Original article

The Impact of Family Environment on Self-Stigmatization and Social Functionality Among Schizophrenic Patients

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Abstract

Background: The family environment has a critical role in treatment compliance, social functioning, and internalized stigmatization of individuals with schizophrenia. This study aimed to determine the relationship between family environment, social functionality, and self-stigmatization.

Aim: This descriptive and cross-sectional study was undertaken to determine the impact of the family environment, self-stigmatization, and social functionality on 96 patients with schizophrenia, who were registered with an association called Schizophrenia Friends.

Methods: Data was collected using a questionnaire, which contained a Family Environment Scale, Self-Stigmatization Scale and Social Functionality Evaluation Scale. Descriptive statistics, an independent sample *t* - test and correlation analyses were used to analyze the data.

Results: The patients had high self-stigmatization and social functionality levels. The self-stigmatization level was higher among those who were single and who lived with their parents, however, the social functionality level was higher among the employed people.

Conclusion: Accordingly, psycho-education sessions can be organized to reduce patients' stigmatization-related perceptions. [*Ethiop. J. Health Dev*: 2022: 36(1): 00-00]

Keywords: Self-stigma, Family environment, social functioning, Schizophrenia

Introduction

Schizophrenia is a mental disorder that emerges during early adulthood when people are socially and professionally functional and that causes a significant loss of abilities. Disorders in functions continue for five years after the onset of the disease despite taking the appropriate medication (1). Patients with schizophrenia suffer from difficulties in fulfilling their social roles, establishing social interaction, and meeting their own needs (2,3). Only a few patients live independently, while many need care and support to maintain their daily life (2,4).

Research indicates that family is an important factor for the mental development of people, and certain family environments change the progress of mental disorders (4,5). Environments where interdependence, sincerity, self-expression, positive opinions, and family harmony are achieved can be beneficial for schizophrenic patients and can reduce the severity of symptoms and their environmental stress (6-9). Difficult family environments, which are confrontational, have decreased protection, are violent, negligent and consist of aggressive characteristics, can exacerbate depression, anxiety, and suicidal thoughts as a source of stress (5,9). In a study conducted with schizophrenic patients in Taiwan, it was found that the feeling of family harmony partially mediated the relationship between internalized stigma and quality of life (10). It has been reported that the supportive family environment increased compliance with treatment and increased social functionality (11). Positive attitudes such as empathy and emotional support were reported to increase flexibility among patients and assisted them in developing a resistance to environmental stress (8). Family adaptation may be beneficial for patients with schizophrenia, and a poorer family adaptation may serve as a stress source and result in more severe thoughts of depression, anxiety, and suicide (9). A recent study reported that family adaptation partially served as an intermediary element for the relationship between internalized stigma and healthy quality of life (10).

Unhealthy family environment and internalized stigmatization may worsen the quality of life. The stigmatizing impact of schizophrenia may negatively impact their environment and those around them. Internalization or self-stigmatization is the adoption of popular stigmatizing thoughts such as dangerousness or feelings of insufficiency by the people with mental disorders (12). Internalized stigmatization prevents adaptation to treatment and the recovery process among patients with schizophrenia (12). Recent studies have indicated that insufficient family support was related to self-stigmatization (12-13).

Functional recovery and social integration of patients with schizophrenia are among the important therapeutic objectives (14). One of the greatest difficulties for people with schizophrenia, apart from social adaptation is weak social functionalities. Patients with schizophrenia have severe problems in terms of their daily life skills, social relationships, families, and communicating within their environments, and it is a fact that these patients cannot return to their original functional levels. Chronical schizophrenic patients display disorders in solving social problems, job performance and interpersonal relationships (15). Social functionality is defined as the ability to work, maintain interpersonal relationships, and perform self-care activities. Social functionality levels affect social support, activity levels and the functionality of life in general (16). Schizophrenia reduces patients' daily functionality (17). Thus, patients' social functionality levels are believed to be directly related to functional

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recovery. Lower social functionality reduces their quality of life and creates problems in their social, family, entertainment, and professional spheres (18). One of the factors affecting social functionality is believed to be family. Schizophrenia development is associated with mental and social stressors such as unhealthy family communication – a non-biological factor. Moreover, communication-related problems experienced by the parents of highly risky children increased their vulnerability to developing schizophrenia (19). Therefore, family is an important factor that affects patients' mental health and emotional well-being (20).

Based on all these findings, it is thought that the family environment may influence self-stigmatization and social functionality in individuals diagnosed with schizophrenia. During a literature search, no research has been found which addressed the effects of schizophrenic patients and family environment on self-stigmatization and social functionality. Therefore, this study aimed to examine the impact of family environment on stigmatization and social functionality among the people with schizophrenia. The results of this study can guide health professionals or families with schizophrenic members. It may also help professionals provide the services, assistance and support which can reduce the feeling of stigmatization among patients and increase social functionality.

Method

Design and sample

This study was conducted with 96 patients registered with the Association of Schizophrenia Friends, between January and March 2020. The inclusion criteria were as follows: diagnosis of schizophrenia, voluntariness to participate, having no inability to establish communication.

Research question

1. What were the mean scores of the participants on the self-stigmatization assessment and social functionality assessment scales?
2. Is there a relationship between the family environment scale and the self-stigmatization and social functionality assessment scales?

Data collection tools

Data was collected using a questionnaire, which included questions around the patient's socio-demographic characteristics (gender, age, marital status, educational status, financial status etc.), a Family Environment Scale, a Self-Stigmatization Assessment Scale, and a Social Functionality Assessment Scale. The three scales included in the questionnaire are reviewed below.

Family Environment Scale (FES): Developed by Fowler (1982), the validity and reliability study of this scale was performed by Usluer (1989) (21). It assesses the mental perception of family environment, and it can be administered to the family members. The scale consists of 26 items and two subdimensions: Family Unity and Family Control. The highest scores for the former and latter were 64 and 40, respectively, and the score from each subdimension reflects the level of the individuals' interpersonal relationships and control properties. Cronbach's alpha coefficient was calculated as 0.82 and 0.74 for the subdimensions while assessing the internal consistency of the scale (19).

Self-Stigmatization Assessment Scale: This 17-item Likert type scale was developed by Yıldız et al. Cronbach's alpha coefficient was 0.93 while it ranged between 0.60 and 0.91 for the subdimensions. Three factors that could explain 63.5% of the scale were perceived devaluation, internalized stereotypes, social withdrawing, and concealment of the illness. Higher scores suggest higher stigmatization (22).

Social Functionality Assessment Scale: The Social Functionality Assessment Scale was developed by Yıldız et al. It consists of 19 items and aims to measure social functioning (23). The scale has four subdimensions: Self-care subdimension for the items 1-7, Interpersonal Relationships, and amusement subdimension for the items 8-14, Independent Life subdimension for the items 15-18, and Employment subdimension for item 19. Each item has three options and is scored between 1 and 3. The lowest possible score is 19 and the highest is 57. Higher scores indicate higher levels of social functioning. The Cronbach's alpha coefficient was 0.84. This scale was filled out by the researcher interviewing the patient or by the relatives of the patient and/or by the patient themselves. Filling out the scale took roughly between 7-8 minutes.

Data analysis

The data obtained during the study was analyzed using IBM SPSS (Statistical Package for Social Sciences) 21.0 package software program. The IBM SPSS program is one of the most widely used statistical programs in the field of health sciences.

For the analysis of the study, data on the socio-demographic characteristics and family environment scale, self-stigmatization assessment scale and social functionality assessment scale, percentages and mean values were used.

The comparison of the Family Environment Scale, Self-Stigmatization Assessment Scale, and the Social Functionality Assessment Scale in terms of the participants' socio-demographic characteristics were performed using an independent t- test and a One-Way ANOVA. The relationship between two continuous variables was assessed using Pearsons correlation coefficient.

Ethical considerations

Ethical approval was obtained from Ethical Committee for Scientific Research at Kocaeli University Medical School (KÜ GOKAEK 2020.01.03-2019/353) and permission was obtained from the school where the study was performed. The patients were informed about the study and their informed consent was obtained.

Results

Patient characteristics: Of the patients forming the experimental group, 74% were male, 86.5% were single, and 76.2% had high school degree or higher. Of the patients in this group, 86.5% had an income equal to their expenses, and 86.5% lived with their parents. The mean age of the patients was 37.41±8.71 years.

Mean scores obtained by patients from the self-stigmatization assessment scale and social functionality assessment scale based on socio-demographic characteristics: Table 1 has the mean scores that the patients obtained from the self-stigmatization assessment scale and social functionality assessment scale. Regarding the self-stigmatization assessment scale, those who were single had statistically and significantly higher scores than those who were married, and those who lived with their parents had statistically and significantly higher scores than those living with their spouses and children[$p<0.05$). The scores from this scale did not significantly vary based on gender, educational status, and financial status. Regarding the social functionality assessment score based on the socio-demographic characteristics, only employment status indicated a statistically significant difference. Employed people could assess the social functionality better than the unemployed ones [$p<0.05$).

Table 1. **Patients' characteristics and comparison of SSI-P and social functioning assessment**

Characteristics	SSI-P			Social Functioning Assessment		
	Mean ± SD	t / F	p	Mean ± SD	t / F	p
Gender						
Women	46.24±10.47	-1.483	0.142	48.04±2.74	0.315	0.754
Men	50.04±11.21			47.81±3.14		
Education level						
Primary school and lower	49.30±11.29			47.52±3.32		
High school and higher		0.124	0.901		-0.638	0.525
	48.97±11.11			47.98±2.95		
Marital status						
Married	38.00±9.34	4.184	**0.000***	48.84±2.60	-1.245	0.216
Single	50.78±10.36			47.72±3.08		
Perceived economic level						
Less than income expense						
Equal to income expense	52.53±12.27			46.92±3.54		
		1.221	0.225		-1.220	0.226
	48.50±10.88			48.02±2.94		
Working in a job						
Yes	42.70±12.49	1.940	0.055	50.10±3.21	-2.518	**0.013**
No	49.79±10.76			47.61±2.92		
Other members of household						
Parents	50.89±10.25	4.501	**0.000***	47.69±3.06	-1.446	0.151
Spouse-children	37.30±9.11			49.00±2.67		

Abbreviation: SSI-P, self-stigmatization assessment scale; SD, standard deviation
*$p<0.01$

Mean scores obtained by patients from the scales
Table 2 indicates the mean scores participants obtained from the scales. Accordingly, the mean score from the family unit subdimension was 36.71±6.50 while the mean score from the Family Control subdimension was 21.52±3.73. The mean score from the self-stigmatization assessment scale was high [49.05±11.09), and the scores from its subdimensions "perceived devaluation, internalized stereotypes, social withdrawal and concealment of the illness" were respectively as follows: 24.19±6.27; 18.54±4.13, 6.31±1.77. The mean score from the social functionality assessment scale was 47.95±3.19 [high). The scores from its subdimensions "self-care, interpersonal relationships and amusement, independent life and working" were respectively as follows: 17.25±0.89, 18.77±1.83, 10.77±1.23, 1.08±0.53.

Table 2. **Descriptive statistics of patients' family environment, SSI-P and social functioning assessment (n=96)**

Scales	Mean ± SD	Min–Max	Range rover
Family environment scale			
Family Unity	36.71±6. 50	27-74	16-64
Family Control	21.52±3.73	17-41	10-40
SSI-P	49.05±11.09	25-74	17-85
Perceived devaluation subscale	24.19±6.27	11-39	8-40
Internalized stereotypes and social withdrawal subscale	18.54±4.13	8-25	7-35
Concealment of the illness subscale	6.31±1.77	2-10	2-10
Social Functioning Assessment	47.87±3.03	41-53	19-57
Self-care	17.25±0.89	15-21	7-21
Interpersonal relationships and amusement	18.77±1.83	14-21	7-21
Independent life	10.77±1.23	8-12	4-12
Employment	1.08±0.53	1-3	1-3

Abbreviation: SD, standard deviation

Associations between scores obtained by patients from the family environment, self-stigmatization assessment scale and social functionality assessment scale: Table 3 presents the correlations between the score's patients obtained from the scales. A positive relationship was found between the subdimensions of family environment while the correlation between the family environment, self-stigmatization assessment scale and social functionality assessment scale was not significant.

Table 3. **The correlation between patients' family environment, SSI-P and social functioning assessment**

Variables		Family Unity	Family Control	SSI-P	Social Functioning Assessment
Family Unity	r	1	0.306*	-0.003	0.130
	p		**0.002**	0.973	0.207
Family Control	r		1	0.133	-0.009
	p			0.196	0.930
SSI-P	r			1	-0.115
	p				0.266

*p<0.01

Discussion

Different family environments affect families' coping strategies during an acute schizophrenic episode. These have an influence on the recurrence of the episodes and the course and outcome of the disorder (24). Challenging family environments which have conflicts, lower levels of protectiveness, violence, negligence, and aggression cause poor health outcomes and allostatic loads. In this context, dysfunctional family environments have a negative effect on mental health (11). This study examined the relationship between the family environment's evaluation of self-stigmatization and social functioning in patients diagnosed with schizophrenia.

This study found that single individuals were more likely to stigmatize themselves as compared to married individuals. Studies in the literature indicate that marital status does not affect stigmatization levels (25-27). A study found that individuals who have no family members or friends have higher levels of stigmatization (28). Being married as a social support factor has a positive effect on patients and is a criterion for a good prognosis. Individuals who are single and at risk should be given education to increase their social support factors and should be directed to occupational activities.

Those who lived with their parents had statistically and significantly higher scores from the self-stigmatization assessment scale than those who lived with their spouse and children. The literature has no relevant studies in this regard. The probability of the pressure regarding families' self-burden, may affect the patients and might have yielded this result, therefore, qualitative studies can be carried out to clarify this issue.

The social functionality of the employed patients in this study was better as compared to that of the unemployed patients. Melle et al. (2000) found that loss of employment among patients suggested a negative result in terms of social functionality and integration to the society (29). The patients with schizophrenia in remission had higher employment rates (30). It is a fact that employment creates positive effects on patients with schizophrenia. Moreover, it is believed that legal obligations and sanctions regarding the employment of patients can facilitate this process, especially with regards to enabling them to adapt in society.

This study indicated that patients' self-stigmatization levels were higher. There are relevant studies with similar results in the literature indicating that internalized stigmatization levels were high among the patients with schizophrenia (10, 31). A qualitative study conducted with schizophrenic patients reported that patients experienced shame and feelings of inferiority, and that they suffered from disappointment due to the idea of being a burden to their families and receiving a psychiatric diagnosis (32). The internalized stigma heightens the symptoms, especially when patients internalize the stereotypes and start to become introverted due to feelings such as worthlessness or shame, and this results in a delay of the recovery process and distorts the progress of patients (33). A study conducted with forensic psychiatric patients indicated that the patients' mean social functionality scores decreased as their mean self-stigma scores increased (33). Another relevant study reported that internalized stigma among psychotic patients might adversely affect the functionality (34). The results of the current study indicated the importance of personal/group trainings performed to reduce the rate of internalized stigma which emerges because of a schizophrenic diagnosis. It is believed that psychiatric

nurses can contribute to the recovery of schizophrenic patients due to their training and the roles that they can play regarding guidance, and counseling, and that because they can facilitate the social lives of their patients.

Participants' social functionality levels were found to be high in the study. Aydın (2016) found that social functionality levels of patients with schizophrenia were high (35). A relevant experimental study reported that the psychoeducation provided to the patients with schizophrenia positively affected the general level of behavioral functional disorder as compared to the control group (36). These results reflect that social functionality can be increased with interventions. High social functionalities of patients were a positive and desired result.

The correlation analysis performed in this study indicated that the relationship between the family environment, self-stigmatization and social functionality was not significant. This prognosis is important for the adaptation of patients with mental disorders. In addition, family behaviors and relationships are particularly important in the treatment process. A relevant study indicated that interpersonal relationships and control perceptions of patients with schizophrenia positively and significantly increased in the family environment (5). O'Brien et al. found in their study (2006) conducted among adolescents with psychosis that positive family participation in the recovery process reduced the number of symptoms in the early phase and increased social functionality (37). Anczewska et al. noted that a supportive family may positively impact the psychosocial difficulties experienced by an individual (38). The emotions expressed by patients with psychiatric disorders were found to have a positive relationship with the stigmatization content and process which had an adverse relationship with the clinical and personal recovery (39). Hsiao et al. (2018) found that a better family adaptation terminated the adverse impacts of internalized stigmas and enhanced patients' quality of life (10). Families of patients with schizophrenia have a great impact on social functionality. While performing the appropriate actions, families can act as a therapist and significantly facilitate the process of adaptation to society while undertaking a social role with patients (40). Positive family feedback decreased the negative symptoms of patients with schizophrenia and contributed to the quality of life positively (41). Families are highly important for the Turkish society. Strong family relationships and ties are among the important cultural characteristics of the Turkish society (14). According to the present study, the mean score from interpersonal relationships – a subdimension of the Family Environment Scale – was above the moderate level. Therefore, positive perceptions of the family environment by the patients might have affected the results.

The results of the study indicate that patients should not be left alone during the home care process, and families should also be supported in terms of community mental health. Public health professionals / health professionals working in the field of mental health should educate and follow the patient and the family during the rehabilitation phase of the patient and organize counseling and support activities. It is thought that effective compliance, cooperation of the patient and the family, and participation in the treatment can positively affect the social functionality of the patient. Empowering patients and families personally and increasing their self-esteem are important attempts to prevent or eliminate self-stigma. Participating in anti-stigmatization studies and taking part in advocacy groups may also be useful supports for patients and families (41). In addition, it may be beneficial to provide information consultancy and support to families about what to do during the symptom, sign, and the crisis period of the patients.

Limitation

The study was conducted with patients in only one institution, and patients in other institutions were not included, which may be a limitation of this study.

Conclusion

This study indicated that the self-stigmatization level was higher among the patients with schizophrenia, particularly the single ones and those who lived with their families, and that the level of assessing the social functionality was higher among the employed people. Patients' self-stigmatization and the social functionality level of patients was found to be high. Since patients with schizophrenia are oriented to stigmatize themselves, public health professionals / health professionals working in the field of mental health should conduct psychoeducation sessions that will reduce the rate of self-stigmatization. Acceptance of the disorder by the family members, informing them about the problems they may see and the organization of regular family trainings by the psychiatric nurses are believed to have positive effects on the patients.

References

1. Şükrü F, Öztürk M, Kılıç Ö, Güneytepe Sİ, Üçok A. The impact of a six-month interpersonal group psychotherapy on functionality of patients with schizophrenia in a community mental health center. Anadolu Psikiyatri Dergisi. 2018;19(6):559-566. doi: 10.5455/apd.297262
2. Kavak F, Ekinci M. A comparison of the life qualities and functional recovery levels of schizophrenic patients who live in their homes and in protected houses. Gümüşhane University Journal of Health Sciences. 2014; 3(1): 588-598.
3. Dziwota E, Stepulak MZ, Włoszczak-Szubzda A, Olajossy M. Social functioning and the quality of life of patients diagnosed with schizophrenia. Annals of Agricultural and Environmental Medicine**.** 2018;25(1):50-55. doi: 10.5604/12321966.1233566
4. Amagai M, Takahashi M, Amagai F. Qualitative study of resilience of family caregivers for patients with schizophrenia in Japan. Age (Years). 2016;63(4.9):55-74.

5. Özçelik EK. Family enviroment, internalized stigma and quality of life in patients with schizophrenia. Master thesis, Erzincan University, Health Science Institute, Nursing Department, 2015, Erzincan.
6. Tüzer V, Başterzi AD, Aydemir Ç, Kısa C, Göka E. Assessment of expressed emotion and family environment in schizophrenic patients. Turkish Journal of Clinical Psychiatry. 2003;6(4):198-203.
7. Gurak K, Weisman de Mamani A. Risk and Protective Factors, Perceptions of Family Environment, Ethnicity, and Schizophrenia Symptoms. The Journal of Nervous and Mental Disease. 2016;204(8):570-7. doi: 10.1097/NMD.0000000000000558.
8. Girón M, Nova-Fernández F, Mañá-Alvarenga S, Nolasco A, Molina-Habas A, Fernández-Yañez A. et al. How does family intervention improve the outcome of people with schizophrenia? Social Psychiatry and Psychiatric Epidemiology. 2015;50(3):379-87. doi: 10.1007/s00127-014-0942-9.
9. Lopez D, de Mamani AW. Assessing the effect of family cohesion and insight on suicidal ideation among individuals with schizophrenia. Schizophrenia Bulletin. 2019;45(Suppl 2): S227.
10. Hsiao CY, Lu HL, Tsai YF. Effect of family sense of coherence on internalized stigma and health-related quality of life among individuals with schizophrenia. International Journal of Mental Health Nursing. 2018;27(1):138-146. doi: 10.1111/inm.12302.
11. Shan P, Li G, Jiang D, Chen C, Wang L, Tian H, ... & Zhang J. Supportive Family Environments can Improve Treatment Compliance, Social Cognition, Brain Activity in Patients with Schizophrenia: A Pilot Study. Psychiatry and Clinical Psychopharmacology. 2020;30(4):362-368.
12. Özçelik EK, Yıldırım A. Schizophrenia patients' family environment, internalized stigma and quality of life. Journal of Psychiatric Nursing. 2018;9(2):80-87. doi:10.14744/phd.2017.07088
13. Asrat B, Ayenalem AE, Yimer T. Internalized Stigma among Patients with Mental Illness Attending Psychiatric Follow-Up at Dilla University Referral Hospital, Southern Ethiopia. Hindawi Psychiatry Journal. 2018 Jan 23; 2018:1987581. doi: 10.1155/2018/1987581.
14. Coşkun E, Altun, ÖŞ. The relationship between the hope levels of patients with schizophrenia and functional recovery. Archives of Psychiatric Nursing. 2018;32:98–102. http://dx.doi.org/10.1016/j.apnu.2017.10.006
15. Bae SM, Lee SH, Park YM, Hyun MH, Yoon H. Predictive factors of social functioning in patients with schizophrenia: exploration for the best combination of variables using data mining. Psychiatry Investigation. 2010;7(2):93-101. doi: 10.4306/pi.2010.7.2.93.
16. Aşık E, Barlas G. Psikiyatri hemşireleri için bir alan: şizofrenide duygu tanıma ve sosyal işlevsellik. JAREN. 2016; 2(2): 92-96. doi: 10.5222. (In Turkish).
17. Kimhy D, Vakhrusheva J, Jobson-Ahmed L, Tarrier N, Malaspina D, Gross JJ. Emotion awareness and regulation in individuals with schizophrenia: Implications for social functioning. Psychiatry Research. 2012;200:193-201. http://dx.doi.org/10.1016/j.psychres.2012.05.029
18. Can G, Tanrıverdi D. Social functioning and internalized stigma in individuals diagnosed with substance use disorder. Archives of Psychiatric Nursing. 2015;29(6): 441-446. doi: 10.1016/j.apnu.2015.07.008.
19. Özçelik EK. Family environment, internalized stigma and quality of life in patients with schizophrenia. Master thesis, Erzincan University, Health Sciences Instıtutes, Nursing Department, 2015, Erzincan.
20. Sawant NS, Jethwani KS. Understanding family functioning and social support in unremitting schizophrenia: A study in India. Indian Journal of Psychiatry. 2010;52:145-149.
21. Usluer S (1989) The reliability and validity of the Turkish Family Environment Questionnarie. Unpublished master thesis. İstanbul, Boğaziçi University, Faculty of Education, Education Sciences Department (In Turkish).
22. Yıldız M, İncedere A, Kiras F., Abut FB. Development of self-stigma inventory for patients with schizophrenia (SSI-P): reliability and validity study. Psychiatry and Clinical Psychopharmacology. 2019;29(4):6540-649. doi: 10.1080/24750573.2018.1533189
23. Yildiz M, Kiras F, Incedere A, Esen D, Gurcan MB, Abut B. et al. Development of Social Functioning Assessment Scale for People with Schizophrenia: validity and reliability study. Anadolu Psikiyatri Dergisi. 2018;19(SI 2):29-39. doi: 10.5455/apd.2374
24. Caqueo-Urízar A, Rus-Calafell M, Craig TK, Irarrazaval M, Urzúa A, Boyer L, Williams DR. Schizophrenia: Impact on Family Dynamics. Current Psychiatry Reports. 2017;19(1):2. doi: 10.1007/s11920-017-0756-z.
25. Shin YJ, Joo YH, Kim JH. Self-perceived cognitive deficits and their relationship with internalized stigma and quality of life in patients with schizophrenia. Neuropsychiatric Disease and Treatment. 2016;16;12:1411-7. doi: 10.2147/NDT.S108537.
26. Zhang TM, Wong IY, Yu YH, Ni SG, He XS, Bacon-Shone J. et al. An integrative model of internalized stigma and recovery-related outcomes among people diagnosed with schizophrenia in rural China. Social Psychiatry and Psychiatric Epidemiology.

2019 Aug;54(8):911-918. doi: 10.1007/s00127-018-1646-3.
27. Tesfaw G, Kibru B, Ayano G. Prevalence, and factors associated with higher levels of perceived stigma among people with schizophrenia Addis Ababa, Ethiopia. International Journal of Mental Health System. 2020;14(1):1-8. https://doi.org/10.1186/s13033-020-00348-9
28. Golberstein E, Eisenberg D, Gollust SE. Perceived stigma and mental health care seeking. Psychiatric Services. 2008;59(4):392-399. doi: 10.1176/ps.2008.59.4.392.
29. Melle I, Friis S, Hauff E, Vaglum P. Social functioning of patients with schizophrenia in high-income welfare societies. Psychiatric Services. 2000;51(2):223-228. doi: 10.1176/appi.ps.51.2.223.
30. Karadayı G, Emiroğlu B, Üçok A. Relationship of symptomatic remission with quality of life and functionality in patients with schizophrenia. Comprehensive Psychiatry. 2011;52(6):701-707. doi:10.1016/j.comppsych.2010.11.012
31. Çapar M, Kavak F. Effect of internalized stigma on functional recovery in patients with schizophrenia. Perspective in Psychiatric Care. 2019;55(1):103–111. https://doi.org/10.1111/ppc.12309
32. Wong YI, Kong D, Tu L, Frasso R. "My bitterness is deeper than the ocean": understanding internalized stigma from the perspectives of persons with schizophrenia and their family caregivers. International Journal of Mental Health System. 2018;12:14. https://doi.org/10.1186/s13033-018-0192-4
33. Baysan Arabacı L, Başoğul C, Büyükbayram A. Social functuanality and internalized stigmatizaion levels of forensic psychiatric patients. Anadolu Psikiyatri Dergisi. 2015;16(2):113-121. doi: 10.5455/apd.155230
34. Sevindik CS, Özer ÖA, Kolat U, Önem R. Internalized stigmatization and its effect on functionality in patients with major depressive disorder or psychotic disorder. The Medical Bulletin of Sisli Eftal Hospital. 2014;48(3):198-207. doi: 10.5350/SEMB.20140505052218
35. Aydın E. The effects of case management on clinic symptoms, social functioning, and life quality of schizophrenia patients. Specialty thesis in medicine, Sağlik Bakanliği Türkiye Kamu Hastaneleri Kurumu Istanbul Ili Bakirköy Bölgesi Kamu Hastaneleri Birliği Genel Sekreterliği Bakirköy Prof. Dr. Mazhar Osman Ruh Sağliği ve Sinir Hastaliklari Eğitim Ve Araştirma Hastanesi Psikiyatri Kliniği, 2016, İstanbul. (In Turkish).
36. Kryshtal V, Kozhyna H, Markova M, Korovina L. The dynamics of the level of social functioning and quality of life of patients with schizophrenia as a marker of the effectiveness of psychoeducational programs. Journal of Education, Health and Sport. 2017;7(2):618-624.
37. O'Brien MP, Gordon JL, Bearden CE, Lopez SR, Kopelowicz A, Cannon TD. Positive family environment predicts improvement in symptoms and social functioning among adolescents at imminent risk for onset of psychosis. Schizophrenia Research. 2006 Jan 31;81(2-3):269-75. doi: 10.1016/j.schres.2005.10.005.
38. Anczewska M, Switaj P, Roszczynskamichta J, Chrostek A, Charzynska K. Psychosocial difficulties experienced by people diagnosed with schizophrenia--barriers to social inclusion. In: Bulgarian Comparative Education Society. Plovdiv: o. V., S. 2013;293-299.
39. Chan KK. S, Lam CB. The impact of familial expressed emotion on clinical and personal recovery among patients with psychiatric disorders: The mediating roles of self-stigma content and process. American Jorunal of Orthopsychiatry. 2018;88(6):626. doi: 10.1037/ort0000327.
40. Dziwota E, Stepulak MZ, Włoszczak-Szubzda A, Olajossy M. Social functioning and the quality of life of patients diagnosed with schizophrenia. Annals of Agricultural of Environmental Medicine. 2018;25(1):50-55. doi: 10.5604/12321966.1233566.
41. Halford WK, Schweitzer RD, Varghese FN. Effects of family environment on negative symptoms and quality of life of psychotic patients. Hospital & Community Psychiatry. 1991; 42(12):1241-1247. doi: 10.1176/ps.42.12.1241.
42. Yildiz M, Özten E, IŞik S, Özyildirim İ, Karayün D, Cerİt C, Üçok A. Şizofreni hastaları, hasta yakınları ve majör depresif bozukluk hastalarında kendini damgalama. Anatolian Journal of Psychiatry/Anadolu Psikiyatri Dergisi. 2012;13(1): 1-7.