

Between Stigma and Strength: A Psychosocial Profile of Caregivers of Schizophrenic Outpatients

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ABSTRACT

Schizophrenia is a mental disorder characterized by disruptions in thought processes, perceptions, emotional responsiveness, and social interactions. Although the course of schizophrenia varies among individuals, schizophrenia is typically persistent and can be both severe and disabling. General aim: To evaluate the psychosocial experiences of caregivers of schizophrenic patients, focusing on perceived stigma, self-esteem, and social support. Methodology A descriptive correlational design was performed for the purposes of the current study that are stated earlier to determine the relationships between perceived stigma, self-esteem, and social support among caregivers with schizophrenic outpatients started from June 12th, 2024 to May 14th 2025 The study was conducted in AlRasafa health director in Baghdad City, this is the center in the city contains two biggest hospitals for mental illness are Al Rashad training hospital, and Ibn Rushd teaching hospital, socio-demographical consist of 16 items for caregivers data; the second part includes the items related to Stigma Devaluation Scale (SDS) consist of 12 items, The Rosenberg Self-Esteem Scale consist of 10 items, and Multidimensional Scale of Perceived Social Support (MSPSS) consist of 12 items. Result: shows the majority gender distribution among the participants in the study revealing that the females represented 50.45% (n=56) of the total sample. The average age of the participants was 48.57, with standard deviation of 14.86. regarding the Kinship with patients 41.44% (n=46) were parents. In regarding to marital status most of schizophrenic care givers were married about 62.16% (n=69). Social economic distribution, not enough 54.96%. The participants qualifications are categorized according educational level variable, accordingly as 31.53% (n=35), having primary school education, 9.82% (n=22) illiterate level. Working status variable, the most participants were housewives 41.44% (n=46). Caregivers of schizophrenic outpatients have 51.35% high perceived stigma, while 51.35% have high self-esteem and 68.47 % have moderate social support. Conclusion the females of schizophrenic care givers were married, Social economic distribution, not enough, having primary school education, the most participants were housewives. Caregivers of schizophrenic outpatients have high perceived stigma, while have high self-esteem and have moderate social support

Keywords: Stigma, Psychosocial Profile, Caregivers, Schizophrenia

INTRODUCTION

Schizophrenia is a common, severe mental illness, is a disabling psychiatric condition impacting around 1% of people worldwide and ranking among the top 10 global disability causes. Neurobiologically, schizophrenia is associated with neurotransmitter dysfunction in dopamine and glutamate systems, as well as brain structural changes. Individualized comprehensive management plans, including antipsychotic medications for positive symptoms and evidence-based psychosocial interventions, are essential for improving patient quality of life. Al-Abbudi, [1] write there were Hundred Iraqi acute schizophrenic patients, admitted to Ibn Rushd psychiatric teaching hospital, Baghdad, Iraq. Most of the population worldwide is suffering from mental health problems. For the last four decades, Iraq has had a long history of wars and terrorist activities that have seriously hampered development and, therefore, there is limited research that has been carried out that focuses on the mental health of the natio, especially in regard to common disorders including mood disorders, amnesia, and schizophrenia [2].

Schizophrenia is a costly mental illness that brings a heavy burden to individuals, families and society. The poor recovery outcomes of schizophrenia include a high degree of disability, premature mortality, human rights violations, and loss of productivity. It has been argued that having a family caregiver is beneficial for patients' outcomes.

Schizophrenia is a target of stigma due to its distinctive symptoms, unusual behaviour, and perceived dangerousness. Family caregivers of patients with schizophrenia are subjected to stigmatization. Studies

observed reasons related to biogenetic and psychosocial explanations of schizophrenia, which are associated with a stigma against family caregivers. The stigma against schizophrenic family caregivers is described as a courtesy or associative stigma, which is the process by which family caregivers are stigmatized by association with another individual who is a schizophrenic patient [3, 4].

Stigma is defined as "a mark of shame, disgrace or disapproval". Stigma could be most harmful when internalized, which occurs when individuals may accept societal prejudices and devalue themselves. Internalized stigma develops through the following three steps: (1) the individual recognizes the societal prejudices related to people diagnosed with mental disorders; (2) the individual agrees with such prejudices; and (3) the individual applies the prejudices to himself or herself [5].

These concepts may protect against negative perceptions, feelings, and inappropriate behavioral responses, contributing to mental health and positive social behavior. However, some studies have implemented interventions on self-esteem and hope to reduce stigma [6]. However, few studies have considered self-esteem, self-efficacy, and hope as predictors of self-stigma [7].

Stigmatized identities need self-esteem and self-efficacy to maintain a positive sense of self. Self-esteem refers to the degree of respect or values people place on themselves and their abilities and judgments. On the other hand, self-efficacy is a person's mental

perception of his ability to function in a certain environment or achieve desired results. Stigmatized people may not be affected by negative evaluations of others. Self-efficacy may play a role in correcting the adverse effects of stigmatization.

Due to the difficulties experienced by caregivers in the process of providing care to schizophrenia patients, they are more likely to have social isolation. Caregivers may often feel themselves isolated from their families and friends in maintaining the care of their patients. Loneliness, which is the subjective experience of unmet social and emotional needs associated with social isolation [8], is considered as an important problem for the caregivers of schizophrenia patients. Caregivers usually have limited time to maintain their friendships and social relations [9].

Social isolation may increase as the care needs of the patient increase. In this process, it is important that the caregiver receives adequate social support from his/ her family and friends, and caregivers who cannot receive adequate social support may usually feel themselves isolated and alone in this job [8].

Aims:

1. To assess the level of perceived stigma experienced by caregivers of schizophrenic outpatients.
2. To examine the relationship between perceived stigma and the level of self-esteem and social support received by caregivers.
3. To develop a psychosocial profile that highlights both the negative (stigma) and positive (self-esteem, social support) aspects of the caregiving experience.

Methodology

This study will use to conduct this study for caregivers of schizophrenic outpatients. For quantitative A descriptive correlational design was performed for the purposes of the current study that are stated earlier to determine the relationships between perceived stigma, self-esteem, and social support among caregivers with schizophrenic outpatients started from June 12th, 2024 to May 14th 2025. The non

probability (purposive) sampling method was used to select the study sample. The target population are around (111) calculating a sample size through G*Power with medium effect size 30% and accepted level of power is 95% and a 5% margin of error. Purposeful sampling aims to increase the possibility of obtaining a sample that is representative of the population of interest in terms of the variables of interest and to ensure that participants can provide in-depth and detailed information that can be used to answer the research question. The study was conducted in AlRasafa health director in Baghdad City, this is the center in the city contains two biggest hospitals for mental illness are Al Rashad training hospital, and Ibn Rushd teaching hospital. current study which was consisting of two phases: first phase was for quantitative part which was include four parts: the first part includes the covering letter, socio-demographical consist of 16 items for caregivers data; the second part includes the items related to Stigma Devaluation Scale (SDS) consist of 12 items, The Rosenberg Self-Esteem Scale consist of 10 items, and Multidimensional Scale of Perceived Social Support (MSPSS) consist of 12 items.

Ethical Considerations and Administrative Arrangements

The researcher obtained the first permission to conduct the study from the Scientific and Ethical Committee of the College of Nursing. The researcher has submitted description including the objectives and project of the study to the Hawler medical university to get official permissions to carry out the study. After that, the permission was sent to Al Rasafa health directors in Baghdad City which gave the agreement to the researcher to do the study and made it easy to meet the participants

Study Instrumentation

The study instrument was designed to meet the objectives of current study which was consisting of two phases: first phase was for quantitative part which was include four parts: the first part includes the covering letter, socio-demographical consist of 16 items for caregivers data; the second part includes the items related to Stigma Devaluation Scale (SDS) consist of 12 items, The Rosenberg Self-Esteem Scale consist of 10 items, and Multidimensional Scale of Perceived Social Support (MSPSS) consist of 12 items

Result

Table 1: (a) Distribution of the Study Sample (Caregivers of Schizophrenia Patients) by their Demographic Characteristics

Characteristics (N=111)	Number		Percent
Gender	Male	55	49.55
	female	56	50.45
Caregiver Age (19-79 Years)	Std Err Mean: 1.41	Mean: 48.57	SD: 14.86
Age Categories of Caregivers	20-29	15	13.51
	30-39	16	14.41
	40-49	26	23.42
	50-59	24	21.62
	60-69	18	16.22
	70-79	12	10.81
Kinship with Patients	parents	46	41.44
	Spouse	11	9.91
	son/ daughter	11	9.91
	Sibling	35	31.53
	Other	8	7.21

Table 1: (b) Distribution of the Study Sample (Caregivers of Schizophrenia Patients) by their Demographic Characteristics

Characteristics (N=111)	Number	Percent
Marital Status	single	21
	Married	69
	divorced or separated	7
	Widow	14
Social Economic	Enough	21
	Almost Enough	29
	Not Enough	61
Educational Level	Illiterate	22
	primary	35
	intermediate	18
	Preparatory	15
Working Status	institute or College	21
	housewife	46
	freelance	31
	Employee	20
	Retired	9
	unemployed	5
Domicile	Rural	12
	Urban	99
Duration of Illness	Min-max: 1-45 yrs.	Mean: 12.75
Phase of Illness	Prodromal	8
	acute or active	18
	Residual	85
Difficulty in Medication Supervision	yes	74
	No	37
Duration of Caregiving	Min-max: 1-44 yrs.	Mean: 9.54
Type of Visit	Prodromal	1
	relapse	64
	Routine visit for treatment	46
Having Support from Family	yes	58
	No	53
Having Chronic Disease 2	Yes	59
	No	52
Receiving Education About Schizophrenia	Yes	41
	No	70

Table 1 shows the gender distribution among the participants in the study revealing that the females represented 50.45% (n=56) of the total sample, while males represented 49.55 % (n=55). The average age of the participants was 48.57, with standard deviation of 14.86. regarding the Kinship with patients 41.44% (n=46) were parents, while sibling was 31.53% (n=35). In regarding to marital status most of schizophrenic care givers were married about 62.16% (n=69), while singles about 18.92% (n=21), and widows 12.61% (n=14), only 6.31% were divorced. Social economic distribution, not enough 54.96% (n=61), while almost enough 26.13% (n=29). The participants qualifications are categorized according educational level variable, accordingly as 31.53% (n=35), having primary school education, 9.82% (n=22) illiterate level, 18.92% (n=21) institute or collage graduate. Working status variable, the most participants were

housewives 41.44% (n=46) and freelance 27.93% (n=31). Domicile urban represented 89.19% (n=99) and rural 10.81%. The average Duration of illness of the patients was 12.75, with standard deviation of 10.68.

Phase of illness of the patients with schizophrenia represented the most phase was Residual phase 76.58% (n=85), while active phase was 16.22% (n=18). Difficulty with medication shows that 66.67% have difficulty in supervision with psychotic medication, while only 33.33% haven't. Type of visit 57.66% (n=64) was relapse, while routine visit was 41.44%. duration of caregiving mean 9.54 years old. In regard to having chronic disease 53.15% are have chronic health conditions. And about receiving education about schizophrenia from doctor or any health care professionals 63.06% haven't any information about this disease.

Table 2: Prevalence of Perceived Stigma Among Caregivers for Schizophrenic Patients

SDS (N=111)	Number	Percent
High Perceived Stigma	57	51.35
Low Perceived Stigma	6	5.41
Moderate Perceived Stigma	48	43.24

Table 2 show the prevalence of perceived stigma between the schizophrenic caregivers that 51.35% (n=57) have high perceived

stigma, 43.24% (n=48) have moderate stigma, and only (n=6) 5.41% have low perceived stigma.

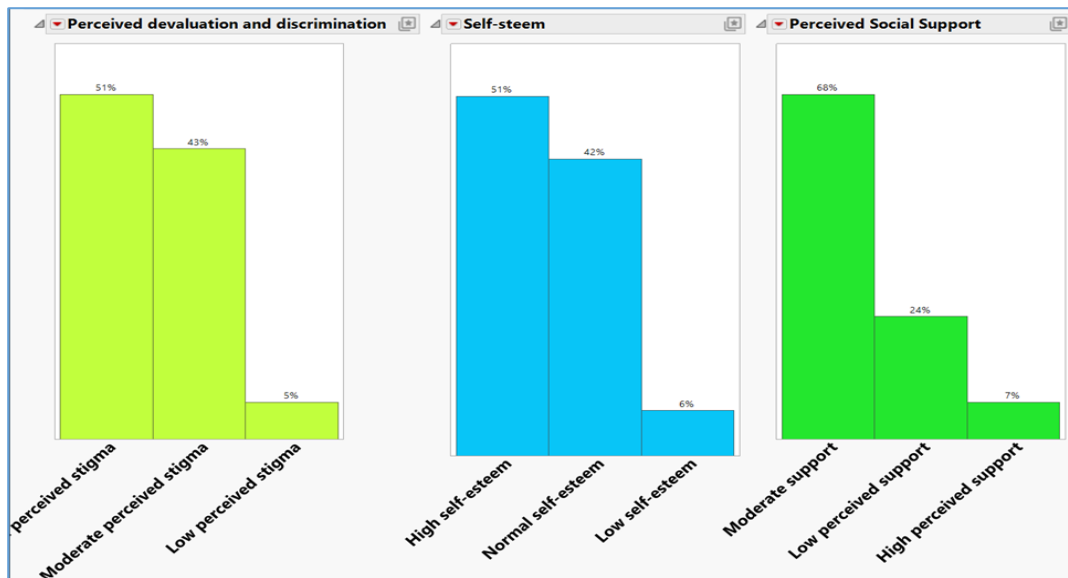


FIGURE 1: Prevalence of Perceived Stigma, Self-Esteem, and Social Support of Caregivers of Schizophrenia Outpatients

Table 3: Prevalence of Perceived Devaluation and Discrimination by General and Medical Characteristics of Caregivers of Schizophrenia

Characteristics (N=111)		Perceived Stigma No (%)			P Value
		Low Perceived Stigma (N=6)	Moderate Perceived Stigma (N=48)	High Perceived Stigma (N=57)	
Gender	Male	5 (9.09)	29 (52.73)	21 (38.18)	0.0130
	female	1 (1.79)	19 (33.93)	36 (64.29)	
Kinship with patients	parents	3 (6.52)	16 (34.78)	27 (58.70)	0.2395
	Spouse	0 (0.00)	3 (27.27)	8 (72.73)	
	son/ daughter	0 (0.00)	8 (72.73)	3 (27.27)	
	Sibling	3 (8.57)	18 (51.43)	14 (40.00)	
Marital status	other	0 (0.00)	3 (37.50)	5 (62.50)	0.2537
	single	0 (0.00)	10 (47.62)	11 (52.38)	
	Married	5 (7.25)	33 (47.83)	31 (44.93)	
	divorced or separated	0 (0.00)	3 (42.86)	4 (57.14)	
Social economic	widow	1 (7.14)	2 (14.29)	11 (78.57)	0.3372
	Enough	1 (4.76)	12 (57.14)	8 (38.10)	
	Almost Enough	1 (3.45)	15 (51.72)	13 (44.83)	
	Not Enough	4 (6.56)	21 (34.43)	36 (59.02)	
Educational Level	Illiterate	1 (4.55)	9 (40.91)	12 (54.55)	0.7815
	primary	3 (8.57)	15 (42.86)	17 (48.57)	
	intermediate	0 (0.00)	6 (33.33)	12 (66.67)	
	Preparatory	1 (6.67)	6 (40.00)	8 (53.33)	
Working Status	institute or College	1 (4.76)	12 (57.14)	8 (38.10)	0.2181
	housewife	1 (2.17)	14 (30.43)	31 (67.39)	
	freelance	2 (6.45)	16 (51.61)	13 (41.94)	
	Employee	1 (5.00)	11 (55.00)	8 (40.00)	
	Retired	1 (11.11)	5 (55.56)	3 (33.33)	
Domicile	unemployed	1 (20.00)	2 (40.00)	2 (40.00)	0.8932
	Rural	1 (8.33)	5 (41.67)	6 (50.00)	
	Urban	5 (5.05)	43 (43.43)	51 (51.52)	
	Phase of Illness	Prodromal	5 (62.50)	3 (37.50)	0.5156
Difficulty in Medication	acute or active	0 (0.00)	7 (38.89)	11 (61.11)	
	Residual	6 (7.06)	36 (42.35)	43 (50.59)	
	yes	2 (2.70)	25 (33.78)	47 (63.51)	0.0009
Type of Visit	no	4 (10.81)	23 (62.16)	10 (27.03)	
	Prodromal	0 (0.00)	1 (100.00)	0 (0.00)	0.3537
Having Support from	relapse	2 (3.13)	25 (39.06)	37 (57.81)	
	Routine visit for treatment	4 (8.70)	22 (47.83)	20 (43.48)	0.3299
	yes	4 (6.90)	28 (48.28)	26 (44.83)	
Family	no	2 (3.77)	20 (37.74)	31 (58.49)	0.4225
	no	4 (6.78)	28 (47.46)	27 (45.76)	
Having Chronic Disease	yes	2 (3.85)	20 (38.46)	30 (57.69)	0.0521
	yes	5 (12.20)	17 (41.46)	19 (46.34)	
Receiving Education About Schizophrenia	no	1 (1.43)	31 (44.29)	38 (54.29)	

Table 3 presented the correlation between sociodemographic characteristics and perceived stigma among family caregivers which showed there are a strong significant between gender and perceived stigma in ($p=0.0130$), difficulty in supervision with schizophrenia

treatment ($p=0.0009$), while the other demographic characteristics haven't any significant. Table 4 shows the prevalence or level of self-esteem among family caregivers, which 51.35% ($n=57$) have high self-esteem, while 42.34% ($n=47$) have normal self-esteem.

Table 4: Prevalence of Self-Esteem for Caregivers of Schizophrenic Outpatients

Self-Esteem (N=111)	Number	Percent
Low Self-Esteem	7	6.31
Normal Self-Esteem	47	42.34
High Self-Esteem	57	51.35

Table 5: Prevalence of Self-Esteem for Caregivers of Schizophrenic Outpatients in Different Caregivers

Characteristics (N=111)		Self-Stem No (%)			P
		Low Self-Esteem	Normal Self-Esteem	High Self-Esteem	
Gender	Male	2 (3.64)	32 (58.18)		0.2634
	female	5 (8.93)	25 (44.64)		
Kinship with Patients	parents	4 (8.70)	24 (52.17)		0.7895
	Spouse	1 (9.09)	3 (27.27)		
	son/ daughter	0 (0.00)	6 (54.55)		
	Sibling	2 (5.71)	19 (54.29)		
Marital Status	other	0 (0.00)	5 (62.50)		0.8446
	single	2 (9.52)	9 (42.86)		
	Married	4 (5.80)	37 (53.62)		
	divorced or separated	1 (14.29)	3 (42.86)		
Social Economic	widow	0 (0.00)	8 (57.14)		0.0357
	Enough	0 (0.00)	15 (71.43)		
	Almost Enough	0 (0.00)	17 (58.62)		
Educational Level	Not Enough	7 (11.48)	25 (40.98)		0.0118
	Illiterate	0 (0.00)	11 (50.00)		
	primary	6 (17.14)	17 (48.57)		
	intermediate	0 (0.00)	9 (50.00)		
Working Status	Preparatory	1 (6.67)	4 (26.67)		0.1177
	institute or College	0 (0.00)	16 (76.19)		
	housewife	5 (10.87)	18 (39.13)		
	freelance	2 (6.45)	14 (45.16)		
Domicile	Employee	0 (0.00)	14 (70.00)		0.3854
	Retired	0 (0.00)	8 (88.89)		
	unemployed	0 (0.00)	3 (60.00)		
	Rural	0 (0.00)	5 (41.67)		
Phase of Illness	Urban	7 (7.07)	52 (52.53)		0.0039
	Prodromal	2 (25.00)	6 (75.00)		
	acute or active	3 (16.67)	6 (33.33)		
Difficulty in Medication	Residual	2 (2.35)	45 (52.94)		0.0182
	yes	3 (4.05)	33 (44.59)		
	no	4 (10.81)	24 (64.86)		
Type of Visit	Prodromal	0 (0.00)	1 (100.00)		0.7236
	relapse	4 (6.25)	30 (46.88)		
	Routine visit for treatment	3 (6.52)	26 (56.52)		
Having Support from Family	yes	2 (3.45)	33 (56.90)		0.2854
	no	5 (9.43)	24 (45.28)		
Having Chronic Disease 2	no	3 (5.08)	32 (54.24)		0.7465
	yes	4 (7.69)	25 (48.08)		
Receiving Education About Schizophrenia	yes	7 (17.07)	20 (48.78)		0.0015
	no	0 (0.00)	37 (52.86)		

Table 5 presented the correlation between demographic characteristics and self-esteem levels showed there are there are relationship between social economic status ($p=0.0357$) educational level ($p=0.0118$), Difficulty in medication supervision (0.0182), and very strong relationship with phases of illness, receiving education about schizophrenia (0.0039, 0.0015), while the others weren't having any significant correlation. Table 6 showed the prevalence of social support, 68.47 ($n=76$) have moderate social support and 24.32% have

low social support, and only 7.21% have high social support. Table 7 shows the social supports with socio demographic characteristics showed that there is a strong relationship between educational level ($p=0.0003$), domicile (0.0013), having a support from family (0.0005), while haven't significant relationships with the other socio demographic characteristics. Table 8 presented the correlation between the variables, perceived stigma, self-esteem, social support there are strong significant correlation.

Table 6: Prevalence of Perceived Social Support Among Caregivers of Schizophrenia Outpatients

Social Support (N=111)	Number	Percent
Low Perceived Support	27	24.32
Moderate Support	76	68.47
High Perceived Support	8	7.21

Table 7: Perceived Social Support Among Caregivers of Schizophrenia with Different Characteristics

Characteristics (N=111)		Social Support No (%)			p
		Low Perceived Support (N=27)	Moderate Support (N=76)	High Perceived Support (N=8)	
Gender	Male	8 (14.55)	42 (76.36)	5 (9.09)	0.0546
	female	19 (33.93)	34 (60.71)	3 (5.36)	
Kinship with Patients	parents	14 (30.43)	29 (63.04)	3 (6.52)	0.2469
	Spouse	5 (45.45)	6 (54.55)	0 (0.00)	
	son/ daughter	1 (9.09)	9 (81.82)	1 (9.09)	
	Sibling	7 (20.00)	24 (68.57)	4 (11.43)	
Marital Status	other	0 (0.00)	8 (100.00)	0 (0.00)	0.5977
	single	3 (14.29)	15 (71.43)	3 (14.29)	
	Married	19 (27.54)	45 (65.22)	5 (7.25)	
	divorced or separated	2 (28.57)	5 (71.43)	0 (0.00)	
Social Economic	widow	3 (21.43)	11 (78.57)	0 (0.00)	0.2017
	Enough	3 (14.29)	15 (71.43)	3 (14.29)	
	Almost Enough	5 (17.24)	21 (72.41)	3 (10.34)	
Educational Level	Not Enough	19 (31.15)	40 (65.57)	2 (3.28)	0.0003
	Illiterate	10 (45.45)	10 (45.45)	2 (9.09)	
	primary	13 (37.14)	21 (60.00)	1 (2.86)	
	intermediate	3 (16.67)	15 (83.33)	0 (0.00)	
	Preparatory	1 (6.67)	14 (93.33)	0 (0.00)	
	institute or College	0 (0.00)	16 (76.19)	5 (23.81)	
Working Status	housewife	17 (36.96)	26 (56.52)	3 (6.52)	0.1767
	freelance	7 (22.58)	23 (74.19)	1 (3.23)	
	Employee	1 (5.00)	16 (80.00)	3 (15.00)	
	Retired	1 (11.11)	7 (77.78)	1 (11.11)	
	unemployed	1 (20.00)	4 (80.00)	0 (0.00)	
Domicile	Rural	8 (66.67)	4 (33.33)	0 (0.00)	0.0013
	Urban	19 (19.19)	72 (72.73)	8 (8.08)	
Phase of Illness	Prodromal	2 (25.00)	5 (62.50)	1 (12.50)	0.1993
	acute or active	8 (44.44)	10 (55.56)	0 (0.00)	
	Residual	17 (20.00)	61 (71.76)	7 (8.24)	
Difficulty in Medication	yes	18 (24.32)	53 (71.62)	3 (4.05)	0.1841
	no	9 (24.32)	23 (62.16)	5 (13.51)	
Type of Visit	Prodromal	0 (0.00)	1 (100.00)	0 (0.00)	0.8371
	relapse	14 (21.88)	46 (71.88)	4 (6.25)	
	Routine visit for treatment	13 (28.26)	29 (63.04)	4 (8.70)	
Having Support from Family	yes	6 (10.34)	45 (77.59)	7 (12.07)	0.0005
	no	21 (39.62)	31 (58.49)	1 (1.89)	
Having Chronic Disease	no	9 (15.25)	46 (77.97)	4 (6.78)	0.0510
	yes	18 (34.62)	30 (57.69)	4 (7.69)	
Receiving Education About Schizophrenia	yes	15 (36.59)	23 (56.10)	3 (7.32)	0.0648
	no	12 (17.14)	53 (75.71)	5 (7.14)	

Table 8: Correlations of Perceived Stigma, Self-Esteem, and Social Support Among Caregivers of Schizophrenia

Pairwise Correlations					
Variable	By Variable	R	95% CI	P	Presentations of Correlations
Total Self-Esteem Score	Total SDS	-0.27	-0.43 to -0.09	0.0041	
Total MSPSS	Total SDS	-0.24	-0.41 to -0.06	0.0107	
Total MSPSS	Total self-esteem score	0.42	0.26 to 0.56	<0.0001	

Table 9: Correlation Analysis Between Self-Esteem, Perceived Social Support (MSPSS), and Depression (SDS)

Relationship	Correlation (r)	95% Confidence Interval	P-Value	Interpretation
Self-Esteem vs. SDS	-0.27	-0.43 to -0.09	0.0041	Significant moderate negative correlation
MSPSS vs. SDS	-0.24	-0.41 to -0.06	0.0107	Significant moderate negative correlation
MSPSS vs. Self-esteem	0.42	0.26 to 0.56	<0.0001	Significant moderate positive correlation

The correlation analysis revealed significant relationships among perceived stigma, self-esteem, and social support among caregivers of individuals with schizophrenia (Table 9). A statistically significant negative correlation was found between perceived stigma (Total SDS) and self-esteem ($r = -0.27$, 95% CI: -0.43 to -0.09, $p = 0.0041$), indicating that higher levels of perceived stigma were associated with lower self-esteem among caregivers. Similarly, perceived stigma was

negatively correlated with perceived social support (Total MSPSS) ($r = -0.24$, 95% CI: -0.41 to -0.06, $p = 0.0107$), suggesting that caregivers who experienced more stigma reported lower levels of social support. Conversely, a moderate positive correlation was observed between self-esteem and social support ($r = 0.42$, 95% CI: 0.26 to 0.56, $p < 0.0001$), indicating that higher social support was associated with higher self-esteem.

These findings highlight the interdependence of psychosocial factors in caregiving contexts and underscore the protective role of

social support in mitigating the adverse effects of stigma on caregivers' psychological well-being.

Scatterplot Matrix

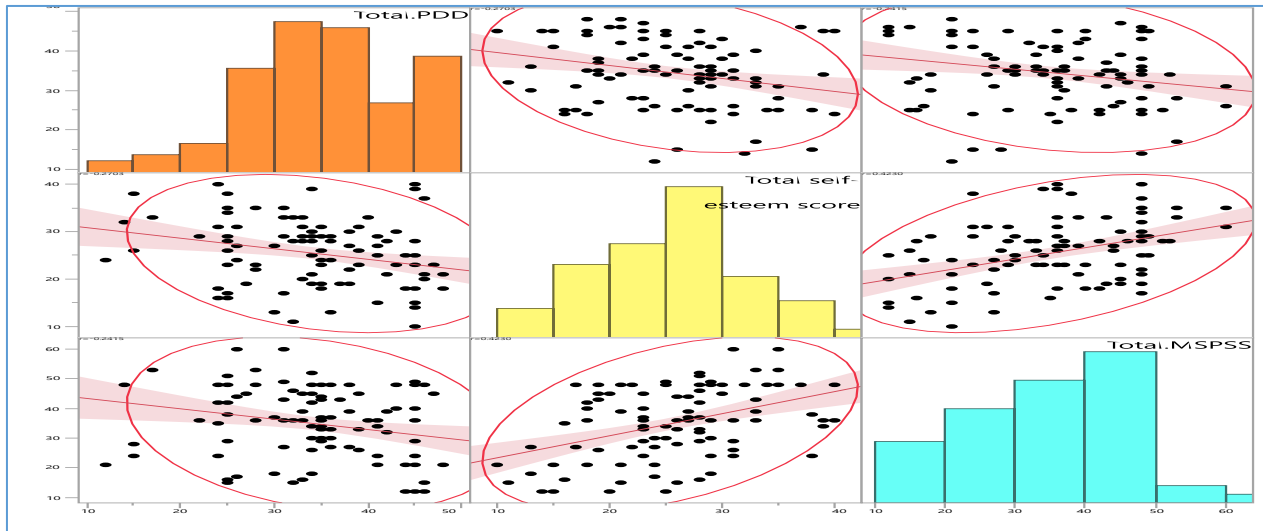


FIGURE 2: Scatterplot Matrix

The pair plot visually presents the relationships among perceived stigma (Total.SDS), self-esteem, and social support (Total.MSPSS) among caregivers of schizophrenic outpatients. The negative correlations between perceived stigma and both self-esteem ($r \approx -0.42$) and social support ($r \approx -0.24$) suggest that higher perceived stigma is associated with lower levels of self-esteem and perceived social support. Conversely, a positive correlation is observed between self-esteem and

social support ($r \approx 0.43$), indicating that caregivers with stronger perceived social support tend to report higher self-esteem.

These findings support the hypothesis that stigma adversely impacts the psychological well-being and social resources of caregivers, underlining the need for stigma-reduction interventions and enhanced support systems for this population.

Color Map on Correlations

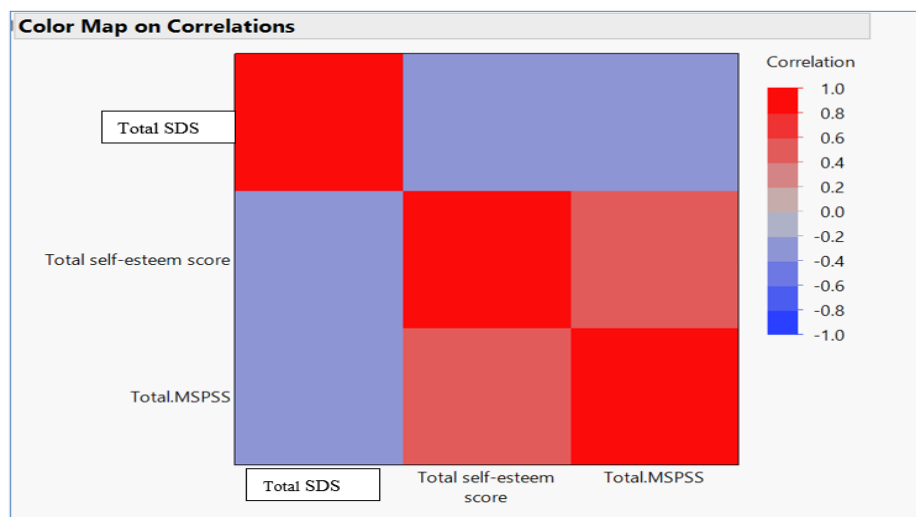


FIGURE 3: Color Map on Correlations

Discussion

Results in table 1 presented that the highest percent of the study sample (50.45%) were female within age group (40 - 49) years old whom accounted for (23.42%) and (41.44%) percent of kinship with patients were parents, while sibling accounted about 31.53% mean 48.57. Middle-aged caregivers seem to be more prevalent perhaps because middle-aged people serve as main family care providers. The findings of this study are in contrast to the study carried out by

Rajendran et al. [10] showed that investigation yielded different in Tunisia showed that the average age of natural caregivers was 55.7 years. The sex ratio (M/F) was 0.86, this Most of caregiver's families were married about 62.16% while just 18.92% were singles. In regard to social economic 54.96% were not enough due to limited financial income, which leads to the family's needs not being met, while only 26.13% were almost enough. Educational level for caregivers where high percentage were primary school 31.53%, illiterate was 19.82%. in regard to working status account for 41.44% were housewives and

freelance 27.93%. most of schizophrenic caregivers their domicile was urban about 89.19% and only 10.81% were rural. Duration of illness mean was 12.75, SD 10.68. phase of illness 76.58% were Residual. 66.67% of caregivers had been Difficulty in supervision for neuroleptics medication. Duration of caregiving mean 10.54 SD 8.08. Related to type of visit 57.66% were out patients suffering from relapse and 41.44% had routine visit for follow up and take schedule medications. Having a support from their family members 52.25% has a support but 47.75 % haven't. Having serious chronic disease 53.15%, while only 46.85 haven't. in regard to receive education about schizophrenia the high percent answer no 63.06% only 36.94 answer yes.

Table 2 the prevalence of perceived stigma between the schizophrenic caregivers that 51.35% (n=57) have high perceived stigma, 43.24% (n=48) have moderate stigma, and only (n=6) 5.41% have low perceived stigma.), The findings of this investigation align with a study carried out by Bipeta et al. [11]. To examine perceived stigma and its correlates in remitted patients with mental illnesses and their caregivers, Results: Of 152 patients with mental illnesses, 76.3% and 85.53 % reported moderate-to-high levels of perceived stigma and endorsed secrecy, respectively. Of 152 caregivers, 40.13% and 25.65% reported moderate-to-high levels of perceived stigma towards patients and families, respectively. Overall, patients had high levels of perceived stigma and endorsed secrecy, another study, findings of this study are In contrast to the study carried out by Shih et al. [12], this investigation yielded different in Tunisia showed that Natural caregivers of patients with schizophrenia are exposed to multi levels of perceived stigma, with The mean score of perceived stigma in patients was 24.7 mean moderate level and mild level in caregivers 15.34.

Table 3 Correlation: the correlation between sociodemographic characteristics and perceived stigma among family caregivers which showed there are a significant between gender and perceived stigma in ($p= 0.0130$), difficulty in supervision with schizophrenia treatment($p= 0.0009$), The findings of this investigation align with a study carried out by Yin et al. [13] showed that the caregivers' experience of discrimination was only significantly correlated with province in China, and a study in Iraq by Hammo [14] noted that there is no relationship between gender and age with social stigma, but there is a correlation with educational level of the patient or his relatives.

Table 4 showed the prevalence or level of self-esteem among caregivers which 51.35% (n=57) had high self-esteem, while 42.34% had normal self-esteem, This investigation's findings contradict a study carried out by Cheng et al. Cheng et al. [15] in Taiwan showed that Caregivers with lower self-esteem, higher levels of psychological distress, and heavier care burdens had poorer QoL during caregiving schizophrenia patients in compare with another mental illness groups, Care burden had a significant total effect on QoL. Both self-esteem and psychological distress were significant mediators. And the same study was done by Bipeta et al. [11] in India for self-esteem in remitted psychiatric patients and their caregivers showed Of 152 caregivers, 40.13% and 25.65% reported moderate-to-high levels of perceived stigma towards patients and families, respectively. Overall, patients had high levels of perceived stigma and endorsed secrecy, low self-esteem, moderate functional impairment, and extremely poor emotional wellbeing. But there is a nother study in Indonesia, findings of this investigation align with a study carried out by Syarif et al., [16] Caregiver most have high self-esteem, that is 83 respondents (61.5%).

Table 5 presented the correlation between demographic characteristics and self-esteem levels showed there are strong relationship between social economic status ($p= 0.0357$) ND educational level ($p= 0.0118$), (0.0182), and very strong relationship with phases of illness, receiving education about schizophrenia (0.0039, 0.0015), while the others weren't having any significant correlation. The findings of this study are In contrast to the study carried out by Shih et al., [12] in twain showed there were no relationships between self-esteem and demographic characteristics.

Table 6 showed the prevalence of social support, 68.47% (n=76) have moderate social support and 24.32% have low social support, and only 7.21% have high social support. The findings of this investigation align with a study carried out by Chen et al. [17] showed that Most participants reported that they were suffering from heavy life burdens and had negative experiences with respect to obtaining social support, and they emphasized that they would require more support. Economic and daily housework burdens, limited social communication, and psychological stresses were the principal burdens. A study done in Indonesia by Syarif et al. [16] to assess the stress levels among caregivers of patients with schizophrenia and identify the key determinants of caregiver stress.the result showed that 77% of caregivers had a adequate social support. ows that social support is a crucial factor in reducing stress and enhancing caregivers' well-being. The data indicated that 30 difficulties in medication supervision of 110 (33%) caregivers experienced low social support, while 70 of 110 (77%) caregivers received adequate support. Social support functions as a resource that helps individuals cope with stress, serving as both an emotional and practical buffer for caregivers caring for individuals with schizophrenia. Adequate social support can reduce burnout and improve caregivers' quality of life, which, in turn, enhances the quality of patient care. Conversely, lack of social support increases vulnerability to stress, consistent with Social Support Theory, which suggests that caregivers who feel isolated are more susceptible to emotional stress and difficulties in caring for patients [16].

Table 7 shows the social supports with socio demographic characteristics showed that there is a strong relationship between educational level ($p=0.0003$), domicile (0.0013), having a support from family (0.0005), while haven't significant relationships with the other socio demographic characteristics. This study is in line with a study in Chengdu, China in 2015. Identified persons with schizophrenia ($n = 661$) and their caregivers. The findings show there was a strong association between schizophrenia and household poverty, in which social support and caregiving burden may had played significant roles on mediating it. More precise poverty alleviation policies and interventions should focus on supporting recovery for persons with schizophrenia, as well as on increasing social support and on reducing family caregiving burden [18].

The correlation analysis revealed significant relationships among perceived stigma, self-esteem, and social support among caregivers of individuals with schizophrenia. A statistically significant negative correlation was found between perceived stigma (Total SDS) and self-esteem ($r = -0.27$, 95% CI: -0.43 to -0.09, $p = 0.0041$), indicating that higher levels of perceived stigma were associated with lower self-esteem among caregivers. Similarly, perceived stigma was negatively correlated with perceived social support (Total MSPSS) ($r = -0.24$, 95% CI: -0.41 to -0.06, $p = 0.0107$), suggesting that caregivers who experienced more stigma reported lower levels of social support.

Conversely, a moderate positive correlation was observed between self-esteem and social support ($r = 0.42$, 95% CI: 0.26 to 0.56, $p < 0.0001$), indicating that higher social support was associated with higher self-esteem. These findings highlight the interdependence of psychosocial factors in caregiving contexts and underscore the protective role of social support in mitigating the adverse effects of stigma on caregivers' psychological well-being. Some previous studies supported it, Ranjan & Gupta showed that the overall social support contributed 52.5% of the variance in self-esteem in caregivers. Social support has a significant positive correlation with self-esteem. It means when social support increases in caregivers of patients with schizophrenia than

self-esteem also increases. Some previous studies also suggested similar findings, the self-stigmatization and poor social support of individuals who care for patients with schizophrenia may cause shame, low self-esteem, a decrease in quality of life, and a decrease in caregiving capacity. Thoits showed the perceived availability of social support may lead to a more benign appraisal of the situation when faced with a stressful event, low self-esteem thereby preventing a cascade of negative emotional and behavioural responses. Rajendran et al. [10] showed the significant positive correlation between resilience, perceived social support, self-esteem and self-efficacy caregivers of patients with schizophrenia [10].

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