Effect of Psycho-educational Program on Nursing Staff Caring Behavior Skills towards Patients having Substance Related Disorders

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Abstract

Background: The jobs that nurses in addiction treatment centers do are incredibly challenging. They devote time and energy to patients who might repeatedly relapse before receiving better results from treatment. **Aim :** To evaluate effect of a psycho-educational program on nursing staff' caring behavior skills towards patients having substance related disorders. **Methods:** The use of quasi-experimental design was made. The subjects involved 134 nurses and divided into (Experimental group & Control group) with 67 nurses in each group who were chosen by purposive sampling. Benha Mental Health and Addiction Hospital was the site of the study. **Tools for data collection:** two tools were used for data collection: **Tool one:** Questionnaire interview assessing nursing staff socio-demographic data, **Tool two**: Nursing staff's compassionate behavior toward patients with substance-related disorders is evaluated using a customized version of the Caring Behavior Assessment Tool. **Results**: Following the implementation of a psycho-educational program, there was a statistically significant improvement in the caring behavior skills of the nurses studying patients with substance-related disorders. **Conclusion:** it was concluded that, a psycho-educational program had positive impact on the nursing staff' caring behavior skills towards patients having substance related disorder. **Recommendations**: According to the study, nurses who work with patients who have substance-related disorders should regularly provide them with up-to-date training programs about emerging health issues and trends associated with these disorders.

Keywords: *Caring behavior skills, Psycho-educational program, Substance related disorder.*

Introduction

Substance related disorders are chronic relapsing brain disorder characterized by cognitive, behavioral and physical symptoms. Individual susceptibility is influenced by psychological, genetic, environmental factors, age of first exposure; substance characteristics and method of use (**Martini et al., 2022).**

In the fight against addiction treatment, nurses are on the front lines. From the initial assessment through treatment and aftercare, nursing staff offers addiction treatment at every stage of the admissions process. Because of this, the psychiatric nurse must function as both a medical professional and a counselor. The job of a nurse in an addiction treatment facility is extremely challenging. (**Wason et al., 2022**).

Professional nurses who exhibit acts, conduct, and mannerisms that communicate safety, concern, and attention to their patients are exhibiting caring behavior (Oluma & Abadiga, 2020). In order to connect nurse interactions to the client's experiences, caring behaviors are essential. In order to improve nursing quality, nurses' compassionate behavior and patient satisfaction are continuously assessed. (**Kasa & Gedamu, 2019**).

Psychiatric nurses work closely with patients who abuse substances and their families for extended periods of time. While caring behaviors are necessary for both diagnostic and therapeutic interventions, they are not properly applied when a patient is in the hospital. Consequently, this resulted in low nurse care delivery and patient dissatisfaction, which in turn affected the prognosis. (**Amelework & Sisay, 2019**).

Patients who receive satisfactory care from nurses feel relieved from stressful and frightful circumstances and are satisfied with the care they received. Furthermore, these actions improve the rapport between patients and nurses. These compassionate behavior skills support meeting each patient's unique needs and are correlated with the nurse's level of empathy. In the end, it might enhance the wellbeing of patients and the standard of care given to those clients. **(Lee & Seo, 2022).**

Significance of the study

Globally, about 269 million people suffer from drug abuse, whose prevalence is expected to continue to increase **[United Nations Office on Drugs and Crime (UNODC), 2020)].** Previous study findings showed the importance of a continuing educational intervention for psychiatric nurses regarding caring for substance related disorder' patients **(Martini et al., 2022)**. Additionally, to raise the standard of nursing services and maintain ongoing training program implementation, including instruction to improve nursing staff's caring behavior skills **(Lee & Seo, 2022)**. Therefore, having a high degree of knowledge and a positive outlook is essential to improving nursing ethics, particularly compassion and the cognitive and emotional empathy that psychiatric nurses have when working with patients who have substance-related disorders.

study Aim

The study aimed at evaluating the effect of a psycho-educational program on nursing staff caring behavior skills towards substance related disorders patients.

Research Hypothesis

Nursing staff's compassionate behavior skills toward patients with substance-related disorders should improve once the psycho-educational program is put into place.

Subjects& Methods

Technical design:

Research design:

The research design was quasi-experimental.

Study setting:

Benha Mental Health and Addiction Hospital was the study's site.

Type of the sample

Purposive sample was used.

Subjects

There were 134 nurses included in the study's sample. The following equation was used to determine the sample size:

Sample size (n) = N/1+N*d2 where N is the total population and d is the precision or error margin.

According to above formula

N = 200 nurse

d = 0.05

$n = 200/1+200* (0.05)^2 = 134$

With 67 nurses in each group, the study sample was split into two equal groups (the Experimental group and the Control group).

The subjects were selected according to following criteria:

Inclusion criteria

-Both genders.

-Nurses that are in direct contact with substance abuse patients.

-Willing to participate in the research.

Exclusion criteria

- Psychiatric nursing staff that do not work directly with

substance abusers as EEG nursing staff.

- Those on sick leaves

Tools of data collection

Two tools were applied:

First Tool: Socio-Demographic Features;

This interview included data as age, sex, marital condition, academic qualifications and job.

Tool 2: Caring Behavior Assessment Tool: Cronin & Harrison (1988) created the tool for measuring caring behavior. It was modified to assess how nursing staff members felt about showing compassion to patients who misused drugs. It was split up into the following seven subscales:

1. **Humanism, faith, hope, and empathy subscale:** This subscale, which ranged in question count from 1 to 16, is concerned with the human rights of people with substance use disorders.

2. **Building trust subscale:** - It included 11 questions those from 17 to 27. This sub subscale is related to the providing of trust from nursing staff to substance abusers.

3. **Expression of positive /negative feelings subscale:** It had 4 questions from 28 to 31. This subscale is related to helping substance use patients to express their feelings freely without fear.

4. **Teaching - learning subscale**: it included 8 questions those from 32 to 39. It is related to the providing of substance use patients with some skills that help them to be independent people.

5. **Supportive and protective environment subscale**: it included 10 questions those from 40 to 49. This subscale is related to providing

substance use patients support to prevent relapse.

6. **Human needs assistance subscale**: it was the questions from 50 to 60 questions. It is concerned with assisting substance related disorder patients in their needs.

7.**Existential-phenomenological and spiritual forces subscale**: - It contained 3 questions from 61 to 63, this subscale is related to help substance use patients to enhance their self-esteem.

Scoring system

A three-point Likert scale was used to indicate how much each nursing behavior reflected caring in the context of the Caring Behavior Assessment Tool (CBA). 1 represented little importance and 3 represented great importance in the ascending scoring system. The questionnaire had the following scoring categories: low caring behavior skills (less than 50%), neutral caring behavior skills (between 50% and 75%), and high caring behavior skills (more than 75%).

Validity:

To achieve criteria of trust and worthiness of that study tools, the tools were distributed on panel of 5 professors and assistant professors of mental health nursing staff members at Benha and Ain Shams University.

Reliability of tool

It had been examined by utilizing the Cronbach's Alpha to measure internal consistency for the tool; nursing staff's caring behavior skills towards substance abusers was 0.958 that reflect accepted internal consistency of used tool.

Operational design

The preparatory phase, pilot study, and field work were all completed for this study.

Preparatory phase

In order to develop study tools and programs, it involved a review of relevant past, present, local, and international literatures in addition to theoretical knowledge of various study-related topics gained from books and online articles.

Pilot Study

A pilot study was carried out on approximately 10% of the total sample to verify the viability, impartiality, and consistency of the study instruments employed, as well as the time required to finish them and to detect potential issues and roadblocks.

Field Work

The actual study was carried out for 5 months and two weeks (5 weeks for pretest, 3 months for the implementation phase, 5 weeks for posttest). Then, the researcher followed up after 3 months of the program. Study was conducted through following phases:

Phase I (Assessment phase)

Researchers worked at the mental health facility from 11:00 AM on Sunday and Thursday of each week. until 2:00 PM. About six weeks were spent gathering data. The number of interviewed nursing staff per week was about 14 nursing staff (7nursing staff in the morning shift as study group & 7nursing staff in the afternoon shift as control group). In a one-on-one interview conducted in a nursing room, the researcher gave a brief explanation of the study's nature and goals and invited participation. Everyone on the nursing staff was made aware of the study's voluntary nature. It took each nurse staff member roughly twenty minutes to complete the questionnaires.

Phase II: Planning phase

The researcher created the program content in the form of a booklet after reviewing recent literature.

Phases III: Program implementation

Eight sessions made up the program: one for an introduction, two for the theoretical portion, four for the practical portion, and a final session summarizing the contents of the used program.

Every session began with an introduction, an evaluation of the participants' eagerness to learn, a request for input regarding the previous session, and the presentation of the goals for the upcoming subject. At the end of every session, nursing staff' questions were discussed to correct any misunderstanding that would have happened.

Program sessions

Introductory session: The researcher set the time for the next session's meeting and went over the program's goals and expected results during the first session.

Theoretical part including 2 sessions

Session (1): This session aimed to provide the experimental group some knowledge about substance related disorder (definition, causes, risk factors and sign, symptoms of substance dependence according to the type of substance used and level of prevention).

Session (2): This session focused on knowledge about professional nursing caring behavior skills.

Practical part containing four sessions

Session (3): The main objective of this session was: to help the nursing staffs identify and apply strategies to cope with stress like relaxation training as (deep

breathing exercise, progressive muscle relaxation, meditation and physical activity). The main objective of this session was: to help the nursing staffs identify and apply strategies to cope with stress like relaxation training as (deep breathing exercise, progressive muscle relaxation, meditation and physical activity).

Session (4): This session aimed to enable nursing staff to apply humanistic skills such as (unconditional positive regard, empathy and credibility skill) with substance related disorder patients. At this session, the researcher gave a situation after each humanistic skill to identify the level of understanding of participants about these skills.

Session (5): This session's main goal was to assist the nursing staff in identifying and using the following teaching and learning strategies with patients who have substance-related disorders: mental preparation,

diversifying stimuli, stimulating motivation, and reinforcement. At this session, the researcher differentiated between teaching and learning and then discussed teaching and learning skills with participants by using different teaching methods.

Session (6): This session aimed to enable nursing staff to apply therapeutic communication skills such skills as(active listening, silence, the skill of giving response that reflect the feelings and thoughts of the patients, questioning skill, the skill of reciting the patient's speech, clarification skill, giving information skill and summarizing skill).

Summary session: the researcher provided reinforcement about the main points of the educational program.

Phase IV (program evaluation)

Evaluation of the program's outcomes was immediately performed after intervention of the

program (post- test) then follow - up following the program's three months by utilizing the same study tools that have been used in pretest on all subjects (experimental group and control group).

Ethical considerations

Prior to the study's conduct, ethical approval was granted by the Benha University Faculty of Nursing Scientific Research Committee, with careful consideration given to participant rights and ethical standards. After informing the studied sample of the current study's goal, an oral consent was obtained. Every participant was made aware that the study is entirely voluntary and that their names would not be appearing on the questionnaire. The data that was collected from the participants was kept strictly confidential and anonymous. The tools' contents were disclosed to the subjects, who were told that they were only being used for research. Participants in the study were free to decline participation at any time or to leave at any moment with no repercussions.

Administrative design

The director of Benha Psychiatric Hospital and the dean of the faculty of nursing both provided formal letters of approval.

Statistical design

Version 20.0 of the IBM SPSS software package was used to feed data into the computer and analyze it. (IBM Corp., Armonk, NY) Numerical and percentage data were used to describe the qualitative data. The Kolmogorov-Smirnov test was employed to confirm the distribution's normality. The range (lowest and maximum), mean, standard deviation, and median were used to characterize quantitative data. The results' significance was assessed at a 5% level. Tests like the Pearson coefficient, Mann Whitney test, Friedman test, Chi-square test,

and Fisher's exact or Monte Carlo correction were used.

Results

Table (1): illustrates that, the highest proportions of study and control groups (58.2%; 59.7%) were in age groups of 25-35 years respectively. Regarding sex, the higher percentage of both the study and the control groups (64.2% and 76.1% respectively) were males. Regarding academic qualification, this table revealed that, more than two thirds of the study and control groups (73.1% & 79.1% respectively) had a diploma degree in nursing. According to Job, majority of both study and control group (89.6% & 94% respectively) were nurses. In relation to marital status, more than two thirds (80.6% & 86.6% respectively) of nurses in study and control groups were married.

Figure (1): reveals that, the experimental group' nurses had a total mean score regarding the caring behavior at pre intervention phase (69.24) and the level became high immediately post and three months after the program (84.44 & 79.33 respectively). While the control group nurses almost had a constant total mean score caring behavior skill throughout pre intervention, immediately post and follow up phases (70.14 & 70.44 & 70.1 respectively).

Table (2): reveals that, there is a highly significant relation between the experimental group' nurses caring behavior skills and their age (p=0.003), years of experience in the psychiatric field (p=0.004) and years of working in the addiction department (p=0.002) at immediate post intervention phase. Likely, there is a significant relation between the experimental group' nurses caring behavior skills and their age (p=0.016), years of experience in the psychiatric field (p=0.012) and years

of working in the addiction department (p=0.003) at follow up phase among the experimental group' nurses. Where there is not significant relation between the experimental group' nurses caring behavior skills and their sex, job and academic qualification at immediate post intervention and follow up phases.

Table (3): shows that, most independent factor affecting nurses caring behavior toward substance abusers was number of years of working in addiction department, which (B= 4.054& p value= 0.042). The more number of years of working in addiction department, the better nurses' caring behavior skills had toward substance abusers. Then, age and years of experience in the psychiatric department had the same effect.

Table (1): Distribution of participants according to Personal data

| Q	Items	Experimental group (n=67)		Control group (n=67)		χ^2	P
		No.	%	No.	%		
1	**Age**						
	< 25	6	9.0	10	14.9		
	25 to ≤ 35	39	58.2	40	59.7	1.654	0.437
	35 or more	22	32.8	17	25.4		
2	**Sex**						
	Male	43	64.2	51	76.1	2.281	0.131
	Female	24	35.8	16	23.9		
3	**Academic Qualification**						
	Diploma of Nursing Technician	49	73.1	53	79.1		
	Bachelor of Nursing	15	22.4	10	14.9	1.339	0.593
	Post graduate	3	4.5	4	6.0		
4	**Job**						
	Nurse	60	89.6	63	94.0	0.891	0.345
	Head Nurse	7	10.4	4	6.0		
5	**Marital status**						
	Single	8	11.9	6	9.0		
	Married	54	80.6	58	86.6		
	Widowed	4	6.0	2	3.0	2.973	0.591
	Divorced	1	1.5	0	0.0		
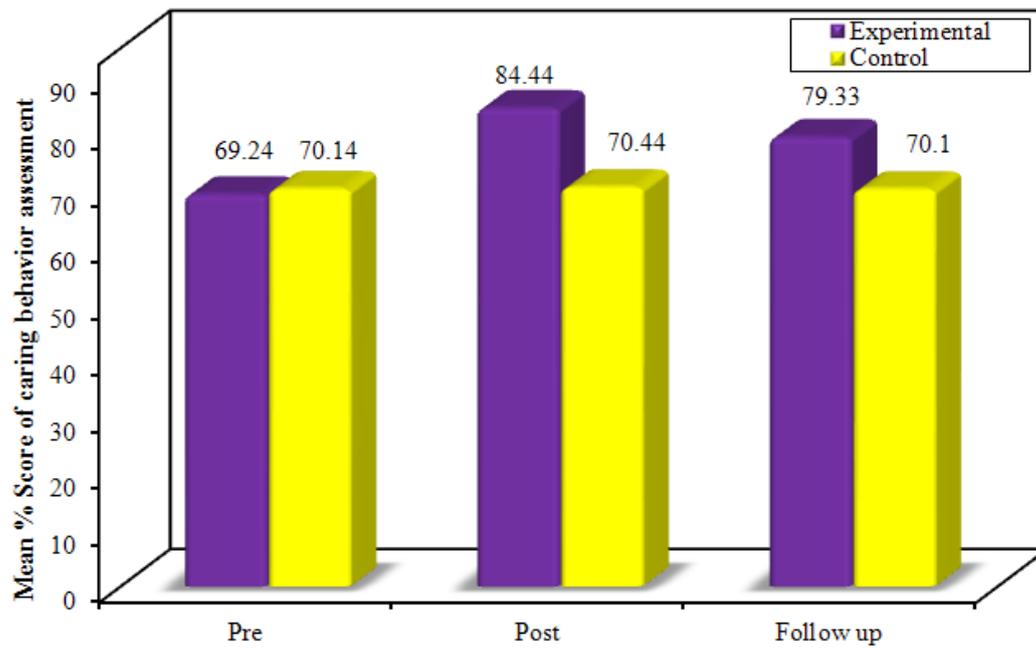
Figure (1): *Comparison between both participant groups regarding Mean Score of caring behavior skills*

Table (2): Relation between caring behavior skills and socio-demographic characteristics of nursing staff in the experimental group

Items	Caring Behavior Assessment									
	Post				Follow up					
	Poor (n =5)		Good (n = 62)		Poor (n =8)		Neutral (n =3)		Good (n =56)	
	No.	%	No.	%	No.	%	No.	%	No.	%
Age										
< 25	3	60.0	3	4.8	3	37.5	0	0.0	3	5.4
25 to ≤ 35	2	40.0	37	59.7	5	62.5	1	33.3	33	58.9
35 or more	0	0.0	22	35.5	0	0.0	2	66.7	20	35.7
$\chi^2(^{MC}p)$	$10.287^*(0.003^*)$				$10.306^*(0.016^*)$					
Sex										
Male	4	80.0	39	62.9	5	62.5	2	66.7	36	64.3
Female	1	20.0	23	37.1	3	37.5	1	33.3	20	35.7
$\chi^2(p)$	$0.588 (^{FE}p=0.647)$				$0.261 (^{MC}p=1.000)$					
Academic Qualification										
Diploma of Nursing Technician	4	80.0	45	72.6	4	50.0	2	66.7	43	76.8
Bachelor of Nursing	1	20.0	14	22.6	2	25.0	1	33.3	12	21.4
Post graduate	0	0.0	3	4.8	2	25.0	0	0.0	1	1.8
$\chi^2(^{MC}p)$	$0.399 (1.000)$				$7.500 (0.090)$					
Job										
Nurse	5	100.0	55	88.7	6	75.0	2	66.7	52	92.9
Head Nurse	0	.0	7	11.3	2	25.0	1	33.3	4	7.1
$\chi^2(p)$	$0.630 (^{FE}p=1.000)$				$4.742 (0.097)$					
Years of experience										
< 5 years	4	80.0	10	16.1	5	62.5	0	0.0	9	16.1
5 to ≤10 years	1	20.0	20	32.3	2	25.0	0	0.0	19	33.9
10 years and more	0	0.0	32	51.6	1	12.5	3	100.0	28	50.0
$\chi^2(^{MC}p)$	$8.985^*(0.004^*)$				$9.905^*(0.012^*)$					
Years of working in addiction department										
< 2 years	5	100.0	15	24.2	6	75.0	2	66.7	12	21.4
2 to ≤5 years	0	0.0	22	35.5	2	25.0	0	0.0	20	35.7
5 years and more	0	0.0	25	40.3	0	0.0	1	33.3	24	42.9
$\chi^2(^{MC}p)$	$9.438^*(0.002^*)$				$11.769^* (0.003^*)$					

Table (3):   Multivariate Linear regression for Caring Behavior Assessment

Items	B	T	P	95% CI	
				LL	UL
Age	3.231	0.988	0.327	-3.302	9.764
Number of years of experience	3.799	1.635	0.107	-0.846	8.444
Number of years of working in addiction department	4.054	2.076[*]	0.042[*]	0.151	7.957
R^2=0.248, F =6.907[*], p <0.001[*]					

Discussion

As a general rule, nurses remain the most important person in giving care for substance abusers and they also have a vital caregiving role for those clients. To do that vital role, psychiatric nursing staff should have sufficient knowledge, a positive attitude and good caring behavior skills toward those patients (**Matthew, 2021**).

Part I: Socio-demographic characteristics of nursing staff

Current research had stated that, the majority of participants were males. This result, from researcher viewpoint, may be due to the male nurses are needed in the addiction department in psychiatric hospitals as during intoxication phase, patients might be impulsive, rude or even aggressive. Other causes that could be

related to Egypt and some countries in the Middle East are the stigma of psychiatric hospitals. Most female nurses do not like working in psychiatric hospitals due to the belief that psychiatrically ill patients are aggressive.

This finding was consistent to research performed by **Abbas & AL-**

Juboori, (2017), large numbers of nurses are males. The finding is inconsistent **Kibret et al., (2022)**, more than half of participants were females.

Regarding nurses' marital status, present research revealed, most of nurses were married. From investigator's viewpoint, that result is probably due to the Egyptian social traditional encouragement for the marriage in early years and they prefer to engage with an employee who has constant income. This finding supported by **Akinjola et al, (2020)**, most of the subjects were married.

Regarding nurses' academic qualification, present research stated, a higher percent was those having nursing technical institute. This result congruent with **Oluma & Abadiga, (2020)** who found that, the majority of nursing staff were those with a diploma and staff nurses. On the opposite side, **Kibret et al.,**

(2022) stated, the majority of participants have a BSc in nursing.

Regarding relationship between demographic data and caring behavior skills, a highly significant relationship was detected between participants' age, experience years in the psychiatric field and in the addiction department at post intervention phase and their caring behavior skills. This may be due to the fact that advanced education and more on the job training in hospital gave the nurses this advantage. Likely, the study of **Assefa et al., (2022)** reported, the participants' age and working experiences were in association with perceptions of the caring skills. Additionally, study conducted by **Inocian et al., (2021)** revealed that, there was a relationship between the subjects' ages and their caring skills. On the other hand, this finding was in opposition with the results of **Kibret et al., (2022)** who stated that,

nursing staff' caring behaviors are not influenced by demographic data. Additionally, **Lee & Seo, (2022)** revealed, head nurses had good caring behavior skills than staff nurses.

Part II: Nursing staff's caring behavior skills towards substance use disorder' patients

The current findings indicated that, the proportion of nurses in both groups who obtained a good score in caring behavior skill was found to be slightly low in pre intervention phase than in post intervention phase. This result could be explained as relatively high proportion of nurses had practical caring skills compared to the psychosocial caring behavior skills. This indicates that nursing staff perceived more concrete, observable aspects of caring skills than expressive caring behavior skills

This result is in line with **Oluma & Abadiga, (2020)** who found that, subjects with a good perception of caring skills was a lower proportion. On the other hand, **Assefa et al., (2022)** reported that, a high percentage of participants had a good perception of caring skills.

Thus, at end of that program, the majority of nurses in these study group had good caring behavior skills in both posttest and follow up phases for the study subjects compared to control subjects.

On the same line, **Mäkelä *et al.* (2022)** showed, web-based education program had a positive impact on the intervention group's knowledge and improved their caring behavior skills toward alcohol and drug use patients. Additionally, **Kibret *et al.* (2022)** stated, 60% of nurses had a satisfactory score in caring behavior skills.

Furthermore, research conducted by **Porter** *et al.* **(2018)** revealed that, the participants had high perceptions of caring behaviors in all of the assessed areas following implementation of the program. On the same hand, knowledge and caring behaviors of nurses toward substance abusers improved following the intervention as stated by **Clarke** *et al.* **(2019).**

Part V: Multivariate linear regression for caring behavior skills

Regarding caring behavior skills, the most independent factor affecting nurses caring behavior toward substance abusers was number of years of working in addiction department. This result is incongruent with **Oluma & Abadiga, (2020)** who demonstrated that, a significantly associated independent variable with caring behavior at $p < 0.05$ is the age.

Conclusion

Based on results of current study, it is concluded that educational program had a positive impact on nursing staff caring behavior skills towards substance related disorders patients. Moreover, there is a strong positive relation between the nursing staff' attitudes and their age, years of experience in the psychiatric field and years of working in the addiction department.

Recommendations

- Training and education programs on attitudes and caring behavior skills should be offered to nurses at suitable times, taking into consideration their working shifts, and asking nurses about the topics they wish to know more about.

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