Relation between self empowerment and social functioning among patients with schizophrenia

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Abstract

Self-empowerment in schizophrenia may be associated with symptoms and social functioning. It is possible that being disempowered may adversely affect one's level of functioning and that improvements in self-empowerment were associated with overall severity of symptoms and improvement of social functioning. **Aim of the study:** to determine the relation between self-empowerment and social function among patients with schizophrenia. **Subject:** A convenient sample of 130 patients with schizophrenia from both inpatient and outpatient services of Neuropsychiatric Department of Tanta University Hospital. **Study design**: A descriptive correlation research design was utilized. **Study tools:** four tools were used: **Tool 1** is Structured interview, **Tool 2** is " Positive and negative syndrome scales, **Tool 3** is The Empowerment Scale, and **Tool 4** is Social Function Scale. **Results:** This study revealed that more than half of the studied patients had low sense of self-empowerment, one third of patients had moderate sense of self-empowerment, and the minority had high sense of self-empowerment. **Conclusions:** it can be concluded that, there was a highly positive statistical significant correlation between total self-empowerment level and total social functioning level, while there was highly negative statistical significant correlation between total self-empowerment level and total Positive & negative syndrome level, and there was a highly negative statistical significant correlation between social functioning level and total positive & negative syndrome level. **Recommendations**: Further research on developing programs that are needed for a better understanding of relations between schizophrenia, empowerment and social functioning to improve social functions and self-empowerment levels of patients with schizophrenia.

Key words: Patients with Schizophrenia, Social functioning, Self empowermet.

Introduction

Schizophrenia is one of the top ten most common chronic, multifactorial disordersin the world.[1] It is marked by a wide range of positive symptoms (delusions and hallucination), cognitive symptoms (dysfunctions in working memory, attention, visual and verbal learning with deficits in reasoning, planning, abstract thinking and problem solving) and negative symptoms (blunted affect or lack of expressiveness, lack of pleasure or interest in life, reduction in quantity of spoken words, lack of energy and lack of motivation) .[2-5] It affects at least 0.7 percent of the population according to statistics. and The onset age is usually between adolescent and early adulthood.[6] The patient's thinking, perception, attitude, and emotion are all disrupted in schizophrenia.[7,8]

Social functioning refers to peoples' ability to perform day to day social tasks appropriately and to maintain a sufficient social life. Social performance depends in part on the level of social skills such as independent living skills, engaging in positive relationship with other, engagement in a range of common social activities (e.g. Sports) and engagement in productive employment. [9,10]

The impairment of social functioning in patients with schizophrenia can take several forms, including: : poor work performance, poor reception and expression of nonverbal signs, social anxiety, social isolation, lower rates of marriage, withdrawal from social relation and inability to take role in society and maintaining familial or friendly relationships.[11-12]

Social functioning among patients with schizophrenia may be affected by many factors as psychotic symptoms (hallucination, delusion), cognitive symptoms, motivation, social support and self-empowerment. Self-empowerment is the greatest factor facilitate or hamper social function among them.(9-12) Self-empowerment is defined as 'the relation between a sense of personal competence, a desire for and a willingness to take action according to a psychological definition.(13) Self-empowerment also refers to a sense of personal competence, which is seen to be a necessary requisite for a successful outcome in schizophrenia.[13, 14, 19]

Self-empowerment is defined as taking control of one's own life ,setting objectives , and thinking rationally .It basically means that people must be aware of their own strengths and weakness ,as well as trust in themselves .[15-16]

The basic attributes of self-empowerment are :self-esteem –self-efficacy, having decision making capacity, having access to information and resources, having a range of options from which to make a choice, assertiveness, a feeling that one can make a difference, learning to think critically, ability to express anger, not feeling alone, feeling part of a group, understanding that a person has rights, having an effecting changes in one's life and one's community, growth and change that is never-ending and self-initiated, increasing one's self image and overcoming stigma.[14,17]

Self-empowerment has been a key role in psychiatric nursing because it is critical for

patients' recovery from mental illness, as it provides incentive to change their behaviors and lifestyles in a positive direction, and increases their ability to have control on them lives. [18,19] On the other hand, disempowerment refer to taking power from individuals away thus leaving them feeling helpless, low self-esteem, unable to control their life and less likely to succeed.[20] The recent related studies (Boyer, 2012, Hasan ,2017) have found that when patients have a good self- empowerment , this help them to be more positive about their illness, allow them feel they are a part of the treatment process, decrease individual helplessness, diminish psychiatric symptoms especially negative ones, improving quality of life, improving recovery rate and reduce the risk of relapse.[10,14,21]

Impairment in social functioning is widespread in patients with schizophrenia and it can last for years.(12) Self-empowerment allows patients to have a greater impact on the organizational and societal contexts in which they live, allowing them to have more control over their lives , as well as a better recovery rate [13,14]

Significance of the study

The significance of this study rises up from that patients with schizophrenia suffer from disempowerment for many reasons such as: long period of hospitalization, chronicity of disease, low self-esteem, negative believes and behavior about them from society which causing stigmatization and finally lead to disempowerment. Even though little study has been done to investigate this relationship, disempowerment relates to impaired social functioning. So, the role of the psychiatric nurses should be performing focus assessment of the relationship between these variables that help them to develop a plan of care for patients with schizophrenia.

Aim of the study

The aim of this study is to:

Determine the relation between self-empowerment and social functioning among patients with schizophrenia.

Research question

What is the relation between self empowerment and social functioning among patients with schizophrenia?

Subjects & Method

Subjects

Research design

Adescriptiv correlation research designwas utilized in the current study.

Setting

The study was conducted at both inpatient and outpatient services of Neuropsychiatric Department of Tanta University Hospital. Tanta University Hospital is affiliated to "Ministry of High Education". The capacity of the Neuropsychiatric Department is (31) beds divided into two wards for male patients (17 beds) and two wards for female patients (14beds).

Subjects

A convenient sample of 130 patients with schizophrenia according to DSM-5 from the previously mentioned setting. This number was determined according to Epi-Info software statistical package. The criteria used for sample size calculation were as follows: 95% confidence level and expected outcome is 70% with margin of

error : 5% The sample size based on the previously mentioned criteria should be N >92.

These subjects had the following inclusion criteria:-

- Adult patients (18 years and above).
- Willingness to participate in the study.

Exclusion criteria

Patients diagnosed with: mental retardation (IQ less than 70%).

- Substance related disorder.
- Co-morbid psychiatric disorder (e.g. Personality disorders).
- Acute stage of schizophrenia.

Tools of the study: -The data was collected by using the following four tools:-

Tool I: Structured interview:

It was developed by researcher that includes:

a - Socio-demographic characteristics such as: age, sex, occupation, level of education, marital status, place of residence and income.

b - Clinical Characteristics of patient with schizophrenia includes: age at onset of schizophrenia, number of previous psychiatric hospitalizations, duration of the illness, and mode of admission.

Tool II: Positive and negative syndrome scales (PANSS)

It was developed by ***Andreason (1984)***,[22] (PANSS) to assess a wide range of psychiatric symptoms, The PANS is a semi structured interview that compromises of 30 items, each item is accompanied by a specific definition as well as detailed anchoring criteria for all seven rating points. it divided into three subscales; positive scale includes 7 items for example delusion, hallucination, hostility; negative scale includes 7 items for example blunted affect, emotional withdrawal, stereotyped thinking, and general psychopathology scale includes16 items for example somatic concern, poor attention, lack of judgment and insight. The seven points represented increasing levels of psychopathology as the following scoring system: -(1) refers to absent- (2) refers to minimal - (3) refers to mild. - (4) refers to moderate- (5) refers to moderate severe - (6) refers to severe. – (7) refers to extreme.

Scoring System

Total scores ranged from 30 to 210, where higher scores indicated a high positive and negative syndrome level (PANSS) .

•Low Positive and negative syndrome level (PANSS): (<50%) (30-119)

•Moderate Positive and negative syndrome level (PANSS): (50%-75%) (120-165)

•High Positive and negative syndrome level (PANSS): (>75 %) (166-210)

Tool III: - The Empowerment Scale (ES): The Empowerment scale adapted by **Rogers (1997)**. [23] It is used to evaluate the feelings of empowerment for patients with schizophrenia. The scale consists of 28 items rated on a 4-point Likert scale (ranging from1 strongly disagree to 4 strongly agree). It consists of five subscales which include:

1) Self-efficacy/self-esteem (9 items) such as (having positive attitude about the self).
2) Power/powerlessness (6 items) such as (feeling alone).
3) Community activism and autonomy (6 items) such as (People hamgg ve a right to make their own decisions, even if they are bad ones).

4) Optimism and control over the future (3 items) such as (optimistic about the future).
5) Righteous anger (4 items) such as (Getting angry about something is often the first step toward changing it).

Scoring system

Total scores ranged from 28 to 112, where higher scores indicated a stronger sense of empowerment.

- Low sense of empowerment: (<50%) (28-69)
- Moderate sense of empowerment: (50%-75%) (70-91)
- High sense of empowerment: (>75 %) (92-112)

Tool IV : Social Function Scale (SFS)

This scale was developed by **Birchwood et al. (1990).**[24] It was designed to enable assessment of social function, social skills and performance. It is a77-item scale with varying response format (dichotomous questions, three point likert scale, four point likert scale and five point likert scale). A higher score indicates better social function. This scale consisted of seven sub-scales. These subscale were:

The seven subscales were:

1.Social engagement/withdrawal (5 items include four items of them rated by four point likerte scale and one item rated by five point likerte scale) such as (time spent alone, initiation of conversation, social avoidance).
2. Interpersonal behavior (4 items include one item rated by dichotomous question, one item rated by four point likerte scale, one item rated by five point likerte scale and one item rated by asking about number of friends) such as(number of friends/having a romantic partner, quality of communication).
3. Pro-social activities (22 items rated by four point likerte scale) such as (engagement in a range of common social activities, e.g. sport).
4. Recreation (15 items rated by four point likerte scale) such as (engagement in a range of common hobbies, interests, pastimes).
5. Independence-competence (13 items rated by four point likerte scale) such as (ability to perform skills necessary for independent living)
6. Independence-performance (13 items rated by four point likert scale) such as (performance of skills necessary for independent living)
7. Employment/occupation (5 items include two items rated by dichotomous questions , one item rated by three point likert, and one item rated by four point likert scale and one item rated by asking about sort of job and number of hours working in day) such as (engagement in productive employment or a structured program of daily activity).

Scoring system

The overall score on the social function scale ranged from 0 to 223 with 223 being the highest and 0 being the lowest .

-Poor social function : (< 50%) (0-111)
-Fair social function : (50%-75%) (112-167)
-Good social function : (> 75%) (168-223)

Method

The study was accomplished according to the following steps:-

1. An official letter was addressed from the dean of the faculty of nursing to the director of the psychiatric department

of Tanta University Hospital to obtain their permission for collection of the data.

2. Ethical considerations

- The Scientific Research Ethics Committee of the Faculty of Nursing at Tanta University approved the study protocol
- Informed consent was obtained from the patients after explanation of the purpose of the study.
- Patients were being assured about the confidentiality of data and the privacy of patients was being respected.
- Respecting the right of the patients to withdraw at any time during the data collection period.
- The study caused no harm or pain to the patients.

3. The study tools (II , III, IV) were translated into Arabic language by the researcher , and tested for internal validity by a jury composed of five experts in psychiatric nursing. The required corrections were carried out accordingly

4. The tool IV (Positive and negative syndrome scales (PANSS) was added after finishing the protocol to bring significant weight to the research by measuring all items which can affect empowerment and social functioning in patients with schizophrenia.

5. Tools of the study were tested for reliability using **Cronbach's alph test** was found to be 0,912 - 0,785 and 0,873 respectively for tool 2, tool 3 and tool 4 which represented highly reliable tools.

6. A pilot study was conducted on 10% of patients with schizophrenia in order to identify the barriers and problems, and to test the tools for clarity.

7. *Data collection procedure*

- After getting the approval to carry out the research from the appropriate authorities, the researcher reviewed the patients' records and selected patients who meet the inclusion criteria.
- These patients were invited to participate in the study after being informed to the nature of the study, and the researcher collected the data through face to face interview with each patient on an individual basis to assess the level of empowerment , the level of social function and positive, negative and general psychopathology symptoms of schizophrenia.
- The researcher met the patients within range of three to four days per week, the number of the patients every day range from 2 to 6 patients and the time required to complete the data collection sheet ranged from 45 to 90 minute according to condition of the patient, tolerability to answer the questions and presenting symptoms. The duration of data collection was five months, starting from 1st August to the end of December 2021.

Statistical analysis

The collected data were organized, tabulated and statistically analyzed using SPSS software statistical computer package version 26. For quantitative data, the range, mean and standard deviation were calculated. For qualitative data, comparison was done using

Chi-square test (χ^2). Correlation between variables was evaluated using Pearson and Spearman's correlation coefficient r. A significance was adopted at P<0.05 for interpretation of results of tests of significance (*). Also, a highly significance was adopted at P<0.01 for interpretation of results of tests of significance (**).

Results

Table 1 clarifies distribution of the studied patients according to their sociodemographic characteristics. Regarding the age; one third of patients (36.2%) aged 30 to less than 40 years old, (27.7%) of them aged 20 to less than 30 years old and 0.8 of them aged less than 20 years old with rang (19-64) and Mean±SD 37.07±10.701.

In relation to gender; about half of the studied patients (53.8%) are male and (46.2%) of them are female. While in relation to marital status; more than one third (40.0%) of the studied patients are single, and minority of them(9.2%) are separated. It is founded that (46.2%) of the studied patients had secondary school while the minority of them had post-graduate (0.8%).

Regarding occupation; two thirds of studied patients (64.6%) were not working and one third (35.4%) of them were working. In relation to the residence; more than two thirds (70%) of them were living in city while less than one third (30%) of them was living in village. As regards to income; half of them (52.3%) had enough income while (47.7%) of them had not enough income.

Figure 1 illustrates distribution of the studied patients according to their total self-empowerment level. It shows that more than half (52.3%) of the studied patients have low sense of empowerment, and one third (42%) of them have moderate sense of empowerment, and only (5.4%) have high sense of empowerment.

Figure 2 illustrates distribution of the studied patients according to their total social function level. It shows that more than two thirds (69.2%) of the studied patients have poor social function level, while one third (30.8%) of them have fair social function level.

Figure 3 shows distribution of the studied patients according to their total positive & negative syndrome scale (PANSS) level. It shows that two third (66.9%) of the studied patients have low positive & negative syndrome scale (PANSS) level, while about one third (33.1%) of them have moderate positive & negative syndrome scale (PANSS) level .

Table 2 clarifies correlations between total self-empowerment level and social function level of the studied patients. It's obvious that there is highly positive statistical significant correlation between total self-empowerment and social functioning level where r= 0.844, p-value = 0.000.

Table 3 clarifies correlations between self-empowerment level, social function level of the studied patients and their positive & negative syndrome scale level (PANSS). It's obvious that there is highly negative statistical significant correlation between self-empowerment level and positive symptoms of schizophrenia where r= -0.809, p= 0.000. Also, there is highly negative statistical significant correlation between

self-empowerment level and negative symptoms of schizophrenia where r= -0.785, p= 0.000. Also, there is highly negative statistical significant correlation between self- empowerment level and general symptoms of schizophrenia where r= -0.814, p= 0.000. And there is highly negative statistical significant correlation between the patient's level of self-empowerment and their positive & negative syndrome level (PANSS) at r=0.845, p-value = 0.000.

It's obvious that there is highly negative statistical significant correlation between social functioning level and positive symptoms of schizophrenia where r= -0.818, p= 0.000. Also, there is highly negative statistical significant correlation between social functioning level and negative symptoms of schizophrenia where r= -0.842, p= 0.000. Also, there is highly negative statistical significant correlation between social functioning level and general symptoms of schizophrenia where r= -0.791, p= 0.000. And there is highly negative statistical significant correlation between social functioning level of the studied patients and their positive & negative syndrome level (PANSS) where r= - 0.853, p-value = 0.000.

Table 4 illustrates correlation between sociodemographic characteristics of the studied patients and their total self-empowerment score. This table shows that there is a positive statistical significant correlation between age of patients, marital status, educational level, occupation, residence, income and their total self-empowerment score, where P= 0.000. While, there is no positive statistical significant correlation between gender of patients, and their total self-empowerment score, where t= 0.094, P = 0.760.

Table 5 shows correlation between sociodemographic characteristics of the studied patients and their total social function score. This table illustrates that there is a statistical significant positive correlation between age of patients and their total social function score where f= 5.233 , p= 0.001, there is a statistical significant positive correlation between marital status and their total social function score as f= 7.141 , p= 0.000 , also there is a statistical significant positive correlation between educational level and their total social function score where f= 4.790 , p= 0.001, there is a statistical significant positive correlation between occupation and their total social function score as t= 33.947 , p= 0.000.

There is a statistical significant positive correlation between residence and their total social function score where t= 8.549, p= 0.004, and there is a statistical significant positive correlation between income and their total social function score where t= 16.162, p= 0.000.While, there is no statistical significant positive correlation between gender of patients, and their total social function score, where t= 1.162, P = 0.283.

Table 6 shows correlation between sociodemographic characteristics of the studied patients and their total positive & negative syndrome scale (PANSS) score. This table shows that there is a positive statistical significant correlation between age of patients, marital status, educational level,

occupation, residence and their total positive & negative syndrome scale (PANSS) score, where P= 0.000 respectively , also there is a positive statistical significant correlation between income and their positive & negative syndrome scale (PANSS) score, where t= 8.971 , P= 0.003.While, there is no positive statistical significant correlation between gender of patients, and their total positive & negative syndrome scale (PANSS) score, where t=0.948, P = 0.332.

Table 7 shows correlation between sociodemographic characteristics of the studied patients and their total score of positive symptoms of schizophrenia. This table illustrates that there is a positive statistical significant correlation between marital status of the patients, educational level, occupation, residence and their total score of positive symptoms of schizophrenia, where P= 0.000 respectively, also there is a positive statistical significant correlation between age and their total score of positive symptoms of schizophrenia, where f= 4.953 , P= 0.001, and between income and total score of positive symptoms of schizophrenia , where t= 7.739, p= 0.006 While, there is no positive statistical significant correlation between gender of patients, and their total score of positive symptoms of schizophrenia, where t=0.004, P = 0.947.

Table 1 Distribution of the studied patients according to their sociodemographic characteristics.

sociodemographic Characteristics	The studied patients (n=130)	
	N	%
Age (in years)		
▪ (<20)	1	0.8
▪ (20-<30)	36	27.7
▪ (30-<40)	47	36.2
▪ (40-<50)	30	23.1
▪ ≥ 50	16	12.3
Range	**(19-64)**	
Mean ± SD	**37.07±10.701**	
Gender		
▪ Male	70	53.8
▪ Female	60	46.2

Marital status		
▪ Single	52	40.0
▪ Married	33	25.4
▪ Divorced	14	10.8
▪ Widow	19	14.6
▪ Separated	12	9.2
Educational level		
▪ Illiterate	26	20.0
▪ Read and write	23	17.7
▪ Secondary	60	46.2
▪ University	20	15.4
▪ Post-graduate	1	0.8
Occupation		
▪ Work	46	35.4
▪ Not work	84	64.6
Residence		
▪ City	91	70.0
▪ Village	39	30.0
Income		
▪ Enough	68	52.3
▪ Not enough	62	47.7
With whom you live (Cohabitation)		
▪ Family	108	83.1
▪ Single	4	3.1
▪ Other	18	13.8

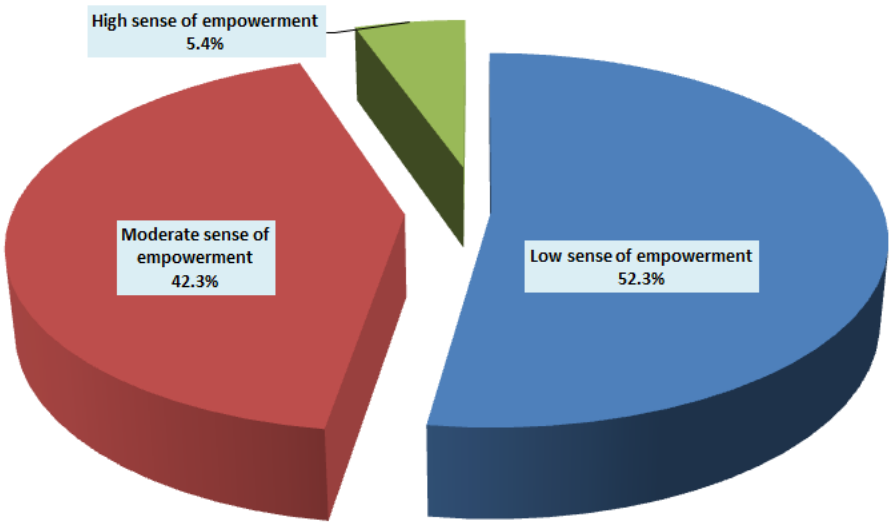

Figure 1 Distribution of the studied patients according to their self-empowerment level.

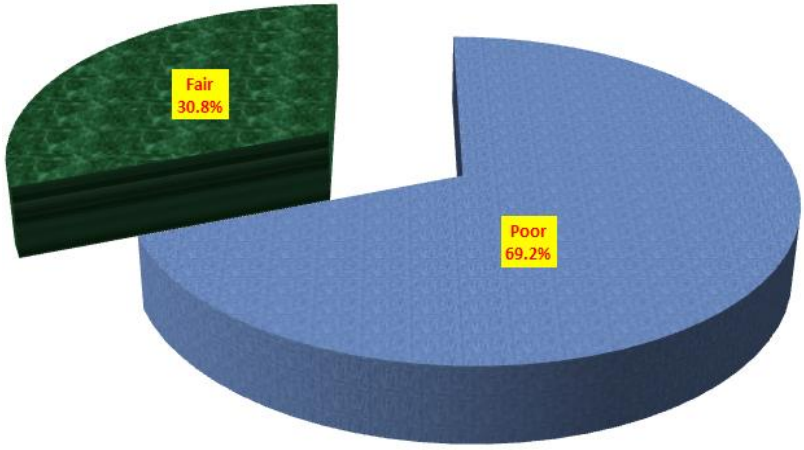

Figure2 Distribution of the studied patients according to their social function level.

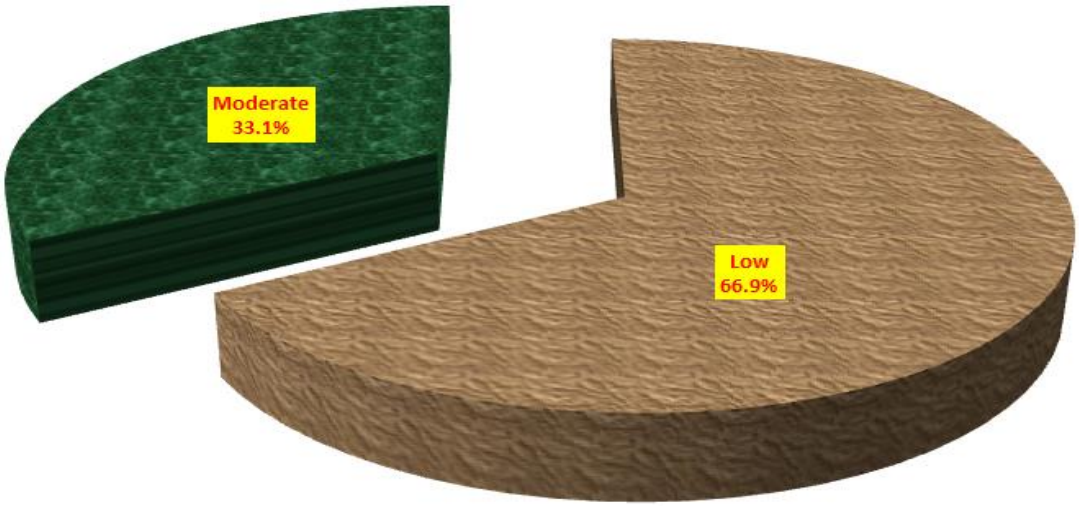

Figure 3 Distribution of the studied patients according to their positive & negative syndrome scale (PANSS) level.

Table 2 Correlations between self-empowerment level and social function level of the studied patients.

	The studied patients (n=130) Self -empowerment level					
	Low Sense		Moderate Sense		High Sense	
	N	%	N	%	N	%
Social Function level						
▪ Poor	61	46.9	29	22.3	0	0.0
▪ Fair	7	5.4	26	20.0	7	5.4
r , P	**0.844 , 0.000****					

r: Pearson' correlation coefficient

* Significant at level P<0.05

** Highly significant at level P<0.01

Table 3 Correlations between self-empowerment level, social function level of the studied patients and their positive & negative syndrome scale level (PANSS).

Positive& negative syndrome scale (PANSS) assessment Domains	The studied patients (n=130)			
	Self-empowerment score		Social Function score	
	R	P	R	P
1. Positive symptoms of schizophrenia	-0.809	**0.000****	-0.818	**0.000****
2. Negative symptoms of schizophrenia	-0.785	**0.000****	-0.842	**0.000****
3. General symptoms of schizophrenia	-0.814	**0.000****	-0.791	**0.000****
Total PANSS	-0.845	**0.000****	-0.853	**0.000****

r: Pearson' correlation coefficient

* Significant at level P<0.05

** Highly significant at level P<0.01

Table 4 Correlation between sociodemographic characteristics of the studied patients and their total self-empowerment score.

Sociodemographic characteristics of the studied patients	Total empowerment score	F/t P
Age (in years)		
▪ (<20)	68.00±0.00	
▪ (20-<30)	**74.50±12.260**	**6.853**
▪ (30-<40)	61.94±20.010	**0.000***
▪ (40-<50)	55.13±16.665	
▪ ≥ 50	53.56±18.769	
Gender		
▪ Male	**63.33±18.779**	0.094
▪ Female	62.32±18.762	0.760

Marital status ▪ Single ▪ Married ▪ Divorced ▪ Widow ▪ Separated	 63.35±18.208 **75.70±16.548** 55.43±15.786 52.37±15.374 50.75±13.130	 **8.980** **0.000***
Educational level ▪ Illiterate ▪ Read and write ▪ Secondary ▪ University ▪ Post-graduate	 54.58±19.586 63.87±15.079 60.22±17.837 78.95±±13.605 **92.00±0.00**	 **6.993** **0.000***
Occupation ▪ Work ▪ Not work	 **71.93±15.904** 57.89±18.332	 **19.10** **0.000***
Residence ▪ City ▪ Village	 58.56±17.970 **72.90±16.592**	 **18.173** **0.000***
Income ▪ Not enough ▪ Enough	 55.53±17.435 **69.54±17.374**	 **21.022** **0.000***

* Significant at level P<0.05

Table 5 Correlation between sociodemographic characteristics of the studied patients and their total social function score.

Sociodemographic characteristics of the studied patients	Total social function score	F/t P
Age (in years) ▪ (<20) ▪ (20-<30) ▪ (30-<40) ▪ (40-<50) ▪ ≥ 50	 **146.00±0.00** 107.64±32.800 88.70±43.316 73.10±34.935 67.06±41.169	 **5.233** **0.001***

Gender ▪ Male ▪ Female	 **91.70±39.196** 83.95±42.740	 1.162 0.283
Marital status ▪ Single ▪ Married ▪ Divorced ▪ Widow ▪ Separated	 91.31±36.325 **111.39±37.650** 77.86±40.899 64.26±39.742 60.08±34.065	 **7.141** **0.000***
Educational level ▪ Illiterate ▪ Read and write ▪ Secondary ▪ University ▪ Post-graduate	 69.19±43.590 92.70±38.367 84.88±37.334 113.55±36.222 **161.00±0.00**	 **4.790** **0.001***
Occupation ▪ Work ▪ Not work	 **113.33±33.961** 74.32±37.801	 **33.947** **0.000***
Residence ▪ City ▪ Village	 81.45±38.691 **103.69±42.141**	 **8.549** **0.004***
Income ▪ Not enough ▪ Enough	 73.84±38.764 **101.15±38.610**	 **16.162** **0.000***

* Significant at level P<0.05

Table 6 Correlation between sociodemographic characteristics of the studied patients and their total positive & negative syndrome scale (PANSS)score.

Sociodemographic characteristics of the studied patients	Total positive & negative syndrome scale (PANSS) score	F/t P
Age (in years)		
▪ (<20)	51.00±0.00	
▪ (20-<30)	73.81±24.371	
▪ (30-<40)	91.02±33.365	**6.310**
▪ (40-<50)	104.27±35.844	**0.000***
▪ ≥ 50	**117.25±45.568**	
Gender		
▪ Male	89.37±35.089	0.948
▪ Female	**95.57±37.407**	0.332
Marital status		
▪ Single	89.02±33.774	
▪ Married	\2.27±28.022	**7.285**
▪ Divorced	98.29±34.332	**0.000***
▪ Widow	**116.32±41.029**	
▪ Separated	115.83±26.846	
Educational level		
▪ Illiterate	**114.81±39.870**	
▪ Read and write	90.22±30.160	**7.692**
▪ Secondary	93.85±33.915	**0.000***
▪ University	62.90±20.266	
▪ Post-graduate	41.00±0.00	
Occupation		
▪ Work	73.93±31.114	**21.048**
▪ Not work	**102.25±34.946**	**0.000***
Residence		
▪ City	**100.02±35.925**	**15.677**
▪ Village	74.05±29.994	**0.000***
Income		
▪ Not enough	**101.89±32.545**	**8.971**
▪ Enough	83.43±37.275	**0.003***

* Significant at level P<0.05

Table 7 Correlation between sociodemographic characteristics of the studied patients and their total score of positive symptoms of schizophrenia.

sociodemographic characteristics of the studied patients	Positive symptoms of schizophrenia	F/t P
Age (in years) ▪ (<20) ▪ (20-<30) ▪ (30-<40) ▪ (40-<50) ▪ ≥ 50	 11.00±0.00 16.83±6.992 21.55±7.931 **24.70±8.441** 24.56±10.985	**4.953** **0.001***
Gender ▪ Male ▪ Female	 21.21±8.332 21.32±9.238	 0.004 0.947
Marital status ▪ Single ▪ Married ▪ Divorced ▪ Widow ▪ Separated	 20.63±8.364 15.91±7.174 23.36±8.643 26.32±8.042 28.25±5.848	**8.489** **0.000***
Educational level ▪ Illiterate ▪ Read and write ▪ Secondary ▪ University ▪ Post-studies	 25.19±9.912 19.96±9.398 22.38±7.459 14.90±5.929 9.00±0.00	**5.525** **0.000***
Occupation ▪ Work ▪ Not work	 17.24±8.053 23.46±8.327	**16.999** **0.000***
Residence ▪ City ▪ Village	 22.81±8.663 17.64±7.849	**10.278** **0.000***
Income ▪ Not enough ▪ Enough	 23.44±8.621 19.28±8.404	**7.739** **0.006***

* Significant at level P<0.05

Discussion

Schizophrenia affects many elements of a patient's life and causes deficiencies in cognitive, perceptual, motor, emotional, and social functioning. A central aspect of schizophrenia is impaired social functioning, which is known to be present before the beginning of psychosis. [25] Social functioning among patients with schizophrenia may be affected by many factors such as psychotic symptom, cognitive symptoms, motivation, social support and empowerment so, empowerment is the greatest factor that facilitates or hamper social function among those patients. [9,12]

Despite advancements in pharmaceutical and psychosocial therapies for schizophrenia, functional challenges persist. This emphasizes the importance of learning more about these challenges in order to improve functioning therapies in schizophrenia. (***Wright A , 2021***). [26]

The results of the current study showed that more than half of the studied patients had low sense of self-empowerment. This may be due to that the studied patients expressed not having strengths and resources during their interview, they reported being weak, and did not have the confidence that would enable them to have more control over their lives. Additionally, they displayed characteristics of decreased self-determination.

This result is not similar to ***Brohan E et al (2016)***, who reported that 63% of the participants had moderate or high empowerment.[27] While, the study of ***Grealish A (2017)*** indicated a moderate to low level of empowerment.[28] In addition to, ***Vauth R (2019)*** in their study had returned the low sense of empowerment to reduction in self-efficacy at a more general level by dysfunctional coping and higher levels of anticipated stigma.[29]

The results showed that more than two thirds of the studied patients have poor social function level, while one third of them have fair social function level. This could be explained by that deficits in social functioning are important determinant in schizophrenia. A core feature of the illness that persists despite treatment. In support of our result, the study of ***Ryu S (2020)***, and ***Tawfik (2020)*** found the same result.[30,31]

Additionally, ***Weittenhiller L (2021)*** found that patients with schizophrenia were less likely to have spent time with friends. Also, they reported more social barriers. Social barriers and motivations were related to real-world social functioning, such that more barriers were associated with more difficulty in close relationships.[32] The study of ***Evensen S (2016)*** affirmed that schizophrenia is associated with poor social functioning.[33] And the study of ***Ryu S (2020)*** pointed that patients with schizophrenia showed a significantly higher level of functional disability.[30] In the opposite direction, ***Torio I et al (2014)*** discovered that schizophrenia patients had moderate difficulties in social functioning.[34]

The results showed that two thirds of the studied patients have low positive & negative syndrome level (PANSS), while one third of them have moderate positive & negative syndrome level (PANSS). This might be attributed to the fact that the patients were

placed on antipsychotic medications and these medications have proven their effectiveness in reducing the level of positive and negative syndrome in them. This is similar to the findings of ***Haddad P (2018)***.[35]

The present study showed there is strong high positive statistical significant correlation between self-empowerment and social functioning level. This might be due to empowerment increases patients' understanding of the need to build interactions with others and entails the development of various interpersonal and social skills, including cooperation with others and ability to contribute to the work of groups, organizations, and other social entities , also increase the ability to make decisions, to actively influence the course of their lives, and to attain their goals and all these consequences enhance their social functioning as a whole. .The studies of ***Vita A (2018)*** , ***Berry K (2014) and Chan R (2018)*** verified the same correlation. [19,36,37]

The present study showed that there is strong high negative statistical significant correlation between the patient's level of self-empowerment and their positive &negative syndrome level (PANSS); this can be explained by the presence of these symptoms which impair the patients' ability to understand their illness and its behaviors, accesses to information, and knowledge, the ability to make decisions, participate in society, and share decision making. in the same line, the study of ***Morsy O (2019)*** who stated that there is high significance correlation between empowerment and negative symptoms among patients with schizophrenia. [38]

It was obvious that there was strong high negative statistical significant correlation between social functioning level of the studied patients and their positive & negative syndrome level (PANSS). Negative symptoms in schizophrenia are characterized by marked reductions in reward-seeking behavior despite a seemingly intact capacity to experience pleasure. This reduction of behavior, which can include speech, nonverbal, and social behavior, hampers daily life and the functioning of the patient. This includes a decrease in motivation for pleasurable activities as well as a failure to respond to traditional incentives. These symptoms interfere with the acquisition of social skills and their application as required for real-world social functioning.

In addition, patients with schizophrenia usually have psychotic symptoms reflecting altered perception of reality such as auditory hallucinations and delusions. These symptoms significantly prevent their interpersonal relationship, and disturb their adjustment in various social situations. Consequently, patients tend to show poorer social and interpersonal functioning. Thus, the presence of these symptoms impairs the social functioning.

This finding is in the same direction with **Santosh S (2015)** found significant negative correlation between social functioning and symptoms of positive & negative syndrome level (PANSS).[39] This finding is in line with ***Harvey P (2019)*** who pointed that social functioning in schizophrenia can be influenced by symptoms. [40] Also ***Nemoto T (2020)*** cited that worsening in general psychiatric

symptoms of schizophrenia was related to a decrease in patient's social functioning. [41]

In the same line with ***González-Blanch C (2020)*** had pointed an association between higher symptoms severity with poorer social functioning. [42] And ***Ryu S (2020)*** who discovered that chronic negative symptoms were linked to poor functional results in schizophrenia, and that the global functioning score was linked to the positive and negative syndrome scales. [30]

Similarly, In ***Abel D (2021);*** treatment of negative symptoms of schizophrenia is one of the main areas to consider in order to improve social functioning. [43] In addition, **Robertson B (2014)** indicated that negative symptoms in schizophrenia contributed to real-world social dysfunction. [44] And the study of ***Isvoranu A (2022)*** indicated that psychotic symptoms were related to social functioning in schizophrenia. [45]

In the same context, the studies of ***Glenthøj L (2016), and Cotter J (2015)*** detected that negative symptoms appeared to play an important role in real-world social dysfunction and thus treating them appeared to be a possible path for improving the social functioning in schizophrenia. [44,46,47]

Moreover, ***Bae S et al (2010)*** found that the social functioning level of the patients was low if the negative symptom score was high.[48]

The results of ***Schlosser D (2015)***, revealed that negative symptoms (a volition, anhedonia) had been shown to be strongly associated with functioning than expressive symptoms.[49]

Carrión R (2016) had pointed out that the length of negative symptoms was a predictor of poor social functioning. [50] In the **same line**, the study of ***Fulford D (2013)***, found that negative symptoms played a prominent role in the impaired functioning of schizophrenia. [51]

In addition, the study of ***Kundu P (2013)*** confirmed that positive symptoms have a substantial negative connection with social functioning. [52] ***Glenthøj L (2020)*** demonstrated the relationship between negative sensations and functional limitations. [53]

Moreover, ***Blanchard J (2017)*** found that in schizophrenia, social impairment is the result of the combined effects of negative symptoms.. [54] And ***Galderisi S (2018)*** discussed that negative symptoms including lack of social motivation and anhedonia are closely related with social functioning in schizophrenia. [55] Furthermore, the study of ***Rabinowitz J (2013***) reported that both prominent positive and negative symptoms of schizophrenia are linked to a significant loss in functionality.[56]

In contrast, ***Huang C (2017)*** concluded that General intelligence, attentiveness, and facial expression detection were all found to be strongly linked with global social function in schizophrenia. [57] And ***Ryu S (2020)*** declared that cognitive deficits were the most central domain of social functioning in schizophrenia. [30] In addition, ***Yang Z (2021)*** revealed that in schizophrenia, neurocognition and functional capability were frequently cited as determinants of real-world functioning.. [58]

The present study revealed that there was a statistical significant positive correlation between age of patients, marital status, educational level, occupation, residence, income and their total empowerment level. In

relation to age, the study appeared that patients aged (20-<30) years had high empowerment level than other age groups, this could be attributed to the fact that during this age the persons become more mature, more participate in society, more dependent on himself and control their anger.

According to the marital status, it was discovered that married patients had high empowerment level. This might be due to that marriage improve quality of live, improve social interaction with other and help patient to be more confident in him/herself. The present study discovered that post-graduate patients had high self-empowerment level. This result could be attributed to that Higher education made the patients self-dependent, and "High education is one of the most important means of empowering patients with the knowledge, skills and self-confidence necessary to participate fully in the treatment process." This is in harmony with ***Tallburi (2015)*** , who stated that a high educational level can assist patients in developing abilities that enable them to make decisions that affect society and have an impact not just on certain concerns like as health, security, and peace, but also on every individual, family member, and community as a whole. (59)

In relation to work, the study appeared that working patients had high self-empowerment level. This can be explained by that employment and income-generating activities play a role in promoting the economic position of patients which then leads to receiving a well treatment and being able to reach the resources. Similarly, ***Farooq*** (***2015***), indicated that employment is seen as a powerful weapon for empowerment. (60)

In regard to residence, patients who live in village had high level of self-empowerment than those who live in city. The presence of social support from individuals close to the patient, such as family members and neighbors, is empowering, and social support embodies access to relationships that provide emotional advice.. Finally, patients with enough income had high empowerment level, this could be explained by that income makes people powerful, able and active to participate. Then, they will get the power and the ability to work for poverty eradication. Income enables people access to the structures and knowledge which support a standard of living.

The results pointed that there was a statistical significant positive correlation between age of patients, marital status, educational level, occupation, income, and their total social function level. This is consistent with the results of ***Abd EL Aziz E (2017)***,(61) which evidenced that there were statistically significant positive correlations between some patients demographic characteristics such as age, educational levels, occupation and their social functioning. Also ***Duțescu M (2018***) High levels of education and marriage were found to be predictors of good social functioning..(11)

Patients aged (<20) years had high total social function level than other age groups. This could be explained by that patients aged (<20) years are more motivated for and competent in social interactions and this age plays an important role in social experience and behavior of the patient and characterized by

large network of friends and the social-network size is increased in this age. This in accordance to ***Duțescu M (2018)*** A study found that patients' social functioning was influenced by their age. [11]

Married patients had high total social function level than other groups, where ***Li X (2015)*** indicated that marriage is considered a predictive feature of social functioning.[62]Also, ***Duțescu M (2018)*** appeared the same finding. [11]

Post-graduate patients had high total social function level than other educational levels. This might be due to post-graduate education fits the individual for his roles in society and inform him/her about its culture or the accepted ways of living so he/she becomes socialized into the prevailing culture and learns the social rules and expectations and this in turn promotes high social functioning among them. This is similar to ***Monfort-Escrig C (2021)***. [63]In contrast to ***Li X (2015)*** who showed that a patient's educational background had no influence on their social functioning.[62]

Working patients had high total social function level than non-working ones. Employment provides the means to independent living and social integration. Patients who are employed consume a lower amount of medication, exhibit lower negative symptom severity and tend to achieve better social functioning. This is similar to ***Monfort-Escrig C (2021)***. [63] ***Luciano A (2014) & Evensen S (2017)*** had reported the same result.[64,65]

The results indicated that there were a positive statistical significant correlation between age of patients, marital status, educational level, occupation, residence, income and their total positive & negative syndrome level (PANSS)This is in harmony with ***Rabei S (2019)***, [66] He stated that schizophrenia symptom dimensions could change depending on demographic characteristics and that symptom dimensions were related to patient age. and ***Abd EL Aziz E (2017)*** who concluded that patients' age was positively correlated with overall symptoms.[61]

The present results illustrates that there was a positive statistical significant correlation between marital status of the patients, educational level, occupation, residence and their total level of positive symptoms of schizophrenia. The marital status, separated patients had high level of positive symptoms than other groups. Marriage appeared to enhance quality of life of the patients , The educational level, illiterate patients had high mean score of positive symptoms than other educational levels. This might be attributed to the fact that illiterate people are not aware of their illness.

The occupation, not-working patients had high level of positive symptoms than working patients. This is evident in the study of ***Ang M (2020)***, which stated that people with positive symptoms had a lower chance of finding work. [67] In those who resided in city had high level of positive symptoms than the village residents. In a similar way, ***Padhy S (2014)*** The study liked urban living with psychosis because living in an urban location causes greater stress and increases the risk of psychosis.[68]

Conclusion & Recommendations

Conclusion

Based on the results of the present study, it can be concluded that regarding the total level of self-empowerment among the patient, more than half of the studied patients had low sense of empowerment, one third of patients had moderate sense of empowerment, and the minority had high sense of empowerment. More than two thirds of the studied patients had poor social function level, while one third of them had fair social function level. Also, the findings of the study revealed that there was a highly positive statistical significant correlation between total empowerment level and total social functioning level, while there is highly negative statistical significant correlation between self-empowerment level and positive symptoms of schizophrenia. Also, there is highly negative statistical significant correlation between self-empowerment level and negative symptoms of schizophrenia. Also, there is highly negative statistical significant correlation between self-empowerment level and general symptoms of schizophrenia. And there is highly negative statistical significant correlation between the patient's level of self-empowerment and their positive & negative syndrome level (PANSS).

There is highly negative statistical significant correlation between social functioning level and positive symptoms of schizophrenia. Also, there is highly negative statistical significant correlation between social functioning level and negative symptoms of schizophrenia. Also there is highly negative statistical significant correlation between social functioning level and general symptoms of schizophrenia. And there is highly negative statistical significant correlation between social functioning level of the studied patients and their positive & negative syndrome level (PANSS).

Recommendations

Based on the results of the present study, the following recommendations were suggested:-

1) Recommendations for the mental health nurses

- A priority intervention to improve the social deficits and addressing psychiatric symptoms of patients with schizophrenia is essential to improve their level of self-empowerment.
- Patients with schizophrenia are in need of a rehabilitation model that encourages their self-empowerment, thus, psychosocial rehabilitation should aim towards empowerment within the framework of individuals 'mental health promotion
- Developing workshops for training mental health nurses on the accurate assessment of negative symptoms and social functioning oriented with their interrelation among patients with schizophrenia.
- Social skills enhancement training program should be integrated in the psychiatric hospitals' protocol of care in conjunction with pharmacological .
- Develop social rehabilitation programs to patients with schizophrenia.

2) Recommendations for families and the community

- There is a great need to establish programs for the families to increase their understanding of the nature of

schizophrenia and its effect on self-empowerment and social function to increase their support for their patients.

- Inclusion family in treatment planning to improve their support to patients and as a result improve self-empowerment and their recovery.
- Supported community engagement interventions require mental health services to develop stronger connections with local community networks and activities, to aid in improvement of social functions and self-empowerment of patients with schizophrenia.
- Rehabilitation centers should be broadened in general and private hospitals to improve social function and patients' self-empowerment.

3) Recommendations for future research

- Further research on developing programs that are needed for a better understanding of relations between schizophrenia, empowerment and social functioning to improve social functions and self-empowerment levels of patients with schizophrenia.
- Implementation of research project on patient with schizophrenia to improving their self-empowerment.

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