Relationship Between Self -Concept Clarity, and Positive and Negative Symptoms among Patients with Schizophrenia

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Abstract

Background: Self-concept clarity indicates the extent to which beliefs about the self are clearly and confidently defined, internally consistent, and stable over time. Disturbances in the perception of **self** are thought to be central to the development of psychosis. A growing body of research reflects that the incoherence or disorganization in sense of self in schizophrenia may mask individuals from perceiving reality accurately and perceive themselves as if they lost contact to themselves and *spent a lot of time* wondering about the kind of person they are. *Objective:* So the aim of this study was to assess the self- concept clarity, as well as positive and negative symptoms among patients with schizophrenia. And, to identify the relationship between self- concept clarity and both positive and negative symptoms among patients with schizophrenia. *Settings:* The study was conducted at EL-Maamoura Hospital for Psychiatric Medicine, in Alexandria, Egypt. *Subjects:* the data was collected from 200 in patients with schizophrenia . *Tools:* three tools were used to collect the date; socio-demographic and clinical structured interview schedule , The Brief Psychiatric Rating Scale (BPRS-version 4.0) and the Self-Concept Clarity Scale . *Results:* Findings of the present study revealed that around half of the studied sample demonstrated low self-concept clarity (50.5%). Whereas, 38.5% of the studied subjects had moderate self-concept clarity. Moreover, a statistically significant correlations were found between self-concept clarity in relation to positive and negative symptoms among the studied subjects. (r_s= 0.242, P<0.001, and r_s= 0.225, P=0.001, respectively). The overall brief psychiatric rating scale (BPRS) was proved to be the independent predictor of the self-concept clarity **Conclusion**: The present study concluded that the studied subjects demonstrated low self-concept, and positive and negative symptoms was positively correlated with self-concept clarity .**Recommendations :** psychoeducational program for low concept clarity when dealing with patient with schizophrenia is need to develop clear, consistent and stable sense of self which would directly foster patients' wellbeing and help in integration into the community.

<u>Keywords:</u> Self-Concept Clarity, Positive Symptoms, Negative Symptoms, Patients with Schizophrenia..

Introduction

Schizophrenia has long been a controversial mental disorder that affects how people feel, think and behave. Historically, schizophrenia was primarily conceptualized as "a disorder of the self, in which an individual has an incoherent, unclear, or otherwise disturbed sense of self". (Berna et al., 2016; Klaunig et al., 2018)

Phenomenological research indicates that disturbance in self –concept clarity may be a core phenotypic marker of schizophrenia spectrum disorders. Self-concept clarity (SCC) is defined as "the metacognitive awareness of the structural integrity of self-belief". The phenomenological theory documented that disturbances in self-concept clarity in schizophrenia is grounded in at least three domains of experience. Domain 1) somatosensation and body perception, which includes sense of touch, proprioception, and

general perceptions of one's own body; Domain 2) phenomenological self-experiences, which are first-person experiences of body ownership and integrity; and Domain 3) dialogical self, which is the ability to converge the many aspects of self-concept into a coherent identity (Lodi-Smith & DeMarree, 2018; Raballo & Parnas, 2012)

Schizophrenia-spectrum disorder has been suggested that the disturbances in the perception of self may underlie both positive symptoms, negative symptoms and disorganized symptoms. According to Cicero et al., (2015) individuals who experience low SCC are more likely to feel that their thoughts and beliefs about themselves are frequently changed, or even different features of their personalities conflict with one another. Therefore, they are more accounted for substantial variation in delusional beliefs, hallucination proneness, impulsive non-conformity, unusual experiences and psychosis-like experiences compared to the general population.

Moreover, Evans et al, (2015) also confirmed that self-concept clarity is negatively correlated with psychotic-like experiences among people with schizophrenia. Raballo & Parnas (2012) claimed that study of self-disturbances has the potential to provide understanding of their association with psychotic symptoms. Acknowledging this reality, there is a tremendous need for research that furnishes psychiatric nurses to examine this relationship between the self- concept clarity and both positive and negative symptoms among patients with schizophrenia. This in turn, could virtually gain nurses a comprehensive understanding of patients' behaviors. The clarity of one's self-concept may have an impact on one's internal perceptions, relationships with others, and interactions with the outside world. In that sense, putting the hand on such relationship will assist psychiatric nurses in developing therapeutic approaches and interventions to improve schizophrenic patients' SCC as well as their psychotic symptoms. Additionally, it

enhances their sense of meaning in life, psychological adjustment, and thereby overall quality of life that are necessary to reintegrate patients with schizophrenia into the community (Hasson-Ohayon et al., 2014; Moe & Docherty, 2014; Stuart, 2014; Townsend, 2013).

Aims of the Study

This study aims to:

1. Assess the self- concept clarity, as well as positive and negative symptoms among patients with schizophrenia.

2. Identify the relationship between self-concept clarity and both positive and negative symptoms among patients with schizophrenia.

Research Questions

What is the relationship between self- concept clarity and both positive and negative symptoms among patients with schizophrenia?

Materials and Method

Materials

Design:

A descriptive correlational design was used to conduct this study.

Settings:

The study was conducted at EL-Maamoura Hospital for Psychiatric Medicine, in Alexandria, Egypt. The hospital is affiliated to the Ministry of Health and Population, and serves three governorates, namely; Alexandria, EL-Behera and Matrouh. It has a capacity of 948 beds and composed of twenty two wards.

Subjects:

The Epi info program was used to estimate the sample size based on using 5% acceptable error, 95% confidence coefficient, 70% expected frequency and population size of 390 patients with schizophrenia (as counted by the researcher

at one point of time) . It was decided in the present study to recruit a sample of 200 adult patients with schizophrenia

Inclusion criteria:
- Duration of illness not exceeding 10 years.
- Able to communicate in a coherent and relevant manner.
- Age ranges from 20 to 50 years.

Tools: Three tools were used to collect the necessary data for this study:

Tool I: A Socio-Demographic and Clinical Data Structured Interview Schedule: It was developed by the researchers to elicit data about the patient's socio-demographic characteristics such as age, sex, social status, educational level, work status, place of residence. Patient's clinical characteristics covered items such as duration of illness, number of previous psychiatric hospitalization, age at the beginning of illness, type of treatment modalities received.

Tool II : The Brief Psychiatric Rating Scale (BPRS-version 4.0): It contains 24-items. The this 24 items are categorized to four: positive symptoms, negative symptoms, depression- anxiety, and agitation-mania. A seven point Likert scale which range from 1 (not present) to 7 (extremely severe) are used to assess the presence and severity of symptoms. It was recently used with patients with schizophrenia in Egypt (Khedr, El-Gueneidy, Shehata, & Elkot, 2020). The items related to positive and negative symptoms for this research used only. (Elnakeeb, 2013; Ventura et al., 1993; Zanello et al., 2013)

Tool III: Self-concept Clarity Scale: It is consisted of twelve items. Each item was rated on a five point Likert scale answered as 1 (Strongly Agree) to 5 (Strongly Disagree). The total scores range from 12 to 60, with higher scores indicating higher self-concept clarity. The scale showed good psychometric properties in terms of internal consistency

(0.86). (Campbell et al., 1996; Cicero et al., 2013; Matto & Realo, 2001; Suszek et al., 2018b).

Method:

- A written official approval to conduct the study was obtained from responsible authorities.

- Tool I (the Socio-Demographic and Clinical Data Structured Interview Schedule) was developed by the researcher.

- Tool III (self-concept clarity Scale) was translated into the Arabic language. Then this tool was tested for content validity by five experts in the field of psychiatric nursing.

- A pilot study was carried out on 15 adult inpatients with schizophrenia in order to assess the clarity, feasibility and applicability of the study tools.

- Reliabilities of tools II and III were tested using the Cronbach's alpha method on 10 adult inpatients with schizophrenia. Tool II (Brief) and tool III (Sccs) proved to be reliable (Cronbach's alpha = 0.905, and 0.758 respectively).

Empirical phases:

- Male wards only were selected for this research (because the number of female patients decreased in the hospital in this period).

- For data collection, the wards were selected randomly (except ward A and ward B because in this period those wards were used for newly admitted patients until they prove that those patients are free from COVID-19.

- On each randomly selected ward, all patients' medical charts were screened to identify patients who met the predetermined inclusion criteria.

- Each patient was then interviewed on an individual basis to go through the study. Each interview lasted from 15 to 20 minutes according to patient's attention, concentration& willingness to participation.

- To observe the patient for items which included in tool II, the researcher observed the patient intermittently for half an hour/day for seven consecutive days

- Steps "10" to "14" were repeated in the next selected wards until the required number of patients was completed.

- Collection of data was done during the period from 25th January to 25th May 2021.

- **Statistical analysis:**

Qualitative data were described using number and percent. Quantitative data were described using range (minimum and maximum), mean, and standard deviation. Significance of the obtained results was judged at the 5% level. The correlations between two quantitative variables were assessed using Spearman correlation coefficient (r.).

Ethical considerations:

- Informed written consent was obtained from the patients (or his relative/witness) after explanation of the study aim (for patients who were illiterate oral consent were used).

- The patient's privacy was respected and protected and Data confidentiality was assuredThe right to participate and to withdraw from the study was emphasized to the patients.

Results

Table (1) shows the distribution of the studied subjects according to the severity of psychotic symptoms. It was observed that 19.0% of the studied subjects suffering from severe level of grandiosity, and 5.5% had severe level of self-neglect.

The same table also presents that 34.0% of the studied subjects were suffering from moderate level of hallucinations, and 46.5% of them have a moderate level of blunted affect.

Figure (1) This figure displayed 50.5% of the studied subjects reported lower self-concept clarity. While, 38.5%of the studied subjects had moderate level of self-concept clarity. Only 11.0% had high self-concept clarity.

Table (2) reveals the correlation matrix between self-concept clarity and positive and negative symptoms of the studied subjects. It was noticed that highly statistical significant correlations were found between self-concept clarity and positive symptoms and negative symptoms (r_s =0.242, P<0.001, and r_s =0.225, P=0.001, respectively). The table also revealed that, self-concept clarity was highly significantly correlated with overall Positive and Negative Symptoms (r_s =0.278, p <0.001). This means that the lower self-concept clarity, the higher severe psychopathology in relation to both positive and negative symptoms.

Table (3): depreciates the results of regression model used to examine the independent association of positive and negative symptoms with self-concept clarity, when the effects of other covariates were accounted for. Model 1indicates that overall positive and negative symptoms was positively associated with self-concept clarity (B= 0.671, t= 4.148, P<0.001). Models 2 and 3 reflect that the relationship between overall positive and negative symptoms and self-concept clarity remained positively significant even after controlling the covariates (socio- demographic and clinical variables in Models 2 and 3). The increment in R^2 was significant across the three models, explaining 15% of the variance in self-concept clarity (F = 12.106, p <0.001).

Discussion

This study provides a starting point to understand the relationship between self-concept clarity and positive and negative symptoms among patients with schizophrenia. It has been found that the majority patients with schizophrenia had low self-concept clarity. This finding is in line with the suggestion by some theorists who found that patients with schizophrenia demonstrate low self-concept clarity than the healthy control group(Cicero et al., 2016). Similarly, (Klaunig et al., 2018) found that patients with schizophrenia complained from decreasing in self-concept clarity on either self-report measures or task measures.

(Klaunig et al., 2018). De Sousa et al., 2016 explained that this poor clarity of self-concept among patients with schizophrenia was specifically correlated with both the auditory-verbal hallucinations and disorganized thought disorder.

It is conceivable that lack of clarity of self-concept among patients with schizophrenia could be partly explained by the anatomical changes in brain regions. From the perspective of neuro-anatomical theory, patients with schizophrenia showed greater structural impairment in the inferior parietal cortex. Thus, they didn't have the ability to regulate their body image, sense of self, sensory integration and executive function. Abnormality in the grey matter has also been found responsible for losing of mental proprioceptive functions, which causes a failure to properly recognize one's self (Brent et al., 2014; Nasrallah, 2012).

It can be inferred from a broad range of empirical and theoretical work, that the lack of self- concept clarity among patients with schizophrenia, may be in part influenced by the course of illness itself. Such notice supports the present study as half of patients with schizophrenia having illness for more than ten years, which reflects a prevalent high degree of chronicity among the studied sample. Psychotic symptoms, which are the prevalent feature of chronicity among patients with schizophrenia, that may influence the extent to which patients' beliefs about themselves as, stable, consistent and clearly defined persons. This fact lent further support for the findings of the present study, where the correlation matrix showed a strong significant correlation between the severity of positive and negative symptoms with self-concept clarity (Table 6). This finding which congruent with the results that found in previous studies (Evans et al., 2015; Noyman-Veksler et al., 2013). These obtained findings could be an indication that disturbances in the self-experience may be attributed to the disruption in centerpiece of positive and negative symptoms such as auditory hallucinations, thought intrusion,

and delusion of control. This could virtually affect the individuals' ability to discriminate between self and non-self, impaired boundary awareness as well as imagination and reality (Brent et al., 2014; Postmes et al., 2014). Moreover, evidence from recent studies reported that patients with schizophrenia who suffering from lack self-concept clarity have problems in perceiving reality accurately. These disturbances in perceiving reality are thought to be the core of psychotic symptoms. As, patients usually spend a lot of time wondering what type of person they are, constantly modify their views about themselves, and believe that they are not the person they appear to be, and feel as if they have lost contact with themselves. (Berna et al., 2016; Klaunig et al., 2018; Lodi-Smith & DeMarree, 2018).

Taken together, understanding self-concept clarity, how it maintained, improved and how it interacts with other psychological and behavioral processes is very essential to encompass into the psychiatric nurses' agenda. This would eventually act as an impetus for providing nursing interventions that is tailored to develop self-concept clarity, improve outcomes of psychiatric illness and wellbeing of people with schizophrenia.

Conclusion

Almost all patients with schizophrenia exhibit low self-concept clarity. Also self-concept clarity was significantly correlated with psychopathology in relation to positive and negative symptoms among the studied patients with schizophrenia. An evidence of correlation between self-concept clarity and overall positive and negative symptoms even after controlling the covariates (socio-demographic and clinical variables, this indicates that overall positive and negative symptoms have an independent impact on self-concept clarity.

Recommendations

In line with the findings of the study, the following recommendations are made:

Conducting psycho-educational program regarding how to develop clear, consistent and stable sense of self would directly foster patients' wellbeing and integration into the community. Further researches are needed to focus on self-concept clarity as potential barriers to recovery from schizophreni
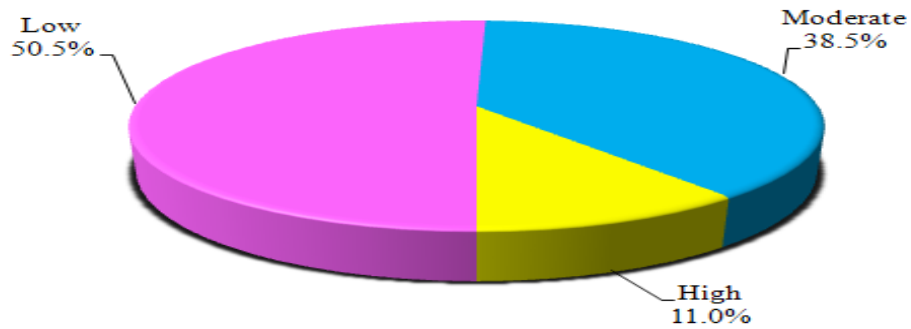
Figure (1): **Level of self-concept clarity among the studied subjects (No=200)**

Table (1): **Distribution of the studied subjects according to psychotic symptoms (No=200)**

Q	Brief Psychiatric Rating Scale (BPRS)	Not Present		Very Mild		Mild		Moderate		Moderately Severe		Severe		Extremely Severe	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	Positive symptoms														
1	Grandiosity	1	0.5	23	11.5	59	29.5	49	24.5	24	12.0	38	19.0	6	3.0
2	Suspiciousness	2	1.0	11	5.5	31	15.5	37	18.5	86	43.0	33	16.5	0	0.0
3	Hallucinations	4	2.0	30	15.0	7	3.5	68	34.0	61	30.5	24	12.0	6	3.0
4	Unusual thought content	75	37.5	32	16.0	11	5.5	29	14.5	42	21.0	11	5.5	0	0.0
5	Bizarre behavior	26	13.0	66	33.0	60	30.0	33	16.5	12	6.0	3	1.5	0	0.0
6	Disorientation	47	23.5	86	43.0	52	26.0	12	6.0	3	1.5	0	0.0	0	0.0
7	Conceptual disorganization	141	70.5	35	17.5	7	3.5	10	5.0	7	3.5	0	0.0	0	0.0
	Mean ± SD.	3.15 ± 0.78													
	Negative symptoms														
8	Blunted affect	0	0.0	4	2.0	55	27.5	93	46.5	44	22.0	4	2.0	0	0.0
9	Emotional withdrawal	20	10.0	84	42.0	69	34.5	16	8.0	8	4.0	3	1.5	0	0.0
10	Motor retardation	132	66.0	58	29.0	9	4.5	1	0.5	0	0.0	0	0.0	0	0.0
11	Self-neglect	0	0.0	4	2.0	52	26.0	75	37.5	58	29.0	11	5.5	0	0.0
	Mean ± SD.	3.01 ± 0.62													

SD: Standard deviation

Table (2) Correlation Matrix between Self-Concept Clarity and positive and negative symptoms of the studied subjects.

		Self-concept clarity scale	Brief Psychiatric Rating Scale (BPRS)		
			Positive symptoms	Negative symptoms	Total BPRS
Positive symptoms	r_s	0.242*			
	p	<0.001*			
Negative symptoms	r_s	0.225*	0.362*		
	p	0.001*	<0.001*		
Total BPRS	r_s	0.278*	0.936*	0.652*	
	p	<0.001*	<0.001*	<0.001*	

r_s: Spearman coefficient   *: Statistically significant at $p \leq 0.05$

Table (3):   Hierarchical Multiple Linear Regression for factor affecting self-concept clarity

	B	SE	β	t	p
Model 1					
Overall Brief Psychiatric Rating Scale (BPRS)	0.671	0.162	0.283	4.148*	<0.001*
R²= 0.080 F = 17.206*, p<0.001*					
Model 2					
Overall Brief Psychiatric Rating Scale (BPRS)	0.739	0.160	0.312	4.629*	<0.001*
Work status	10.340	3.27	0.212	3.157*	0.002*
R²= 0.124 F = 13.976*, p<0.001*					
Model 3					
Overall Brief Psychiatric Rating Scale (BPRS)	0.638	0.161	0.269	3.954	<0.001*
Work status	9.890	3.22	0.203	3.065*	0.002*
Number of previous hospitalization	1.105	0.405	0.184	2.729*	0.007*
R²= 0.156 F = 12.106*, p<0.001*					

R²: Coefficient of determination   B: Unstandardized Coefficients
B: Unstandardized Coefficients   F,p: f and p values for the model
t: t-test of significance   CI: Confidence interval
LL: Lower limit   UL: Upper Limit
*: Statistically significant at $p \leq 0.05$

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