

Family Centered Evaluation of Treatment Outcome in Schizophrenia: Marmara Family Interview for the Assessment of Psychiatric Treatment

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SUMMARY

Objective: Assessment of psychiatric treatment has been a central issue in psychiatric research. Most assessment tools are based on the patient's account and mainly focus on clinical agendas. Assessment tools, which gather the perspective of attached daily needs are limited. The purpose of our study was to evaluate the inter-rater reliability and internal consistency of the Marmara Family Interview for the Assessment of Psychiatric Treatment (MFIPT) in a clinical sample.

Method: The study also aimed to explore a possible association between the investigated assessment tool and the Brief Psychiatric Rating Scale. Thirty patients were followed over a period of 6 months.

Results: The inter-rater reliability for the interview subscales were self care/hygiene: $\kappa = 0.77$; social participation: $\kappa = 0.84$; boundaries in daily life: $\kappa = 0.76$; academic/work activities: $r = 0.81$, clinical condition/symptom severity: $\kappa = 0.72$; attitude towards treatment: $\kappa = 0.82$; participation in family crisis/emotional support: $\kappa = 0.77$; participation in daily routines/household activities: $\kappa = 0.63$; use of psychiatric services: $\kappa = 0.62$. Cronbach's alpha was found to be 0.90 for the overall internal consistency of the assessment tool. The strongest correlation between the Brief Psychiatric Rating Scale and Marmara Family Interview for the Assessment of Psychiatric Treatment was the depression subscale and the participation in family crisis/emotional support item ($r = 0.151$; $P > 0.05$).

Conclusion: Marmara Family Interview for the Assessment of Psychiatric Treatment is a reliable instrument for the assessment of daily results of the treatment and daily functioning by the caregivers. Although, it has some limitations in assessing the clinical course.

Key Words: Schizophrenia, family, psychiatric assessment

INTRODUCTION

Evaluation scales are important tools in supporting psychiatric treatment and diagnosis. During the last half century, these scales were used both in the description of syndromes and for the results of treatments in the mental health field (Lukoff et al., 1986a; Moos et al., 2002; Murphy and Moller, 1993). Increased usage of psychosocial treatments in clinical practice for schizophrenia in recent years necessitated the evaluation of such treatments and evaluation scales gained more importance in this process (Droogan and Bannigan, 1993; Scott and Dixon, 1995). Although clinically-oriented evaluation tools (Positive and Negative Syndrome or Brief Psychiatric Assessment Scales) are very sensitive in the assessment of existing symptoms (Lukoff et al., 1986b), they are far from capable of showing how symptoms affect daily life and functionality. These scales were developed for the clinician to evaluate clinical symptoms. In the last few years, evaluating treatment on the basis of functionality and clinical condition became important. In particular, evaluating daily functionality on the basis of family functioning is believed to make the phases of treatment and remission in schizophrenia more visible (Greenberg et al., 1997).

Families and caregivers are among the most frequently consulted groups during psychiatric evaluations (Cole et al.; Liberman and Kopelowicz, 1995; Wilson and Hobbs, 1999). Although

rating scales endeavor to develop objective results about the patient's condition in clinical practice, information regarding functionality is often gathered from these sources. Despite this practical result, family and caregiver descriptions are not regularly included in the treatment decision-making process. Gathering expansive information with only the scales applied to patients provides often a limited view of the treatment process. Generally, the family and the patient are evaluated separately. Detailed family evaluation about the patient is not possible in practice and tools oriented to this aim are not available.

Our study included the development of an interview form oriented to the direct inclusion of caregivers' views in the evaluation of general conditions and results of psychosocial treatment of schizophrenia patients, and development of the evaluation form. In this regard, inter-rater reliability and internal validity of the interview scale and the relationship between the Brief Psychiatric Evaluation Scale were evaluated in order to make use of the tool easier for mental health workers.

Method

Our study was a methodological study, which was realized at Istanbul Faculty of Medicine, Department of Psychiatry inpatient unit. The study included 30 caregivers of schizophrenic inpatients in this service who met the study criteria. The caregivers who had devoted at least 35 h or more to family members of patients with schizophrenia diagnoses and who were physically and psychologically well enough to understand the dialogues and explanations were included in the study. Inter-rater reliability of the study had been conducted with 32 evaluation interviews and clinical psychiatric evaluation and internal validity was established using the results of 90 follow-up interviews conducted with 30 caregivers. Follow-up interviews took place in one-month intervals.

Rating tools

Marmara Family Interview for the Assessment of Psychiatric Treatment

The Marmara Family Interview for the Assessment of Psychiatric Treatment (MFIPT) was developed in our clinic concurrently with the Turkish adaptation of the Camberwell Family Interview. The Camberwell Family Interview, which is used to detect emotional expression levels, includes the

free expression of the illness process (Leff and Vaughn, 1985). MFIPTI was designed as a similar expression model as a semi-structured interview (Appendix-I) The interview is based on the visible domains of daily functioning. In addition to general questions, questions that require detailed expressions are specified by using boxes. The interview is planned to last approximately 30 min. Except for exacerbation periods, this duration was observed to be satisfactory for the caregiver during routine follow-up. The interview reviews the observations and experiences of the past month.

The content of MFIPT was developed from in-depth caregiver interviews that took place between 1996 and 1997 at Marmara University Psychiatric Clinic. Evaluation domains related to patients were determined with focus groups, which included tape recordings. The form was administered to 15 caregivers during outpatient clinic follow-ups as a pilot study (Kuşcu et al., 1997). Four caregiver groups of 8-10 people were formed in the first step of the study. The interview was fine-tuned by executing corrections in the content and the semi structured interview form that includes 9 evaluation areas (Appendix-I), and the rating scale (Appendix-II) was developed.

The interview form includes the following domains: 1. Participation in daily routines/household activities; 2. Self care/hygiene; 3. Social participation; 4. Boundaries in daily life 5. Academic/work activities; 6. Illness symptoms and clinical condition; 7. Use of psychiatric services; 8. Attitude and behavior towards treatment; 9. Contribution to family crises/emotional support. The interview rating scale was developed with a Likert scale of 1-4, "1" showing the lowest level in the subsection, and "4" as the highest level.

The Brief Psychiatric Rating Scale

The Brief Psychiatric Rating Scale (BPRS) was designed to assess functions such as attention, orientation of psychotic patients besides psychotic, depressive and negative symptoms. According to the severity level items are scores from 1 to 7. The first 13 items of the 24 items are scored using all data sources, such as family members and nurses, and other items are scored based on observations during the interview (Overall and Gorham, 1962).

Application and Rating

During the evaluation of inter-rater reliability,

Table 1. Demographic Distribution of Caregivers

Age (mean $\pm$ SD)*	54.60 $\pm$ 11.88	
Sex (n, %)		
Women	22	73.7
Men	8	23.3
Level of education (n, %)		
Primary school	15	50.0
High school	4	13.3
High school and above	11	36.7
Profession (n, %)		
House wife/retired	16	53.4
Worker	10	33.3
Teacher	4	13.3
Relation to the patient (n, %)		
Mother	16	53.4
Father	3	10.0
Spouse and aunt	4	13.3
Sibling	7	23.3

* Mean $\pm$ SD: Mean $\pm$ Standard Deviation

32 interviews, which each lasted 30-40 min were conducted with the caregivers of patients diagnosed with schizophrenia and were recorded on tape. With the cassette decoding study, all interviews were evaluated separately by a psychiatric specialist and a psychiatric nurse specialist. We conducted 90 interviews following this evaluation and compared them to the Brief Psychiatric Rating Scale, which was administered concurrently.

Statistical Analyses

The statistical analyses began with computing all the descriptive statistics (frequency, percentage, distribution interval etc.) In the analysis of internal validity and inter-rater reliability of MFIPT, Cronbach's alpha and Kappa reliability values were computed, respectively. Spearman correlation analysis was used for the evaluation of the relationship between the 9 subscales of MFIPT and BPRS. Statistical analyses were performed with version 11.5 of SPSS package program.

FINDINGS

Demographic distribution of the caregivers

The mean age of the caregivers included in the study was 54.6 $\pm$ 11.8 years (range: 41-77), 73.7% of the caregivers were women, 50% were literate

with a primary school level education, 36.7% were educated throughout high school and above, and 53.4 of the caregivers were the mothers of the patients (Table 1).

Inter-rater reliability

In the evaluation of the 9 subscales of the interview form, the inter-rater reliability for the interview subscales were as follows: self care/hygiene: κ = 0.77; social participation: κ = 0.84; boundaries in daily life: κ = 0.76; academic/work activities: r =0.81; clinical condition/symptom severity: κ = 0.72; attitude towards treatment: κ = 0.82; participation in family crisis: κ = 0.77. In addition to these findings, inter-rater reliability of the subscale participation in daily routines/household activities was κ = 0.63 and for use of psychiatric services it was κ = 0.62. (Table 2).

Internal validity

The correlations of the items of MFIPT with each other are shown in Table 3. Cronbach's alpha was 0.90 for the overall internal consistency of the assessment tool. The mean score intervals of the items showed variations between 1.73 and 2.50. The lowest correlation in the correlation matrix was between the attitude towards treatment subscale and participation in daily routines/household activities (r = 0.3079), while the highest correlation was between the subscales of participation in family crisis and academic/work activities (r = 0.8032). Cronbach's alpha value extracted from the analysis of each item was 0.8874 (use of psychiatric services) at the lowest, and was 0.9087 (attitude towards treatment) at the highest.

Test-retest

The correlation of MFIPT total scores of different measurements was analyzed with spearman correlation analysis. The scores for Martop1 (Marmara Family Interview for the Assessment of Psychiatric Treatment, 1st follow-up total) and Martop2 (Marmara Family Interview for the Assessment of Psychiatric Treatment, 2nd follow-up total) were r = 0.169; P > 0.05 and for Martop1 and Martop3 (Marmara Family Interview for the Assessment of Psychiatric Treatment, 3rd follow up total) r = 0.017; P > 0.05.

The Brief Psychiatric Rating Scale and The Marmara Family Interview for the Assessment of Psychiatric Treatment

Table II. Inter-Rater Reliability Values of the Marmara Family Interview for the Assessment of Psychiatric Treatment

Caregiver evaluation domains	Kappa reliability values κ
1. participation in daily routines/household activities	0.63
2. Self care/hygiene	0.77
3. Social participation	0.84
4. Boundaries in daily life	0.76
5. Academic/work activities	0.81
6. Illness symptoms and clinical condition	0.72
7. Use of psychiatric services	0.62
8. Attitude towards treatment	0.82
9. Participation in family crisis/emotional support	0.77

There was no correlation between the subscales of MFIPT and the depression and negative psychotic symptoms subscales of BPRS. The strongest correlation between the depression subscale and MFIPT subscales was with the family crisis/emotional support item ($r = 0.151$; $P > 0.05$).

The highest correlation between negative symptoms and psychosis subscales of BPRS was with the attitudes towards treatment subscale of MFIPT ($r = -0.165$; $P > 0.05$). The lowest correlation between BPRS psychosis subscale was found with participation/contribution to daily household routines subscale of MFIPT ($r = -0.192$; $P > 0.05$). There was no relationship between MFIPT total score and BPRS total score ($r = -0.166$; $P > 0.05$). There was no significant relationship between total score of MTEFI and depression and negative symptoms subscales of BPRS (r values respectively: 0.079 , -0.052 ; $P > 0.05$). A significantly negative, but weak correlation was found between the psychosis subscale of BPRS and MFIPT total score ($r = -.362$; $P = 0.049$).

DISCUSSION

Working with the patient and the family in the treatment of schizophrenia is important in terms of the continuity of care (Mohr, 2000; Pickens, 1998). The observation of the family should be taken into consideration in order to understand the current conditions of the patient and to help the patient live in a comfortable and compatible fashion with the family. Active involvement of the family in the treatment process and sharing their experiences of the developments and domestic life of the

patient has been shown to help in reaching treatment goals (Greenberg et al., 1997; Rose, 1996; Saunders, 1997). The caregiver experience with schizophrenia and treatment results in Turkey have been reported in previous research (Karancı, 1995; Karancı and Inandılar, 2002). Our study shares the results of a rating scale developed in order to meet the needs of this patient population in Turkey.

In terms of ease-of-use and inter-rater reliability, MFIPT is believed to meet the needs in the field. Despite the finding of a satisfactory reliability among raters in the pilot study, discussion of its content, especially on the participation of daily household routine and use of treatment services subscales, is needed. In the same way, future use of MFIPT in different clinical populations and with wider patient groups will strengthen the content and inter-rater reliability of the rating scale.

Internal validity of MFIPT is important in terms of its use in clinical practice. Test-retest results were not as strong as the internal validity. The main reason for this was the clinical change that occurred in the period between the tests. MFIPT reviews domains that change over time. The difference in reevaluations in these domains showed that the scale is able to follow these changes. In addition to this, the interview form includes content that allows the family members to share their own agendas freely. During our study, both the caregivers and mental health workers who used the interview as an information source provided positive feedback about the content of the interview.

When assessed in terms of the clinical process, there was no relationship between total scores of

Table III. Item Correlation of the Marmara Family Interview for the Assessment of Psychiatric Treatment (MFIPT) (Spearman)

		participa- tion in daily routines/ household activities	Self care- hygiene	Social participation	Boundaries in daily living	Academic/ work activities	Illness symptoms and clinical condition	Use of psychiatric service	Attitude towards treatment	Participation in family crisis / emotional support	Total MTDA
participation in daily routines/ household activities	r									.543	.734
	p									.002	.000
Self care- hygiene	r	.573								.610	.755
	p	.001								.000	.000
Social participation	r	.562	.434							.388	.757
	p	.001	.017							.034	.000
Boundaries in daily life	r	.391	.469	.653						.497	.712
	p	.033	.009	.000						.005	.000
Academic-work activities	r	.541	.549	.616	.626					.806	.859
	p	.002	.002	.000	.000					.000	.000
Illness symp- toms and clinical condition	r	.476	.470	.553	.381	.531				.479	.736
	p	.008	.009	.002	.038	.003				.007	.000
Use of psychiatric service	r	.630	.640	.609	.556	.771	.672			.728	.895
	p	.000	.000	.000	.001	.000	.000			.000	.000
Attitude towards treatment	r	.317	.513	.526	.484	.375	.472	.412		.287	.578
	p	.088	.004	.003	.007	.041	.008	.024		.124	.000
Participation in family crisis /emotional support	r	.543	.610	.388	.497	.806	.479	.728	.287		.811
	p	.002	.000	.034	.005	.000	.007	.000	.124		.000

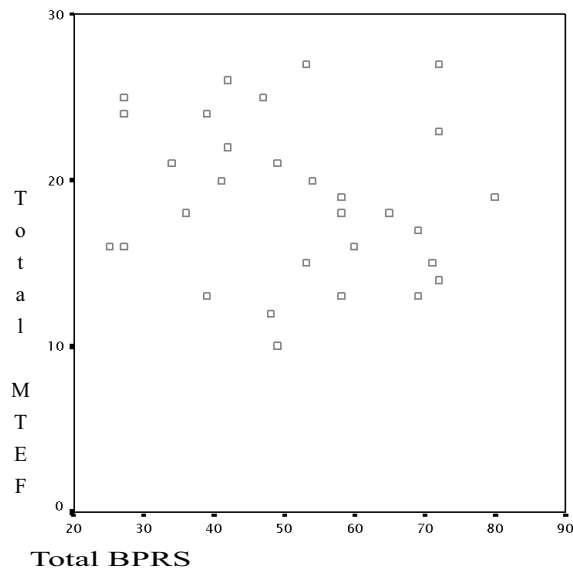
MFIPT and total scores of BPRS. Even though negative and positive psychosis symptoms subscales of BPRS and MFIPT assessment domains formed a relationship, this finding was far from MFIPT forming a support to the treatment process.

Along the same line, the positive relationship between the depression subscale of BPRS and MFIPT total score, and the contribution to family crises subscales necessitates further evaluation of how depression findings are interpreted by the family in future studies. In our study, it was found that, in particular, depression symptoms were evaluated more positively than negative and psy-

chotic symptoms subscales. The lowest correlation between BPRS psychosis subscale was found with the participation in daily routines/household activities subscale of MFIPT.

These results of caregivers evaluating processes that mostly reflect their agenda revealed that medication usage and compliance was the first priority. Generally, changes in clinical processes develop independently from caregiver observations and needs. The aim of our study was to highlight caregiver observations that complete the clinical process. At this point, MFIPT is not an alternative to other treatment tools, but has a complimentary nature.

Graphic 1. Distribution of MFIPT total scores according to BPRS total scores



TOTMTEFI: Total Marmara Family Interview for the Assessment of Psychiatric Treatment scores
TOTBPRS: Total Brief Psychiatric Rating Scale scores

One of the limitations of our study was that the validity of MFIPT was not tested. The main difficulty in this area is that a gold-standard assessment does not exist. Family and caregiver assessments

were used limitedly in clinical practice. The main aim of our study was to take a step in filling this gap. MFIPT represents one of the pioneering interventions in this area. Using our study together with quality of life scales, which were developed especially for schizophrenia and adapted to the Turkish population, will fill the need in this domain (Heinrichs et al, 1984, Soygür et al, 2000). Similarly, using tools regarding the evaluation of daily functioning with MFIPT in future research will enhance our findings.

The need for an assessment package that complements the evaluation of the clinical condition and includes daily functioning is becoming more important (Barrell et al, 1997). Structuring a similar assessment of caregiver expression is believed to strengthen the content of the assessment. There is a need for a more detailed assessment of psychosocial programs and daily functioning, in addition to clinical process. Assessment sources such as clinicians, caregivers, and family members, and information gathered from these sources can be used for evaluating the general condition and daily functioning of the patient and defining factors that impede treatment, making decisions related to the type and dosage of medication, and selecting treatment options. (Lieberman and Kopelowicz, 1995). In this regard, our study shares the results of the first such intervention in Turkey.

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APPENDIX-I
MARMARA FAMILY INTERVIEW FOR THE ASSESSMENT OF
PSYCHIATRIC TREATMENT

I will ask you questions about howspent the previous month and your observations about

First of all, has there been any new developments with----- in the previous month?

How did he/she spend the last month?

Did you observe any differences?

Did you experience an important problem?

Are there any differences in’s behavior?

Were there any differences in’s behavior in the previous month?

Participation in Daily Routines/Household Activities

How did he/she spend a typical day in the previous month?

(Daily activities.../eating/hygiene/etc.....)

With your permission, I would like to get more detailed information about your observations in the previous month.....

How isat home?

Did he/she spend time with you? (Eating /TV watching /sitting together)

Did he/she help with household chores? (Shopping/help to food)

Did he/she participate in family meetings/gatherings?

Does he/she do it by himself/do you insist?

Does he/she continue or get bored and leave without any reason?

Does he/she do it regularly /Is it spontaneous?

Self Care-hygiene

How is his/her self-care? (Washing-up/Brushing teeth /Dressing up/ Orderliness.....)

Can he/she do it without help? Do you need to remind him/her? What do you do?

Warnings/Reminders

Does it spontaneously

Social Participation

Doesgo out?

What does he/she do/where does he/she go? (Going for a stroll/cinema/crowded restaurants.....)

Does he/she have friends? (Does he/she call them?)

Did he/she meet any new friends? (Does it continue?)

Does he/she go to family gatherings?

Does he/she go to weddings/engagements?

What happens?

What do you do?

Spontaneously/insistence

Regularly/intermittent

Can carry on/can't carry on

Calling/getting calls/mutual plans.....

Boundaries in Daily Life

Does he/she make demands at home?

Does he/she use other peoples' belongings from time to time?

Does he/she sleep in other people's rooms/does he/she enter your room without permission?

Permissions?

Warnings? Reactions to warnings?

General attitude towards boundaries?

Usage of rooms /usage of gear/.

With permission/without permission

Academic/Work Activities

Can he/she functional in professional life?

Does he/she look for a new job?

Are there any changes related to work?

Can he/she continue school?

Are there any changes related to school?

How are his/her courses going?

Does he/she take exams?

Changes in work life...

Job changes.... New job searches....

Leaves of absence..... Durations.....

Attendance to school.....Course success.....

Attendance to school..... Willingness to attendance to school.....

Searches for education.....

Admissions.....Job etc. admissions....

Illness Symptoms and Clinical Crises

How were his/her complaints in the previous month?

Were there any changes observed?

Does he/she have difficulty in carrying out his/her daily activities due to complaints?

Did you experience any problems due to his/her complaints?

Use of Psychiatric Services

From time to time families call the hospital in order to get consultation. I want to ask some questions about this issue.....

Did you have any difficulties concerning your appointments in the hospital?

Were there any changes in your appointment schedule?

How many times did you go to the hospital in the last month?

Did you have to call the hospital?

Did you need to reach your doctor urgently?

Does..... come by/call the hospital frequently?

Crises....

Severity of complaints...

Effects of the complaints on daily life (with examples)...

Seeking treatment without an appointment..... hospital/Dr. applications

Emergency admissions....

Frequent calls. Searches for help and support.....

Attitude Towards Treatment

I want to ask you some questions about.....'s medication.

Does he/she talk about his/her treatment?

What does he/she think about his/her treatment.....?

Does he/she have any worries?

Does he/she experience any difficulty with taking his/her medication?

What does he/she think about the future of the treatment?

Treatment beliefs and attitudes...

Worries/Fears/Drawbacks...

Medication arrangement...Reminders....

Optimism about treatment...

Participation in Family Crisis/Emotional Support

Did you or have an important experience in the previous month?

Did you experience an important problem?

What was 's attitude?

Did he/she contribute to the solution? Give advice?

Did he/she help?

Did you have support from him/her?

Before finishing the interview do you have other things you want to say?

Thank you for your contribution.....

APPENDIX-II

MARMARA FAMILY INTERVIEW FOR THE ASSESSMENT OF PSYCHIATRIC TREATMENT-SCALES

1. Participation in Daily Routines/Household Activities

(4) Uses common areas (eating together, watching TV...) Joins conversations/Is diligent in housework that is his/her responsibility (shopping...) All these cover the majority of the previous month.

(3) Uses common areas, but his/her general preference is to stay alone at home/carries out his/her responsibilities unwillingly/cannot continue his/her relationship with he family for a long time/He/she is a listener in conversations/Gets bored easily/Joins spontaneously.

(2) Joins only when pressured/cannot carry on (discontinues eating...)/Does not join conversations/Does not do housework

(1) Does not use common areas (eats in his/her room...)/Uses common areas as rarely as possible/Indifferent about housework.

2. Self Care-Hygiene

(4) Engages in self care regularly/Does not require regular or continuous warning/Pays attention to orderliness

(3) Requires reminding about self care/can engage in self care when reminded/tries to be orderly

(2) Needs help with self-care/needs detailed explanation and modeling.

(1) Cannot accomplish self care despite help

Can only execute his/her cleaning with the help of others/does not attempt to be orderly....

3. Social Participation

(4) Participates in social activities/Meets new friends... Carries on the friendship/there are some places he/she drops by when he/she is out/Forms new social relationships...carries on.

(3) Uses social domains/Can not tolerate long social interactions/New relationships develop with others' efforts and do not continue...

(2) Participates in social activities when pressured/Unwilling about offers/Avoids social interactions.

(1) Does not use social domains/He/she has coincidental encounters/CInability to tolerate any social interaction/He/she has a hesitant attitude in making offers (not open to proposals).

4. Boundaries in Daily Life

(4) Careful about boundaries/Uses other peoples belongings with permission/Stays in his/her room/his/her belongings stay in his/her room

(3) Uses other people's belongings with permission/frequently borrows other people's belongings/does not take responsibility for his/her belongings

(2) Changes attitude when warned/reminding is needed/Uses other peoples belongings with permission /sleeps in his/her bed, but sometimes sleeps in the living room

(1) Enters other people's rooms without permission and uses their belongings (toothbrush etc...)/uses rooms randomly/his/her belongings are all around the house/continues despite warnings.

5. Academic/Work Activities

(4) Goes to school or work/willing about attendance/Takes new advice/passes course/finishes homework...

(3) Attendance at school or work is not regular/cannot tolerate stressful surroundings....

(2) Expresses his/her desires about school or work... but cannot realize his aims/has admissions and trials but cannot conclude

(1) Cannot go to school or work /Unwilling about school or work... does not express desire to work or go to school/does not try

6. Illness Symptoms and Clinical Crises

(4) Notable decrease in illness symptoms/do not restrict daily activities/symptoms are not evident in expression/noticeable remission

(3) Decrease in illness symptoms, but they continue to affect daily activities

(2) No change in illness symptoms, affect daily activities.

(1) Increase in illness symptoms/symptoms are visible in verbal expression excessively/symptoms completely affects daily life

7. Use of Psychiatric Services

(4) Regularly comes to his/her appointments alone/No emergency admissions/Does not need to drop by or call between appointments.

(3) Comes to his/her appointments regularly/He/she calls the doctor/institution one or more times during the week.

(2) Hinders his/her appointments/Comes by the hospital from time to time/Frequent consultation requests

(1) There are emergency admissions to the hospital/Calls that include emergency consultations

8. Attitude Towards Treatment

(4) Uses his/her medication regularly. Has a hope about treatment.

(3) Sometimes requires reminders about medication. Is hopeful about treatment, but sometimes expresses his/her worries about treatment.

(2) Frequently expresses his/her worries about treatment. Feels despair about treatment, but uses his/her medication/Irregularity about attitudes about medication.

(1) Refuses treatment or the medication is given secretly by mixing into his/her food.

9. Participation in Family Crisis/Emotional Support

(4) The family can share every problem. Can give advice about crises.

(3) The family can only explain small problems, not larger ones. The patient can give advice on small problems.

(2) The family cannot explain any problem. The patient gives random or groundless advice/No emotional support

(1) Detached from the family's agenda and indifferent towards difficulties