



## Original Article

# Investigation of the psychometric properties of the stigma section of the Family Interview Schedule

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### Abstract

**Objectives:** The aim of this study was to adapt the stigma subdimension of the Family Interview Schedule (FIS) developed for a World Health Organization study for use with a Turkish population and to conduct a validity and reliability assessment of the instrument.

**Methods:** The study sample consisted of 141 family members who presented at the Adult Psychiatry Inpatient and Outpatient Unit of a university hospital and the İzmir Schizophrenia Solidarity Association between May 2019 and November 2020 who met the sampling criteria. The inclusion criteria were age >18 years, literacy, family member of a patient with a diagnosis of schizophrenia, schizoaffective disorder, or a mood disorder. Internal consistency analysis and test-retest analysis were performed to assess reliability, and validity was evaluated using language validity analysis, content validity analysis, and exploratory factor analysis.

**Results:** The content validity index of the stigma section of the FIS was 0.96, and a Cronbach alpha level of 0.81 was determined. The Spearman correlation coefficient of test-retest reliability between 2 measurements was 0.86.

**Conclusion:** The results of the present study demonstrated that the Turkish version of the stigma section of the FIS created is a valid and reliable instrument that can be used to assess the stigma experiences of family members of people with chronic mental illness in Turkey.

**Keywords:** Chronic mental illness; family stigma; reliability; validity.

### What is presently known on this subject?

- The Family Interview Schedule, developed for the World Health Organization, is a widely used assessment tool designed to assess the experience of family members of an individual with chronic mental illness. One section of the instrument evaluates perceptions related to stigma.

### What does this article add to the existing knowledge?

- The results of the present study indicate that the Turkish version of the stigma section of the Family Interview Schedule is a valid and reliable assessment tool that can be used to evaluate the stigmatization experiences of family members in Turkish society.

### What are the implications for practice?

- A Turkish version of the stigma section of the Family Interview Schedule offers mental health professionals a valuable, rapid assessment tool to evaluate and address stigmatization concerns of family members. The availability of additional comparable data will also benefit international research.

Effectively addressing chronic mental illness involves more than just control of symptoms and management of disabilities; it also includes social acceptance of the patient and their family members.<sup>[1,2]</sup> Numerous studies have shown that patients with chronic mental health problems and their relatives are widely affected by stereotypes and prejudices.<sup>[3-8]</sup> Family members are the most important source of support for patients; however, stigma can contribute to a degradation of their own mental health, including depression and emotional distancing from the stigmatized relative.<sup>[8]</sup> Social stigma and discrimination can have a cascading adverse effect.

Family members often experience self-stigmatization/internalized stigma as a result of socially accepted stereotypes.<sup>[2]</sup>

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**Submitted Date:** December 04, 2020 **Accepted Date:** June 20, 2021 **Available Online Date:** March 21, 2022

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Family members have reported feelings of shame, self-blame, anger, fear, worry, hopelessness, unhappiness, loneliness, helplessness, and guilt, as well as experiences of being ignored and isolated, including by mental health professionals, and discrimination with regard to public support in areas such as accommodation and employment.<sup>[3,7,9-11]</sup>

In the literature, the stigma experience of family members has generally been studied using self-report or qualitative studies.<sup>[2]</sup> Some quantitative studies have also examined society's approach to families when they learn about the presence of a sick individual, as well as the emotional responses of family members related to the individual, such as embarrassment and anger, and behavioral responses, such as hiding the disease. The family experience of stigma has typically been evaluated by modifying existing measurement tools; for example, using the stigma subdimensions of scales, or evaluation questions based on case studies.<sup>[2,12,13]</sup> The Family Experiences Interview Schedule,<sup>[13,14]</sup> which is used to assess family burden, and the stigma subdimensions of the World Health Organization (WHO) Family Interview Schedule (FIS), which focuses on the family's perception of the patient's psychiatric problems and the effects of these problems on the patient and the family, are among the instruments used to assess the family's stigma experience.<sup>[15,16]</sup> In addition, there are measurement tools such as the Stigma-by-Association Scale,<sup>[17]</sup> which examines cognitive, emotional, and behavioral effects of a relationship with a stigmatized person, the Affiliate Stigma Scale for caregivers,<sup>[17]</sup> the Parents' Internalized Stigma of Mental Illness Scale,<sup>[19]</sup> and the Self-Stigma in Relatives of People with Mental Illness Scale.<sup>[20]</sup> In Turkey, 2 measurement tools have been adapted for use to evaluate the internalized stigma experiences of family members. The Self-Stigma Inventory for Families, developed by Yıldız et al.,<sup>[21]</sup> was designed for use with the mother, father, siblings, and children of patients with schizophrenia. The validity and reliability analysis of this instrument was performed only with families of schizophrenia patients. It has not yet been assessed for use with family members who care for patients with a diagnosis of another chronic mental illness. The Parents' Internalized Stigma of Mental Illness Scale is an adaptation that has been found to be valid and reliable with parents of individuals diagnosed with a broad group of mental illnesses (postpartum depression, anxiety disorder, schizophrenia, etc.).<sup>[22]</sup>

The stigma subdimension of the FIS is a short assessment tool. The respondent is asked to rate their concerns about social stigma, their emotional experience related to stigmatization (anxiety, embarrassment, feeling depressed, etc.), and tendency to hide the disease. The results reflect the reaction to indirect stigmatization. Another strength of the tool is that it can be administered to family members of patients with all types of chronic mental illness. Furthermore, as an accepted WHO instrument, it will allow for comparisons of results obtained in different cultural settings. The present study was designed to adapt the stigma section of the FIS to the Turkish language and test its validity and reliability.

## Materials and Method

The data collection process was initiated after receiving institutional approval and patient consent.

### Study Sample

Family members of individuals with a diagnosed mental illness who were referred to the Adult Psychiatry Outpatient and Inpatient Unit of a university hospital and the Izmir Schizophrenia Solidarity Association between May 2019 and November 2020 and who complied with the sample inclusion criteria were considered for the study. The inclusion criteria were age >18 years, literacy, family member of a patient with mental health problems (schizophrenia, schizoaffective disorder, mood disorder). A primary caregiver has been defined as a person who lived with the patient for at least 6 months and provided unpaid care and support. The literature offers various formulae to determine an adequate sample size. According to the 1-in-10 rule, there should be at least 10 participants for each variable. The 1-in-100 rule calls for at least 5 participants for each item or a minimum of 100 individuals in the sample.<sup>[23]</sup> Since the form had 14 items, the number of items was multiplied by 10 and a sample of 141 was used.

### Data Collection Tools

The study data were collected using the Family Member Characteristics Form, Stigma Section of Family Interview Schedule, and the General Health Questionnaire (GHQ).

#### *Family Member Characteristics Form*

A demographic information form was used to collect information about the family members and the patients. The form requested details of age, gender, employment status, marital status, relationship to the patient, whether they live with the patient, and the duration of patient care.

#### *Stigma Section of Family Interview Schedule*

The FIS is a tool originally developed for the WHO to interview family members of patients with schizophrenia. It is now also used to measure similar effects among those close to individuals with other mental illness disorders. The FIS consists of 5 sections: symptoms and social behavior, burden, stigma, service providers, and attribution. The stigma section of the FIS used in this study consists of 14 questions that are scored from 0 (almost never) to 3 (almost always). A high score indicates greater severity of the stigma experience.<sup>[15]</sup>

#### *General Health Questionnaire*

The GHQ is a self-report scale used to detect mental health problems in the community. A short-form version with 12 items was used in this study. A 4-point Likert-type scale is used to score the items 0–3.<sup>[24]</sup> Kılıç<sup>[25]</sup> conducted a psychometric

evaluation of a Turkish adaptation of the short-form scale and reported a Cronbach alpha value of 0.78 and a test-retest reliability of 0.84. The GHQ was used in this study to evaluate the predictiveness of the FIS stigma subdimension scores.<sup>[26]</sup>

### **Data Collection Process**

All of the data collection tools used were self-report instruments. Family members who met the sampling criteria were interviewed, enrolled in the study upon providing written and verbal consent and completed the descriptive characteristics form and scales. During the retest data collection process, family members were contacted by phone and the scale was administered again after an interval of 3 weeks. The time required for the data collection was 15 to 20 minutes.

### **Data Analysis**

The data were analyzed using SPSS for Windows, Version 15.0 software (SPSS Inc., Chicago, IL, USA). Descriptive characteristics data of the patient and family members were analyzed and presented using the number, percentage, mean and SD. Item analysis, internal consistency reliability coefficient analysis (Cronbach alpha reliability coefficient), and test-retest analyses were performed for the reliability analysis. Language validity analysis (translation and back translation), content validity analysis (content validity index [CVI]) and construct validity (explanatory factor analysis) were used to determine the validity of the instrument. The research steps employed were a language validity assessment, followed by a content validity evaluation, a pilot study, and a psychometric examination.

#### **First Stage: Language Validity**

The translation-back translation method was used in the language validity phase of the study. The original language of the scale was translated from English to Turkish. The importance of the selection of appropriate translators for this kind of work has been emphasized in the literature; the translators must not only be proficient in both languages but also have comprehensive conceptual knowledge of the field in question.<sup>[27]</sup> In this study, the scale was independently translated by 3 faculty members who are experts in the field of psychiatric nursing, have published studies examining stigma, and speak both languages. The 3 translations were compared, and a consensus Turkish form was developed. In the back-translation stage, a professional translated the Turkish form back to English. The translated and original forms were compared, and the Turkish version was finalized. The next step was to assess content validity.

#### **Second Stage: Content Validity**

To appropriately calculate the CVI of a scale, a minimum of 3, and preferably 10, experts are recommended. The CVI should be at least 0.78 if >6 experts are used.<sup>[28]</sup> In this study, 10 psy-

chiatric nursing experts were recruited to evaluate the content validity of the items and the scale in terms of intelligibility of the content, suitability for Turkish society, and the ability to measure the intended concept. The experts applied a 4-point grading system of “irrelevant” (1 point), “somewhat relevant” (2 points), “highly relevant” (3 points), and “extremely relevant” (4 points) to each item. The CVI for the entire schedule was 0.96. The CVI of item 6 was calculated to be 0.80, it and 0.90 for items 1, 7, 8, and 11. The CVI of the remaining items was 1.00. A pilot study was launched after modifications based on the experts' comments.

#### **Third Stage: Pilot Study**

The scale was administered to 20 family members to test comprehensibility and clarity. The members of the pilot study were excluded from the study sample. The researchers assessed the results of the pilot study and reached a consensus on final adjustments: items with a total item score correlation <0.30 were examined in terms of construct and content, and revised as necessary. The word “fact” was changed to “disease” in items 3 and 5. The scale was considered ready for use.

#### **Fourth Stage: Psychometric Examination**

The Kolmogorov–Smirnov test was used to evaluate the distribution of the data set, since the sample size was >50.<sup>[26]</sup> The skewness and kurtosis of each item was examined. Normality analysis revealed that the data set did not exhibit normal distribution. Reliability analysis included the use of the Spearman correlation coefficient measure to examine the items and the total scale since the data did not demonstrate characteristics of normal distribution. The correlation between the test and retest scores was also assessed using Spearman correlation analysis. The internal consistency of the scale was evaluated using the Cronbach alpha coefficient. Content validity was evaluated with the CVI, construct validity was assessed using explanatory factor analysis (EFA), and predictive validity was evaluated with simple linear regression analysis. In this study, EFA was conducted using principal axis factoring, as it is a preferred method of extraction when the data do not demonstrate normal distribution.<sup>[29]</sup> The varimax rotation technique was employed to examine the relationship between factors.

#### **Ethical considerations**

The WHO was contacted before initiating the research process and it was confirmed that the use of the scale is open to the public and does not require any additional individual permission. Local institutional approvals were obtained from the university hospital and the Schizophrenia Solidarity Association where the study was to be conducted. Ethics approval for the study was granted by the Noninvasive Research Ethics Committee of Dokuz Eylul University on May 22, 2019 (no: 2019/13-52). The participants were informed about the study and provided written and verbal consent.

## Results

### Findings Related to Sociodemographic Data of Caregivers

The mean age of family members was  $55.74 \pm 12.50$  years, and the mean duration of care was  $13.12 \pm 9.52$  years. Females made up 70.2% ( $n=99$ ) of the family caregivers, and 29.8% ( $n=42$ ) were male; 75.2% ( $n=106$ ) were married, and 70.2% ( $n=99$ ) were unemployed. In all, 41.8% ( $n=59$ ) of the family members were the mother of the patient, 15.6% ( $n=22$ ) were the father, 16.3% ( $n=23$ ) were the spouse, 15.6% ( $n=22$ ) were a sibling, and 7.1% ( $n=10$ ) were children of the patient. The patient lived with the family member in 79.4% ( $n=112$ ) cases, and 67.4% reported no other family members diagnosed with a mental health disorder. Of the family members, 11.3% ( $n=16$ ) indicated that they were unwilling to take the patient to a hospital due to a fear of social exclusion (Table 1).

The mean age of the patients was  $41.99 \pm 15.08$  years. The mean duration of disease was  $14.59 \pm 10.76$  years, and the mean duration of treatment was  $14.02 \pm 10.89$  years. In the patient group, 54.6% ( $n=77$ ) were female, 82.3% ( $n=116$ ) were unemployed, and 46.8% ( $n=66$ ) were diagnosed with schizophrenia, 5% ( $n=7$ ) with a schizoaffective disorder, and 48.2% ( $n=68$ ) with a mood disorder (Table 2).

### Examination of Psychometric Properties of the Stigma Section of the FIS

#### Results of Validity Analysis

The language, content, construct, and predictive validity of the scale were assessed. EFA was employed to evaluate construct validity. In the first step, the Kaiser–Meyer–Olkin (KMO) value of the 14 items was determined to be 0.77 and the Bartlett's test for equality result of  $\chi^2=533.115$  was significant ( $p<0.001$ ). As the data did not present a normal distribution, principal axis factoring was used as the method of extraction.<sup>[29]</sup> EFA yielded 4 factors with an eigenvalue  $>1$ , which accounted for 43.52% of the total variance. The analysis indicated that only 2 items displayed normal distribution in the second and third subsections. The factor loading of all of the items but item 14, "Feel that somehow it might be your fault," was  $\geq 0.30$ . The factor loading for item 14 was 0.20, this item was removed, and the EFA was repeated.

The original version of the stigma section does not contain any subsections, however, as a result of the analysis, the Turkish instrument was structured to include 2 subdimensions. A KMO value of 0.78 and a Bartlett test result of  $\chi^2=507.963$ , which was significant ( $p<0.001$ ) was observed for a construct with 2 subsections. The variance accounted for was 34.20%. The factor loading was between 0.27 and 0.84 in the first subsection (10 items) and between 0.28 and 0.54 in the second subsection (3 items) (Table 3). Simple linear regression analysis was used to evaluate predictive validity (Table 4). A mental disease risk value from the GHQ of  $F=41.770$  was statistically significant ( $p<0.001$ ). The coefficient of determination of pre-

dictability for the mental disease risk variable from the family stigma variable was  $R^2=0.23$ .

#### Results of Reliability Analysis

The Cronbach alpha reliability coefficient of the scale was calculated, as well as item analyses and test-retest reliability in order to assess reliability. The additivity of the scale items was tested using the Tukey test of additivity, and the Hotelling T-squared distribution statistic was used to test response bias. Due to the fact that the data set did not exhibit normal distribution, Spearman's correlation analysis was used for item analysis. The items' total score correlation coefficients varied between 0.30 and 0.61 and were statistically significant ( $p<0.001$ ) (Table 5). The correlation between the subsection total scores and the items varied between 0.41 and 0.66 in the first subsection and between 0.57 and 0.78 in the second subsection and were statistically significant ( $p<0.001$ ). The correlation between the total score and the first subsection was 0.55 and it was 0.87 for the second subsection.

Reliability analysis of the form with 2 subdimensions yielded a Cronbach alpha value for the total scale of 0.75, 0.81 for the first subsection, and 0.45 for the second subsection. Since the alpha value of the second subsection was low, that section was removed. The final version of the scale had 10 items and 1 subsection. The Cronbach alpha value for the final scale with 10 items was 0.81. The scale was administered again to participants after 3 weeks and test-retest reliability resulted in a Spearman correlation coefficient of 0.86 ( $n=34$ ). The response bias of the individuals responding to the scale was tested with the Hotelling T-squared test:  $T^2=665.117$ ;  $p=0.000$ , and it was determined that the FIS stigma section did not have response bias. The additivity of the scale items was tested with the Tukey test, resulting in values of  $F=0.646$  and  $p=0.422$ , and it was concluded that the scale items were additive. The scale items were also assessed in terms of the percentage of responses to each item (Table 6). Responses other than "not at all" contribute to the stigma score. The most commonly selected item was, "I feel depressed because of the mental illness of my relative," (66.7%). The item with the lowest percentage of positive response was, "I worry that other people may blame me for my patient's problems," (13.4%).

## Discussion

This study was designed to examine the psychometric properties and adapt the stigma section of the FIS developed for the WHO for use with family members of individuals with a diagnosis of chronic mental illness in Turkey. The scale has previously been translated into many languages (e.g., German, Japanese, Russian) and is widely used in studies of family caregivers.<sup>[30,31]</sup> In this study, the EFA resulted in a 1-dimension tool with 10 items for a Turkish sample. Since the resulting scale was one-dimensional, confirmatory factor analysis was not used. The scale has been used in a single-dimensional form in

**Table 1. Descriptive characteristics of the caregivers (n=141)**

Descriptive characteristics	Mean±Standard deviation	
Age (years)	55.74±12.50 (min: 24, max: 83)	
Duration of care	13.12±9.52 (min: 6 months, max: 42 years)	
	<b>n</b>	<b>%</b>
Gender		
Female	99	70.2
Male	42	29.8
Marital status		
Married	106	75.2
Single	35	24.8
Educational status		
Literate	4	2.8
Primary school	45	31.9
Secondary school	12	8.5
High school	36	25.5
University or more	44	31.2
Employment status		
Employed	42	29.8
Unemployed	99	70.2
Relationship		
Mother	59	41.8
Father	22	15.6
Spouse	23	16.3
Sibling	22	15.6
Child	10	7.1
Other	5	3.5
Having another family member with a mental problem		
Yes	46	32.6
No	95	67.4
Unwillingness to take the patient to hospital due to fear of social exclusion		
Yes	16	11.3
No	125	88.7
Living in the same house with the patient		
Yes	112	79.4
No	29	20.6
Total	141	100

other studies of caregiver groups.<sup>[30,31]</sup> The use of a scale with fewer than 14 items has been cited previously in the literature, and may be warranted depending on the culture and the sample. Shibre et al.<sup>[16]</sup> evaluated the stigma perception of 178 caregivers of schizophrenia patients in rural Ethiopia using the stigma section of the FIS form. In another study, Shibre et al.<sup>[30]</sup> used the stigma section of the FIS in a cross-sectional study to evaluate perceived stigma in relatives of epilepsy pa-

**Table 2. Descriptive characteristics of patients (n=141)**

Descriptive characteristics	Mean±Standard deviation	
Age	41.99±15.08 (min: 18, max: 80)	
Illness duration	14.59±10.76 (min: 6 month, max: 50 year)	
Treatment duration	14.02±10.89 (min: 6 month, max: 50 year)	
	<b>n</b>	<b>%</b>
Gender		
Female	77	54.6
Male	64	45.4
Employment status		
Employed	25	17.7
Unemployed	116	82.3
Diagnosis		
Schizophrenia	66	46.8
Schizoaffective disorder	7	5.0
Mood disorder	68	48.2
Total	141	100

tients. The scale was translated into Amharic and contained 13 items. To examine the perception of stigma in India, Koschorke et al.<sup>[32]</sup> used a 10-item version of the FIS stigma section in mixed-method research. When the items were examined, we found that except for the item, "I feel depressed because of the mental illness of my relative," the items used and the results seen were similar to those of the present study.

Our EFA determined a KMO value of 0.78 for the scale items. It has been recommended that the KMO value (range: 0–1) be  $\geq 0.80$  for good factor analysis; however, a value of  $\geq 0.70$  indicates that the data have an acceptable fit in terms of sample adequacy.<sup>[33]</sup> We also examined the predictability of stigma. Stigma was found to have a coefficient of determination of distress of 23%. In the literature, there are reports that the mental health of family members as primary caregivers was affected negatively and that psychological morbidity increased because of stigma.<sup>[6,34]</sup> This result supports our validity results that indicated that stigma was positively related to distress.

The reliability analysis results demonstrated that the stigma section of FIS was a reliable measurement tool for a Turkish sample. The Cronbach alpha value calculated was 0.81. Reliability has been established in the literature with a Cronbach alpha coefficient of  $\geq 0.80$ .<sup>[35]</sup> The one-dimensional, 10-item form used is within the recommended limits and appears to be quite reliable.<sup>[27]</sup> Other research using the scale has provided information on the internal consistency coefficient. In a study of family members of individuals with epilepsy that used a 13-item form of the stigma section of the FIS, the Cronbach alpha reliability coefficient of the scale was 0.89.<sup>[36]</sup> An adapted FIS with a Cronbach alpha of 0.92 has also been used to eval-

**Table 3. Results of exploratory factor analysis (n=141)**

Items	Factor load
Sub-section 1	
1. I worry about being treated differently.	0.48
2. I worry that other people will find out about the disease.	0.76
3. I feel a need to hide the disease from other people.	0.84
5. I make an effort to hide the disease from other people.	0.70
6. I worry that people will avoid us.	0.46
8. I worry that other people will blame me for my relative's problems.	0.48
9. I worry that people might be afraid to marry into our family.	0.36
10. I worry about taking my relative out.	0.27
11. I feel ashamed about the disease.	0.50
13. I feel depressed because of the mental illness of my relative.	0.46
Sub- section 2	
4. I help other people understand what it is like to have a relative with a psychiatric problem.	0.28
7. I try to explain to other people that my relative is not like the image they may have of a "crazy person."	0.54
12. I have sought out other people who have a relative with psychiatric problems.	0.49
Total variance explained (%):	34.20

**Table 4. Results of simple linear regression analysis**

Model (10 items)	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	F	P
	0.481	0.231	0.226	41.770	0.000

**Table 5. Item-total score correlation analysis (n=141)**

Items	Spearman Rho I	p
Sub- section 1		
1. I worry about being treated differently.	0.61	0.000
2. I worry that other people will find out about the disease.	0.55	0.000
3. I feel a need to hide the disease from other people.	0.49	0.000
5. I make an effort to hide the disease from other people.	0.54	0.000
6. I worry that people will avoid us.	0.57	0.000
8. I worry that other people will blame me for my relative's problems.	0.43	0.000
9. I worry that people might be afraid to marry into our family.	0.60	0.000
10. I worry about taking my relative out.	0.35	0.000
11. I feel ashamed about the disease.	0.43	0.000
13. I feel depressed because of the mental illness of my relative.	0.52	0.000
Sub- section 2		
4. I help other people understand what it is like to have a relative with a psychiatric problem.	0.42	0.000
7. I try to explain to other people that my relative is not like the image they may have of a "crazy person."	0.30	0.000
12. I have sought out other people who have a relative with psychiatric problems.	0.50	0.000

uate the stigma experiences of parents of individuals diagnosed with a developmental disorder in low-income countries.<sup>[37]</sup> According to the item analysis results of the present study, the correlation between the subdimension total score and the items was between 0.41 and 0.66 and was statistically

significant. It is recommended that the correlation coefficient be  $>0.25$ .<sup>[33]</sup> The item-total score correlation in this study was  $\geq 0.30$ , which indicates that all of the items were homogeneous, measured a similar construct, and had good internal consistency.<sup>[26]</sup> Reliability was also assessed using test-retest

**Table 6. Responses of family caregivers to stigma items (n=141)**

Items	Not at all (0)	Sometimes (1)	Often (2)	A lot (3)	Any positive response (%)
1. I worry about being treated differently.	69	41	14	17	72 (51.1)
2. I worry that other people will find out about the disease.	100	24	8	9	41 (29.1)
3. I feel a need to hide the disease from other people.	101	21	7	11	39 (27.7)
5. I make an effort to hide the disease from other people.	103	24	2	11	37 (26.2)
6. I worry that people will avoid us.	109	18	6	7	31 (22.1)
8. I worry that other people will blame me for my relative's problems.	122	15	3	1	19 (13.4)
9. I worry that people might be afraid to marry into our family.	96	25	7	13	45 (31.9)
10. I am worried about taking my relative out.	113	17	8	3	28 (19.9)
11. I feel ashamed about the disease.	120	17	3	1	21 (14.9)
13. I feel depressed because of the mental illness of my relative.	47	64	17	13	94 (66.7)

reliability. The consistency coefficient recommended in the literature for test-retest reliability is  $\geq 0.80$ .<sup>[33]</sup> The correlation coefficient obtained in our research was 0.86, which is sufficient to indicate test-retest reliability.

The stigma section of the FIS can be assessed in terms of the total score, as well as the percentage values for the frequency of the responses (Table 6). In this study, the item "I feel depressed because of the mental illness of my relative," received a positive response from 66.7% of the family caregivers, which strongly suggests that the stigma experience may lead to depressive feelings in family members of patients with chronic mental illness. Sahu et al.<sup>[38]</sup> also recorded a high level of responses to the same item. There may be commonalities worthy of further exploration.

### Strengths and Limitations of the Study

The original version of the stigma section of FIS was evaluated the stigma experiences family members of people with schizophrenia in the study. The schedule was later used with different family member groups and in different cultural settings. In the present study, the stigma section was adapted to Turkish society; and a broader sample-consisting of family members of people with chronic mental illnesses and not just the family members of people with schizophrenia-was used. As such, the scale can address a larger sample, ensure the assessment of the stigma experience of family members of people with chronic mental diseases and provides the opportunity to compare stigmatization levels. This is one of the strengths of the study. At the same time, because the tool has been developed by the WHO and is a preferred scale in the extant literature, it offers possibilities for comparing stigma levels with the results of the studies conducted in different cultures. However, a limitation of this study was that as there was no other measurement tool for assessing the family stigma experiences during the period wherein the study was conducted, no parallel form could be used.

### Conclusion

The present study provides a valid and reliable Turkish version of the stigma section of FIS as a valid available instrument to assess the stigma experiences of patient family members. This tool could be used by mental health professionals to generate very useful data of the experiences of family members of people with chronic mental illnesses in both hospital and community settings. In addition, we expect that information gleaned from use of the stigma section of the FIS will contribute to intervention studies and additional research of stigmatization. Expanded use of this instrument in different cultures offers a valuable opportunity to compare and contrast experiences that will provide data for policy proposals.

**Conflict of interest:** There are no relevant conflicts of interest to disclose.

**Peer-review:** Externally peer-reviewed.

**Authorship contributions:** Concept – Z.Ç.D.; Design – Z.Ç.D., F.Ş.İ., A.S.; Supervision – Z.Ç.D., F.Ş.İ.; Fundings - Z.Ç.D., F.Ş.İ.; Materials – Z.Ç.D., F.Ş.İ.; Data collection &/or processing – Z.Ç.D., F.Ş.İ., A.S.; Analysis and/or interpretation – Z.Ç.D., F.Ş.İ., A.S.; Literature search – Z.Ç.D., F.Ş.İ., A.S.; Writing – Z.Ç.D., F.Ş.İ., A.S.; Critical review – Z.Ç.D., F.Ş.İ., A.S.

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