Social Skills Training Program and its Effect on Quality of Life and Stigma among Patients with Schizophrenia

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ABSTRACT

Context: Schizophrenia is a severe mental disorder that significantly disrupts an individual's social interactions, work performance, and overall quality of life. People with mental illnesses frequently encounter stigma due to various causes, which may result in self-stigmatization when they internalize these negative beliefs.

Aim: Evaluate the effect of social skills training program on quality of life and stigma among patients with schizophrenia.

Methods: The current study employs a quasi-experimental research design (one group pre/post-test). The research was conducted at the inpatient unit of El-Maamoura Hospital on 50 patients diagnosed with schizophrenia. They were selected purposefully for this study. Four study tools were selected to assess the sociodemographic and medical data, social skills, life quality, and stigmatization among patients with schizophrenia.

Results: Most schizophrenic patients in this study initially exhibited low social skills before the program; however, this proportion declined to less than one-fifth after the program, showing a statistically significant improvement in all aspects of social skills. Similarly, while fewer than one-fifth of the participants initially reported a good quality of life, this figure rose to approximately two-thirds following the program, with significant improvements in all quality-of-life domains except for thought and speech, orientation and insight. Furthermore, 66% of the patients experienced a high stigma level before the program, which decreased to one-third afterward, with significant reductions across all stigma subscales. Additionally, a highly statistically significant correlation was found between overall scores of social skills, quality of life, and stigma across the program phases ($p \leq 0.001$).

Conclusion: Social skills training has a notably beneficial influence on enhancing social abilities and life quality and reducing stigma among patients diagnosed with schizophrenia. Implementing a psychoeducational nursing intervention program is essential to mitigating the adverse effects of schizophrenia and fostering better insight among affected patients.

Keywords: Social skills, training program, quality of life, stigma, schizophrenia

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1. Introduction

Schizophrenia is widely recognized as one of the most severe psychiatric disorders due to its chronic, recurring, and disabling nature, which places a significant burden on both patients and their families. Disruptions in thought processes, perception, emotions, and social interactions characterize the condition. Globally, it is among the top ten leading causes of disability, with mortality rates are twice as high as those of the general population *(Mostfa et al., 2022).*

Furthermore, schizophrenia is a serious mental illness with a global median lifetime prevalence of three per 1,000 individuals. It typically emerges in early adulthood and follows a chronic or episodic progression *(Guedes de Pinho et al., 2018).*

Social skills refer to behaviors that enable individuals to engage and communicate effectively in social settings. These skills encompass verbal and nonverbal abilities, allowing people to interpret others' cues, convey information, and share attitudes, opinions, and emotions. They foster connections and sustain meaningful relationships *(Blanchard et al., 2015).*

Social skills training assists patients in addressing social skill deficiencies. It equips them with essential abilities to effectively manage daily challenges, cope with stressors that may lead to relapse, and enhance social adaptation. Additionally, these benefits contribute to stabilizing their

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condition, improving medication adherence, and supporting their recovery journey *(Barzegar et al., 2016)*.

The World Health Organization defines quality of life as individuals' perceptions of their position in life within their culture, value systems, personal goals, standards, expectations, and interests. Quality of life is a multifaceted, subjective concept identifying the baseline of physical level, emotional, social, and material well-being. It provides a standard against which an individual or society can evaluate the various aspects of one's personal life. In cases of paranoid schizophrenia, quality of life can reflect both the individual's insight into their functional abilities and the impact of treatment on their well-being *(Shah & Prabhu, 2020)*.

The quality of life (QoL) in patients diagnosed with schizophrenia is evaluated through both objective and subjective lenses. Objective QoL assessments typically involve external factors like living conditions, sociodemographic details, and the individual's social role and function. Subjective QoL assessments focus on overall life satisfaction and specific areas like contentment with jobs, finances, family and social relationships, and living conditions *(Fanta et al., 2017)*.

Internalized stigma significantly hinders the functional and social recovery of individuals with schizophrenia. The feeling of stigma can cause diminished self-esteem, ongoing self-criticism, and hinder normal life and social interactions. This feeling, in turn, can lead to negative outcomes such as social withdrawal, depression, suicide, and a lower quality of life that necessitate a deeper exploration of these consequences on the patient's life quality *(Chan et al., 2022)*.

Stigma is a complex, multifaceted issue that encompasses misconceptions and beliefs, biased attitudes, and discriminatory actions directed at individuals with mental health disorders. It can also be internalized by those affected. Furthermore, stigma must be understood within a wider context, where various social and cultural factors interact to create social devaluation and negative stereotypes *(Cam & Cuhadar, 2011)*.

2. Significance of the study

Schizophrenia is considered one of the most prevalent psychotic disorders in Egypt and is a long-term condition with a challenging prognosis. The Egyptian National Institute of Mental Health reported that the disorder impacts approximately 1.1% of the population *(Guedes de Pinho et al., 2018)*.

This study is significant because the negative symptoms of schizophrenia are often linked to a decline in the essential skills needed for patients to achieve satisfaction in daily activities. Patients may struggle to initiate conversations, make eye contact, or speak monotone. So, supporting these individuals can improve their ability to adjust to the community. Psychiatric nurses play a crucial role in improving the social skills of schizophrenic patients, as they are well-positioned to assess and implement effective interventions due to their close contact with patients and their expertise and concern for their well-being *(Abdelgelil et al., 2022)*.

Therefore, psychiatric mental health nurses should develop and implement social skills training programs aimed at enhancing the quality of life and reducing self-stigma among those individuals. These programs should focus on assessing the personal experience of stigma through subscales that measure alienation, social withdrawal, and stigma resistance, while also working to improve motivation and energy levels in schizophrenic patients *(Chan et al., 2022)*.

3. Aim of the study

Evaluate the effect of social skills training on quality of life and stigma among patients with schizophrenia through:

- Evaluate social skills in individuals with schizophrenia.
- Examine the quality of life in patients with schizophrenia.
- Measure the level of stigma experienced by individuals with schizophrenia.
- Design and implement a social skills training program for patients with schizophrenia.
- Assess the impact of the social skills training program on these individuals' quality of life and stigma.

3.1. Research Hypotheses

- The social skills training program will significantly improve the quality of life for individuals with schizophrenia.
- The social skills training program will have a statistically significant positive impact on reducing stigma levels among patients with schizophrenia.

4. Subjects & Methods

4.1 Research Design

This study utilized a quasi-experimental research design with a single-group pretest-posttest approach. A quasi-experiment is a research method that assesses the causal influence of an intervention on a particular population without random assignment *(Usadọlọ, 2016)*. Consequently, this design is well-suited for examining the impact of the independent variable (social skills training program) on the dependent variables (quality of life and stigma) in individuals with schizophrenia.

4.2 Study Setting

The research occurred in El-Maamoura Hospital (the inpatient units), operated under the Ministry of Health and Population. This hospital services three northern governorates: El-Beheira, Matrouh, and Alexandria. It includes 21 wards and has an overall bed capacity of 948 beds. Patients' psychiatric units constitute 16 wards of the total hospital wards. Psychiatric wards include three free and two private wards for males, three free and two private wards for females, one male and one female ward for intensive psychiatric care, one male and one female adolescent ward, and one male and one female psycho-geriatric ward.

The hospital also includes an addiction center and outpatient clinic for psychiatric and substance-dependent patients. The inpatient wards primarily offer psychiatric assessments, diagnoses, and pharmacological treatment. The clinic operates three days a week.

4.3 Subjects

The researcher recruited a purposive sample of 50 participants diagnosed with schizophrenia, whose family

caregivers consented to their participation and took part in the study for six consecutive months.

Inclusion criteria

- Male and female.
- Patients are capable of effective communication and interaction.
- Patients who were clinically stable and under antipsychotic treatment during the study.

Exclusion criteria

- Substance dependent.
- Acute psychosis stage.
- Any other neurological disorders.
- Medical conditions that could impact quality of life.

The following equation was used to calculate the study sample size:

$S = X\ 2NP\ (1-P) \div d2(N-1) + X\ 2P\ (1-P)$

S symbolizes the required sample size, while X is the chi-square table value for one degree of freedom at the chosen confidence level (3.841). N signifies the total population size, and P denotes the proportion of the population, presumed to be 0.50 to yield the largest possible sample size. Lastly, d represents the margin of error, expressed as a proportion (0.05) *(Krejcie & Morgan, 1970)*.

4.4 Tools of Data Collection

4.4.1. Structured Interview Questionnaire

The investigators created this tool to capture relevant sociodemographic and medical information. Sociodemographic details collected included age groups, patients' gender, marital status, education, employment status, and residence. Medical information embraced illness duration, hospitalization length and frequency, and admission method.

4.4.2. The Social Skills Questionnaire

Developed by *Paul and Isobel (2003)*, this tool is designed to evaluate a patient's social functioning. It is structured into five categories, with each category containing eight items, totaling 40 statements to be completed: Self-care skills (Personal appearance, appropriate clothing); Domestic skills (Table setting and clearing, cooking simple foods); Community skills (knowledge of location, use of public transport); Social skills (Speech, conversation with residents, participation, leisure activity) and Responsibility (Finance, meals, get up).

Scoring system

Each statement was graded using a 4-point Likert scale. The scale scored one mark for (incompetent) to 4 marks for (competent), with an overall score varying between 41 and 160. The scores for each category were summed, and the mean score for each category was classified as follows: high functioning (3.8 and above), moderate functioning (3.2 to just under 3.8), and low functioning (2.4 to just under 3.2). The frequency and percentage of each level were then reported based on the total scale score.

4.4.3. Quality of Life Scale

This scale, adapted from *Abolmagd et al. (2004)*, assesses various aspects of quality of life. It includes eight subscales. The first subscale, physical health and activities, contains 13 statements concerning the patients' abilities to sit still, pacing excessively, and handwringing. The second subscale concerns social relationships and economic status through 13 statements assessing problems with a family, illness, and conflict. The third subscale covered general behavior and attitude, through 12 statements relevant to dependent on others to meet physical and emotional needs.

The fourth subscale assessed patients' habits such as alcohol use, includes three statements. The fifth subscale was concerned with thought and speech, it contains 12 statements assessing bizarrely illogical or disorganized behavior. The sixth subscale consists of two statements assessing memory and attention: Difficult learning, forgetting medication, and appointments. The seventh subscale assesses orientation and insight, with its two statements that assess getting lost around the home, inability to identify the year, and losing the ability to drive the care. The eighth subscale is concerned with assessing the mood. It includes 20 items relevant to sudden panic attacks, bouts of intense feelings, and unreasonable fear.

Scoring system

Each statement is marked using a three-point Likert scale: Two indicates little difficulty, one indicates moderate difficulty, and zero equals severe difficulty.

4.4.4. Internalized Stigma of Mental Illness Scale (ISMIS)

Ritsher et al. (2003) developed the ISMIS scale, it encompasses 29 statements aimed at assessing internalized stigma through five subscales: Alienation, which assesses the patient feeling out of the world, embarrassed/ashamed because of his/her mental illness; stereotype endorsement, which covers the patients' believe of the violence of mentally ill and or of not getting married; discrimination experience that covers their sense of discriminating against them because of mental illness; social withdrawal that assessing their sense of rejection from healthy people because of their mental illness; and final the stigma resistance that assessing their sense of benefit to the community.

Scoring system

The subscales are evaluated utilizing a four-point Likert scale, with answers ranging from strongly disagree, scored as one, to strongly agree, scored as four. The "stigma resistance" subscale had reverse marked. The overall score is determined by summing the scores of all subscales, ranging from 29-116 points. Higher ISMIS scores reflect a greater level of internalized stigma, whereas lower scores indicate stronger resistance to stigma.

4.5. *Procedures*

Three psychiatric nursing professors reviewed the tools used in this study to ascertain their validity and ensure their comprehensiveness, clarity, accuracy, and relevance, confirming their content validity. Internal consistency was assessed utilizing Cronbach's alpha reliability coefficient. The social skills questionnaire had a reliability of r=0.85, the quality-of-life scale had r=0.89, and the ISMIS scale had r=0.87.

The research was carried out in multiple phases, including the preparative phase, pilot testing, and fieldwork.

The researchers reviewed related literature during the preparative phase and created the study tools. Formal letter was secured from the Nursing Faculty at Damanhour University to the Hospital Director of the study setting.

Prior to initiating the study, authorization was granted by the Scientific Research and Ethical Committee at Damanhour University's Faculty of Nursing under the ethical code (88a). Patients recruited in this study were informed of the research aim. The patient's written consent was secured. Data confidentiality was upheld, with the information used exclusively for research. Patients were informed that their data would remain anonymous and confidential and that they had the right to stop participating.

A pilot sample comprising 10% of the total participants was selected. The pilot study aimed to assess the feasibility of the research process and the clarity and relevance of the questions in the research instrument. The results showed that no modifications were necessary, and the pilot sample was incorporated into the study.

Fieldwork: The researcher developed and implemented the training program over a six-month period, encompassing baseline (preprogram) assessment, planning, development, application, and postprogram assessment (final evaluation). It began in the first week of December 2023 and ended in June 2024.

Program implementation: The social skills training program was executed across the subsequent sequential phases:

I. Assessment phase (Pre-intervention phase)

Before administering the training program, all study participants underwent a baseline assessment from the first day of the last week of December 2023 to the first week of January 2024. Each patient was given a data collection tool and instructed to select a response that accurately reflected their situation. The researchers assisted participants who encountered difficulties while completing the questionnaires.

II. Planning phase

The researchers developed the content for the training program, guided by a comprehensive review of the literature, the characteristics of the sample, and the outcomes of the assessment phase. Additionally, three expert psychiatrists and psychiatric/mental health nursing professors developed and reviewed an illustrated learning booklet for accuracy. This booklet was distributed to the patients and intended to be a self-learning reference after the intervention sessions. The training program sessions emphasized acquiring knowledge and skills to improve the quality of life and reduce the stigma of studied patients with schizophrenia.

III. Implementation phase

This phase spanned five months, from January to June 2024. The researchers conducted the training program by visiting the selected site thrice weekly. The recruited patients were distributed into ten small groups, each composed of five individuals. Meetings were scheduled on Sundays, Mondays, and Wednesdays. Each subgroup participated in 13 sessions, including four theoretical and nine practical sessions. Theoretical sessions lasted between 60-90 minutes. The practical sessions were ranged between 90 minutes to two hours long. The researchers were facilitators, instructors, and motivators, encouraging patient participation in discussions and activities through positive reinforcement.

The theoretical sessions were conducted using lectures, group discussions, and various teaching materials such as handouts, white papers, and PowerPoint presentations to encourage active participation. Patients were requested to describe their personal experiences concerning work and everyday situations. The lectures were delivered clearly and simply, accompanied by an engaging PowerPoint presentation created by the researchers in simplified Arabic. Each theoretical/practical session began with a review of the preceding session to ensure comprehension, and the objective of the new one was outlined, using straightforward language to ensure accessibility for all patients.

During the practical sessions, the researchers employed real-life scenarios and demonstrations as instructional methods to teach essential practical skills. Additionally, the researcher used lectures, videos, and discussions. The researchers allowed the patient to think critically, give a wide range of responses to the different situations, and analyze each one. Afterward, the researchers presented the most appropriate response at the end of each situation discussion and gave a rationale for each choice. A summary of the key points and a notification of the next scheduled session were provided at the end of each meeting.

Contents of the Social Skills Training Program

The first session was a 60-minute theoretical session aimed at helping patients understand fundamental information about schizophrenia, including its definition, symptoms, causes, diagnostic procedures, and treatment approaches. Session 2, lasting 90 minutes, focused on explaining the concept and different types of social skills. Session 3 was another 90-minute theoretical session designed to help patients understand the meaning and various aspects of quality of life.

Session 4, also 90 minutes long, aimed to educate patients on the definition, impact, and ways to reduce stigma. Session 5 was a 90-minute practical session that focused on strategies to enhance quality of life. Patients were encouraged to adopt an optimistic mindset, as optimism is linked to improved task performance, creativity, stress resilience, and self-esteem. Session 6, also 90 minutes long, aimed to help patients develop appropriate conversational skills for socializing and forming friendships.

Session 7 was also a practical session that lasted 90 minutes and focused on enhancing verbal and nonverbal communication skills to help patients understand and empathize with others. Session 8 was a 90-minute practical session dedicated to applying assertiveness skills. Session 9, another practical session of 90 minutes, aimed to help patients develop affiliative skills, such as expressing emotion toward family members and friends and effectively engaging in self-disclosure activities.

Session 10, lasting 90 minutes, focused on equipping patients with problem-solving skills to handle finances, transportation, and activity planning challenges. Session 11, a 90-minute practical session, emphasized the importance of self-care activities, such as personal grooming and hygiene, by applying positive management techniques. Session 12, which lasted 90 minutes, aimed to help patients practice and demonstrate appropriate apology skills. Session 13, a 60-

minute closing session, summarized the program's proceedings and concluded the educational intervention with a post-test assessment.

IV. Evaluation phase

The evaluation phase occurred in the third and fourth weeks of June 2024. Utilizing the same tools, the researchers assessed the program's efficacy by comparing variances between preprogram and postprogram test results. This evaluation enabled the researchers to gauge improved life quality and reduced levels of stigma among the studied patients.

4.6. Data analysis

The study data were analyzed using Microsoft Excel and SPSS (Statistical Package for Social Sciences) version 26.0. Various statistical methods, including the chi-square test, were utilized to compare observed and expected outcomes. Furthermore, correlation coefficients were computed to measure the strength of linear relationships among the variables. A p-value of ≤0.05 was considered the threshold for statistical significance.

5. Results

Table 1 illustrates that most studied patients (60%) were male, aged over 38 years (38%). Most patients had completed preparatory education and were either unemployed or housewives. Additionally, 40% of the patients were single, and a significant proportion (76%) lived in rural regions.

Table 2 displays that 56% of the patients had been living with schizophrenia for over three years. Furthermore, 76% of the patients were admitted to the hospital for less than one month, and 62% were admitted voluntarily.

Table 3 clarifies that 74% of schizophrenic patients had a low level of self-care skills preprogram. This proportion declined to 16% after program implementation; 76% of the studied individuals had low domestic skills at preprogram versus 24% post-program. Also, 64% had low community skills at preprogram versus 22% post-program. Additionally, 66% of the schizophrenic patients had low social skills at preprogram, which decreased to 20% post-program.

Moreover, 56% had a low level of responsibility at preprogram. However, this proportion reduced significantly to 16% after program application. Also, this statistically significant reduction were applied for all the studied social skills.

Figure 1 shows improvements in the total scale of low social skills at post-program implementation. In the preprogram, 82% of the studied patients had low social skills. However, this percentage decreased to 18% post-program.

Table 4 clarifies that 88% of the patients had poor physical health activities at preprogram. This proportion declined to 24% after program implementation; 84% had poor social relationships at preprogram versus 38% post-program. Also, 76% had poor general behavior and attitude at preprogram versus 46% post-program. 96% of the patients had poor habits preprogram that improved to 24% post program. Also, 80% of the patients had a poor level of memory and attention, and this proportion declined significantly to 32% after program implementation for all quality-of-life domains except thought and speech, orientation, and insight ($p>0.05$).

Figure 2 elucidates that 16% of patients had a good quality of life during the preprogram, but this proportion improved to 61% post-program.

Table 5 illuminates that 52% of schizophrenic patients had a high level of alienation at preprogram. This proportion declined to 22% after program implementation; 58% had a high stereotyping stigma at preprogram versus 28% post-program. Also, 64% had a high level of discrimination at preprogram versus 14% post-program. Additionally, 66% had a high social withdrawal at preprogram, and this percentage decreased to 14% post program. 8% had a low level of stigma resistance at preprogram, but this percentage increased significantly to 72% after program implementation. The improvements were statistically significant for all the studied stigma subscales.

Figure 3 shows a reduction in the total patterns of high stigma at post-program application. The figure represents that 66% had a high stigma at preprogram versus 32% post-program.

Table 6 demonstrates a highly statistically significant positive correlation between social skills and quality of life pre and post-program application ($p<0.001$).

Table 7 demonstrates a highly statistically significant positive correlation between social skills and stigma pre and post-program application ($p<0.001$).

6. Discussion

Individuals with schizophrenia often experience cognitive impairments and struggle with daily activities such as maintaining employment, living independently, and achieving a satisfactory quality of life. They may have difficulty accurately interpreting meaningful gestures or responding appropriately. Consequently, they face challenges in developing social and interpersonal skills. Most individuals with schizophrenia demonstrate substantial deficits in social skills, which hinder their ability to form and sustain relationships, fulfill social responsibilities (such as work or marital roles), and effectively meet their personal needs *(Abdelaziz et al., 2017).* This study aimed to evaluate the effect of social skills training program on quality of life and stigma among patients with schizophrenia.

The current study's findings indicate a statistically significant enhancement in social skills following the application of social skills education. This outcome confirms that individuals with schizophrenia can acquire a diverse range of social skills. The observed improvement is likely attributed to the structured training program, which incorporated lectures, discussing a life scenarios, instructional guidance, engaging visuals, videos, and group discussions as teaching strategies. Similarly, *Ghaith and Mohamed (2019)* reported a statistically significant difference in social skills among participants after completing a social skills training program.

Table (1): Frequency and percentage distribution of schizophrenic patients' demographic features (n=50).

Sociodemographic variables	No	%
Age groups		
18-<28	14	28
28-<38	17	34
More than 38	19	38
Mean±SD	64.44 ± 3.65	
Gender		
Male	30	60
Female	20	40
Marital status		
Single	20	40
Married	19	38
Divorced	10	20
Widow	1	2
Educational level		
Can not read and write	7	14
Can read and write.	7	14
The primary level of education	2	4
Preparatory level of education	19	38
Secondary level of education	4	8
University and more	11	22
Occupation		
Unemployed/Housewife	19	38
Employed	4	8
Farmer	8	16
Crafter	14	28
Free work	5	10
Residence		
Rural	38	76
Urban	12	24

Table (2): Frequency and percentage distribution of schizophrenic patients' medical characteristics (n=50).

Medical variables	No	%
Duration of disease		
Less than 1 year	7	14
From 1-<2 years	11	22
From 2-<3 years	4	8
More than 3 years	28	56
Duration of hospitalization		
Less than one month	38	76
From 1-<2 months	11	22
From 2-<3 months	1	2
Frequency of hospitalization		
Never	17	34
Once	7	14
Twice	3	6
Three times	8	16
More than three times	15	30
Mode of admission		
Voluntary	31	62
Involuntary	19	38

Table (3): Comparison of social skills among schizophrenic patients pre- and post-program application (n=50).

Social skills	Pre		Post		X^2	P-value
	N	%	N	%		
Self-care skills						
Low	37	74	8	16		
Moderate	10	20	15	30	26.28	0.001
High	3	6	27	54		
Domestic skills						
Low	38	76	12	24		
Moderate	8	16	14	28	24.33	0.001
High	4	8	24	48		
Community skills						
Low	32	64	11	22		
Moderate	11	22	18	36	29.12	0.001
High	7	14	21	42		
Social skills						
Low	33	66	10	20		
Moderate	11	22	13	26	32.18	0.001
High	6	12	27	54		
Responsibility						
Low	28	56	8	16		
Moderate	13	26	15	30	28.42	0.001
High	9	18	27	54		

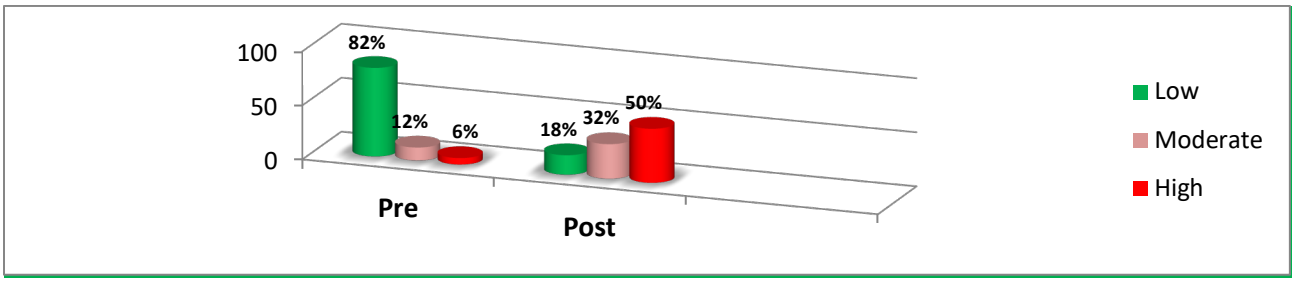

Figure (1): Percentage distribution of total social skills among patients with schizophrenia (n=50).

Table (4): Comparison of quality of life among schizophrenic patients pre- and post-program application (n=50).

Quality of life domains	Pre		Post		X^2	P-value
	N	%	N	%		
Physical health and activities						
Poor	44	88	12	24	27.38	0.001
Good	6	12	38	76		
Social Relationships and Economic Status						
Poor	42	84	19	38	38.82	0.001
Good	8	16	31	62		
General behavior attitude						
Poor	38	76	23	46	22.28	0.001
Good	12	24	27	54		
Habits						
Poor	48	96	12	24	17.5	0.001
Good	2	4	38	76		
Thought & speech						
Poor	50	100	40	80	8.3	0.9
Good	0	0	10	20		
Memory & Attention						
Poor	40	80	16	32	17.2	0.001
Good	10	20	34	68		
Orientation& insight						
Poor	50	0	42	84	7.5	0.8
Good	0	0	8	16		
Mood						
Poor	46	92	14	28	20.77	0.001
Good	4	8	36	72		

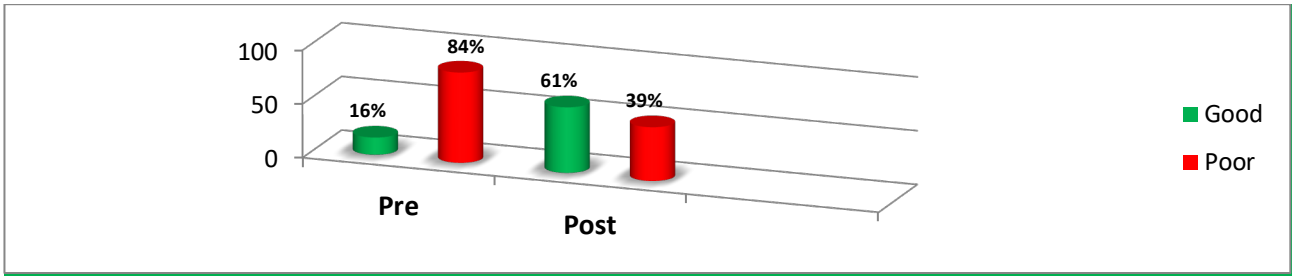

Figure (2): Percentage distribution of total quality-of-life among patients with schizophrenia (n= 50).

Table (5): Comparison of stigma among schizophrenic patients pre- and post-program application (n= 50).

Subscale of stigma	Pre		Post		X^2	P-value
	N	%	N	%		
Alienation						
Low	7	14	29	58		
Moderate	17	34	10	20	21.38	<0.001
High	26	52	11	22		
Stereotype endorsement						
Low	7	14	32	64		
Moderate	14	28	4	8	34.82	<0.001
High	29	58	14	28		
Discrimination experience						
Low	2	4	31	62		
Moderate	16	32	12	24	14.28	<0.001
High	32	64	7	14		
Social withdrawal						
Low	3	6	34	68		
Moderate	14	28	9	18	20.77	<0.001
High	33	66	7	14		
Stigma resistance						
Low	4	8	36	72		
Moderate	18	36	6	12	19.22	<0.001
High	28	56	8	16		

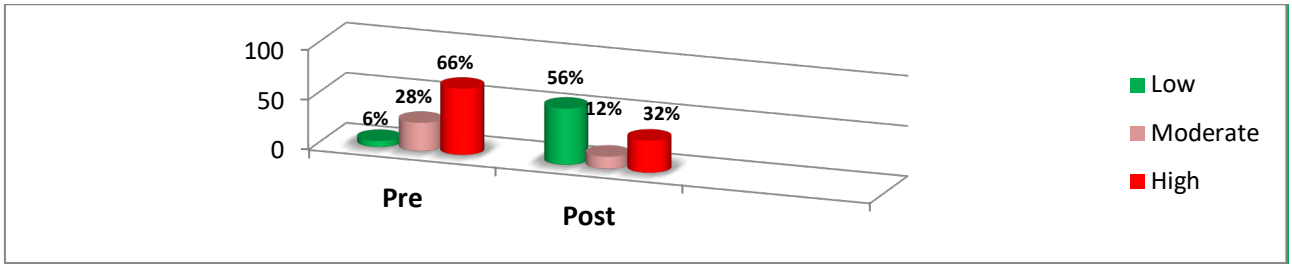

Figure (3): Percentage distribution of total stigma levels among patients with schizophrenia (n=50).

Table (6): Correlation between social skills and quality of life among the studied patients.

Total level of social skills	The overall quality of life			
	Pre		Post	
	r	P-value	r	P-value
	0.733	0.000	0.864	0.000

Table (7): Correlation between social skills and stigma among schizophrenic patients.

Total level of social skills	Overall stigma			
	Pre		Post	
	r	P-value	r	P-value
	0.722	0.000	0.843	0.000

These findings agree with the research done by *Barzegar et al. (2016)* about the impact of social skill education on schizophrenia's negative symptoms. Their research revealed a significant improvement in socialization levels, personal hygiene, and grooming, relationships with others, and spontaneous conversation among individuals with schizophrenia following participation in a training program. Additionally, a notable reduction in symptoms was observed in patients who underwent several months of psychosocial skills training.

In the same way, these results are corroborated by *Best et al. (2019)*, who emphasized the role of nurses in fostering social skills through education, role modeling, and practice. Their findings suggest that patients are more likely to integrate learned skills into their daily routines when consistently engaging in these activities. Through modeling and reinforcing social skills, nurses can assist patients in improving their social interactions. Developing specific skills like sustaining eye contact, practicing active listening, and self-care can also strengthen patients' communication capabilities and increase their confidence in social environments.

Regarding life quality, this study reveals highly statistically significant differences between the two study phases. These findings may be due to participants discovering that social skill training meets their needs to improve QoL (improves mood, social relationships, and physical health). They move towards more self-determined motives. This positive cycle, in which activity therapy improves QoL and increases motivation to participate, creates a positive cycle of health. So, the first research hypothesis is supported.

The above result agrees with *Hjorth et al. (2017)*, who explored the impact of schizophrenia on the physical health domain of quality of life. They found the domains and overall quality of life improved after the intervention program in those patients. These findings also align with *Du et al. (2023)*, who examined the connection between social skills, quality of life, and family life contentment in individuals with schizophrenia. The study found that social skills training improved functional performance and quality of life by using exercises to develop social skills, which resulted in higher participant engagement. Participants showed more enthusiasm in completing daily activities and embracing their roles, and their integration into the community also saw positive changes.

The present study demonstrates a significant improvement across all dimensions of the internalized stigma after participants underwent social skills training. Furthermore, participants reported a general decrease in perceived stigma following the program. These positive outcomes can be credited to the social skills training program's effectiveness as a structured, interactive group discussion, intervention targeted to reduce the internalized stigma and its related aspects through various therapeutic methods. The program played a crucial role in reducing stigma and its associated dimensions, this finding provides additional evidence for the second research hypothesis.

The above findings are agreed by *Kaşli et al. (2021)*, who studied the subjective recovery and stigmatization among chronic mentally ill. Their study demonstrated that the program led to a statistically significant reduction in both the individual domains and overall levels of internalized stigma associated with mental illness.

Likewise, the findings agree with those of *Abdelgelil et al. (2022),* who investigated the negative symptoms among schizophrenic patients after social skills training. Their study concluded that the training was effective in significantly alleviating negative symptoms, reducing stigma, and enhancing social skills among patients compared to their condition prior to the intervention.

This study reveals a significant positive correlation between overall quality of life and social skills, indicating that various aspects of quality of life are linked to an individual's functional abilities. Psychological health and greater satisfaction in social relationships also contribute to improved self-care and social skills.

These outcomes correspond with the findings of *Dionisie et al. (2023)*, who studied the association between life quality and functionality among schizophrenic patients and found that lower social skills in individuals with schizophrenia were linked to a diminished quality of life. Similarly, the results agree with the research by *Mahmoud et al. (2017)*, which highlighted that most schizophrenic patients experience little social support and reduced quality of life, emphasizing the connection between social support and overall well-being.

Regarding the correlation between social skills and overall stigma levels, this study demonstrates a statistically significant positive relationship between these variables. This result may be linked to the harmful effects of stigma on self-esteem, hope, and social functioning in individuals with schizophrenia. Internalized stigma causes people to adopt society's negative views, leading to feelings of shame and insignificance, social isolation, and emotional distress. In psychiatric conditions, factors such as psychological distress, impaired social functioning, family burden, self-harm tendencies, negative caregiver attitudes, and living away from home have been identified as key contributors to both life quality and stigmatization.

These results are in line with *Turkmen et al. (2021)*, who studied the connection between internalized stigma and social performance in individuals with psychiatric disorders and reported a mutual influence between social functioning and internalized stigma.

7. Conclusion

Program focused on social skills training have proven effective in enhancing the quality of life and decreasing stigma among patients with schizophrenia.

8. Recommendations

The current study suggests the following recommendations:

- Develop focused interventions to improve the quality of life for individuals with schizophrenia.

- Develop a psychoeducational nursing program aimed at mitigating the negative effects of schizophrenia and improving patients' insight into their condition.
- Conduct awareness programs for both patients with schizophrenia and their families to educate them on effective ways to support and interact with affected individuals.
- Establish rehabilitation programs to improve patients' insight levels, strengthen their coping mechanisms, and ultimately enhance their overall quality of life.
- Implement psychosocial support programs for family members and caregivers to train them on the necessary skills to provide emotional and social support to individuals with schizophrenia.
- Conduct future research on a larger sample of patients with schizophrenia to explore effective strategies for improving their quality of life.

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