

Effect of Activity Therapy on Symptoms and Quality of Life among Patients with Paranoid Schizophrenia

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ABSTRACT

Background: Schizophrenia is a severe, chronic, and long-term mental disorder; as well paranoid schizophrenia is the most common type of schizophrenia. Activity therapy can alleviate the symptoms of mental disorders, specifically paranoid schizophrenia, by improving the patient's symptoms and quality of life. **Aimed** to evaluate the effect of activity therapy on symptoms and quality of life among patients with paranoid schizophrenia. **Subjects and Method: Design:** A quasi-experimental design (pre/posttest single group type) was applied. **Setting:** The study was conducted in inpatient wards at the Shebin Elkom Psychiatric and Mental Health Hospital in Meet-khalf at Menoufia affiliated with the Ministry of Health and Population, Egypt, from the beginning of August 2022 to the end of November 2022. The therapy involved 9 sessions. **Subjects:** A purposive sample of fifty-one patients with paranoid schizophrenia. **Tools:** Personal characteristics and medical history sheet, Positive and Negative Syndrome Scale (PANSS), and the Quality-of-Life Scale were used for data collection. **The Results:** There was a highly significant reduction in symptoms after activity therapy. As well, there was a highly significant improvement in quality-of-life after activity therapy at ($p \leq 0.000$). **Conclusion:** Regular activity therapy can alleviate the symptoms of patients with Paranoid Schizophrenics, which in turn improves all dimensions of their quality of life. **Recommendations:** Activity therapy should be provided as an intervention for patients with mental illness to improve their symptoms and quality of life.

Key words: Activity Therapy, Quality of Life, Paranoid Schizophrenia

INTRODUCTION

Schizophrenia affects approximately 1.1% of the population, while paranoid schizophrenia being the extremely common subtype of this chronic disorder (National Institute of Mental Health “NIMH”, 2018). Furthermore, schizophrenia affects fifty percent of patients in psychiatric hospitals worldwide. Schizophrenia is the most common chronic psychosis in Egypt, accounting for the majority of inpatients in mental hospitals. The prevalence rate of schizophrenia in Egypt is expected to be around 22 percent of people or 56 thousand Egyptians. Patients with Schizophrenia experience a variety of symptoms, which can be either positive or negative (Barakat, 2015).

Paranoid schizophrenia is considered by predominantly positive symptom of schizophrenia, involving hallucinations and delusions. These devastating symptoms confuse the line between what is or isn't real, making it hard for the person to live a normal life (Cagliostro, 2020). The symptoms are commonly distributed into positive symptoms (increase or distortion of normal functioning) and negative symptoms (declined or loss of functioning). Positive symptoms such as delusions and hallucinations. However, the negative symptoms involve decreased or lost volition, motivation, and spontaneous behavior. Social withdrawal and loss of awareness of socially appropriate behavior, anhedonia, flattening of mood, and blunting of affect in addition to the lack of thought and speech. Cognitive symptoms such as impaired "executive functioning" the ability to understand information and use it to make decisions. Having difficulty focusing or paying attention “working memory issues”, the ability to use information immediately after learning it (NIMH, 2019).

A person with active paranoid schizophrenia; the enormous majority of their attention and energy is focused on preserving and protecting their false beliefs or cognitive and/or perceptual distortions. The early symptoms of schizophrenia may appear normal and may be explained by a variety of other factors. This includes less frequent socialization with friends, difficulty sleeping, irritability, or a drop in grades (Center for Addiction and Mental Health, 2019). The schizophrenia prodromal stage is recognized by an increase in negative symptoms. These negative symptoms could include a growing lack of motivation, a decreased ability to focus, or social isolation. The warning signs that psychosis is imminent include having the ability to see, hear, or taste things that others do not. Suspiciousness and a general fear of the intentions of others. Unusual or persistent thoughts or beliefs. It's difficult to think clearly. Retiring from family and friends.

Moreover, there has been a significant decrease in self-care (National Alliance on Mental Illness “NAMI”, 2016).

World Health Organization describes the life quality as "people's perceptions of their status in life within the condition of the culture and value systems in which they live, and in relation to their objectives, norms, expectations, and interests". Quality of life is a multidimensional, subjective concept which identifies the baseline of physical level, emotional, social, and material well-being. It provides a standard against which an individual or society can evaluate the various aspects of one's personal life. In paranoid schizophrenia, quality of life may represent the functional effect itself as perceived by the patient, as well as its treatment (Shah & Prabhu, 2020).

Antipsychotics are the foundation of schizophrenia treatment. Nonetheless, the study of the efficacy of antipsychotics for the management of schizophrenia found that only around 60% of symptoms reduce after treatment with antipsychotics. Moreover, only 23% of patients with schizophrenia treated with antipsychotics achieve a good response (Leucht et al., 2017). Positive symptoms respond better to medication than negative symptoms. According to study findings, 30% of patients with schizophrenia did not respond to treatment and were intractable to the treatment (Bitter, 2020). Furthermore, studies show that negative symptoms have a pronounced negative influence than positive symptoms on functional disabilities, life quality, and the burden of caring for others (Abdelgelil et al., 2022). Side effects of schizophrenia medications include sleep disorders, overweight, numbness, dry mouth, muscle stiffness, extrapyramidal side effects, and neuroleptic malignant syndrome (Fowler et al., 2017).

Corresponding to the evidences, the treatment strategy for patients with schizophrenia is a combination of psychopharmacological treatments and non-psychopharmacological interventions like psychotherapy, occupational, and family therapy. Nowadays, prompt disease diagnosis and treatment with various pharmacological and nonpharmacological interactions can result in a meaningful improvement in this disease. Activity therapy that improves mood and emotional drain are one of these non-pharmacological treatments (Areshtanab et al., 2016). Nowadays, sports are used in various communities to avoid disorders, improve health, and obtain a sense of relief. The evidences show that exercise can improve self-confidence, mental health, and cognitive functioning, as well decreasing depression, negative mood, and

anxiety in patients with schizophrenia (Türk & Gökçen, 2022). Exercise is important in the rehabilitation and treatment of psychotic patients because of its positive mental and physical effects (Tasci et al., 2018).

Activity therapy is every bodily movement generated by skeletal muscles that lead to energy expenditure. Exercise is a planned, structured, and repetitive physical activity used to enhance or preserve one or more aspects of physical fitness. Regular activity therapy enhances oxygen transportation, reduces triglycerides, cholesterol, blood pressure, and enhances quality of life (Shah & Prabhu, 2020).

Significance of the Study

Paranoid schizophrenia, is a very common subtype schizophrenia that received the most attention in terms of research, owing to the dramatic and devastating effects it has on a person's life quality, employment, marriage, and parenthood expectations. Schizophrenia has an impact on the general health, subjective well-being, autonomy, functioning, and life satisfaction of those who have it (David & Roger, 2019). Psychopathology has a significant influence on the life quality, well-being, and social and occupational function and resulting in a significant social and economic burden (El-Azzab & Abu-Salem, 2018). In schizophrenia, quality of life is related to negative symptoms, depression, emotional distress, low self-esteem and self-efficacy, as well as a lack of emotional and social support (Fitryasari et al., 2018).

There is scientific confirmation that antipsychotic medications can lead to side effects such as obesity and weight gain. Moreover, these people typically have smoking habits, inadequate diets, and insufficient levels of daily physical activity for general health maintenance. These factors reduce their ability to perform daily activities, which can lead to financial difficulties, social stigmatization, discrimination, and a decrease in their quality of life. Although quality of life is a complex structure affected by a variety of factors, these findings positively support activity therapy as an important modifiable factor influencing patients' quality of life (Eluana et al., 2016).

Psychiatric nurses have an influential role in the prevention, treatment, and rehabilitation of patients. In this concern, nurses play an important role in supporting patients with psychiatric disorders to do physical exercise. Further, the physical exercise program is a practical, inexpensive, easily accessible, and implementable method. Additionally, consolidated that the inclusive behavioral and psychological interventions built on the nursing routine method to improve patients' quality of life (QOL) and mental

health during the first episode of schizophrenia and help them socialize early (Zhang, Yin, & Shang, 2021). Nurses are essential members of health care and rehabilitation teams, playing an important responsibility in patient's response, preparation for treatment, and supportive mental, physical, and social care. Furthermore, nurses are responsible for giving a particular care plan to provide rehabilitation in order to put the patient in the best feasible health and prevent potential side effects of the disease. As a result, the nurse serves as a consultant, caregiver, and supporter on the rehabilitation team. Furthermore, the nurses are in charge of supporting and guiding all rehabilitation interventions (Ebrahim et al, 2019). Therefore, this study aims to assess the effect of activity therapy on symptoms and quality of life among individuals with paranoid schizophrenia.

AIM OF STUDY

To evaluate the effect of activity therapy on symptoms and quality of life among patients with paranoid schizophrenia. This was achieved by attaining the following objectives:

- Evaluate the severities of positive, negative, and general psychopathology symptoms in individuals with paranoid schizophrenia.
- Assessing levels of quality of life among patients with paranoid schizophrenia.
- Design a program of activity therapy based on symptoms and quality of life among patients with paranoid schizophrenia.
- Implement the designed program of activity therapy on patients with paranoid schizophrenia
- Evaluate the effect of the designed program of activity therapy on symptoms and quality of life among patients with paranoid schizophrenia

RESEARCH HYPOTHESES

H1 Symptoms' severity among patients with paranoid schizophrenia will be significantly lower scores after activity therapy than before.

H2. Quality of life levels among patients with paranoid schizophrenia will be significantly higher after activity therapy than before.

SUBJECT AND METHOD

Research design

A quasi-experimental research design, a pre-posttest was used to evaluate the effect of activity therapy on symptoms and quality of life among patients with paranoid schizophrenia.

Setting: The study took place in an inpatient ward of Egypt's Ministry of Health and Population's Shebin Elkom Psychiatric and Addiction Treatment Hospital in Meet-Khalf, Menoufia. Shebin Elkom psychiatric hospital (Meet Khalaf psychiatric hospital) was established at 1999 and firstly opened its doors in 2005. It has a bed capacity of 113. The hospital has five departments: three for men, one for women, and one for addiction therapy. It also houses an ECT section. The hospital provides emergency services 24 hours a day for critical and emergency cases, outpatient services for psychiatric disorders and addiction through outpatient clinics, community medical services to provide psychological rehabilitation, and rehabilitation services for inpatients.

Subjects: Using the Epi-Info statistical package developed by the World Health Organization and the Centers for Disease Control and Prevention, Atlanta, Georgia, USA, version 2002, a purposive sample of 51 patients with paranoid schizophrenia who were admitted in the aforementioned setting was chosen. The following criteria were applied to determine the sample size: A 95% confidence interval. The subjects fulfill the following requirements.

Inclusion Criteria of the Subjects:

- (1) Patients who received antipsychotic medications without changing the medication or dose for more than three months earlier to access this study.
- (2) Patients who are considered physically well adequate to do physical activity.

Exclusion Criteria of the Subjects:

- (1) Patients who had paranoid schizophrenia for less than a year prior to study entry.
- (2) Patients with any psychiatric condition other than paranoid schizophrenia or neurological illness.
- (3) Participants who were pregnant to avoid Fetal harm.
- (4) Patients with present or previous substance abuse to drowsiness.

Tools for data collection

Tool (I): Personal and medical characteristics questionnaire. Developed by researchers in the Arabic language.

Part one: Personal information on the participants' characteristics, including their gender, age, residence, marital status, working status, educational level, economic status and with whom he/she live.

Part two: Medical characteristics sheet includes the onset of disease, previous hospital admission, reason for admission, presence of other medical problems and smoking.

Tool (II): Positive and Negative Symptoms Scale "PANSS": It was adopted by Cheng (1996) in an English language and translated into an Arabic language by researchers. It involved 30 items. The PANSS was aimed to evaluate the severities of positive, negative, and general psychopathology symptoms in individuals with paranoid schizophrenia. The severity of symptom for each item is rated according to which anchor point on a 7-point scale (1 = absent, 7 = extreme) best describes the presence of the symptoms. A higher value indicates that the patient is suffering from more severe symptoms. MC-PANSS has proven to be very reliable and effective. In this study, the MC-PANSS was used to measure schizophrenia severity.

Scoring system: The PANSS contains 30 items, 7 of which are Positive Symptoms Scales, 7 of which are Negative Symptoms Scales, and the remaining 16 are General Psychopathology Symptoms Scales. The scores for these scales are calculated by adding the ratings for each component item. As a result, the possible ranges for the Positive and Negative Scales are 7 to 49, and the General Psychopathology Scale is 16 to 112. A Composite Scale is calculated by subtracting the negative score from the positive score in addition to these measures. This results in a bipolar index ranging from -42 to +42, which is essentially a difference score indicating the degree of predominance of one syndrome over the other.

Tool (III): Quality of Life Questionnaire: It was developed by Walker, Sechrist, and Pender (1987) in an English language, to recognize the way of living or the method in which individuals achieve their day-to-day activities. It has been translated, modified, and adapted to Egyptian culture by El Gueneidy, Abdel Kader, and Mahgoub (1990). It covers the following areas:

- **Emotional dimension:** includes four questions about attempting to achieve goals, experiencing obstacles as a result of the disease, experiencing improvement day by day, and dealing with daily difficulties.

- **Social dimension:** includes six questions about enjoying spending time with friends and relatives; sharing with others their problems, making new relationships to feel happy; searching for people with the same health problem to make a social relationship; feeling that the disease has an effect on work and production; and feeling that the disease has an effect on the relationship with surroundings.

- **Mental dimension:** includes five questions about being anxious, relaxed, ashamed of illness, taking medications to feel relaxed, and annoyed.

- **Physical dimension:** Includes three broad items that were divided into

a) Eating behavior includes five questions: Taking snacks between meals, taking packed food, using oil instead of butter, taking salty food, and smoking.

b) Taking care of one's health includes five questions: By visiting or calling a doctor on experience discomfort, such as dyspnea; conducting regular investigations, such as liver function tests; and taking medications exactly as prescribed by his/her doctor.

c) Personal care includes three questions: Whether his/her need help from others feeding, dressing and bathing.

The quality of life questionnaire consists of 28 questions; 16 statements are phrased negatively, and 12 statements are phrased positively. These statements are rated on a 3-point scale, which is: (3) strongly agree; (2) agree; and (1) disagree. According to these answers, the score ranges from 28 to 64. The scoring for negative answers was reversed, i.e., 1 for strongly agreeing, 3 for disagreeing, and so on. Each item contained different scoring. The emotional dimension ranged from 4 to 12. The social dimension ranged between 6 to 18. The mental dimension ranged from 5 to 15. The physical dimensions range from 13 to 39. The low score specified a poor life quality, and the high score revealed a good quality of life. These items were collected into total scoring points to estimate the quality of life. It was divided into three levels: Level 1 (poor quality of life): ages 28 – 45. Level 2 (fair quality of life): 46 – 63. Level 3 (good quality of life): more than or equal to 64.

The validity of the tools: A jury of five experts in the field of psychiatric and mental health nursing and medicine evaluated the tools for content validity in order to determine the relevance and completeness of the study tools.

Reliability of the tools: The internal consistency of tools II and III were determined by utilizing Cronbach's alpha and found to be strongly reliable at 0.85 for tool II and 0.83 for tool III.

Method of Data Collection**Administrative approval:**

Official approval to carry out this study was achieved from the directors of the Psychiatric and Addiction Treatment Hospital in Meet-Khalf at Menoufia and the Ethics and Research Committee, Faculty of Nursing, Menofia University (research No: 918).

Pilot Study

A pilot study was conducted to measure the tools' useability and applicability, and to determine the time needed to fill the tools. As 10% of the subjects, a pilot study was done on six patients. The subjects for pilot study were selected randomly and then eliminated from the study.

Field of Work:

The study was accomplished from the beginning of August 2022 to the end of November 2022. Participants have participated voluntarily.

Phase 1: Assessment stage: Before collecting data and after explaining the study's goal and objectives, informed consent was gotten during this stage. The study tools were applied by researchers to assess baseline data (pretest) for more comparisons to evaluate the effect of the activity therapy. Each participant interview was around 40 minutes on average. The researchers plan to collect data two days per week. This stage lasted about seven weeks.

Phase 2: Designing stage: This stage aims to design an activity therapy program. It was constructed in the Arabic language and built on appropriate recent reviews of literature. This stage includes establishing the purposes and contents of the activity therapy intervention, which consist of:

- Concept of activity therapy
- Benefits of activity therapy

Strategies for putting activity therapy into action.

Teaching techniques include open discussion, group brainstorming, demonstrations, real-world scenarios, positive reinforcement, teamwork, and role playing.

Media:- A brochure, personal hygiene items like soap and a hairbrush, teeth brush, and toothpaste. Illustrations, a watch for keeping time when working out. Materials used in

drawing, coloring, and artistic endeavors, such as coloring books, glue, colored buttons, and coloring pencils. materials applied in leisure activities, such as role-playing game scripts, puzzles, discussions on short tales, and mobile phones for listening to music.

Evaluation techniques include oral inquiries, re-demonstrations, and test.

The program's content validity was revised by five expert professors of psychiatric nursing before implemented the program and there was no modification needed.

Phase 3: Implementation stage: The intervention's implementation was carried out in meetings utilizing several educational approaches and guiding pamphlets that were designed in the planning stage. The intervention's implementation took seven weeks to complete the sessions to evaluate the effect of activity therapy on patients with paranoid schizophrenia.

The general objective of the program was to evaluate the effect of activity therapy on symptoms and quality of life among patients with paranoid schizophrenia.

Specific goals of activity therapy :

After completing the program of activity therapy, patients will have the ability to:

- Recognize the implication of and the symptoms of paranoid schizophrenia.
- Discover the importance and techniques of activity therapy and their role in treating the symptoms of paranoid schizophrenia.
- Incorporate a few essential morning grooming and individual hygiene behaviors, such as styling hair and brushing teeth.
- Become more socialized and relate better to others in their environment.
- Identify the benefits of activity therapy for the mind and body.
- Practice some physical exercises properly.
- Express their needs and feelings verbally, respond clearly to any question posed to them, and initiate and maintain a constructive conversation.

Implementation of activity therapy: -

This stage concentrated on the implementation of the activity therapy program for patients suffering from paranoid schizophrenia. Patients were classified into 10 subgroups; every subgroup was composed of five patients. Activity therapy involved 9 sessions, 2 theoretical and 7 practical. Sessions were applied for 40 to 50 minutes per day, twice a week. Sunday and Wednesday from 10 am to 1 pm.

The activity therapy sessions were held in the inpatient wards' leisure rooms at the previously mentioned location. Each session began with a summary of the information presented during the prior session, and the new session's objectives were stated while considering the need to use simple language to appropriate all patients with paranoid schizophrenia. This was done to confirm that all patients understood the contents of activity therapy. The researchers employed modeling and demonstration during the session to help the patient practice group activity skills. After that, the researchers then used repeated demonstrations of skill by every patient to help them to teach it. After ending, researchers thanked participants for their time and urged them to clarify any aspects that were unclear.

Session 1: Greeting:- The goal of this session was to motivate patients to participate actively in activity therapy. The researchers accomplished this by getting to know the patients and bounding the group rules, such as confidentiality, and additionally the nature and objectives of the study.

Session 2: Activity Therapy Knowledge:- This session aimed to enhance people's understanding of the definition, importance, types, and benefits of activity therapy, in addition to the problems that can be treated with it, by inspecting the patients' knowledge of activity therapy and its specific effects on them. Researchers used a video and PowerPoint presentation to present the program's content.

Session 3: Progressive Muscle Relaxation:- The researchers give instructions for systematic tensing and relaxing of specific muscle groups, beginning with upper body muscle groups and progressing down to the lower body.

Session 4: Body Scan:- *The researchers asked the patient to "close your eyes" and imagine each part of your body glowing one at a time, as if you were looking at it from the outside. Consider each finger, your palm, wrist, forearm, elbow, shoulder, and so on.*

Continue to work your way through every part you can think of. Doing this before going to bed promotes systemic relaxation, and deeper sleep aids in the rejuvenation of your body.

Session 5: Work on Balance:- The researchers instructed the patient that, when trying to balance, it's difficult to focus on anything other than your body. Try standing on one foot for as long as you can. Then switch to the opposite side. If you feel at ease, try balancing with your eyes closed. Next, as if standing, place one foot in front of the other so that the heel of one touches the toes of the other.

Session 6: Breathing Exercises:- Place one hand on your stomach and the other on your chest. Close your eyes and pay attention to the breathing. Feel the rise and fall of your chest. Take a deeper breath and notice how the air appears to move downward into your belly. As you breathe, your diaphragm muscle stretches and contracts.

It's nice that we don't have to think about every breath we take. However, concentrating on it increases the amount of oxygen in the body and improves all body functions. Mindful breathing is also an excellent way to redirect your attention away from the outside world and toward yourself.

Session 7: Warm up and Cool-down Stretches:- Warm-up stretches are tracked by 5 minutes of walking, which increased gradually over the first four weeks to 30 minutes, the cool-down exercises included 5 minutes of slow walking, then cool-down stretches.

Session 8: Improving Quality of Life Application of strategies planned to improve quality of life. The participants were instructed to be optimistic because optimism improves task performance, creativity, stress tolerance, and self-esteem, and to look for "flow" which is being completely immersed in your current activity, being challenged but succeeding with clear goals and feedback. It's a wonderful place to be.

Session 9: Closure:- This session was aimed to present a summary of prior skills, acquire awareness of the patients' skills, and collect feedback on accessible relaxation techniques and activity therapy sessions.

Phase 3: Evaluation (Post-test) This stage aimed to evaluate the effect of an activity therapy program on the improvement of the severity of symptom of paranoid

schizophrenia in studied patients. As well as their quality of life. After the group activity therapy program sessions ended, tools II and III were applied again as a post-test in the study group.

Ethical consideration:

Patients with paranoid schizophrenia provided informed consent to participate in the study. Confirm to the patients that their data will be kept private and confidential, and that it will only be utilized for this study's purposes. The freedom to leave the study at any time is emphasized. The subjects were not harmed or injured as a result of the study's design. The subjects' anonymity was confirmed.

Statistical Analysis:

Data collected were tabulated and statistically analyzed using an IBM personal computer, version 22, of the Statistical Package for Social Science (SPSS). Both descriptive statistics like range, mean and standard deviation (SD); and qualitative data like numbers and percentages were provided as forms of data. The significant tests were employed as Paired t-test & Coefficient correlation r-test.

RESULTS:

Table (1): demonstrates the personal characteristics of patients with paranoid schizophrenia. Regarding their gender, 56.9% of them were male. As well as their age, about 50% were between 30 to 40 years with a mean of 38.06 ± 8.72 . Nearly two-thirds (66.7%) of them were single. As for education, 27.5% of them had reads and writes and more than one-half 56.9% of patients were working. Furthermore, slightly less than three-quarters (70.5%) of sample reside in rural areas. Concerning income, more than three-fifths of them (68.6%) had sufficient income.

Table (2): shows frequency distribution of the subject regarding their medical history. Regarding onset of disease in year, 62.7% of them were less than two years. As well as 56.8% of the study sample did not have previous admission to the hospital, while 45.1% of them had hallucination as the reason for hospitalization. Additionally, 54.9% of them did not have other health problems, and 90.2% of studied patients were smoking.

Table (3): reveals that the mean change with a highly significance changes between the pre and post observations regarding their total (PANSS); total positive symptoms, total negative symptoms, and general psychopathology ($p \leq 0.000$). As well, this table shows that a highly statistically significance differences in the mean change between the

pre and post observations regarding their total quality of life, total emotional, total mental and total physical ($p \leq 0.000$)

Figure (1) demonstrates the severity of symptoms. It reveals that 74.6% of studied patients who had severe symptoms at pre-program were reduced to 33.3% at post-program. Additionally, 7.8% of the studied sample had mild severe symptoms at pre-program was increased to 37.3% at post-program.

Figure (2) displays the quality of life level. It indicates that the percentage of studied patients who had good quality of life at pre-program (7.8%), was increased to 39.2% at post-program. Also, the percentage of studied patients who had poor quality of life (47.1%) at before-program, reduced to 15.7% at after-program.

Table (4) reveals that working status of studied patient was statistically significant independent negative predictor regarding their PANSS at pre and post program ($p \leq 0.015$ & 0.033 respectively).

Table (5) clarifies that gender of studied patients were statistically significant independent predictors regarding their quality of life at post program ($p \leq 0.024$). As well as economic status of studied patient was statistically significant independent predictors regarding their quality of life at pre and post program ($p \leq 0.042$ & 0.034 respectively).

Table (6) reveals that a highly statistically significant negative correlation was found between quality of life and PANSS among studied patient at post program ($p \leq 0.000$).

Table (1): Frequency distribution of studied patients regarding their personal characteristics (n=51).

Personal characteristics	No	%
Gender		
Male	29	56.9
Female	22	43.1
Age		
20 - <30	8	15.7
30 - <40	26	51.0
40 - <50	12	23.5
50+	5	9.8
Min- Max	22-60	
Mean ±SD	38.06±8.72	
Residence		
Rural	36	70.6
Urban	15	29.4
Marital status		
Single	34	66.7
Married	6	11.8
Divorced	11	21.6
Working Status		
Do not work	22	43.1
Working	29	56.9
Educational level		
Illiterate	7	13.7
Reads and writes	14	27.5
Primary	8	15.7
Secondary	9	17.6
University	13	25.5
Economic		
Less than sufficient	9	17.6
Sufficient	35	68.6
Sufficient and a little more	4	7.8
It is sufficient and can be saved	3	5.9
Who do you live with		
On your own	9	17.6
With others	42	82.4

Table (2): Frequency distribution of studied patients regarding their medical characteristics (n=51).

Medical Characteristics	No	%
The onset of disease in years		
0- <2	32	62.7
2- <4	8	15.7
4 - <6	8	15.7
6+	3	5.9
Previous hospital admission		
Yes	22	43.2
No	29	56.8
Reason for hospitalization		
Suicidal ideation	5	9.8
Hallucination	23	45.1
Relapse	21	41.2
Drug abuse	1	2.0
Aggressive behavior	1	2.0
What are other health problems		
Diabetes	8	15.7
Hypertension	11	21.6
Diabetes and hypertension	4	7.8
Not present	28	54.9
Smoking		
Yes	46	90.2
No	5	9.8
Smokers (n=46)		
Min –Max	2-32	
Mean ±SD	10.04±6.40	

Table (3): Mean and standard deviation of sample regarding their total severity of symptoms, total dimensions and total quality of life items pre/post program

Variables	Pre-program		Post-program		T test	p-value
	Mean	±SD	Mean	±SD		
Severity of symptoms						
Total positive symptoms	28.27	±5.876	23.16	±4.880	13.710	0.000**
Total negative symptoms	22.88	±6.458	18.92	±4.489	10.343	0.000**
Total general psychopathology	40.57	±10.247	33.92	±9.028	13.169	0.000**
Total PANSS	91.73	±17.725	76.00	±13.984	18.314	0.000**
QOL Dimensions						
Total emotional	6.88	±1.818	10.20	±1.096	14.40	0.000**
Total social	8.96	±1.536	9.00	±1.562	1.000	0.322
Total mental	8.92	±1.454	10.82	±1.396	9.486	0.000**
Total physical	22.00	±4.104	27.57	±4.153	12.421	0.000**
Total QOL	46.76	±6.111	57.59	±4.969	18.327	0.000**

* significance $p < 0.05$

**highly significance $p < 0.001$

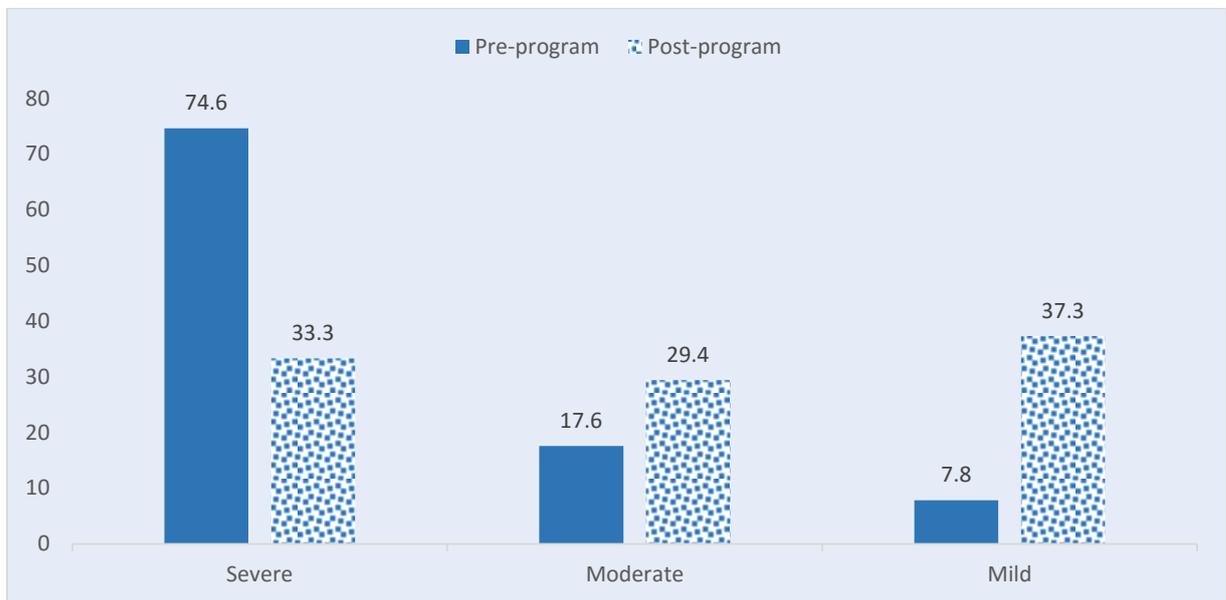


Figure (1): Percentage distribution of studied patients regarding their severity of symptoms pre/post program (n=51).

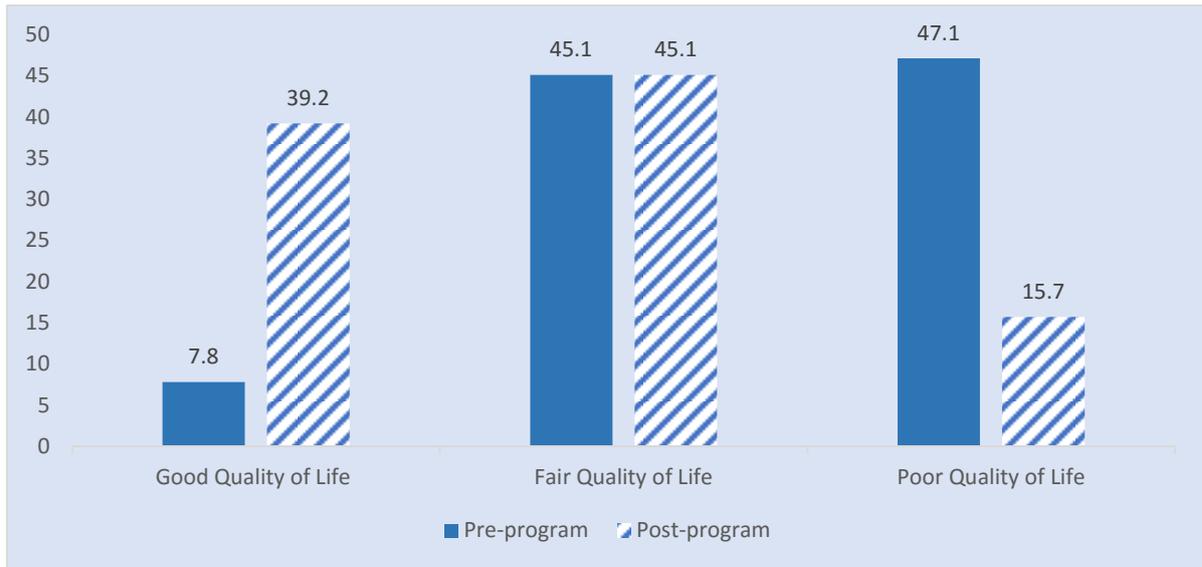


Figure (2): Percentage distribution of studied patients regarding their total quality of life level pre/post-program (n=51).

Table (4): Liner regression of studied patients regarding their PANSS and personal characteristics pre/post program

Variables	Pre					Post				
	Unstandardized Coefficients		Stand ar diz ed Coeff icient s	t	Sig.	Unstandardized Coefficients		Standa rdized Coeffi cients	t	Sig.
	B	Std. Error	Beta			B	Std. Error	Beta		
Constant	122.36	20.10		6.085	.000	98.406	16.121		6.104	.000
Gender	2.928	5.45	-.083	.537	.594	1.318	4.367	-.047	-.302	.764
Age	-.185	.331	-.091	-.559	.579	-.115	.265	-.072	-.435	.666
Residence	4.924	5.789	-.128	.851	.400	4.414	4.641	-.145	-.951	.347
Marital status	2.033	2.223	.141	.915	.366	.951	1.782	.083	.533	.597
Working status	4.355	1.719	-.385	2.534	.015*	3.029	1.378	-.339	-2.198	.033*
Educational level	.972	1.943	.078	.500	.620	1.261	1.558	.129	.810	.423
Economic	-1.56	3.877	-.062	-.402	.690	-1.829	3.109	-.092	-.588	.559
Who do you live with	3.581	7.298	-.078	.491	.626	2.965	5.851	-.082	-.507	.615

Dependent Variable: total PANSS * Significance p<0.05 **highly significance p<0.001

Table (5): Liner regression of studied patients regarding their quality of life and personal characteristics pre/post-program

Variables	Pre					Post				
	Unstandardize d Coefficients		Sta nda rdiz ed Coe ffi cients	t	Sig.	Unstandardize d Coefficients		Stand ardize d Coeffi cients	t	Sig.
	B	Std. Error	Bet a			B	Std. Erro r	Beta		
Constant	42.38	6.66		6.36	0.00	56.78	5.19		10.93	0.00
Gender	3.43	1.80	.28	1.89	.06	3.28	1.40	.33	2.33	.024*
Age	-.19	.11	-.27	-1.74	.09	-.15	.08	-.26	-1.76	.08
Residence	-2.96	1.91	-.22	-1.54	.13	-2.47	1.49	-.23	-1.65	.10
Marital status	.859	.73	.17	1.16	.25	.75	.57	.18	1.30	.20
Working status	.356	.57	.09	.62	.54	-.36	.44	.11	-.82	.41
Educational level	.200	.64	.05	.31	.76	-.35	.50	-.10	-.70	.48
Economic	2.69	1.28	.31	2.09	.042*	2.19	1.00	.31	2.19	.034*
Who do you live with	1.21	2.42	.07	.50	.62	.67	1.88	.05	.36	.72

Dependent Variable: Total Quality of life * Significance p<0.05 **highly significance p<0.001

Table (6): Correlation between total quality of life and total PANSS among studied patients pre/post program

Variables	Total Quality of life			
	Pre-program		Post-program	
Total PANSS	r	p-value	r	p-value
	-0.160	0.262	-0.616	0.000**

DISCUSSION

Physical treatment and typically antipsychotic treatment are the core schizophrenia treatments. Although antipsychotic drugs are essentially fundamental in overcoming particular symptoms of schizophrenia, don't correct deficiencies in a patient's life (Alam et al., 2022). As a result, management methods for enhancing the patient's quality of life and decreasing symptoms have been established, one of which is activity therapy (AT). Activity therapy is an appropriate tool for assisting individuals with paranoid schizophrenia to improve their quality of life (Shah & Prabhu, 2020). Additionally, aerobic exercise may alleviate mental and physical health issues related to schizophrenia and counteract side effects of antipsychotics such as obesity, diabetes, and metabolic syndrome. Furthermore, one of the most important reasons for using activity therapy for people with schizophrenia is that it releases endogenous cannabinoids, feel-good endorphins, and other brain chemicals naturally that can improve wellbeing and divert attention away from anxiety (Heywood et al., 2022). Along with the current study was assumed to evaluate the effect of activity therapy on symptom decrease and improving quality of life among patients with paranoid schizophrenia, and the results found that activity therapy had a positive consequence on reduction of symptom and quality of life improvement among the persons with paranoid schizophrenia. The outcomes of the present study revealed that the mean score of symptoms among participants significantly declined after activity therapy. This might be characteristic to several opportunities, for example is activity therapy, a non-pharmacological adjunctive treatment that increases hippocampal volume and brain-derived neurotrophic factor levels, which improves cognition, synaptic plasticity, negative symptoms, and neurogenesis.

The current study finding is consistent with the findings attained by Firth et al. (2018), studied "Exercise as an intervention for first-episode psychosis" In the United Kingdom and found that in patients have first episode, a personalized exercise guidance program improved short-term verbal memory, negative and positive symptoms, and functioning of psychosocial. In addition to Sabe, Kaiser and Sentissi (2020) whose studied "Physical exercise for negative symptoms of schizophrenia" showed a significant useful consequence of physical exercise on negative symptoms.

Concerned with the findings of the present study, gender of patients was a significantly independent predictor regarding their quality of life. This might be due to traditional ideals about gender that impact man and woman role-play in society, which might be

contribute to gender differences in gender and quality of life, this might be connected with some conventional gender stereotypes that have an effect on how men and women act out their roles in society. Those outcomes were consistent with Santhalingam et al. (2022) who studied "The effect of socioeconomic factors on quality of life of elderly in Jaffna district of Sri Lanka" found that females perceived lower QOL than males in all domains excluding the environmental domain. Also, Shafie et al. (2021) who studied "Gender difference in quality of life (QoL) among outpatients with Schizophrenia in a tertiary care setting," in Singapore, which presented that there was no significant change in QoL domains scores and genders.

Regarding the effect of activity therapy on symptoms, the current study stated that nearly three-quarters of individuals with paranoid schizophrenia had severe symptoms before therapy, while one third only had severe symptoms after therapy. This result is congruent with Swora et al. (2020), who studied "Physical activity (PA), positive and negative symptoms of psychosis, and general psychopathology among people with psychotic disorders" and found that higher levels of "PA" were linked with well mental health, that is alleviate negative symptoms levels (all studies: $r = 0.214$; experimental studies: $SMD = 0.838$), positive symptoms (all studies: $r = 0.170$; experimental studies: $SMD = 0.677$); and general psychopathology (all studies: $r = 0.451$; experimental studies: $SMD = 1.511$). These outcomes are consistent with those of Sabe et al. (2020) who noticed that aerobic or mixed exercise significantly reduced negative and total score symptoms for schizophrenia. Additionally, Firth et al. (2018) showed that PANSS subscale scores had statistically significant benefits of exercise for negative and general symptoms, which were reduced by 33% ($t = 3.04$, $P = 0.013$) and 25% ($t = 4.73$, $P = 0.03$), respectively. Nevertheless, 25% of the reduction in positive symptoms did not significantly change from treatment as usual ($t = 2.06$, $P = 0.168$).

Regarding quality of life, the current study outcomes showed that there were highly significant differences concerning pre- and post-activity therapy groups. Participants discovered that activity therapy meets their contributions and needs to QoL (improves mood, social relationships, etc.). They move up towards more self-determined motives. This positive cycle, in which activity therapy improves QoL, and QoL increases motivation to participate, creates a positive cycle of health. This result is consistent with Hjorth et al. (2017), who studied "Improving quality of life and physical health in patients with schizophrenia: In a program for 30-month conducted in an actual-life location" in Denmark and showed that the patients who have newly diagnosed with schizophrenia

enhanced their QoL ($p = .056$), and the psychological domain enhanced by 8.0 points ($p = .003$).

According to the findings of this study, the economic status of the studied patients was a statistically significant independent predictor of their quality of life both before and after the program ($p = 0.042$ and 0.034 , respectively). This might be because the rich place a high value on having the flexibility to choose what brings them the most happiness in life, while the poor rely heavily on survival skills to get by. Therefore, an increase in income levels would supply the rural poor with essentials that would enable them to improve their QOL. On the contrary, Thangiah et al. (2020) who studied "Income inequality in quality of life among rural communities in Malaysia" showed a significant relationship between income and the physical, psychological, environmental, and social QOL domains.

The study showed that a highly negative significant association was found concerning quality of life and psychiatric disorders as measured by the PANSS among the studied patients at post program. This may be due to the fact that for those residing in safe environments where severe psychiatric symptoms are expected, such as psychiatric inpatient wards, psychiatric symptoms may have less of an impact because they are frequently less disruptive to a person's capacity to meet their needs. This result is in line with Mo et al. (2023) who studied "The mediating role of health-promoting behaviors on the association between symptom severity and quality of life among Chinese individuals with mental illness" which stated that psychiatric symptoms were also negatively associated to QoL (-0.73 ; $p = 0.001$). Also, Eack and Newhill (2017) who studied "Psychiatric symptoms and quality of life in schizophrenia", they revealed that positive and negative symptoms both presented a significantly stronger relationship with QoL among studies of patients treated in outpatient settings ($r = 0.28$ and 0.32 , respectively) compared to inpatient settings ($r = 0.12$ and 0.22 , respectively). But in investigations of both outpatients and inpatients, general psychopathology was associated with QoL in an equal way. These data imply that while general psychopathology has a moderately unfavorable connection with QoL regardless of treatment setting, positive and negative symptoms may be more relevant to the QoL of schizophrenia patients getting treatment in the community.

CONCLUSION:

Based on the results, activity therapy was demonstrated to be useful in alleviating symptoms and improving quality of life among individuals with Paranoid Schizophrenia.

RECOMMENDATIONS:

1. The effect of utilizing activity therapy as an intervention for patients with paranoid schizophrenia would be involved in nursing students' curricula.
2. Inform nurses participating in an in-service training program about the significance of activity therapy and how to apply it to alleviate symptoms and improve quality of life.
3. Establishment of a workshop for psychiatric nurses on the benefits of activity therapy as an effective mechanism of coping for patients with schizophrenia.

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تأثير العلاج بالنشاط على الأعراض وجودة الحياة بين مرضى فصام جنون العظمة

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الخلاصة

الخلفية: الفصام المزمن هو اضطراب عقلي حاد طويل الأمد. وكذلك الفصام المصحوب بجنون العظمة هو أكثر أنواع الفصام شيوعاً. يمكن أن يقلل العلاج بالنشاط من أعراض الاضطرابات العقلية، وخاصة الفصام المصحوب بجنون العظمة، من خلال تحسين جودة حياة المريض. **الهدف:** تهدف هذه الدراسة إلى تقييم تأثير العلاج بالنشاط على الأعراض وجودة الحياة بين مرضى فصام جنون العظمة. **منهجية الدراسة:** التصميم: استخدمت دراسة شبه تجريبية حيث اجريت الدراسة في القسم الداخلي بمستشفى الطب النفسي والصحة النفسية في ميت خلف بالمنوفية التابع لوزارة الصحة والسكان، مصر. تكونت العينة من 51 مريضاً مصاباً بفصام جنون العظمة. **أدوات جمع البيانات:** استمارة الخصائص الشخصية والتاريخ الطبي، ومقياس المتلازمة الإيجابية والسلبية للفصام ومقياس جودة الحياة. **النتائج:** كشفت نتائج الدراسة أن هناك انخفاضاً كبيراً في أعراض الفصام وكذلك تحسن كبير في جودة الحياة بعد النشاط العلاجي ذات دلالة إحصائية ($p \leq 0.000$). **الخلاصة:** يمكن أن يخفف النشاط العلاجي من أعراض مرضى الفصام، مما يؤدي بدوره إلى تحسين جميع أبعاد جودة الحياة. **التوصيات:** يجب تقديم النشاط العلاجي كتدخل للمرضى الذين يعانون من أمراض عقلية لتحسين الاعراض لديهم وكذلك جودة حياتهم.

الكلمات المرشدة: العلاج بالنشاط، الفصام، جنون العظمة، جودة الحياة.