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RESEARCH ARTICLE

IMPACT OF PSYCHOEDUCATIONAL PROGRAM ON THE QUALITY OF LIFE OF PATIENTS WITH SCHIZOPHRENIA

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ABSTRACT

Impaired quality of life is a grave, pervasive, and one of the most serious problems in the community care of patients with schizophrenia. Psycho educational programs that provide patient's with information about the illness, it's course and medical regimen, various coping strategies, problem solving and ways to minimize the patient's chance of relapse may help patients to enhance their quality of life.

Aim: the study aimed to assess the impact of psycho educational program on the quality of life of patients with schizophrenia.

Design: this study followed a quasi-experimental design.

Setting: it was carried out at "Tanta Mental Health Hospital".

Subjects: the subjects of the study consisted of 50 patients with schizophrenia. They were selected according to specific criteria.

Tools: two tools were used to collect data for the study: questionnaire sheet concerning knowledge about schizophrenia and life satisfaction and enjoyment scale. Each patient was interviewed individually using the study tools as pre-test. The educational program was implemented on small group basis. Each subgroup encompassed 5-8 patients and attending a total of 15 sessions. These sessions were scheduled as 3 sessions per week for duration of about 5 weeks. Each session was last for about an hour.

Results: the main results revealed that a significant improvement in the patient's knowledge and quality of life after the application of a psycho educational program.

Recommendation: the study recommended that, patients and their families should be continuously and regularly submitted to psycho educational program that involved knowledge about disease, medication, side effects and it's management, relapse prevention, and learning social skills.

INTRODUCTION

Schizophrenia is a severe, complex, chronic, and common psychotic mental disorder that affects about 1% of the general population, most of them between the ages of 15 and 35 years and has a devasting effect on patient's lives and on their families (Barkur 2002; Kane 2006). The long term course of schizophrenia is frequently characterized by frequent and prolonged hospitalization, reducing social and occupational functioning, loss of independent living, substance abuse, increased risk of suicidal and violent behavior and impaired quality of life (Lincoin *et al.,* 2007). Quality of life is considered as a multifaceted construct that encompasses an individual's behavioral and cognitive capacities, emotional well-being, and abilities requiring performance of domestic, vocational and social roles (Saxena and Orley 2000).

The issues on quality of life are discussed widely in different scientific fields. In sociology, quality of life is understood as subjective understanding of well-being taking into account individual needs and understanding. In economics, it is the standard of living (WHOQOL Group 1995).

In the medical field, there is no universally accepted definition of quality of life, usually it is referred to the definition of World health organization introduced in 1995, it is an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, values and concerns incorporating physical health, psychological state, level of independence, social relations, personal beliefs and their relationship to salient features of the environment (WHOQOL Group 1995; Hamed 2004). The concept of quality of life has both an objective and a subjective component. The subjective component refers to a concept of well-being, life satisfaction or happiness, while the

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objective component hinges on aspects of social functioning and environment (Murphy and Murphy 2006).

Quality of life of schizophrenic patients has been identified as an important area of research for many years (Adewuya *et al.,* 2006). This is with good reasons as quality of life of patients with schizophrenia has been found to be impaired compared to general population (Lehman *et al.,* 1982; Evans *et al.,* 2007; Bobes *et al.,* 2005). In the Egyptian study conducted by Elyzel (2011) was found that more than half of studied patients with schizophrenia (51.6%) had poor quality of life (Elyazel 2011). Impairment in quality of life increases the impact of schizophrenia on patients, family members, health care system, and community. Indeed, this impairment leads to a considerable increase in both the direct and indirect cost of illness. (Aronson 1997) Direct costs include treatment provided in inpatient, outpatient, and long-term care, as well as criminal justice costs, medication costs, and publicly owned capital such as state mental health facilities. Indirect costs mostly arise from 1- the productivity loss suffered by individuals with schizophrenia in which frequent inpatient stays can endanger social and occupational integration, as a result of the associated loss of the ability to work and social participation and limit the individual´s quality of life, 2- family members burden, there is plenty of research about burden on relatives of patients with schizophrenia; however concern for this group has increased during last decades due to the process of deinstitualization (Mcevoy 2007; Zeidler *et al.,* 2012). *Dillehay and Sandys* defined family burden as a "psychological state produced by the combination of physical work, emotional pressure, social restrictions, and economic demands arising from taking care for a patient as well". Burden of family caregivers leads to negative consequences not only for themselves but also for patients, other family members, and health care system. For relatives of patients with schizophrenia has been found associated with an important reduction in their QOL, causing damage in caregiver's health condition (Dwyer *et al.,* 1994; Dillehay and Sandys 1990). Furthermore, their negative quality of life have impacted on poor caring, mistreatment or behaving violently to the patients which can cause patients relapse˙ In fact, schizophrenia is the most costly treated illness by psychiatrist (Dillehay and Sandys 1990).

For these reasons, in the care of patients with schizophrenia, interventions which only target symptoms are not enough, but a more holistic view is necessary in which patients' quality of life is a central concern. In psychiatric nursing, there is a need to find interventions by which the quality of life of these patients is best supported (Lieberman *et al.,* 2005). Among psychosocial interventions that enhance patient's quality of life, the psychoeducational intervention has been considered to be the most promising and successful within the last thirty years (Mohr 2006). Psychoeducation is the education of a person in subject areas that serve the goals of treatment and rehabilitation (Wilkinson and Lewine 2004). In this sense, educational programs that provide patient's with information about the illness, it's course and medical regimen, various coping strategies, problem solving and ways to minimize the patient's chance of relapse may help patients to enhance their quality of life (Mohr 2006). Thus, nurses must make client education an integral part of practice particularly when enhancing quality of life. Therefore, in nursing there is an urgent need to find the most appropriate ways to conduct patient education among this group of patients to best improve their quality of life (Mohr 2006).

Aim of the study

The study aimed to evaluate the impact of psychoeducational program on the quality of life of patients with schizophrenia.

Research Hypothesis

Quality of life of patients with schizophrenia will improved after the implementation of a psychoeducational program.

MATERIALS AND METHODS

Research design

This study followed the quasi-experimental design.

Setting

The present study was conducted at inpatient word of Tanta Mental Health Hospital which affiliated to General Secretrait of Mental Health with a capacity of 75 beds (two words for male, and two words for female) and provides health care services to Gharbya, Menofia, and KafrElsheikh governorates.

Subjects

The target population of this study consisted of fifty schizophrenic inpatients. They were fulfilling the following inclusion criteria:

- Age at least 18 years.
- With at least two previous admissions.
- Able to communicate relevantly.
- Willing and agree to participate in the study.

Tools of data collection

Two tools were used to collect data for the study:

Tool I: A structured Interview Knowledge Assessment Schedule

It developed by the researcher after thorough review of related literature and it comprised the following parts:

Part one: Socio-demographic and Clinical characteristics of the studied patients

It comprised the socio demographic data of the patients as age, sex, marital status, level of education, occupation, income, residence, and order in the family as well as clinical data of the patient as age of onset of psychotic illness, number of previous psychiatric hospitalization, date of last admission, mode of current admission, symptoms of current admission and past history of physical diseases if available.

Part two: Interview knowledge structured Assessment schedule

It was developed to assess patient's knowledge regarding:

- Schizophrenia (definition, causes, symptoms, treatment modalities)
- Relapse (causes, warning symptoms, ways of coping with symptoms)
- Antipsychotic Medication (name, side effect, compliance with medication) for each of the knowledge item a correct response will be scored (1) and the incorrect response will be scored (zero). Total knowledge score was (49). Each patients had knowledge score considered Satisfactory if ≥ 50% and Unsatisfactory if < 50%

Tool II: Quality of life Enjoyment and Satisfaction Questionnaire (Q-LES-Q)

Quality of patient's life was assessed by using the Quality of Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q). It was originally developed by Endicott *et al.* (1993). It is a 93-item self-report scale that was aim to measure the degree of enjoyment and satisfaction experienced by subjects in the following domains:
Physical health (13 items), Subjective feelings (14 items), Leisure time activities (6 items), Social relationships (11 items), General activities (16 items), household duties (10 items), school course domain (10 items), and work domain (13 items). The household duties, work, and school subscales were excluded as it considered irrelevant for hospitalized patients. After their exclusion of the scale became a 60 items. The questionnaire used a five-point likert scale ranging from 1 to 5 where: 1= never or not at all, 2= rarely, 3= Sometimes, 4= Often or most of the time, 5= all of the time. The total score of the scale range from 60-300. All statements in the scale in the positive direction

< 50% indicated Low quality of life
50- 75% indicated Average quality of life
≥ 75% indicated High quality of life

Method

An official approval was obtained from the identified hospital to collect the study data. Tool one was developed by the researcher after a thorough review of related literature. Tool two was translated by the researcher to Arabic language. It was tested for translation and content validity by a group of five experts in the psychiatric medicine and psychiatric nursing field. Then a test-retest reliability was applied on tool I and II to ascertain the reliability (alpha reliability= 0, 89 and 0, 92 respectively). A pilot study was carried on 10 patients with schizophrenia to ascertain the clarity and applicability of the study tools. In addition, it serves to estimate the approximate time required for interviewing the patients as well as to identify obstacles that might be faced during data collection, and those patients were excluded later from the study.

The actual study was divided into three phases

Phase 1 (pretest or assessment phases)

The researcher reviewed all the schizophrenic patient's records in order to choose those who meet the inclusion criteria. Before starting the interview; informed consent to participate in the study obtained from the patients after explanation the purpose of the study and assurance the patient about his privacy and confidentiality of the obtained data. The patients informed that the nature of the study will not cause any harm or pain and he has a right to withdraw from the study at any time if they want. An interview was conducted on an individual basis. Each patient was interviewed by the researcher. The interview lasted 40-50 minutes depending on the capacity of the patients to respond. Patients were interviewed using tool I and II.

Phase 2 (intervention phase)

Based on the results obtained from phase one and a review of the related literature, the program was developed. The educational program was implemented on small group basis. Each group encompassed 5-8 patients. Each group was attending a total of 15 sessions. These sessions were scheduled as 3 sessions per week for duration of 5 weeks. Each session was last for an hour.

The content of the program was presented in the following sequence

The first session was an introductory session that emphasized acquaintance between the group members as well as the researcher and also the explanation of the program's purpose. Sessions 2, 3, 4 concentrated on knowledge about schizophrenia (definition, causes, and symptoms). Knowledge about antipsychotic medication, its side effects, and the ways of patients deal with them was discussed in sessions 5, 6. Appreciating the importance of drug compliance and knowledge about relapse was the core of session 7, 8. Symptoms checklist and color cards exercise used to help patient's self-monitoring of early warning symptoms of his relapse were the issue of sessions 9, 10. Sessions 11, 12 centered on teaching the patients deep breathing exercise and progressive relaxation technique to help them to cope with stress. Social skills training to teach patients basic social skills. Finally, at session 15, the immediate evaluation of the program was done. The program was presented as health teaching sessions given by the researcher, followed by discussion between the researcher and the patients, handout, visual aids, demonstration & re-demonstration, video tape, and role play were used as a media of teaching.

Phase 3 (evaluation phase)

The evaluation of the implemented program done through:
Reapplying of the Knowledge questionnaire and Quality of Life Enjoyment and Satisfaction questionnaire as follows:

1- Immediately after implementation of the program (posttest 1).
2 - Three months later after the program implementation (posttest 2).

Limitation of the study

- During program implementation there were lack of privacy, there was no specific place for conducting the program.

- The researcher was exposed to many interruptions by other patients and staff members which lead to distractibility of the study subjects.
- Some patients discharged before completing the whole 15 sessions, thus the researcher start again with new patients, and this was time and effort consuming

Statistical analysis

Statistical presentation and analysis of the present study was conducted, using the mean, standard deviation, Paired t-test, Chi-square, Linear Correlation Coefficient, and R-ANOVA by SPSS V17.

RESULTS

Table 1. Socio-demographic Characteristics of the studied subjects

Sociodemographic Characteristics	Studied subjects N=(50) N	 %
Sex		
Male	35	70.00
Female	15	30.00
Age groups		
<30	10	20.00
30-	12	24.00
40-	14	28.00
>50	14	28.00
Range	22-79	
Mean±SD	42.02±13.08	
Marital status		
Single	27	54.00
Married	15	30.00
Separated	1	2.00
Divorced	7	14.00
Level of education		
Illiterate	8	16.00
primary school	6	12.00
Preparatory	4	8.00
Secondary	17	34.00
University	15	30.00
Occupation		
Working	25	50.00
Student	3	6.00
Housewife	4	8.00
Retired	2	4.00
Without	16	32.00
Income		
Enough	26	52.00
Not enough	24	48.00
Mean±SD	3.40±2.19	

Table 2. Clinical Characteristics of the studied subjects

Clinical Characteristics	Studied subjects N=(50) N	 %
Duration of the disease (in years)		
<5	7	14.00
5-	21	42.00
15-	11	22.00
>25	11	22.00
Range	1-46	
Mean±SD	15.06±10.48	
No of previous admission		
<5	23	46.00
5-10.	13	26.00
>10	14	28.00
Range	1-30	
Mean±SD	7.96±8.01	
Mode of current admission		
Voluntary	13	26.00
Involuntary	37	74.00
Patient's insight		
Has insight	15	30.00
Doesn't have insight	35	70.00

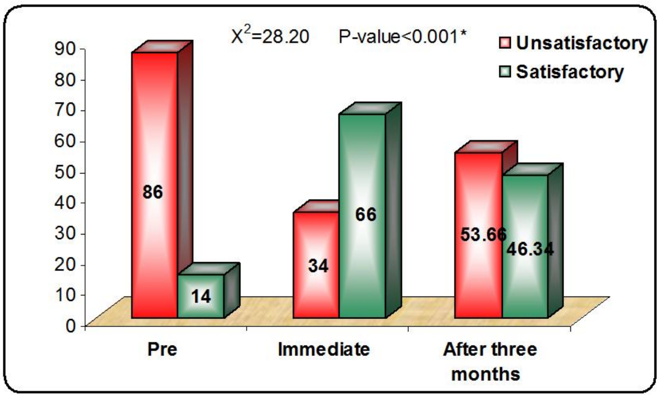

Figure 1. distribution of the studied subject's total knowledge among the three phases of the program

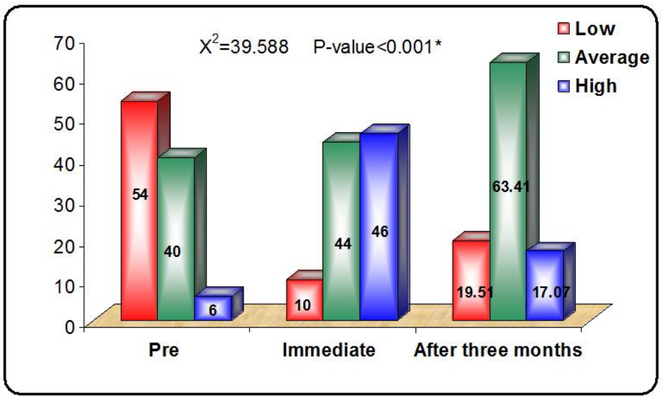

Figure 2. Distribution of the studied subject's total quality of life among the three phases of the program

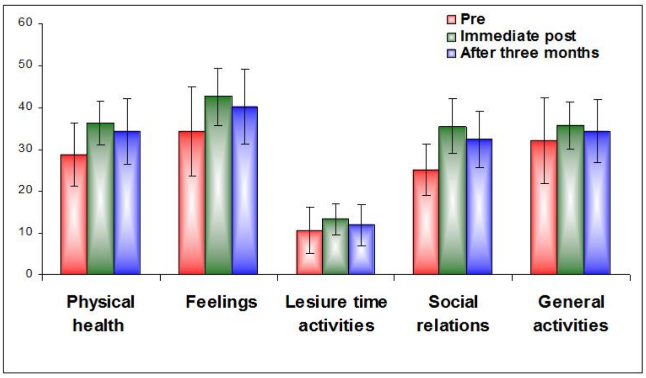

Figure 3. Distribution of the studied subjects regarding their mean score of quality of life subscales among three phases of the program

Table 3. Distribution of the studied subjects regarding their total means score of knowledge among three phases of the program

Phases of the program	knowledge	RANOVA	
		F	P-value
	Mean ±SD		
Pre-program implementation	14.86±9.35	22.45	<0.001*
Immediate post	27.52±10.48		
After three months	21.85±11.39		

Table 4. Distribution of the studied subjects regarding their total mean score of quality of life among three phases of the program

Phases of the program	Quality of life	RANOVA	
	Mean ±SD	F	P-value
Pre-program implementation	134.36±31.35	15.488	<0.001*
Immediate post	163.40±19.33		
After three months	156.71±27.12		

This is going with a study conducted by Delft (2010) who found that Eighty-six percent of the patients could not demonstrate knowledge about schizophrenia and 92% reported that professionals had not explained the illness to them. They also reported that apart from what they had\ learned about their disease is their personal observations/experience of their symptoms (Delft and Roos 2010).

Table 5. Extent of change in the total mean score of patient's knowledge and quality of life among three phases of the program

Items		Mean ± SD	Comparison	Paired t-test	
				t	P-value
Knowledge	Pre	14.86±9.35	Pre - Immediate	7.95	<0.001*
	Immediate	27.52±10.48	Pre – After three months	4.08	<0.001*
	After three months	21.85±11.39	Immediate – After three months	-3.09	<0.001*
Total QOL	Pre	134.36±31.35	Pre - Immediate	8.23	<0.001*
	Immediate	163.40±19.33	Pre – After three months	4.04	<0.001*
	After three months	156.71±27.12	Immediate – After three months	-1.87	0.07

Table 6. Correlation between total knowledge and total quality of life in pre, immediate, and after three months of the program application

Phases of the program	Total Knowledge	Total Quality of life	r	P-value
	Mean±SD	Mean ±SD		
Pre-program implementation	14.86±9.35	134.36±31.35	0.090	0.534
Immediate post	27.52±10.48	163.40±19.33	0.403	0.004*
After three months	21.85±11.39	156.71±27.12	0.359	0.021*

DISCUSSION

Schizophrenia is an illness that has impacts on many aspects of patient's functioning. The long term course of schizophrenia is frequently characterized by frequent and prolonged hospitalization, reducing social and occupational functioning, loss of independent living, substance abuse, increased risk of suicidal and violent behavior and impaired quality of life. Patients with schizophrenia have difficulty maintaining many of the essential life roles and resources that significantly impair every aspect of their daily life. (Lincoin *et al.,* 2007) In order to provide comprehensive and user-oriented community-based psychiatric services for patients with severe mental illness, quality of life has become an important aspect in the planning and evaluation of services. (Lauer 1999) The present study indicated that most of the studied patients had unsatisfactory total knowledge about their illness before the application of the program. This is may be due to the assumption that nurses may be lacking knowledge about mental illness which makes them unable to provide information to the patient, or they may lack awareness of their role as educator. Health education is an integral part of the nurses' function that is to teach patients and their family about disease. Another assumption is that, nurses may have negative attitudes towards mentally ill patients and perceive mentally ill patients as not competent enough to receive instructions about their diseases. Additionally, those patients may be informed before about their medication and illness but due to the nature of their disease they did not remember what they had been told by mental health practitioners; they may also have been too ill at that time to properly assimilate what they were told.

In addition to a study conducted by Sabra *et al.* (2008) who mentioned that most of the studied patients with schizophrenia had a considerable lack of knowledge about their illness and medication (Sabra 2008). Immediately after the application of a psycho-educational program the present study revealed a significant improvement in the total score of patient's knowledge. This may be due to the impact of educational sessions that focuses on giving the patients knowledge about schizophrenia and medications. In addition to the interaction between researcher and patients during session giving the patients opportunity to ask questions which increases patients understanding of their illness and medications. In this respect, Rummel *et al.* (2005) who stated that there was a significant improvement in total knowledge of the studied patients with schizophrenia after their participation in the psychoeducational program (Rummel *et al.,* 2005). Additionally, Hassan (2014) who stated that Psycho-educational interventions improve patients' and primary caregivers' knowledge of schizophrenia and impact positively on patients' physical and psychological outcomes and primary caregivers' burden of care and quality of life(27). Moreover, Lincoln *et al.* (2007) who mentioned that participation in psychoeducational program is associated with better cooperation and extensive knowledge about illness (28)

In contrast, a study by Charzyńska (2011) found that approximately 50% of the studied patients with schizophrenia considered level of their knowledge on the illness immediately after the implementation of the program to be not satisfactory (Charzyńska and Charzyńska 2011). However, these results declined after three months of the program. This may be due to lack of continuous inpatient's educational services and poor mental health and rehabilitation services for the patients in the community in which neither the patients nor the family receive knowledge about disease and medication on the patient's discharge. In spite of the decline in the patient's knowledge after three months it still better than the pre-program implementation phase. The difference between pre –immediate phase, immediate-after three months, and pre- after three months of the program implementation was statistically significant. For the quality of life of patients with schizophrenia. The quality of life scale used in this study monitors a total quality of life as well as its five dimensions

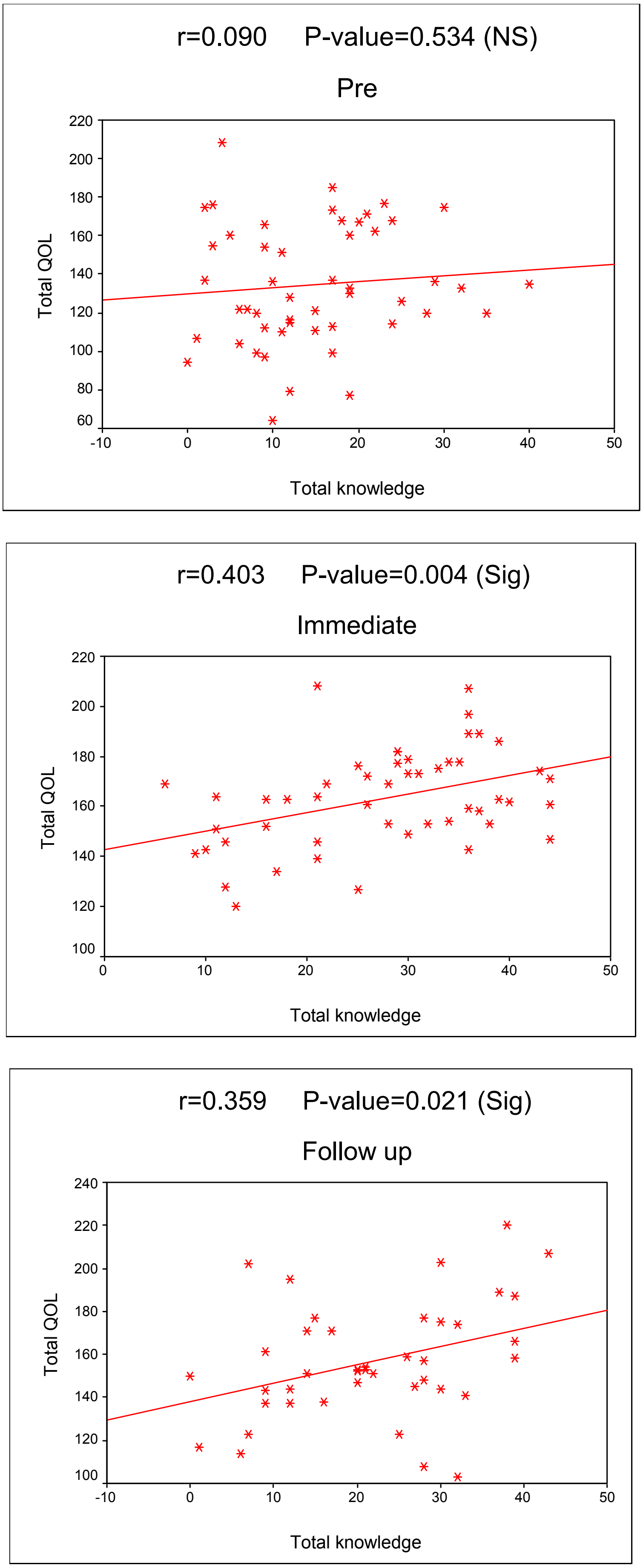

Figure 4. Correlation between total knowledge and total quality of life in pre, immediate, and after three months of the program application

namely physical, feelings, leisure time activities, social relations, and general activities. The findings of the present study before the application of the program showed that more than half of the studied patients; their total quality of life was low. This result may be explained by factors associated with their QOL such as: personal characteristics, mental symptoms, relations with family, friends and others, social support, self-esteem, type and compliance with medication, stigma, and lack of knowledge about disease. This is supported by Alptekin *et al.* (2005) and Woon *et al.* (2010) who stated that impairment in quality of life is evident in patients with schizophrenia (Alptekin *et al.,* 2005; Woon *et al.,* 2010; Elsayes 1998). Similar results was reported by an Egyptian study carried by Elsayes (1998) on life satisfaction among long stay psychiatric inpatients at El-maamoura hospital , this study indicated that 60% of studied patients suffered from life dissatisfaction (Elsayes 1998).

In contrast a study done by Shawkan (2012) to assess quality of life for people with schizophrenia in Saudi Arab showed that most Saudi Arabian people with schizophrenia were satisfied with their quality of life. (Shawaka 2012) This difference may be due to culture differences. Immediately after the application of the program, the findings of the present study indicated that there was a statistical significant improvement in patient's quality of life. This is may be due to the effect of both educational sessions that includes providing information about the disease and medication and training sessions of the program that focus on stress reduction techniques, social skills, and training exercise that help patients to monitor early warning signs of relapse. In addition to the building of therapeutic alliance between patients and researcher has been found to be associated with improved patient’s quality of life as it is linked with higher level of general and social functioning, reduce symptoms, and improved medication adherence (Alexander and Coffey 1997). The difference between pre and immediately after the application of the program was statistically significant. This is consistent with a finding obtained by Xia *et al.* (2010) who stated that, participants receive psychoeducation are more likely to be satisfied with mental health services and have improved quality of life (Xia *et al*., 2010). Likewise Atkinson *et al.* (1996) who compared the effects of an education group with a group on a waiting list found significantly greater improvement in QoL immediately after education sessions in the intervention group compared to the waiting list group (Atkinson *et al.,* 1996). On the same line, Pekkala and Merinder (2002) undertook a Cochrane review of the effectiveness of psychoeducational interventions in patients with schizophrenia. The authors reported that psychoeducation has benefits compared with standard care. The review concluded that psychoeducation possibly has a positive effect on patients’ wellbeing (Pekkala and Merinder 2002). In addition to, the results of Munich Psychosis Information Project Study suggested that a relatively brief intervention of 8 psychoeducational sessions with systemytic family involment in simultaneous groups can considerably improve the treatment of schizophrenia (Pitchel-Walz *et al.,* 2006).

In contrast, the greater criticism regarding the illness to the patients during psycho-educational treatment can indirectly contribute to lower quality of life (Chądzyńska *et al.,* 2001). On the same line, Vreeland *et al.* (2006) reported the effects of a group based psychoeducational programme (Team Solutions) compared with care as usual. The Team Solutions treatment model is a modular psychoeducational programme that includes the following themes: symptoms of mental illness, medications, relapse prevention, coping strategies, and how to avoid crisis found that there was no significant changes were found related to QoL (Vreeland *et al.,* 2006). Additionally, Abbadi (2005) in his study showed that psychoeducation can be harmful for the patients because it seems to enhance mistrust, suspicion, pretence and false self (Abbadi 2005).

Although quality of life of patients have declined after three months of the program implementation without significant differences between immediate and after three months of the program implementation and this may be due to inadequate community mental health services, in an Egyptian study Okasha (2004) he stated that after care services in Egypt are still limited owing to poor understanding of most people of the need for follow up after initial improvement. Indeed public psychiatric treatment services, housing, and rehabilitation services for people with schizophrenia are grossly inadequate (Okasha 2004). But 63% of the studied patients still have an average response this is may attributed to the impact of psycoeducational program in which 46% of the studied patients still had a satisfactory knowledge after three months of the program implementation. In addition to the impact of hospitalization versus living in the community on patient's quality of life; they are still in contact with their community, having a support person, living with their families, and lives in at least restrictive environment. In the same line, a study by Foldemo and Bogren (2002) who noted that subjective quality of life of patients with schizophrenia could improve over time when patients moved to community (Foldmen and Bogren 2002). This is also consistent with a study by Degme *et al.* (2007) who showed that the group of patients with schizophrenia who were educated about their disease, possible outcomes, ways of treatment and medications presented better level of compliance, higher level of social functioning and they had better clinical outcome of their disease after three months from the release from the hospital (Degme *et al*., 2007).

Regarding the correlation between knowledge and quality of life among patients with schizophrenia, the present study indicated that there was a statistical significant positive correlation between knowledge and quality of life among patients with schizophrenia. Gaining the knowledge helps the patients to counteract the illness, daily functioning and for getting rid of helplessness against symptoms. Providing patients with information can promoting patient's autonomy, empower patients by increasing their sense of control and mastery over their lives and problem solving usually results in improving QOL. In contrast, a study by (Browne *et al.,* 1998) who investigated quality of life in schizophrenia: insight and subjective response to neuroleptics. They found that knowledge about the illness has not been shown to be significantly related to QOL level (Browne *et al.,* 1998). Similarly Corten *et al.* (1994) stated that subjective assessments of the quality of life do not change with the increase in knowledge about schizophrenia (Corten *et al.,* 1994).

Recommendation

1- The patients and their families should be continuously and regularly submitted to psychoeducational program that involved knowledge about disease and medication
2- Psychosocial rehabilitation programs that involve social skill training, stress management, and vocational training can improve patient's quality of life
3- Hospital staff in psychiatric hospital should be educated about principle for treating with mentally ill patients, mental illness, medications, side effect, and management, skills for effective communication and how to build trusting relationship with the patients.
4- Frequent and or long period of hospitalization should be minimized as much as possible to keep patients in contact with their community, maintain their work and their social life.

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