Relation between Resilience and Life Satisfaction among Schizophrenic Patients

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Abstract

Background: Schizophrenia is serious mental disorders characterized by sever cognitive impairments that affect patient's ability to cope with stress and therefore, lower resilience and life satisfaction**. Aim of the study**: Aim of this study was to investigate the relation between resilience and life satisfaction among schizophrenic patients. **Research design:** A descriptive correlational design was used in this study. **Setting:** Psychiatric and Mental Health Hospital in Benha city, Qalubia Governorate**. Subject:** A purposive sample consisted of 100 schizophrenic patients from the previous study setting. **Tools:** Three tools were used for data collection. Tool 1- structured interview questionnaire was used to collect data about socio demographic and clinical characteristics of the studied sample. Tool (2):- The Connor-Davidson Resilience Scale (CD-RISC) to assess reference values for resilience in clinical samples. Tool (3):- Satisfaction with Life Scale was used to measure life satisfaction among the studied sample**. Results:** The result of the present study revealed that, more three quarters of the studied patients had low level of total resilience and the majority of the studied patients had low level of total life satisfaction and there was a highly statistically significant positive correlation between total resilience and total life satisfaction. **Conclusion:** In ability of schizophrenic patients to deal with stressors are prone to have low resilience that in turn lowers patient's life satisfaction. **Recommendations:** Training patients on developing of stress coping skills which risk factor for resilience to reduce burdens of patients and contribute to improvement in satisfaction with life.

Key words: Schizophrenia, resilience, life satisfaction.

Introduction:

Schizophrenia is a chronic psychotic disorder characterized by three broad categories of symptoms: positive symptoms, negative symptoms, and cognitive symptoms ***(Goff, 2021)***. Schizophrenia affects up to 1% of the world population and considered one of the most costly worldwide disorders, being among the top 10 global causes of disability. For, instance, schizophrenia leads to severe functional and psychosocial impairments, challenges in community living and often disabling illness and meanwhile, has an adverse impact not only on the inflicted individual´s health, quality of life and well-being but also on their surrounding environments ***(Marder & Cannon, 2019)***.

The annual number of new cases of schizophrenia is estimated to be seven individuals per 1000 worldwide will

develop schizophrenia during their lifetime. In addition, national survey of mental disorders in Egypt showed that the prevalence of schizophrenia is around 2% from 22.1% of totally mental disorders ***(Elsherif, (2020)***. Not only around 30% of individuals with schizophrenia will remain symptomatic and significantly impaired, but also, have shortened life expectancy has been attributed to medical disorders such as cardiovascular disease and diabetes that affect longevity and increase ***(Nielsen et al., 2020)***.

Due to the risk of mortality of schizophrenia which is twice that of the general population and global burden of diseases which increased world globaly by 17.7% since 2005 and the disability, medication and psychological and psychosocial interventions which continues to be the core treatment for the management of schizophrenia not sufficient for improving outcomes ***(Sonbol et al., 2020)***; & **(Collaborators, 2017)**. Hence, targeting towards positive mental health and positive psychology mainly resilience and life satisfaction that focus on well-being, happiness, and meaning or purpose in life is very important for schizophrenic patients ***(Messias et al., 2020)***.

Resilience is a dynamic process which encompasses positive adaptation within the context of significant adversity which affects ability to ‘bounce back, or it is the person's ability to deal with stressors. Resilient individual has good mental health which confers considerable protection, contrary to schizophrenic patients, who have lower level of resilience due to cognitive impairments which affect 84% of individuals diagnosed with schizophrenia. Cognitive impairments and deprivation in brain structure hence, resilience mechanism among schizophrenic patients based on the brain structural connectivity ***(Benestad, 2020)***.

Furthermore, Abnormal activation of hypothalamic-pituitary-adrenal axis stress response, causes disruption in the neurodevelopment of emotion and reward processing associated with early stress exposures that contribute to lower resilience to schizophrenics ***(De- Rosse & Barb., 2021)***. This besides, other additional factors weakens resilience among schizophrenics like negative symptoms, hopelessness, and lower self-esteem can lead to increase anxiety, fear, sadness and stress leading to low resilience, while, positive emotions served as an important function in the ability of resilient patients to rebound from stressful encounters ***(Tammingaet al, 2021)***.

Resilience has emerged as a novel intervention target to possibly improve later outcome and functional capacity in schizophrenia. In addition, it considered a protective factor that foster a positive outcome among individuals facing adverse circumstances like schizophrenia and enhancing the effectiveness of psychotherapeutic treatments. Resilience also, helps the patient cope with distressing symptoms of schizophrenia, enhances understanding of the illness, and improves compliance to medication, decrease relapse, suicidal attempt, promotes personal growth as well as cognitive survival. With the reciprocal influence of resilience and positive emotions among schizophrenic patients, satisfaction with life will be affected positively ***(Jaaskelainen et al., 2020)***.

Life satisfaction is a person's own overall evaluation or appraisal of their life and is a cognitive-judgmental process; also it is cognitive component of subjective well-being (SWB) ***(Smith & Konik., 2021)***. Personality traits mainly neuroticism is a strong factor that weakens life satisfaction. In addition to, severity of psychiatric symptoms mainly negative symptoms, social isolation, low self-esteem, sleep difficulties that affect majority of schizophrenic patients, educational status which is mainly distorted due to cognitive impairments ***(Boland et al., 2020)***. Also, marital status and unemployment, hence, all such factors decrease happiness, inhibit sense of well-being and life satisfaction among schizophrenic patient ***(Jennifer et al., 2020)***.

With the increase of life satisfaction among schizophrenic patients, happiness and psychological well-being increase, positive attitudes towards medication, reduction of positive symptoms, reduction in a motivation, decreased rate of psychotic relapse and hospitalization, decrease suicidal attempts and improve functional recovery and productivity decrease mortality rate among schizophrenics and allow longer lifespan ***(Kasperek-Zimowska et al., 2020)***. Several studies reveal a greater association between resilience and life satisfaction which is closely related to resilience as both mainly affected by cognitive impairments, stress coping and schizophrenic symptoms and correspondingly, when both enhanced, buffers negative effect of long term hospitalization, over all function and recovery of schizophrenics achieved ***(Shelton et al., 2019)***.

Basically psychiatric nurse has an important role toward schizophrenic patients in achieving functional recovery to develop meaningful life, social functioning, achieving good prognosis and good quality of life. For instance, targeting programs or interventions to improve resilience and life satisfaction such as stress coping, mindfulness, social support and positive emotions enhancing which increase life satisfaction through resilience building. To this end, internal locus of control, mental wellness, and effective community integration among schizophrenic patients will become a basic characteristic of patients ***(Lok & Bademli, 2021)***.

Significance of the study:

Schizophrenia is a chronic and severe mental disorder affecting (0.28%) 21 million people worldwide. Schizophrenia life-span is shortened by an average of 28.5 years compared to that of the general population and associated with high excess mortality and patients are 2-3 times more likely to die early than the general population ***(World Health Oranization (WHO), 2019)***. The National Institute of Mental Health (NIMH) estimated that the worldwide prevalence of schizophrenia is around 0.33 to 0.75% are non-institutionalized patients and estimated that between 0.25 and 0.64% of the U.S. population has schizophrenia ***(Cherry, 2020)***. While in Egypt by the end of 2019 the number of schizophrenic patients is estimated to be about (1 million) people ***(Ramy, 2019)***.

Several studies revealed low resilience level and in the majority schizophrenic patients, a study in USA proved the significant effect of resilience in reductions

of both positive and negative symptoms, relapse and suicide rate with stabilization and increase in self-efficacy ***(Torgalsboen & Mohn, 2018)***; & ***(Zizolfi et al., 2019)***. In addition, studied that proposed a severely decreased in life satisfaction among schizophrenic patients compared with healthy controls, and meanwhile, low life satisfaction worsen symptom levels, decrease happiness, increase negative attitudes towards medication, increase rate of psychotic relapse and re-hospitalization, increase suicidal attempts and functional recovery decreases ***(Pazoki et al., 2020)***. Hence, it was deemed necessary to evaluate resilience and life satisfaction among schizophrenic patients.

Aim of the study:

This study aims to assess the relation between resilience and life satisfaction among schizophrenic patients.

Subject and Methods:

Research question:

Is there a relation between resilience and life satisfaction among schizophrenic patients?

Research design:

A descriptive correlational design was used in this study.

Setting:

The present study was conducted at the Psychiatric and Mental Health Hospital in Benha city, Qalubia Governorate, which is affiliated to General Secretariat of Mental Health in Egypt.

Sample:

1- Sample size:

The estimated sample size is 100 patients, at confidence level 95% by using ***Steven Thompson equation, (2012)***

$$n = \frac{N \times p(1-p)}{\left[\left[N-1 \times \left(d^2 \div z^2\right)\right] + p(1-p)\right]}$$

2- Sample type:

Purposive sample included in this study according to the following criteria:

1- Both sexes.

2- Age ranges from 20-60 years.

3- Patient willingness to participate in the study.

Tools for data collection:

Tool (I): A structured interviewing questionnaire:

The questionnaire was developed by the researcher based on scientific review of literature to assess the following parts:

Part I: - Socio-demographic data: It consisted of 7 items to elicit data about the studied patient's such as (age, sex, marital status, educational level, residence, and occupation).

Part II: **-** Clinical data: It consisted of 7 items include (age at onset of the disease, number of previous hospitalization, duration of hospitalization and mode of admission, by whom in case of involuntary admission, family history of psychiatric disease and patient's relation to him).

Tool (2):- The Connor-Davidson Resilience Scale (CD-RISC):

The scale was originally developed by ***Connor & Davidson, (2003)*** to establish reference values for resilience in general population and in clinical samples and how well one is equipped to bounce back after stressful events or trauma. The scale contains 25 items divided into 5 subscales covering the resilience characteristics and includes (personal competence consists of (7 items), control consists of (5 items), acceptance of change and secure relationships consist of (4 items), trust /

tolerance/strengthening effects of stress consist of (7 items) and spiritual influences consist of (2 items). The response options ranged from (0) not true at all, (1) sometimes true and (2) true nearly all of the time.

Scoring system:

Low resilience = (<50%).

Moderate resilience = (50-70%).

High resilience = (>70%).

Tool (3):- Satisfaction with Life Scale:

The scale was originally developed by ***El-Desouki, (1998).*** The scale designed to measure one's life satisfaction, the extent of the individual's enthusiasm for life and the true desire to live it. The scale consisted of 29-items divided into 6 subscales which includes Happiness (7 items), Sociality (4 items), Reassurance (6 items), Psychological stability (3 items), Social recognition (6 items) and Conviction (3 items). The response options ranged from (0) strongly disagree, (1) slightly agree and (2) strongly agree.

Scoring system:

Low life satisfaction= (<50%).

Moderate life satisfaction= (50-70%).

High life satisfaction= (>70%).

Methods

Phase one:- Preparatory phase:-

This phase included reviewing of related literature and different studies relevant to the topic of research, using textbooks, articles, magazines and internet research was done to get a clear picture of all aspects related to the research topic.

Administrative approval:

A written letter was issued from the dean of the Faculty of Nursing Benha University to obtain the approval from the director of Psychiatric & Mental Health Hospital in Benha city, Qalubia Governorate and then from General Secretariat of Mental Health in Egypt to conduct the proposed study. Also, approval from the hospital's nursing director at Psychiatric & Mental Health Hospital in Benha was taken before data collection. The aim and the nature of the study were explained to the administrative personnel.

Content validity of the tools:

Arabic translation was done by researcher for Connor-Davidson Resilience Scale (CD-RISC) and English translation for Satisfaction with Life Scale and tested for their translation. Content validity of tools was done by jury of 5 expertises (4 in Psychiatric Nursing Field from Benha, Menufia and Ain-shams University and 1 in Psychiatric Medicine Field from Benha) who checked the relevancy, comprehensiveness, clarity and applicability of the questions. According to their opinions modifications were done and the final form was developed.

Reliability of the tools:

Applied by the internal consistency of the tools were checked by test-retest reliability. Reliability for Connor-Davidson Resilience Scale was .89 and Satisfaction with Life Scale was .81

- Voluntary participation and right to refuse to participate in the study was emphasized to the subjects.

Ethical considerations:

The objective and aim of the study were clarified by the researcher to every participant in the study, oral consent obtained from each patient before conducting the interview and they were assured for maintaining anonymity and

confidentiality. The patients were informed that they have the right to participate in the study and the right to withdraw from the study at any time.

A pilot study:

After the tools were designed, they were tested through a pilot study, which was done before its application in the field work to check clarity and feasibility of the designed tools to be sure that it was understood and to estimate the time needed to complete its items. It was carried on a sample of 10% (10 schizophrenic patients) who were excluded later from the main study sample to assure stability of the results.

Phase two:- Actual study:-

- The researcher started data collection by introducing herself to the patients.
- Brief description about the purpose of the study and the type of questionnaire required to fill was given to each patients.
- The sample was selected by interviewing 100 schizophrenic patients purposively that met the previous prescribed criteria and about 50 patients (13 female and 37 male) from total number of patients of hospital were excluded.
- The researcher followed the specific precautions (wear mask) due to corona virus circumstances after explanation and reassurance of patients.
- Data collection was done by interviewing each patient individually and according to his condition such as aggressive, excited patient and patient who had modified electroconvulsive therapy unable to complete the assessments.
- The researcher started to collect data from patients, 5 patients/ day each interview lasted 30-45 min. Data collected from some patients on more than one day which depended on patient response and condition.
- The process of data collection took a period of 3 months from the first of July 2020 to the end of September 2020, 3 days week, from 10 A.M.: 12 P.M., 3 hours/ day, 3 days/week, 3 patients/ day and 1 patient/ hour.

Statistical analysis :

All data collected were organized, coded, computerized, tabulated and analyzed by using The Statistical Package for Social Science (SPSS programs version 20), which used frequencies and percentages for qualitative descriptive data, Chi-square was used for relation tests, mean and standard deviation was used for quantitative data and person correlation coefficient (r) was used for correlation analysis and degree of significance was identified. A highly statistical significant difference was considered if p-value < 0.01, statistical significant difference was considered if p-value < 0.05 and non-statistical significant difference was considered if p-value p > 0.05.

Results:

Table (1) Shows that, more than one third of the studied patients (39%) their age ranged between 30-<40 years, with mean age was 41.61±4.05 year. As regard to sex, more than three quarters (79%) of the studied patients were male, and more than half (55%) were single. Also, less than half of the studied patients (42%) had secondary education. Regarding to occupation, more than one two thirds (69%) were unemployed, moreover, more than one half of them (54%) were residing in rural areas**.**

Table (2) Illustrates that, less than one third of the studied patients (30%) their age at the onset of the disease was at ≥35 years, with mean age was 28.34±2.71 years. Also, more than one third of them (38%) admitted to hospital between periods 1- 3 times

previously. Moreover, less than half of them (44%) hospitalized from 5-<10 years, with mean age was 12.70 ± 0.93. Likewise, all the studied patients (100%) were admitted to the hospital in an involuntary manner, more than three quarters (78%) were admitted with their families. Also, (9%) of the studied patients had family history of psychiatric disorders, and (100%) suffered from schizophrenia respectively, and more than half of them (55.6%) were Father / Mother..

Figure (1) Shows that, more three quarters of the studied patients (76%) had low level of total resilience.

Figure (2) Shows that, the majority of the studied patients (80%) had low level of total life satisfaction. Also, less than one fifths of them (15%) had moderate level. While less than one fifths of them (5%) had high level.

Table (3) Shows that, there was a highly statistically significant positive correlation between total resilience of the studied patients and their total life satisfaction at p-value = < 0.01.

Table (4) Demonstrate that, there was statistically significant relation between total resilience of the studied patients and their socio-demographic characteristics as age, marital status and educational level at p-value = < 0.05. While, there was no statistically significant relation with their sex, occupation and residence, at p-value = > 0.05.

Table (5) Demonstrate that, there was statistically significant relation between total life satisfaction of the studied patients and their socio-demographic characteristics as age, marital status and education level at p-value = < 0.05. While, there was no statistically significant relation with their sex and occupation and residence, at p-value = > 0.05.

Table (6) Reveals that, there was a highly statistically significant relation between total resilience of the studied patients and their number of previous hospitalizations and duration of hospitalization at p-value = < 0.01. Also, there was statistically significant relation with their age at the onset of the disease at p-value = < 0.05). While, there was no statistically significant relation with their family history of psychiatric disorders at p-value = > 0.05.

Table (7) Validate that, there was a highly statistically significant relation between total life satisfaction of the studied patients and their number of previous hospitalizations and duration of hospitalization at p-value = < 0.01. Also, there was statistically significant relation with their age at the onset of the disease at p-value = < 0.05. While, there was no statistically significant relation with their family history of psychiatric disorders at p-value = > 0.05.

Table (1): Distribution of the studied patients according to their socio-demographic data (n=100).

Socio-demographic characteristics	N	%
Age (year)		
• 20-<30	9	9
• 30-<40	39	39
• 40-<50	35	35
• 50- ≤ 60	17	17
Mean ± SD **41.61±4.05**		
Sex		
• Male	79	79
• Female	21	21
Marital status		
• Single	55	55
• Married	20	20
• Divorced	21	21
• Separate	2	2
• Widowed	2	2
Educational level		
• Illiterate	12	12
• Read & write	11	11
• Primary education	16	16
• Secondary education	42	42
• University degree	19	19
Occupation		
• Employed	31	31
• Un employed	69	69
Residence		
• Rural	54	54
• Urban	46	46

Table (2): Distribution of the studied patients according to their clinical data (n=100).

Clinical data	N	%
Age of onset of the disease (years)		
• 15- < 20 Years	8	8
• 20-< 25 Years	26	26
• 25-<30 Years	17	17
• 30-<35 Years	19	19
• ≥35 Years	30	30
Mean± SD **28.34±2.71**		
Number of previous hospitalizations		
• From 1- 3 times	38	38
• From 4- 6 times	34	34
• From 7 times and above	28	28
Duration of hospitalization (years)		
• 5-<10 Years	44	44
• 10-<15 Years	26	26
• 15-<20 Years	12	12
• ≥20 Years	18	18
Mean± SD **12.70 ± 0.93**		
Mode of admission		
• Voluntary	0	0.0
• Involuntary	100	100
In case of Involuntary admission, is it through		
• Family	78	78
• Transfer from another hospital	16	16
• Police	3	3
• Neighbors	3	3
Family history of psychiatric disorders		
• Yes	9	9
• No	91	91
If yes, what is the disease? (n=9)		
• Schizophrenia	9	100
• Anxiety disorder	0	0.0
• Depression	0	0.0
• Bipolar disorder	0	0.0
The relationship between you and the patient is (n=9)		
• Father / Mother	5	55.6
• Brother / Sister	3	33.3
• Uncle / Aunt	0	0.0
• Grandfather / Grandmother	1	11.1

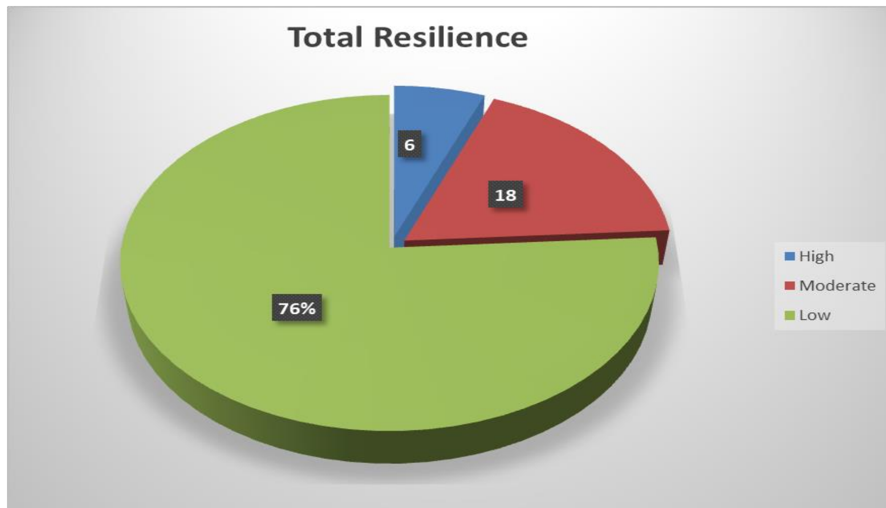

Figure (1): Distribution of the studied patients according to their total level of resilience (n=100).

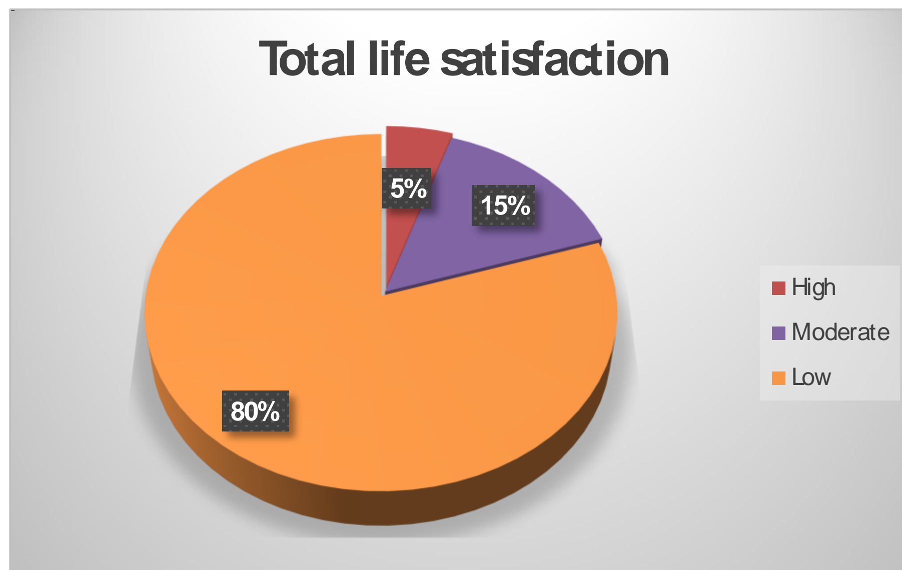

Figure (2): Distribution of the studied patients according to their total level of life satisfaction (n=100).

Table (3): Correlation between total resilience and life satisfaction among the studied patients.

Scales	Total Life Satisfaction	
	r	p-value
Total Resilience	0.436	.000**

Table (4): Relation between socio-demographic characteristics of the studied patients and their total resilience (n=100).

Socio-demographic characteristics		Total Resilience						X2	P-Value
		High (n=6)		Moderate (n=18)		Low (n=76)			
		N	%	N	%	N	%		
Age (year)	20-<30	0	0.	3	16.7	6	7.9	15.72	.015*
	30-<40	0	0.0	5	27.8	34	44.7		
	40-<50	3	50	10	55.6	22	29		
	50- ≤ 60	3	50	0	0.0	14	18.4		
Sex	Male	5	83.3	15	83.3	59	77.6	.357	.836
	Female	1	16.7	3	16.7	17	22.4		
Marital status	Single	2	33.3	15	83.3	38	50	7.354	.048*
	Married	3	50	2	11.1	15	19.7		
	Divorced	1	16.7	1	5.6	19	25		
	Separate	0	0.0	0	0.0	2	2.6		
	Widowed	0	0.0	0	0.0	2	2.6		
Educational level	Illiterate	0	0.0	0	0.0	12	15.8	11.82	.012*
	Read & write	0	0.0	2	11.1	9	11.8		
	Primary	0	0.0	1	5.6	15	19.7		
	Secondary	1	16.7	11	61.1	30	39.5		
	University	5	83.3	4	22.2	10	13.2		
Occupation	Work	0	0.0	7	38.9	24	31.6	3.231	.199
	Don't work	6	100	11	61.1	52	68.4		
Residence	Rural	4	66.7	8	44.4	42	55.3	1.098	.578
	Urban	2	33.3	10	55.6	34	44.7		

*significant at $p < 0.05$.

Table (5): Relationship between socio-demographic characteristics of the studied patients and their total life satisfaction (n=100).

Socio-demographic characteristics		Total life satisfaction						X2	P-Value
		High (n=5)		Moderate (n=15)		Low (n=80)			
		N	%	N	%	N	%		
Age (year)	20-<30	0	0.0	1	6.7	8	10	12.47	.045*
	30-<40	0	0.0	2	13.3	37	46.3		
	40-<50	3	60	9	60	23	28.7		
	50- ≤ 60	2	40	3	20	12	15		
Sex	Male	5	100	12	80	62	77.5	1.447	.485
	Female	0	0.0	3	20	18	22.5		
Marital status	Single	2	40	7	46.7	40	50	12.09	.027*
	Married	3	60	6	40	13	16.3		
	Divorced	0	0.0	2	13.3	19	23.7		
	Separate	0	0.0	0	0.0	2	2.5		
	Widowed	0	0.0	0	0.0	2	2.5		
Educational level	Illiterate	0	0.0	2	23.3	10	12.5	11.434	.038*
	Read & write	0	0.0	1	6.7	10	12.5		
	Primary	0	0.0	2	13.3	14	17.5		
	Secondary	1	20	8	53.4	33	41.3		
	University	4	80	2	13.3	13	16.3		
Occupation	Work	1	20	6	40	24	30	.888	.641
	Don't work	4	80	9	60	56	70		
Residence	Rural	2	40	7	46.7	45	56.3	.822	.643
	Urban	3	60	8	53.3	35	43.8		

*significant at $p < 0.05$.

Table (6): Relationship between the clinical data of the studied patients and their total resilience (n=100).

Clinical data		Total Resilience						X2	P-Value
		High (n=6)		Moderate (n=18)		Low (n=76)			
		N	%	N	%	N	%		
Age at the onset of the disease (years)	15- < 20	0	0.0	1	5.6	7	9.2	11.035	.039*
	20-<25	1	16.7	6	33.3	19	25		
	25-<30	0	0.0	3	16.7	14	18.4		
	30-<35	2	33.3	6	33.3	11	14.5		
	≥35	3	50	2	11.1	25	32.9		
Number of previous hospitalizations	From 1- 3 times	4	66.7	6	33.3	28	36.8	16.740	.002**
	From 4- 6 times	2	33.3	2	11.1	30	39.4		
	From 7 times and above	0	0.0	10	55.6	18	23.7		
Duration of hospitalization (years)	5-<10	2	33.3	7	38.9	35	46.1	12.811	.008**
	10-<15	0	0.0	3	16.7	23	30.3		
	15-<20	3	50	3	16.7	6	7.9		
	≥20	1	16.7	5	27.7	12	15.8		
Family history of psychiatric disorders	Yes	1	16.7	1	5.6	7	9.2	6.950	.706

*significant at p ‹ 0.05. **highly significant at p ‹ 0.01.

Table (8): Relationship between the clinical data of the studied patients and their total life satisfaction (n=100).

Clinical data		Total life satisfaction						X2	P-Value
		High (n=5)		Moderate (n=15)		Low (n=80)			
		N	%	N	%	N	%		
Age of onset of the disease	15- < 20	0	0.0	0	0.0	8	10	12.987	.031*
	20-<25	0	0.0	4	26.7	22	27.4		
	25-<30	0	0.0	1	6.7	16	20		
	30-<35	2	40	6	40	11	13.8		
	≥35	3	60	4	26.6	23	28.8		
Number of previous hospitalizations	1- 3 times	4	80	2	13.3	32	40	22.76	.000**
	4- 6 times	1	20	3	20	30	37.5		
	7 times and above	0	0.0	10	66.7	18	22.5		
Duration of hospitalization	5-<10	3	60	5	33.3	36	45	12.811	.008**
	10-<15	0	0.0	4	26.7	22	27.5		
	15-<20	2	40	3	20	7	8.8		
	≥20	0	0.0	3	20	15	18.8		
Family history of psychiatric disorders	Yes	0	0.0	1	6.7	8	10	.692	.708
	No	5	100	14	93.3	72	90		

*significant at p ‹ 0.05. **highly significant at p ‹ 0.01.

Discussion:

Schizophrenia is a serious mental disorder whereby a person suffers from an unusual psychotic condition and it is one of the top 20 causes of disability worldwide (***Keepers et al., 2020***). Schizophrenia cause poor adaptation to and impairment in social context and more specifically deficient resilience, the dynamic process of adapting to and functioning in the face of adversity. Decreased resilience and in ability to cope with stress have negative effects which include impaired social adaptation, demoralization, hopelessness, lowered self- and efficacy self- esteem and decrease patient's quality of life and life satisfaction (***Luther et al., 2020***).

Data emerging from the study showed that, regarding socio-demographic characteristics of the studied patients, the result revealed that, more than one third of the studied patient's age ranged between 30 to less than 40 years, with mean age was 41.61±4.05 year. From the view point of researcher, this may be due to schizophrenia disease typically emerges in late adolescence and early adulthood. These results come in agreement with a study done by ***Cetin & Aylaz*, *(2020)*** who found that, more than one

third of the studied patients their age between 30 to 40 years.

. In the other hand, these finding were in disagreement with a study carried out by ***Barranha et al., (2020)*** who founded that, only one quarter of the patients belonged to 30 to 40 year age group and the majority aged between 40 to 50 years. Also this study is contradicted with a study done by ***Arafa & Abdelhafeez, (2020)*** who founded that more than one third of the studied patient's age ranged between 20 to less than 30.Also, ***Okasha et al., (2020)*** founded that, half of the studied patients their age ranged from 20 to less than 30 years.

As regards to sex, the current study revealed that, males are exceeding than females, as more than three quarters of the studied patients were male. From the view point of researcher this may be due to the underlying protective effect of women estrogen. These results come in line with a study done by ***Dhaka et al., (2020)***; & ***Awaad et al., (2020)***; & ***Jaberi et al., (2020)*** who mentioned that more than three quarters of the studied patients were male. This result was contradicted with a study done by ***Philip et al., (2020)*** who found that only half of the studied patients were male.

Concerning to marital status, the result of this study revealed that more than half of patients were single. From view point of researcher this related to the debilitating nature or impact of the illness on the overall functioning of the individual could be the barrier and make patients face difficulties to keep up marital relations or may be a reason for divorce or separation as majority of them were single. Or this may be due to that schizophrenic patients may experience difficulties in social relationship due to societal stigmatization that lead to reduced opportunities for socialization and marriage.

This results was in the same line with a study done by ***Cetin & Aylaz, (2020)***; & ***Abdeen et al., (2019)*** who found that, more than half of the studied patients were single and a study done by founded that more than half of them were single. In addition, ***Elsayed et al., (2019)*** founded that majority of the studied patients were single. This study is contradicted with a study done by ***Jaberi et al (2020)*** who founded that three quarter of the studied sample was married and also contradicted with a study done by ***Abd El Fatah et al., (2020)*** who founded that more than half of the studied patients were married.

Regarding to occupation, more than one two thirds were unemployed. From view point of researcher this may be due to schizophrenia is responsible for the profound dysfunction in all aspects of daily life and occupation and affect a person's ability to work. Or this may be due to that patients with schizophrenia typically have long standing deficits in their performance of even the most basic social roles and skills required for work, which cause them to be socially isolated and unemployed. In addition to, schizophrenia interferes with productivity, limits occupational and earning potential and pushing them into low wage and earning thresholds and all this make them un able to tolerate responsibilities.

The result of this study was in the same line of a study done by ***Manea et al., (2020)*** who founded that, more than one two thirds were unemployed. Also this result come in agreement of a study done by ***El-Monsheda & Amr, (2020)*** who founded that, more than one two thirds were unemployed. The result

of this study is contradicted with a study done by ***Abdeen et al., (2019)*** who founded that, one third of the studied patients were un employed and about half of them were employed

Regarding to age at onset of disease, the result of this study illustrates that, one third of the studied patients their age at the onset of the disease was at ≥35 years. This result related to that age at onset of schizophrenia is typically between late teens and mid-thirties and less than one third their age were ≥35 which located in mid-thirties area. This result was in agreement with a study done by ***Okasha et al., (2020)***; & ***Fakorede et al., (2020)*** who founded that, less than one third of the studied patients their age at the onset of the disease were at ≥35 years. Also, these results were in disagreement

With regard to number of previous hospitalizations, the result of this study illustrates that more than one third of patients admitted to hospital between periods 1- 3 times previously. This may be due to inability of patient`s family to cope effectively with the patient or they cannot tolerate the finance of medication or due to stigma associated with mental illness. Also, this may be due to that the schizophrenia is episodic and patients' ability to adjust with stressors is decreased, which lead to re hospitalization. In addition to, non-compliance to medication regimens, that can lead to relapse and re-hospitalization.

The result of this study come in line with a study done by ***Abdelrahman***; & ***Berma, (2017)*** who founded that, more than one third of the studied patients admitted to hospital between period 1- 3 times previously. By contrast, this study is in consistent with a study done by ***Abd-Elmonem et al., (2019)*** who revealed that the majority of the studied patients admitted from 1-3 times. In addition, this study is contradicted with ***Dewedar et al., (2018)*** who reported that more than half of patients hospitalized more than 20 times.

Concerning to duration of hospitalization, this result revealed that less than half of the studied patients hospitalized from 5-<10 years. From view point of researcher this is related to frequency of admission of the patients to the hospital and due to the fact that schizophrenia is chronic psychiatric illness and progressive and disabling condition. This study comes in line with a study done by ***Rabei*** et ***al., (2019)*** who founded that, less than half of the studied patients hospitalized from 5-<10 years.

As regard to Mode of admission, these results revealed that, all the studied patients were admitted to the hospital in an involuntary manner and more than three quarters were admitted with their families. This related to lack of insight about disease and low educational level among patients. This result come in line with a study done by ***Zaki et al., (2018)*** who founded that the majority of the studied patients were involuntary admitted to hospital and admitted by their family members. Also contradicted with a study done by ***Arafa et al., (2017)*** who founded that more than two thirds of patients were voluntary admitted.

Regarding to family history of psychiatric disorders of the studied patients, the result of this study revealed that, only 9% of them had family history of psychiatric disorders, all of them suffered from schizophrenia and more than half of them were father / mother. This may related to that, schizophrenia is higher in first degree

relatives of parents with schizophrenia. The result of this study come in agreement of a study done by ***Arafa et al., (2017)*** who founded that only 4% had had family history of psychiatric disorders, and (100%) suffered from schizophrenia

In relation to total level of resilience among schizophrenic patients, these results revealed that, three quarters of the studied patients had low level of total resilience. This may be primary due to neurocognitive dysfunction decreasing the patient's response to psychosocial stress and adverse events and stress among such patients arises from many factors such as hospitalization, lack of behavioral and social skills, lack of empathy and support from surroundings, impaired interpersonal relationships, poor role functioning and stigma. Also, depressive symptoms, anxiety and negative self-schemas cause reduced happiness, stress, and lower self-esteem which alter and decrease resilience among schizophrenic patients.

Concurrently, absence of support system that is the responsible one for accepting and understanding the features of the disease which help the patients to tolerate stress and to cope effectively with their illness. This result come in agreement with a study done by ***Abdulrahman et al., (2020)*** who stated that, resilience is generally low in schizophrenic patients due to the severity of psychotic symptoms and stress is highly related to schizophrenia development and prognosis. In addition to, ***Wambua et al., (2020)*** reported lower levels of resilience among schizophrenic patients due to negative symptoms and this cause poorer psychosocial functioning**.**

Concerning to total level of life satisfaction among patients with schizophrenia, the result of this study revealed that the majority of the studied patients had low level of total life satisfaction. From view point of researcher this occur as an effect of depressive symptoms which are the most robust indicator of worse life satisfaction and decrease with the severity of depressive symptoms and this is supported by**.** Also, inability to deal with stressors decreases patient's happiness and life satisfaction. In addition to, socio-demographic variables such as marital status, educational level, sex and occupation play a role in life satisfaction level and according to socio-demographics of the studied patients, were single, un employed, not complete their education and majority were male.

Meanwhile, decreased self-esteem caused by negative symptoms effect of schizophrenia lower life satisfaction. This result comes in line with a study done by ***Seo & Lim., (2019)*** who studied optimism and life satisfaction in persons with schizophrenia and reported that majority of patients have lower levels of life satisfaction than healthy controls due to stress and decreased optimism. Also come in accordance with a study done by ***Fervaha et al., (2016)*** who reported low level of life satisfaction among patients with schizophrenia due to the effect of experiencing persistent symptoms and impairments in community functioning.

In accordance to the correlation between total resilience and life satisfaction among the studied patients, there was a highly statistically significant positive correlation between total resilience of the studied patients and their total life satisfaction at p-value < 0.01. This means that schizophrenic patients when have low resilience level have low level of life satisfaction. From view

point of researcher this mainly caused by the disruption of overall organization of brain networks and this cognitive dysfunction cause responses to stressors inevitably come down hence, maladaptation occur which result in low resilience and concurrently, low resilience decreases psychological well-being and satisfaction with life.

Low levels of resilience cause patient with schizophrenia unable take advantage of their positive emotions, or survive their adverse experiences and return to an unfavorable and therefore, not have an extraordinary ability to adapt to significant change or deeply believes that life is meaningful, which reflected on and affect positively their perception of life satisfaction. This result is consistent with ***Zaki et al., (2019)*** who studied quality of life and resilience among patients with schizophrenia and revealed a highly positive significant correlation between quality of life and resilience among patients with schizophrenia.

This result is meanwhile resembles to a study done by ***Rozya et al., (2019***) who studied the strengths in patients with schizophrenia and healthy people and reported that patients with schizophrenia had low gratitude, spirituality and control which affect their life satisfaction negatively. This beyond ***Kim & Jang., (2019)*** who studied the mediating effects of self-esteem and resilience on quality of life in people with schizophrenia, stated a highly significant positive correlation between self-esteem, quality of life and resilience in people with schizophrenia.

Regarding to the relationship between total resilience level and socio-demographic data of patients, the result of this study revealed that there was a statistically significant relation between total resilience of the studied patients and their age, at p-value = < 0.05. As regard, From view point of researcher this may be related to resilience is high in period of adolescence with decrease in old age and age of studied patients group age ranged between 30-<40 with the presence of cognitive dysfunction with poor adaptation to stress so, resilience is significantly related with age.

Concerning to the statistically significant relation between total life satisfaction and marital status, this may be related to marriage as it has a role in improving life satisfaction through achieving marital satisfaction but, more than half of patients were single so have low level of life satisfaction. This is also supported by ***Laxhman et al., (2017)*** who studied satisfaction with sex life among patients with schizophrenia and reported that patients experience their sex life as an area of particular dissatisfaction.

Regarding to relationship between the clinical data of the studied patients and their total resilience, these results revealed a highly statistically significant relation between total resilience of the studied patients and their number of previous hospitalizations and duration of hospitalization at p-value < 0.01. This related to, hospitalization cause reported exacerbated feelings of isolation, feel uncomfortable with people, and on the other hand patients were involuntary admitted and so on stress increased which result in decreasing resilience. This result come in line with a study done by ***Senormanci et al., (2020)*** who reported a significant relation between duration of hospitalization and resilience level and hospitalization may

cause the resilience of patients with psychiatric disorders to be weaker, which is not conducive to recovery.

With concern to the statistically significant relation with their age at the onset of the disease at p-value < 0.05, this is may be due to that less than of patients their ages at onset of disease were ≥ 35 and middle adulthood associated with higher rates of pre-morbid abnormalities, worse cognitive performance that affect resilience and emotions thus beyond, at this age patients have low optimistic expectancy that cause low patience, emotional well-being and life satisfaction. This also supported by ***Riglin et al., (2017***) who stated that emotional problems are higher in middle age with schizophrenia. This result is in consistent with ***Brink& Andersen., (2020)*** as he reported that middle age schizophrenics seemed to have (SQoL) subjective quality of life similar to their age peers in the general population.

Conclusion:

Based on the results of the present study and research questions, the following can be concluded**:**

Findings confirmed that, resilience and life satisfaction seem to be related with each other. The present study revealed that, more three quarters of the studied patients had low level of total resilience and the majority of the studied patients had low level of total life satisfaction. Patients reported low level of resilience and life satisfaction, are largely answered the research question concerning the levels of resilience and life satisfaction among schizophrenic patients. Also, it is observed that, there was a highly statistically significant positive correlation between total resilience and total life satisfaction, which means that, patients who had low score of resilience are more likely to have low life satisfaction and this answered the research question about the relation between resilience and life satisfaction among schizophrenic patients.

Recommendation:

- Based on the results of the present study and conclusion, the following Recommendations are suggested:

- Constructing therapeutic programs and performing the long-term process of psychiatric rehabilitation of patients with schizophrenia such as problem-solving and emotion-focused coping style to decrease psychological symptoms and mental toughness.
- Training patients on developing of stress coping skills which risk factor for resilience to reduce burdens of patients and contribute to improvement in satisfaction with life.
- Enhancing resilience training to negate some of the physical and mental health issues that often occur in schizophrenic patients such as mindfulness, hope, and self-efficacy, sense of coherence, resourcefulness and positive psychology.
- Educating nurses towards the importance of providing social support and interaction via recreational activities to enhance emotional well-being and life satisfaction.
- Motivating nurses toward counseling & educational foundation that directed towards living with hope, optimistic about the future and compassion to increase life satisfaction for patients with schizophrenia.
- Targeting psychotherapy approaches, especially religion-based therapies as complementary therapies alongside medical treatments to improve resilience and overall life satisfaction.

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