



Efficiency of Nursing Intervention on Psychological Adjustment, Perfectionism and Symptoms among Patients with Obsessive Compulsive Disorder

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ABSTRACT

Background: Obsessive-compulsive disorder is a mental disorder in which a person experiences unwanted thoughts, and persistence ideas that patient perceives to be inappropriate. **Aim:** To evaluate efficiency of nursing intervention program on psychological maladjustment, negative perfectionism, and severity of symptoms among patients with obsessive-compulsive disorder. **Design:** Quasi-experimental (randomized control trial) two groups were utilized. **Sample:** A purposive and simple random sampling technique of eighty patients with obsessive-compulsive disorder divided into forty patients in study group and forty patients in control group. **Setting:** The study was carried out in the Outpatients Departments, at the Psychiatric and Mental Health Hospital in Meet-khalf at Menoufia. **Tool:** Socio-demographic data, Brief Psychological Adjustment-6, Positive and Negative Perfectionism Scale, and Obsessive-Compulsive Inventory. **Results:** The study findings revealed that there were highly significant differences regarding obsessive-compulsive disorder symptoms in the study group between pre and post-program ($p \leq 0.000$) and pre-program and follow-up ($p \leq 0.002$). It revealed that there were significant relations between psychological adjustments, positive, negative perfectionism, and Obsessive-compulsive disorder's symptoms through program phases in the study group ($p \leq 0.000$). There were no significant differences between the studied variables and control group through program phases. **Conclusion:** Patients with obsessive-compulsive disorder who participated to the nursing intervention program "study group" improved their symptoms, psychological adjustment, positive perfectionism, and reduced levels of negative perfectionism than those who are in the control group. **Recommendations:** Psychiatric nursing teams should implement the nursing intervention program for people with obsessive-compulsive disorder in order to improve their symptoms, psychological adjustment, positive perfectionism, and reduce negative perfectionism.

Keywords: Nursing Intervention, Psychological Adjustment, Perfectionism, Symptoms and Obsessive Compulsive Disorder.

Introduction

Obsessive-Compulsive Disorder (OCD) is a severe mental and emotional disorder described by the presence of disturbing, anxiety and unwanted thoughts, as well as repetitive actions that cause explicit and distress disorder (Sadock et al., 2015). The obsessional thoughts content, impulses or images are extremely personalized in their nature, and is shaped by the client's individual life events and experiences that impact the attention of a person's obsessive rumination (Rathore & Prakash, 2017). OCD has a lifespan that usually initiates in childhood or adolescence, perseveres throughout an individual's life, and causes significant damage in performance due to the severity of the disease and its chronic nature (Sassano-Higgins & Pato, 2015).

Additionally, perfectionism is associated with some symptoms of OCD such as checking, cleaning, and hoarding. It is concerned with compulsive inspection and "not just right" (NJR) obsessions, specifically thinking that the task was not completed or that the experience did not have a positive perceptual sense of completion (DiBartolo & Rendón, 2012). Perfectionism is commonly conceptualized as a multidimensional structure; has defined as a personality characteristic. Perfectionists practice perfection in all life elements, which never occurs because they adjust and expect more than they can provide, leaving them dissatisfied with themselves. The fear of failure motivates such high standards (Elizabeth, 2022).

Perfectionism has two sides: Healthy (or positive) and pathological (or negative). Positive perfectionism (the healthy aspect) is linked to success and achievement, and it is a widely held

belief that an individual striving to become healthier while recognizing their weaknesses is associated with well-being (Sarafraz, 2020). While the pathological aspect (negative) of perfectionism, which results in concerns about making mistakes, uncertainty, fear of being judged, suicidal ideation, and dissatisfaction with personal performance, plays an important role in triggering "OCD," and is associated with maladaptive outcomes positively associated with distress, and has been identified as a risk factor across a number of psychiatric disorders, including maladjustment, depression and anxiety disorders (Kothari, 2017).

As well as, OCD significantly impairs patients' psychosocial and occupational functioning, and productivity and condition deteriorate as the illness progresses (Svenaesus, 2013). Also, patients with OCD become less productive for themselves, their families, and society at large, perpetuating OCD's negative impact on a person's capability to adapt to daily life needs achieving male adaptation (Rathore, 2017).

Psychological adjustment is the level to which they achieve in everyday life (Cruz et al., 2019; and Peterson, 2015). People with greater levels of psychological adjustment are thought to get a better ability for positive functioning and a healthy pattern of perfectionism. Also, patients with unhealthy perfectionism and maladjustment perfectionism are thought to be significant risk factors for each other, especially OCD patients (Khosravani, 2017).

Nursing management of OCD has changed completely in the past years as well as the development of new management approaches. This

not only takes care of the initial the patient's symptoms of OCD but also helps in enhancing his skill to adapt to daily working life and the negative adverse effect of associated negativism (Varcarolis, 2014). Hence, "the International Guidelines", in relation to the level of symptomatic impairment, cognitive behavioral therapy "CBT" and recommend psycho-pharmacological therapy for treatment of OCD (Gragnani et al., 2022). Pharmacological therapy for OCD has been indicated to be effective in managing OCD and related psychiatric problems, such as serotonin-norepinephrine reuptake inhibitors (SNRIs), selective serotonin reuptake inhibitors (SSRIs) and clomipramine (Rathore & Prakash, 2017; and Liu et al., 2016).

Significance of the study

According to the World Health Organization, OCD is in the top 20 of most significant disabling global diseases, with high treatment costs and a poor life quality (QOL) comparable to heroin addicts, depression, and even schizophrenia (World health organization, 2015). The prevalence of OCD in the general population has been found to be remarkably high, with an estimated total population of at least 50 million worldwide (Rady et al., 2013); as well, it affects up to 2–3% of the global population (Coluccia et al., 2015; and Pozza et al., 2020, 2021). OCD is ranked as the second most common mental disorder, although it is still underestimated worldwide (Fawcett et al., 2020).

The young people with OCD consider their symptoms to be embarrassing and do not disclose them unless specifically asked, unlike those with the majority of other mental illnesses (Erfan & Rakhawy, 2010). As a result, OCD in young

people is frequently undiagnosed and untreated. The accompanying distress and stunted growth can be avoided if effective and timely treatments are available while treatment is most needed. In addition, early detection and intervention improve the outcomes (Rezaei, 2018).

A multidisciplinary approach is essential to the prevention and management of OCD, and nurses play a critical role in this approach by implementing an awareness role. As such, people suffering from mental and emotional disorders such as OCD, maladjustment, negative perfectionism, or related personality disorders become a burden to their families and communities whatsoever (Pampaloni et al., 2022).

Psychiatric nurse professionals can be in a unique position to assess patients' pre-illness conditions, which may be useful in the diagnosis of OCD, the management process, or the recovery or rehabilitation process (Varcarolis, 2014). Nurses should have access to preventive measures for prevention and its effects not only in outpatient psychiatric clinics but also in schools, universities, health facilities and services wherever they can access them. They can develop prevention strategies based on evidence from future studies involving nursing university students and health team members, as well as contribute to raising awareness about the behavioral and maladaptive impact of OCD and its complications (Doenges et al., 2014).

In the past few years, there has been growing attention to OCD due to the distribution of pandemics in increasing rates of deaths which increase the fear and rates of anxiety disorders and many studies have also linked compulsive behaviors and maladjustment to a range of mental

health concerns including self-esteem, lifestyle, depression, daily life activities, sleeping disorders and even suicidal thoughts. Although very few studies have examined the general patterns of association between perfectionism and psychological adjustment factors, in patients with OCD. This necessitates the importance of the role of the psychiatric nurse in the intervention of OCD on the three levels of prevention to limit its effect on the mental health of Egyptian people.

The patients tend to remain in remission long-term, involving only occasional refresher meetings of specialized nursing intervention requiring good motivation and support with the patient. Pharmacological treatment and nursing intervention, when used together complement each other. Desensitization, Thought-stopping, flooding, implosion therapy, and aversive conditioning have also been applied to decrease the worry and discomfort associated with obsessions across habituation to delay performing a ritual, working gradually towards resisting the compulsion. Nurses play an important role in assessing and familiarizing themselves with the signs and symptoms of OCD and depression. Recognizing these signs can help the patient come out of his self-imposed closet and seek treatment. Therefore, the present study aims to evaluate efficiency of nursing intervention program on psychological maladjustment, negative perfectionism, and severity of symptoms among patients with obsessive-compulsive disorder.

Aim of the Study

The aim of the study was to evaluate efficiency of nursing intervention program on psychological maladjustment, negative

perfectionism, and severity of symptoms among patients with obsessive-compulsive disorder.

This was done by attaining the following objectives:

- Assessing levels of positive/negative perfectionism and psychological adjustment among patients with obsessive compulsive disorder.
- Assessing levels of obsessive compulsive disorder symptoms among studied patients.
- Designing and implementing nursing intervention program for patients with obsessive-compulsive disorder in order to improve their symptoms, perfectionism, and psychological adjustment.
- Evaluating efficiency of nursing intervention on psychological adjustment, perfectionism, and symptoms in patients with obsessive-compulsive disorder.

Research Hypotheses:

- People with obsessive compulsive disorder who participated in the nursing intervention program will have productive to lower scores of OCD symptoms than those who did not.
- Patients with obsessive compulsive disorder who participated in the nursing intervention program will have productive to lower scores of psychological maladjustment levels than those who did not.
- Patients with obsessive compulsive disorder who participated in the nursing intervention program will have productive to higher levels of positive perfectionism and reduce levels of negative perfectionism than those who did not.

Subjects and Methods

Research Design

A quasi-experimental (randomized control trial) two-groups were utilized, this trial is a

practical, separate comparing program (study group) that was recognized on improving their symptoms, psychological adjustment levels and positive perfectionism and reduce their levels of negative perfectionism among patients with obsessive compulsive. The participation in the experimental and a waitlist (control group) using 1:1 distribution ratio. The usual medical treatment was provided to both studied groups.

Setting

The present study was done in the Outpatient Clinics at the Psychiatric and Mental Health Hospital in Meet-khalf at Menoufia that affiliated to the Ministry of Health and Population, Egypt.

Sample

Eighty patients with obsessive compulsive disorder are involve in this study, which dividend into two groups (such as 40 study group and 40 for control group) from the above mentioned setting and which were chosen using the purposive and simple random sampling technique. The participants who agreed to participate in this study, were randomly divided into two equal groups (study and control), and met the following **inclusion criteria:** Patients had diagnosed with OCD according to DSM-IV criteria, aged between 18 -55 years old, both genders, and patients were taking medication as doctors prescribed it.

Exclusion Criteria:

If a participant had a current or previous history of pervasive developmental disorder, or intellectual disability according to DSM-IV criteria (defined as IQ <70), a current or previous history of medical or neurological disorders that may affect brain function (e.g., CNS tumors, seizures, or loss of consciousness for 15 minutes or more), sensory limits including hearing impairments, or

visual (e.g., glaucoma or blindness) that will affect with assessment or a current or previous history of drugs abuse within the last month, excluding caffeine or nicotine, and they had language disorders; they were excluded.

Tools: Four tools were used for data collection in this study.

Tool I: A socio-demographic data structured interview sheet: It was developed by the researchers. It includes data about patients with obsessive compulsive disorder and elicited sociodemographic data such as gender, age, birth order, marital status, occupation, education level, size of family, and living with family.

Tool II: Brief Psychological Adjustment-6 (BPASE-6). The BASE-6 was developed by **Cruz et al. (2019)** and it is a self-report instrument of general psychological adjustment comprising of six items. Each item assesses how a participant has been feeling in the past week. The items statement are reversed phrases, this mean that the highest score indicated the higher level of psychological maladjustment. Items are rated on a 7-point scale (ranging from 1 = Not at all, 4 = somewhat, and 7 = Extremely). A sample item is "To what extent have you felt irritable, angry, and/or resentful this week?". Using three different adult samples. A total score of the scale ranges from (6 to 42) with higher scores indicating greater psychological maladjustment ($\geq 60\%$ of total score considered have psychological maladjustment).

Tool III: Positive and Negative Perfectionism Scale PANPS: It was developed by **Terry-Short, Owens, Slade, and Dewey (1995)**, it

consists a 40-items measure of perfectionism that was aimed to determine (20 items) positive and (20 items) negative perfectionism. On a 5-point Likert scale, it assesses the participants' perfectionism from 1 to 5 in both positive and negative perfectionism. The participants' minimum score on each subscale was 20 and the maximum was 100 with higher scores indicating greater positive/negative perfectionism ($\geq 60\%$ of total score of subscale considered have positive/negative perfectionism).

Tool IV: Obsessive-Compulsive Inventory: It was developed by **Foa et al. (1998)**. It includes a 42-items that was aimed to describe how much that experience has distressed or bothered you during the past month. Each item was rated on a 5-point Likert scale (0 = not at all, 1 = a little, 2 = moderately, 3 = a lot, and 4 = extremely). A total score of the scale ranges from (0 to 168) with higher scores indicating greater distressed or bothered experience. 0 to 56 means mild OCD symptoms, 57 to 112 means moderate OCD symptoms, and 113 to 168 means severe OCD symptoms.

Content Validity:

The researchers checked the validity of the tools' content before starting data collection. Translation and back translation process have been done for the measurement by a panel of five bilingual experts; They were three professors of psychiatric and mental health nursing, and two expert in the Arabic language, to verify the items' relevancy and comprehensiveness, and the appropriate changes were carried out accordingly. As well as the time necessary to complete the data sheet was calculated.

Reliability:

Reliability was revealed by applying Cronbach's alpha coefficient test which showed homogeneous items in relatively. The internal consistency of the Brief Psychological Adjustment-6 (BPASE-6), Positive and Negative Perfectionism Scale (PANPS), and Obsessive-Compulsive Inventory was 0.93, 0.91, and 0.89 respectively which these values are highly acceptable as well as acceptable levels of concurrent/ criterion validity.

A Pilot Study:

To determine the time necessary to fill in and to confirm the applicability and completeness of the tools, a pilot study was carried out. It was conducted on eight persons with obsessive compulsive disorder which indicates approximately 10% of the studied sample. Those who participated in the pilot study were included in the main study sample as no changes to the tools were needed.

Procedure:

Conduction of the current study started with an extensive literature of review, selection and preparation of data collection tools and review of related literature covering various aspects of the problem and the designed program was carried out, using accessible books, journals and internet to get familiar with the research problem and program. An agreement of the scientific research ethics committee of the faculty of Nursing, Menoufia University was obtained to carry out the current study and the program. The hospital's administrator also gave his written permission for conduction of the study and program. The objectives of the study were explained to the

participants and asked to read the informed consent to be participated in the program. Prior to the actual data collection, all the questions and queries were discussed and sorted out. Each participant signed a written consent after being properly informed with all the stages of program, intervention and follow up. Data were gathered over a period of six months, from the beginning of May 2022 to the end of October 2022. The researchers interviewed the patients in the outpatients' clinics and the program was implemented. The researchers went to the previously mentioned setting, once a week, from 9 am to 12 midday. The average time to complete the questionnaire was between 50 and 60 minutes. The information collected served as a baseline assessment (pre-test). Then, the participants were then divided into eight groups for the enabling nursing intervention program, each group consisting of five participants. The researchers conducted interviews with eight groups/per week. The intervention consists of eight sessions, each session is 40-50 minutes long.

The Nursing Intervention Program: Included four stages.

1. **Assessment stage:** The researchers reviewed all psychiatric outpatient sheets for selecting patients who met the inclusion criteria. Patients were asked to participate in the study after establishing a relationship of trust and stating the purposes of the study. The procedure continued until the required number (eighty patients) was achieved. The recruited patients were subjected to a pre-test applying the tools of the study to assess the patient's history of positive and negative perfectionism and general psychological adjustment. This was utilized by interviewing patients in a separate manner by the researchers, each patient took 35 - 50 minutes, and whenever the patient wanted rest time the researchers gave him/her more time. The patient's medical data were double-checked from the clinical records. This phase was hold in one session.
2. **Preparation stage:** The researchers developed a nursing intervention program based on the findings of the interviews, observations, and patient records, as well as a review of the literature. It was used immediately following the pretest.
 - **The Program Contents:** Handouts were created to meet the needs of patients while also accommodating to their interests and levels of understanding. It consisted of different elements of positive and negative perfectionism and general psychological adjustment, cognitive behavioral therapy. The researcher investigated the contents validity for the program contents before implemented the program by three professors of psychiatric and mental health nursing, and there were no modification.
 - **Teaching Methods:** All experimental patients received the same training program content and used the same instruction methods, which included lectures/discussions, demonstration, and re-demonstration.
 - **Teaching Media:** That included handouts, videos, pictures, and a slide show on the researchers' computer.
3. **Implementation stage:** The nursing intervention was utilized immediately after the assessment and preparation phases were completed. The sample of eighty patients were distributed into two equal groups (control and

experimental). Routine medical treatment was given to both groups (control and experimental) in the study. The nursing intervention was applied to the experimental group (40 patients) which was distributed into eight subgroups (5 patients in each group) that took the program in a parallel manner. Every session lasted 40 -50 minutes. This phase included eight sessions were issued as follows:

Frist session: It involved welcome, recognition of the researchers, and a group that highlights support and harmony between group participants (5 patients). In addition, the researchers explained an introduction and clarification of the nursing intervention goal, as well as the importance of the nursing intervention to ensure that the program is understood by the patients.

Second session: It included the definition, explanation of the main parts, determine the incidence, define the component and clarification of other cases similar to obsessive-compulsive disorder. Use paper and pen to identify the problem by writing or drawing if possible.

Third session: give information for the patients about the obsessive-compulsive disorder and perfectionism as an adjective or a disorder. Common symptoms of obsessive-compulsive and perfectionism disorder. Differences between mere perfectionism and obsessive-compulsive disorder? Dealing with obsessive-compulsive disorder and perfectionism only. Types of obsessive perfectionism and idealism. The dominant feelings of the sufferer of perfectionism. Diagnosis and treatment of obsessive perfectionism “idealism”. Design a

schedule to determine the problem and the number of times it was repeated.

Fourth session: It deals with the definition of psychological adjustment. The environment to which the individual adapts, dimensions, Key factors, and the importance of psychological adjustment for OCD. Practicing some coping techniques (deep breathing-gradual deep relaxation of all parts of the body).

Fifth session: Negative thinking of patients with OCD. Methods to help patients to overcome the OCD and negative thoughts in proportion to their conditions (such as leather gloves, cream, and so on). Applying deep breathing strategy and deep progressive muscle relaxation technique for all parts of the body.

Sixth session: The role of psychiatric/mental health nurses in dealing with patients with obsessive-compulsive disorder and collecting patients' ideas from the discussion about homework. Explaining the action and the indication of antidepressants for obsessive-compulsive disorder. Helping the patient adhere to the therapeutic medications as prescribed by the doctor for obsessive-compulsive disorder. Discussing with patients about their most important problems with obsessive-compulsive disorder. Using the reverse counting technique "from 100 to 1 randomly" to reduce anxiety and stress associated with OCD.

Seventh session: It was utilized the cognitive behavioral therapy to alleviate symptoms of obsessive-compulsive disorder. Training the patient using a small model to control his recurring thoughts or the repetition of doing a specific thing as a symptom of his disorder.

Eighth session: It included the most important tips for family and friends as well as patients with obsessive-compulsive disorder. The researchers demonstrated the roleplay scenario about the suffering of patients from their symptoms. Some patients represent in a short scenario about their suffering from symptoms, a discussion in the group to review what has benefited from the program sessions.

4- Evaluation stage: Evaluation of the nursing intervention program was done promptly after the eventual implementation of the last session, a post-test survey, which was the same as the pre-test was conducted to evaluate the program's effect. Following the post-test, a three months after the last meeting, the researchers conducted telephone calls to each patient to check on the recommended skills and to ensure that the materials provided were being applied, and the final evaluation through the follow-up test. The follow-up test was conducted applying the same tools to assess the degree of retention through a comparison of results with pre-post-tests. This phase was hold in two session.

Administrative approval

Letters of approval were obtained from the Faculty of Nursing, Menoufia University to the directors of the Psychiatric and Mental Health Hospital in Meet-khalf at Menoufia Governorate, Egypt to get an agreement for data collection.

Ethical considerations:

All ethical issues are emphasized; prior to conducting the interview and providing them with a brief orientation to the purpose of the study, formal consent was obtained from each patient and his/her caregiver. They were also assured that all

data gathered would be kept strictly, confidential and utilized only for the objectives of the study. The patients had the option to withdraw from the study at any time and without any reason.

Statistical Design

Statistical analysis of the data was performed using the Statistical Package Social Science SPSS version 25 software. Quantitative data were expressed as the mean \pm SD & range, and qualitative data were expressed as absolute frequencies (number) & relative frequencies (percentage). It was examined using a chi-square test (χ^2). The ANOVA test, Independent Samples T Test, Independent Samples Mann-Whitney U Test, and Kruskal Wallis Test were used to compare the two or more means between pre, post and follow-up in the experimental and control groups. P-value ≤ 0.05 was considered statistically significant, P-value ≤ 0.001 was considered highly statistically significant, and p-value > 0.05 was considered statistically insignificant. Normality test was performed on the pre, post, and follow-up data total scores among study and control groups using Shapiro-Wilk (SW) test.

Results:

Table (1): Shows that the high equal percentages of patients were males & females (50% of the study and control patients). The highest percentages of patients (40.0%) in the study group and (42.0%) control groups were in the age group ranging between 25 – <34 years. Concerning the patient's occupational, 62.5% of the study group and 57.5% of the control subjects were jobless. About their marital status, 55% of the study group and 47.5% of the control group were singles. In addition, it reveals that 60% of the

study group and 57.5% of the control group were living with their families. As well as it demonstrates that there was no significant change between the study and control groups, this is indicating that there was "equivalence between the studied sample" in terms of all socio-demographic data, occupational and personal characteristics.

Table (2): Reveals that about one-eighth (12.5%) of the study group had mild symptoms of OCD, while about one-quarter (25%) of them had moderate symptoms of OCD, and 62.5% of them had severe symptoms of OCD. Also, the same table demonstrates that a highly statistically significant difference regarding the symptoms of OCD of the study group was detected between the pre-post program ($p \leq 0.000$). Moreover, a statistically significant difference related to the symptoms of OCD of the study group was found between the pre and follow-up programs ($p \leq 0.002$). While there were no statistically significant differences in the means of observation before, after, and follow-up among the participants in the control group.

Figure (1): Shows that the mean of psychological adjustment improved in the post-program and follow-up phases than pre-program (28.15, to 17.68 and 19.25 respectively) where the items of the scale were reversed phrases. As well, the mean of positive perfectionism increased in the post-program and follow-up phases than pre-program (46.4 to 68.4 and 54.8.5 respectively). Moreover, the mean negative perfectionism decreased in the post-program and follow-up phases than in the pre-program (67.5 to 50.7 and 55.3 respectively).

Figure (2): Shows that there is no difference in positive and negative perfectionism in pre and post program phases (99.1 to 100.1) respectively. Moreover, there is no difference in psychological adjustment in pre and post program phases (26.5 to 25.9) respectively.

Table (3): Shows that there were highly significant relations between study and control groups; and in between pre, post, and at follow-up program observations related to psychological adjustment, positive and negative perfectionism, and OCD symptoms ($P < 0.000$). This result means that of the studied sample (study & control groups) the researchers chosen homogeneous of the studied groups. The study results revealed that there were significant changes between psychological adjustment, positive and negative perfectionism, and OCD symptoms among the study group ($P < 0.000$).

Table (4): The present study outcomes revealed that there is a significant positive relations between gender, perfectionism, and OCD symptoms at pre-observation in the study group ($P < 0.036$ and 0.035 respectively), but there is a significant negative relation was found between gender and negative perfectionism ($P < 0.007$). Also, there is a significant positive relation among the study group subjects, between occupation and psychological adjustment ($P < 0.048$), while there is a significant negative relation between marital status and psychological adjustment among the study group ($P < 0.039$).

Table (5): Reveals that there is a significant negative correlation between marital status and psychological adjustment at follow-up observation

among control groups ($P < 0.025$). This table shows that there were no significant correlations between sociodemographic characteristics, positive and

negative perfectionism, and OCD symptoms through the program phases among studied subjects in control group.

Table (1): Distribution of Sociodemographic Characteristics Among Study and Control Groups. (N=80)

Sociodemographic characteristics		Study group (n ₁ = 40)		Control group (n ₂ = 40)		X ² Sig.
		No	%	No	%	
Age	<25	14	35.0	13	32.5	0.067 (0.995)
	25 – <34	16	40.0	17	42.5	
	35 – <44	7	17.5	7	17.5	
	45 – <55	3	7.5	3	7.5	
	Mean±SD	30.30±9.12		30.23±9.33		
Gender	Male	20	50.0	20	50.0	0.000 (1.000)
	Female	20	50.0	20	50.0	
Education	Illiterate	7	17.5	8	20.0	3.610 (0.307)
	Read and write	14	35.0	21	52.5	
	Secondary education	9	22.5	5	12.5	
	University education	10	25.0	6	15.0	
Occupation	Work	15	37.5	17	42.5	0.208 (0.648)
	Does not work	25	62.5	23	57.5	
Marital status	Married	11	27.5	10	25.0	1.159 (0.763)
	Single	22	55.0	19	47.5	
	Divorced	5	12.5	8	20.0	
	Widow	2	5.0	3	7.5	
Habitat	Rural	18	45.0	20	50.0	0.201 (0.654)
	Urban	22	55.0	20	50.0	
Income	Sufficient	8	20.0	12	30.0	1.067 (0.302)
	Insufficient	32	80.0	28	70.0	
Living with family	Yes	24	60.0	23	57.5	0.052 (0.820)
	No	16	40.0	17	42.5	
Family members	3	2	5.0	1	2.5	0.588 (0.745)
	4 – 5	24	60.0	23	57.5	
	6 – 7	14	35.0	16	40.0	
	Mean±SD	5.30±1.07		5.38±1.08		

X² Chi square test

Table (2): Frequency Distribution of Studied Patient Regarding Their OCD Symptom's Severity Through the Program Phases Among Study and Control Groups (n=80).

Severity of OCD Symptoms	Study group (n ₁ = 40)						Control group (n ₂ = 40)					
	Pre		Post		Follow-up		Pre		Post		Follow-up	
	No	%	No	%	No	%	No	%	No	%	No	%
Mild	5	12.5	12	30.0	20	50.0	5	12.5	6	15.0	8	20.0
Moderate	10	25.0	18	45.0	15	37.5	10	25.0	12	30.0	14	35.0
Severe	25	62.5	10	25.0	5	12.5	25	62.5	22	55.0	18	45.0
X²1	26.24						6.820					
p-value	0.000**						0.107					
X²2	5.930						7.970					
p-value	0.203						0.109					
X²3	18.077						5.940					
p-value	0.002*						0.206					

X²1 between pre and post program

X²2 between post and follow-up program

X²3 between pre and follow-up program

* Statistically significant at $p \leq 0.05$

** Highly statistically significant at $p \leq 0.01$

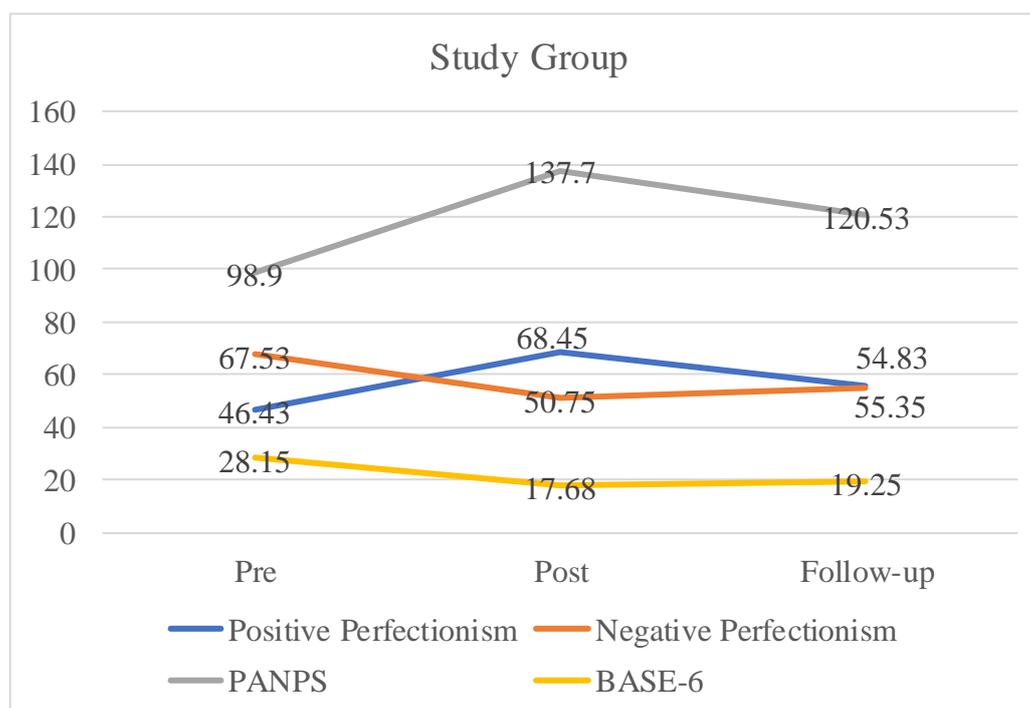


Figure 1: Mean Change Between Observations Among Study Group Through the Program Phases.

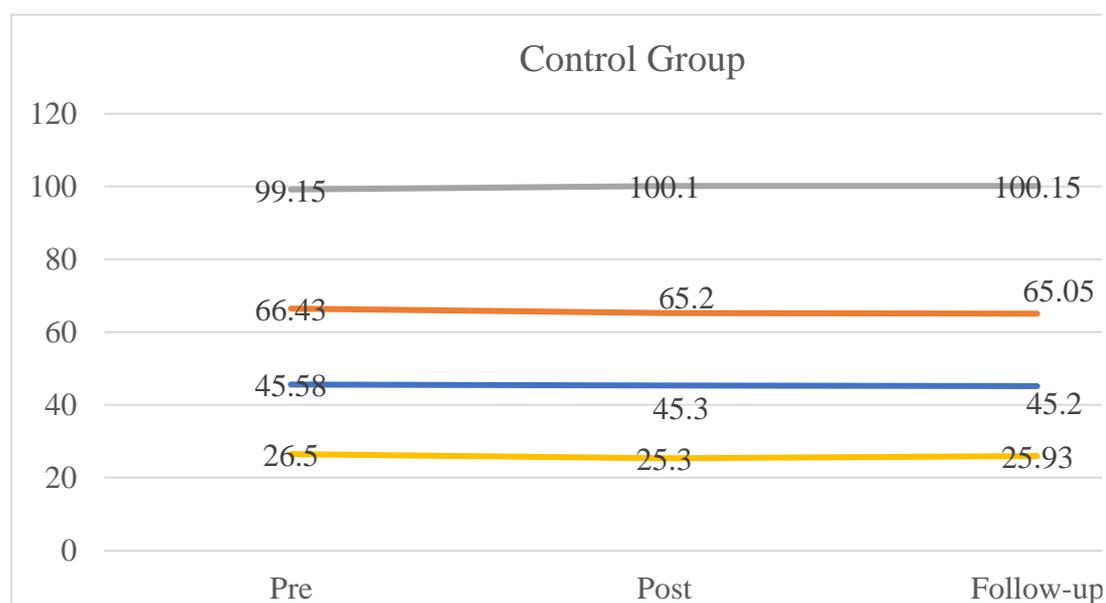


Figure 2: Mean Change Between Observations Among Control Group Through the Program Phases.

Table (3): Relation between Mean Scores of Psychological Adjustment, Positive/Negative Perfectionism, and OCD Symptoms Through the Program Phases Among Studied Subjects in Study and Control Groups.

	Study group (n ₁ =40)		Control group (n ₂ =40)		Test ^a (Sig.)
	Mean±SD	Range	Mean±SD	Range	
Pre					
BPASE-6	28.15±3.36	20 - 34	26.50±3.00	19 - 33	(0.033*) ^c
PANPS					
-Positive Perfectionism	46.43±3.30	41 - 52	45.58±3.27	40 - 52	1.156 (0.251)
-Negative Perfectionism	67.53±6.72	52 - 83	66.43±6.83	51 - 82	0.726 (0.470)
- Total PANPS	98.90±8.23	82 - 113	99.15±8.18	81 - 113	-0.136 (0.892)
OCD Symptoms	89.93±8.33	83 - 108	89.13±8.22	71 - 114	-0.146 (0.882)
Post					
BPASE-6	17.68±1.38	15 - 20	25.30±1.91	22 - 30	(0.000**) ^c
PANPS					
-Positive Perfectionism	68.45±6.59	56 - 84	45.30±2.99	38 - 54	20.223(0.000**)
-Negative Perfectionism	50.75±2.79	45 - 57	65.20±3.76	56 - 73	-19.508(0.000**)
- Total PANPS	137.70±6.76	124 -156	100.10±5.42	88 - 112	27.445(0.000**)
OCD Symptoms	135.70±6.77	123-157	100.10±4.43	86 - 110	24.465(0.000**)
Follow-up					
BPASE-6	19.25±1.21	16 - 22	25.93±2.04	22 - 31	(0.000**) ^c
PANPS					
- Positive Perfectionism	55.35±3.48	47 - 63	45.20±2.99	41 - 53	14.004 (0.000**)
-Negative Perfectionism	54.83±2.86	51 - 64	65.05±2.93	58 - 72	-15.772(0.000**)
- Total PANPS	120.53±4.15	113 -130	100.15±4.55	93 - 111	20.911 (0.000**)
OCD Symptoms	125.53±4.15	100 -120	100.13±4.65	89 - 106	19.981 (0.000**)
Test ^b (Sig.)					
BPASE-6	88.975 (0.000**) ^d		2.573 (0.081)		
PANPS					
- Positive Perfectionism	221.525 (0.000**)		0.158 (0.854)		
- Negative Perfectionism	150.194 (0.000**)		0.984 (0.377)		
- Total PANPS	347.018 (0.000**)		0.326 (0.723)		
OCD Symptoms	377.010 (0.000**)		0.367 (0.733)		

PANPS = Positive and Negative Perfectionism

OCD = Obsessive compulsive disorder

^c = Independent Samples Mann-Whitney U Test

* Statistically significant at p≤0.05

Scale E-6 = Brief Adjustment Scale-6

^a = Independent Samples T Test

^d =Kruskal Wallis Test

** Highly statistically significant at p≤0.01

SD Standard Deviation

^b = ANOVA test

Table (4): Correlation Between Sociodemographic Characteristics, Psychological Adjustment, Positive and Negative Perfectionism, and OCD Symptoms Through the Program Phases Among Studied Subjects in Study Group.

	Study group (n ₁ =40)				
	Positive	Negative	PANPS	BPASE	OCD Symptoms
Pre					
Age	0.052 (0.752)	0.063 (0.700)	-0.031 (0.851)	-0.247 (0.125)	-0.031 (0.851)
Gender	-0.023 (0.888)	-0.418 (0.007**)	0.332 (0.036*)	-0.015 (0.927)	0.342 (0.034*)
EDU	-0.127 (0.435)	0.016 (0.922)	-0.064 (0.695)	0.077 (0.637)	-0.065 (0.685)
Occupation	0.006 (0.971)	-0.133 (0.412)	0.111 (0.495)	0.315 (0.048*)	0.121 (0.485)
Marital status	-0.041 (0.801)	-0.092 (0.571)	0.059 (0.718)	-0.328(0.039*)	0.057 (0.728)
Habitat	-0.021 (0.899)	0.284 (0.076)	-0.240 (0.136)	0.071 (0.663)	-0.230 (0.146)
Income	0.027 (0.870)	0.087 (0.595)	-0.060 (0.713)	0.230 (0.154)	-0.061 (0.723)
Living with family	-0.138 (0.397)	-0.241 (0.133)	0.142 (0.383)	-0.083 (0.611)	0.132 (0.373)
Family members	0.087 (0.595)	-0.301 (0.059)	0.281 (0.079)	0.244 (0.129)	0.271 (0.076)
Post					
Age	0.133 (0.412)	-0.128 (0.430)	0.156 (0.338)	-0.212 (0.189)	0.146 (0.348)
Gender	-0.237 (0.141)	-0.151 (0.351)	-0.137 (0.400)	-0.087 (0.595)	-0.138 (0.401)
EDU	-0.152 (0.350)	0.290 (0.070)	-0.273 (0.088)	-0.261 (0.104)	-0.283 (0.078)
Occupation	-0.150 (0.354)	0.050 (0.760)	-0.130 (0.424)	0.039 (0.811)	-0.135 (0.434)
Marital status	0.027 (0.868)	0.050 (0.758)	-0.019 (0.907)	-0.102 (0.531)	-0.018 (0.917)
Habitat	0.192 (0.235)	0.090 (0.579)	0.170 (0.294)	-0.087 (0.593)	0.176 (0.296)
Income	0.128 (0.432)	-0.290 (0.069)	0.220 (0.173)	0.222 (0.169)	0.232 (0.178)
Living with family	-0.169 (0.298)	-0.291 (0.069)	-0.084 (0.605)	-0.288 (0.072)	-0.088(0.615)
Family members	-0.240 (0.136)	0.116 (0.477)	-0.254 (0.114)	-0.083 (0.612)	-0.264 (0.124)
Follow-up					
Age	-0.043 (0.794)	0.011 (0.948)	-0.020 (0.904)	0.129 (0.429)	-0.022 (0.914)
Gender	-0.063 (0.699)	-0.075 (0.647)	0.048 (0.769)	0.169 (0.298)	0.049 (0.779)
EDU	0.179 (0.270)	0.254 (0.114)	0.009 (0.955)	0.005 (0.977)	0.008 (0.965)
Occupation	0.027 (0.869)	-0.179 (0.269)	0.128 (0.431)	0.061 (0.707)	0.138 (0.441)
Marital status	-0.020 (0.901)	-0.144 (0.377)	0.044 (0.787)	-0.193 (0.234)	0.046 (0.797)
Habitat	0.123 (0.451)	0.148 (0.363)	-0.033 (0.841)	0.156 (0.336)	-0.035 (0.851)
Income	0.060 (0.714)	-0.217 (0.179)	0.139 (0.394)	0.117 (0.472)	0.149 (0.496)
Living with family	-0.167 (0.304)	-0.047 (0.773)	-0.040 (0.807)	-0.070 (0.668)	-0.042(0.817)
Family members	-0.121 (0.458)	0.032 (0.843)	-0.127 (0.435)	-0.125 (0.444)	-0.129(0.445)

r Spearman's Correlation Coefficient test

*Statistically significant at p≤0.05

**Highly statistically significant at p≤0.01

Table (5): Correlation Between Sociodemographic Characteristics, Psychological Adjustment, Positive and Negative Perfectionism, and OCD Symptoms Through the Program Phases Among Studied Subjects in Control Group.

	Control group (n ₂ =40)				
	Positive	Negative	PANPS	BPASE	OCD Symptoms
Pre					
Age	-0.158 (0.329)	0.040 (0.808)	-0.097 (0.553)	-0.156 (0.336)	-0.099 (0.563)
Gender	-0.178 (0.272)	-0.011 (0.946)	-0.062 (0.704)	0.034 (0.836)	-0.068 (0.708)
EDU	0.048 (0.768)	0.092 (0.573)	-0.057 (0.725)	-0.122 (0.453)	-0.067 (0.755)
Occupation	-0.050 (0.757)	0.099 (0.542)	-0.103 (0.527)	0.043 (0.793)	-0.113 (0.537)
Marital status	-0.156 (0.338)	-0.085 (0.602)	0.009 (0.958)	-0.147 (0.364)	0.009 (0.958)
Habitat	-0.054 (0.740)	-0.130 (0.425)	0.087 (0.595)	-0.186 (0.251)	0.088 (0.598)
Income	-0.170 (0.293)	0.163 (0.316)	-0.204 (0.207)	0.203 (0.209)	-0.214 (0.217)
Living with family	0.019 (0.907)	-0.174 (0.282)	0.153 (0.345)	0.094 (0.564)	0.155 (0.355)
Family members	0.068 (0.676)	-0.005 (0.977)	0.031 (0.848)	0.194 (0.229)	0.038 (0.868)
Post					
Age	-0.178 (0.271)	0.145 (0.373)	-0.178 (0.273)	-0.034 (0.837)	-0.176 (0.271)
Gender	-0.216 (0.181)	0.022 (0.893)	-0.152 (0.349)	0.086 (0.600)	-0.153 (0.359)
EDU	0.283 (0.077)	0.028 (0.863)	0.167 (0.304)	-0.073 (0.654)	0.168 (0.305)
Occupation	0.062 (0.705)	0.029 (0.860)	-0.035 (0.830)	-0.022 (0.892)	-0.036 (0.832)
Marital status	-0.158 (0.330)	0.140 (0.389)	-0.188 (0.246)	0.020 (0.902)	-0.189 (0.247)
Habitat	0.116 (0.477)	-0.142 (0.381)	0.104 (0.522)	-0.018 (0.914)	0.114 (0.532)
Income	-0.250 (0.120)	0.234 (0.146)	-0.270 (0.092)	0.062 (0.703)	-0.271 (0.093)
Living with family	-0.091 (0.579)	-0.049 (0.765)	-0.007 (0.968)	-0.060 (0.713)	-0.007 (0.978)
Family members	0.084 (0.607)	0.137 (0.401)	-0.021 (0.899)	-0.127 (0.435)	-0.020 (0.898)
Follow-up					
Age	-0.276 (0.084)	0.168 (0.300)	-0.251 (0.118)	-0.243 (0.132)	-0.258 (0.128)
Gender	-0.103 (0.528)	-0.068 (0.677)	-0.065 (0.688)	0.011 (0.946)	-0.063 (0.685)
EDU	0.219 (0.175)	0.101 (0.533)	0.147 (0.365)	0.012 (0.941)	0.157 (0.375)
Occupation	0.102 (0.532)	-0.002 (0.989)	0.020 (0.903)	0.053 (0.743)	0.022 (0.905)
Marital status	-0.108 (0.508)	0.133 (0.412)	-0.142 (0.381)	-0.355(0.025*)	-0.144 (0.383)
Habitat	0.020 (0.904)	-0.175 (0.280)	0.140 (0.390)	0.086 (0.598)	0.142 (0.398)
Income	-0.220 (0.173)	0.064 (0.693)	-0.176 (0.277)	0.026 (0.871)	-0.177 (0.279)
Living with family	-0.148 (0.361)	0.024 (0.881)	-0.077 (0.636)	0.009 (0.957)	-0.078 (0.638)
Family members	0.122 (0.454)	0.191 (0.237)	-0.057 (0.727)	-0.016 (0.923)	-0.058 (0.738)

r Spearman's Correlation Coefficient test

Highly statistically significant at $p \leq 0.01$ *Statistically significant at $p \leq 0.05$ **Discussion:

The present study program was constructed as a nursing intervention skill to evaluate efficiency of nursing intervention program on psychological maladjustment, negative perfectionism, and severity of symptoms among patients with OCD. The result of the current study showed that the nearest half of the age group of the study and control group was ranging between 25 - < 34 years and there was no significant difference

between the study and control groups regarding most of the socio-demographic data as age, gender, education, occupation, marital status and income (table 1) which was required for homogeneity of the study and control group to exclude any cofactors regarding demographics of patients might effect on the results of the study. The study results agreed with the study of **Heidari et al. (2015)** who reported that the demographic characteristics of the studied patients with OCD

such as age, marital status, educational level, the duration of the disease, history of drug-taking, and residence status, did not reveal any significant differences in the two groups of intervention. All of the patients were female, and the mean (SD) age of the intervention and control groups were 34.16 (6.73) and 33.40 (7.16), respectively.

The results of the current study demonstrated that there was a highly significant difference regarding the symptoms of OCD of the study group detected between the pre and post-program intervention ($p \leq 0.000$) and between the pre and follow-up programs results ($p \leq 0.002$) table (2). The results agreed with the results of **Alex et al. (2010); Comer (2014); and Heidari et Al. (2015)** indicated that the mean (SD) scores of OCD symptoms, depression, anxiety and stress associated with OCD in the intervention group significantly decreased over time after the intervention; however, in the control group, this decline was not significant. The results of the independent t-test revealed that the decrease in the OCD symptoms, depression and anxiety scores before and 1 month after the intervention was 6.43 (5.73) in the intervention group and 0.13 (2.74) in the control group, demonstrating a significant difference between the two groups ($t_{48} = 4.96$, $p < 0.001$).

Additionally, the results of the current study showed highly statistically significant relations between control and study groups related to psychological adjustment, positive and negative perfectionism, and OCD symptoms on the three levels of the program (table 4). The results are congruent with the result of **Sarafraz (2020)** who

showed significant correlations ($P \leq 0.01$) between perfectionism and intervention of OCD (0.34), self-control and integrative self-knowledge (0.58), integrative self-knowledge and self-compassion (0.29), The result also consistent with **Pinto (2017); and Yahghoubi et al. (2015)** who also showed a positive relationship between perfectionism and the severity of OCD symptoms and depression.

The results are also, consistent with **Rathore & Prakash (2017)** who well recognized that the OCD onset, patients exhibit inferior or reduced levels of adjustment on daily life circumstances, and this may deteriorate as disease severity and duration increase. While the use of cognitive behavioral intervention is supportive in improving the general adjustment level in such patients along with remission of their primary OCD symptoms and having the most impact on enhancing adjustment skill in different areas for patients' daily living.

On the contrary, the outcomes of the present study disagreed with **Wheaton and Gallina (2019)** who reported that overall levels of perfectionism (assessed prior to beginning treatment) were not significantly related to OCD treatment outcomes. Additionally, the results contradict the study by **Kljajic, Gaudreau and Franche (2017)** who suggested that there was no difference in task completion time between the high and low self-oriented perfectionism (SOP) groups.

On the other side, the mean score in the post-program observation for subjects in the control group was similar to their mean score in the phase

of baseline. The results are congruent with the results of **Ali (2020); and Kohler et al. (2018)** who indicated that OCD had a big negative impact on patients' capacity to maintain good quality of adjustment in several areas of daily life.

The results of the current study revealed that there was a significant positive correlation between gender, perfectionism, and OCD symptoms in the pre-observation Table (5). The results agreed with **Krebs and Heyman (2015)** who reported that some consistent differences between genders regarding OCD phenomenology, as well as possible genetic differences regarding susceptible polymorphisms and gender may be relevant factors to determine OCD clinical presentation, and may be considered to define more homogeneous subgroups. Although the reasons why OCD presentation differs between genders are not clear.

Moreover, the studies of the genes in the glutamatergic system of **Ma et al. (2021)** found a positive association between OCD, several (Nucleotide Polymorphism) and haplotypes in the gene encoding the glutamate transporter, more associated with men with OCD, according to family-based studies.

The results of this present study revealed that there was a significant positive relation was found between occupation and psychological adjustment which is consistent with **Mancebo et al. (2008)**. As well as these findings are consistent with previous study by **Phillips (2006)** who save as members of the Obsessive Compulsive Foundation survey; The findings also show that the occupational disability of individuals with OCD is comparable to disability rates reported for panic

disorder, major depressive disorder, and body dysmorphic disorder finding is that the most of participants with an occupational disability had held paid employment positions in the past and one-third had been working as higher executives, professionals, or administrators. These findings suggest that although OCD usually begins in adolescence (the average age of onset was 17 - 18 years), the disabling impact of OCD may affect many individuals after they enter the workforce.

Conclusion:

Based on the outcomes of the present study it can be concluded that the patients with obsessive-compulsive disorder who participated to the nursing intervention program improved their symptoms, psychological maladjustment, levels of positive perfectionism, and reduced levels of negative perfectionism than those who are in the control group, which is verified by validity of the study hypothesis.

Recommendations:

Concerning to the findings and conclusion of the current study, the following recommendations are recommended:

- The psychiatric nursing staff should implement a nursing intervention program in all governorates of Egypt for patients with obsessive-compulsive disorder in order to improve their symptoms, psychological adjustment, positive perfectionism, and reduce negative perfectionism levels.
- There is a need of the development and implement a special training program for people with obsessive-compulsive disorder to deal with their symptoms and stressful experiences in daily life.

- Further research: To achieve more generalizability of the results, it is recommended to repeat the current study on a larger, representative probability sample size in different governorates of Egypt.

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