.04	0.008*	5.8±2.7	0.14	0.71
Experience in nursing (years):						
<10	6.9±2.8			6.0±2.4		
10+	4.1±2.9	13.59	<0.001*	5.2±2.3	1.55	0.21
Experience years in psychiatric nursing:						
<5	6.6±2.7			5.9±2.6		
5+	4.7±3.2	6.18	0.01*	5.4±2.2	0.53	0.47

(\* ) Statistically significant at  $p < 0.05$

## Discussion

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The aim of this study was to examine the impact of educational program for psychiatric nurses on the use of successful practice strategies toward patient with psychotic disorders. This was achieved through pre-and post-assessment of the practice of studied nurses.

As the current study results had shown, less than one-third of current nurses had a Bachelor of Nursing degree and their experience in psychiatric nursing had been very variable. From the researchers point of view, this result can be explained by the fact that, less than two third of the study sample were young.

These characteristics, as also shown in previous study (*Fahmy, 2010*), point to a real need for continuing nursing educational program, especially when the work is in a specialty like psychiatry, which has special working conditions with a very peculiar type of patients.

With regard to the effect of the current educational program on the practice of nurses with regard to their own reactions, such as feelings of anger, irritability and helplessness toward psychiatric symptomatology, the findings showed the same pattern of significant decreases in the scores of confirming the patient's view and communicating their own perceptions, and increases in changing patient view without any change in the use of resources, this findings indicated that nurses have taken more steps towards understanding patient illness, nurturing and reassurance, as well as the use of unstructured or structured programming. On the other hand, the less use of communicating one's own perceptions reflects a decline in the dominant role of nurses in communicating one's own views.

In this regard, *Zaki (2016)* pointed out that numerous studies had shown that nurses and other health professionals tend to regard those with mental disorders as more difficult to treat, and to feel less positive and sympathetic towards, compared to other patients. They saw these patients as difficult and less enjoyable to work with.

However, *Dawood et al., (2016)* clarified that other factors, such as patient self-image and staff self-image, have at least an equivalent, if not a greater, impact on staff feeling, which is then reflected in behavior and practice.

Regarding nurses' skills to management of positive and negative symptoms, the findings demonstrated statistically significant changes at pre-post-program. The results showed significant decreases in the scores of communicating own perception and increases in the scores of changing patient view. The use of resources showed a borderline significant increase in positive symptoms. These reflect a positive effect of the program in changing nurses' practice to give more consideration to change patients' views, while decreasing their domineering role in communicating their own views.

The results of the present study are consistent with the findings reported by *Berry et al. (2010)* in their study involving the training of psychiatric nurses. They reported positive trends in the use of strategies based on the patient's own view and negative trends in the reported use of the nurse's own view, although their findings were not statistically significant.

From another perspective, the lack of significant increase in the use of resources by nurses in the current study following the training program may be attributed to the actual lack of such resources in their workplace. A study done by *Rice (2018)* demonstrated implementation challenges across different professional groups, with more implementation difficulties among nurses who are more directly involved in therapeutic decision-making and service delivery. In addition, a six-centre European study on the implementation of family interventions for people with schizophrenia reported that work overload, lack of time and organizational difficulties in the service were obstacles to implementation. (*Mustafa et al., 2019*).

The present study findings showed that the improvement in nurses' practice regarding communication of own perception and change of patient view are more prominent regarding negative symptoms compared with positive

symptoms. This might explain the more obvious improvement of their practice in dealing with negative symptoms compared with positive ones. It also reflects the known negative attitudes towards patients' types and symptoms. The findings are in disagreement with *Delaney et al., (2018)* who said that very modest benefits can be achieved with negative symptoms. However, in accordance with the present study, the study reported by these authors shows that the training of mental health nurses is safe and effective and showed statistically significant improvements in their practice following the training.

In addition, there was significant improvement among patients who were under the care of these nurses after the program in terms of lower rates of relapse and hospital admission and, when relapsed, significantly less time spent in the hospital. Savings in terms of reduced bed occupancy could repay the resources spent on training and supervision. (*Shu et al., 2015*).

The current study has also demonstrated significant improvements in nurses' practice regarding (control problems) managing violence and abuse as well as in dealing with reactions of despair such as suicide and helplessness. In both domains, there were significant post-program decreases in the scores of confirming patient view and communicating own perceptions, while changing patient view increased. The findings again indicate a shift of nurses' practice to be participant provider. These results reported by *Berry et al., (2010)* who pointed out that the importance of this training is underscored by the finding that about two-thirds of respondents thought that care for those with mental disorders was inadequate due to lack of training or expertise, and this belief was correlated with the view that those with mental disorder were difficult to treat.

However, the study had shown no significant change in the use of resources after the program to deal with the reactions of despair. The finding could again be attributed to the lack of adequate resources available to these nurses to help them deal with the problems of despair. A similar finding was found in the study of *Judy et al., (2019)* who

involving the training of psychiatric nurses. Similarly, they found that there was no significant change in the use of other resources and attributed this to the success of the program in giving psychiatric nurses more confidence in dealing with their patients in different situations, without feeling the need for additional external resources.

Improving the practice of nurses in the current study to deal with the reactions of despair among psychiatric patients is quite important, as these patients are often treated differently in these situations due to the prevailing lack of sympathy among health care providers for them.

In line with the above, *Dawood et al., (2016)* reported that while nurses have mostly had positive professional attitudes towards the treatment of those who have self-harmed, they have reported negative personal responses to their care. In addition, and in line with the current study, improved performance of nurses with reactions of despair.

*Mohammed (2012)* found that the majority of post-education nurses allowed the patient to verbalize his/her feelings and listen attentively to the patient. On the same line, *Saleem (2011)* clarified that the most important communication behavior in interaction with the patient is listening skills, which help nurses to build trust relationships with the patients and coordinate their work with other health teams.

The current study showed significant differences between the pre-and post-program phases in total nurses practice mean scores regarding used strategies for management of psychiatric patients. It showed statistically significant decreases in the mean scores of communicating one's own perception and increases in the mean scores of changing patient view. No statistically significant changes could be identified in the confirming patient view or the use of resources mean scores.

In line with the foregoing, *Michael et al., (2019)* reported that while nurses tended to have positive professional attitudes towards the treatment of those who self-harmed, they reported negative personal responses to caring for them. In addition, *Lee and Kim (2017)*

compared the management of patients with mental illness after they had been hospitalized for an episode of deliberate self-poisoning. The results indicated that patients tended to be treated differently from those with other diagnoses. The study, however, could not prove a causal link between negative attitudes and negative care. For example, the difference in treatments may be more closely correlated with a lack of knowledge of appropriate treatments than with negative attitudes. This further supported the impact of the educational program of the present study, which led to an improvement in the nurses' practice.

No statistically significant relation existed with any of the demographic characteristics of the nurses and the practice mean scores of the nurses (confirming the patient's view, communicating their own view, and change patient view) in the pre-program phase. In the post-program phase, mean scores were significantly lower among younger nurses with a bachelor's degree, fewer years of experience in nursing and psychiatric nursing. Improving performance is inversely related to years of experience, as those new to the specialty may be in greater need of training, as their practices are still novel. In line with this, *Redhead et al., (2011) and Baum and Kagan (2015)* stated that knowledge can be based on personal experience and patient viewing. Younger and less experienced nurses therefore need a long-term perspective in order to improve their practice.

Overall, this study demonstrated significant improvement in the total practice mean scores of nurses following the implementation of the training program. Significant declines in the negative approach to communicating one's own perception and an increase in the positive approach to changing patient view had been demonstrated. This indicated that the program has significantly effective and achieved its objective. The program's effectiveness was could be attributed to its content and process. The content of the program was based on the needs identified by nurses and tailored to fill gaps in their knowledge and skills. It was also important for the process to be interactive, based on the principles of adult learning and practical training. This enhanced the acquisition of

practical knowledge that can be applied in their day-to-day practice.

To this end, *Ramirez-Baena et al., (2019)* demonstrated the effectiveness of the current Nursing Education Program. Similarly, all nurses reported increased positive and therapeutic behaviors and decreased instances of negative behaviors when interacting with patients following a training program. In addition, staff who disagreed with the principles of social learning and behavioral management showed less improvement in negative behaviors from pre-to post-assessment compared to other staff.

Similar findings had also been reported by *McTiernan and McDonald (2015)* who have identified significant improvements that persisted after training in coping with occupational violence,' indicating that training resulted in lasting changes in nurses' knowledge and behavior. The authors concluded that after the training program, participants might had the opportunity to apply the knowledge and behavior they learned in their everyday work situations. This supports the explanation of the value of the training process and the researchers encouragement of positive and active interactions during sessions that are essential to adult learning.

## Conclusion

Overall, following the implementation of the educational program, the results of the study demonstrated improvement in the total practice of the studied psychiatric nurses toward management of psychotic disorders, which showed significant decrease in communication own perception mean scores and an increase in the changing patient view mean scores.

The nurses post program practice mean score regarding confirming and changing patient view were influenced by some of their personal characteristics such as age, qualification, years of experience in nursing and in psychiatric nursing. Hence, the program achieved its aim of improving nurses' practice.

## Recommendations

- Psychiatric nurses caring of patient with psychotic disorders need to continually

upgrade and update their skills by reading and attending seminars, workshops and continuing education programs specializing in this field.

- Adequate preparation for nursing students and providing them with adequate information to work in the field of psychiatric nursing is emphasized.
- Appropriate Training programs and self-efficacy courses would help psychiatric nurses to improve their capacity to support stress and improve their work performance toward management of patient with psychotic disorders.

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### Clinical implications

Improved mental health literacy could facilitate appropriate patient management and a continuous renewal of information is needed for psychiatric nurses as health care providers, since they are often the first medical contact in many populations.

Psychiatric mental health nurses must engage at the practice level in resolving the absence of clinical training sites, leading to the creation of a database of findings and helping to develop post-graduate residency programs.

Continuing to focus on inpatient settings as the preferred training site places all professional training in competition with medical residency programs, medical students and other professions. Psychiatric mental health nursing must seriously consider the alternative model of academic-clinical partnerships that are heavily dependent on advanced nurses.

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