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Clinical correlates of follow-up discontinuation in adult psychiatric outpatients: A retrospective cohort study

Erişkin psikiyatri polikliniği hastalarında izlemi bırakmanın klinik belirleyicileri: Retrospektif bir kohort çalışması

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ABSTRACT

Aim: This study aimed to compare treatment continuation and follow-up discontinuation in adult psychiatric outpatients and to evaluate the clinical variables associated with discontinuation.

Materials and Methods: In this retrospective, single-center, observational study, patients aged 18 years and older who were evaluated and started on treatment at the Psychiatry Outpatient Clinic of Balıkesir University Faculty of Medicine Hospital between January 1, 2024 and December 31, 2024 were reviewed. One hundred patients were selected by simple random sampling from eligible records. Five patients with missing demographic data were excluded, and analyses were performed on 95 patients. The primary outcome was follow-up discontinuation. Group comparisons were performed, and variables associated with discontinuation were evaluated using univariate and multivariable logistic regression analyses.

Results: Of the 95 patients included, 55 (57.9%) discontinued follow-up and 40 (42.1%) remained in treatment. Patients who continued treatment had a longer illness duration, a higher number of medications, and a shorter planned follow-up interval. In univariate analyses, illness duration, polypharmacy, history of hospitalization, antipsychotic use, and planned follow-up interval were associated with discontinuation. In multivariable analysis, shorter illness duration and longer planned follow-up interval were independently associated with follow-up discontinuation.

Conclusions: The rate of follow-up discontinuation was high in this psychiatric outpatient sample. Shorter illness duration and longer planned follow-up interval were the most consistent correlates of discontinuation. These findings suggest that interventions aimed at strengthening continuity of care may be particularly important during the early phase of disorder and when follow-up visits are scheduled less frequently.

Keywords: Psychiatric outpatient clinic, Treatment continuity, Follow-up discontinuation, Follow-up interval, Retrospective study

Note: This study was presented as an oral presentation at the 18th International Istanbul Scientific Research Congress (December 28-30, 2025, Istanbul, Türkiye).

ÖZ

Amaç: *Bu çalışmada, psikiyatri polikliniğinde izlenen yetişkin hastalarda tedaviye devam ve takibi bırakma durumunun karşılaştırılması ve takibi bırakma ile ilişkili klinik değişkenlerin değerlendirilmesi amaçlandı.*

Gereç ve Yöntem: *Bu retrospektif, tek merkezli, gözlemsel çalışmada, 1 Ocak 2024-31 Aralık 2024 tarihleri arasında Balıkesir Üniversitesi Tıp Fakültesi Hastanesi Psikiyatri Polikliniği'nde değerlendirilmiş, tedavi süreci başlatılmış 18 yaş ve üzeri hastalar incelendi. Uygun kayıtlar arasından basit rastgele örnekleme ile 100 hasta seçildi.*

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Demografik verileri eksik olan 5 hasta dışlandı ve analizler 95 hasta üzerinden gerçekleştirildi. Birincil sonlanım değişkeni takibi bırakma olarak tanımlandı. Gruplar arası karşılaştırmalar yapıldı ve takibi bırakma ile ilişkili değişkenler tek değişkenli ve çok değişkenli lojistik regresyon analizleri ile değerlendirildi.

Bulgular: *Analize alınan 95 hastanın 55'i (%57,9) tedavi takibini bırakmış, 40'ı (%42,1) tedaviye devam etmiştir. Tedaviye devam eden hastalarda hastalık süresi daha uzun, kullanılan ilaç sayısı daha yüksek ve planlanan kontrol aralığı daha kısaydı. Tek değişkenli analizlerde hastalık süresi, polifarmasi, yatış öyküsü, antipsikotik kullanımı ve kontrol aralığı takibi bırakma ile ilişkili bulundu. Çok değişkenli analizde daha kısa hastalık süresi ve daha uzun planlanan kontrol aralığı takibi bırakma ile bağımsız olarak ilişkiliydi.*

Sonuç: *Psikiyatri polikliniğinde takibi bırakma oranı yüksektir. Daha kısa hastalık süresi ve daha uzun planlanan kontrol aralığı, takibi bırakma açısından en tutarlı ilişkili değişkenler olarak öne çıkmıştır. Bulgular, özellikle erken dönemde ve daha seyrek planlanan izlemde bakım sürekliliğini güçlendirmeye yönelik müdahalelerin önemini düşündürmektedir.*

Anahtar Sözcükler: *Psikiyatri polikliniği, Tedavi sürekliliği, Takip kaybı, Kontrol aralığı, Retrospektif çalışma*

Not: *Bu çalışma, 18th International Istanbul Scientific Research Congress'te (28-30 Aralık 2025, İstanbul, Türkiye) sözlü bildiri olarak sunulmuştur.*

INTRODUCTION

Outpatient follow-up in psychiatric clinics is a key step in the long-term management of many mental disorders. However, in clinical practice, non-attendance at scheduled follow-up appointments and premature treatment termination ("dropout") are common problems. Multi-country analyses of World Mental Health Surveys data have shown significant rates of dropout in outpatient mental health care, predominantly happening within the initial sessions (1). While the definition of "no-show" varies across studies, a unifying trend is that it occurs more frequently in the early phases and reduces treatment effectiveness (2).

Follow-up discontinuation can have multifaceted consequences at the clinical and systemic levels. Nonattendance at visits may result in disruptions to clinical follow-up, delays in identifying treatment-related adverse effects, and increased medication nonadherence. Data from a two-year follow-up in a schizophrenia cohort indicated that appointment non-attendance may be significantly associated with medication non-adherence and may coincide with poor clinical results (3). An observational study on antipsychotic treatment non-adherence emphasised its correlation with adverse outcomes, including relapse and hospitalisation (4).

Follow-up discontinuation behaviour has been linked to many sociodemographic, clinical, and service-delivery characteristics in the literature. In a routine outpatient depression treatment sample, some demographic variables, such as education and socioeconomic status, have been reported to show more consistent associations, whereas findings for variables such as age, sex, and marital status have been more inconsistent (2). A retrospective analysis of mental health clinic data identified a correlation between follow-up discontinuation and factors such as young age and low education; forgetfulness and conflicts with employment or responsibilities were particularly notable reasons (5). These data indicate the potential influence of appointment arranging and follow-up coordination, together with patient attributes.

Factors influencing treatment adherence reach beyond mere attendance; attitudes towards medication, insight, side-effect burden, and regimen complexity (polypharmacy) also have important roles. A detailed study of adherence to antipsychotic treatment reveals methodological variability in the identification of causes; it indicates that multiple factors related to the patient, the disorder, and the treatment relationship may influence adherence behaviour (6). A retrospective study of treatment adherence in psychiatric patients from Turkey also demonstrated that variables such as the number of daily medications and insight can be assessed under adherence-related headings (7). Previous studies on schizophrenia have emphasized that insight and other adherence-related clinical factors are relevant to medication adherence and treatment retention (8,9). In this context, the

continuity of treatment in psychiatric outpatient clinics should be assessed not only on the basis of patient characteristics but also in conjunction with follow-up arrangements and professional care patterns. This study aimed to examine treatment adherence and discontinuation among adult patients in a psychiatric outpatient clinic and to assess the clinical characteristics associated with discontinuation. The study intended to clarify the potential influence of factors, such as illness duration and follow-up intervals, on follow-up discontinuation. A retrospective analysis utilising outpatient records was performed for this purpose.

MATERIALS AND METHODS

Study Design and Sample

This study was a retrospective, single-centre, observational study. The research population included patients aged 18 and over. These patients applied to the Psychiatry Outpatient Clinic of Balikesir University Faculty of Medicine Hospital between January 1, 2024 and December 31, 2024. They underwent psychiatric evaluation and initiated treatment. According to the ethical referral plan, 100 patients who met the eligibility criteria were selected from records using simple random sampling. Five patients with incomplete demographic data were excluded. Ninety-five patients remained for analysis.

Inclusion criteria were as follows: being 18 years of age or older, evaluation in the psychiatry outpatient clinic during the specified dates, initiation of treatment, and availability of follow-up data. Data were obtained retrospectively from electronic medical records and patient files.

Outcome Variable and Definitions

The primary outcome variable was discontinuation of treatment. Treatment continuity meant the patient attended planned outpatient appointments. Discontinuation of follow-up was defined as failing to attend scheduled check-ups, unless the physician recommended termination. For patients who discontinued follow-up, reasons for discontinuation—spontaneous, side effects, or other—were classified if present in the patient's file.

Data Collection and Study Variables

From patient files, we recorded age, gender, marital status, education level, employment status, place of residence, psychiatric diagnosis, presence of comorbidities, illness duration, number of medications, history of adherence to previous treatment, history of side effects, history of hospitalisation, antipsychotic use, benzodiazepine use, augmentation status, and planned follow-up interval. We also evaluated the number of medications for polypharmacy. Use of two or more medications was defined as polypharmacy. Percentages were calculated only for cases where relevant data were available. Diagnoses were grouped into three categories for analysis, based on statistical and clinical similarity: anxiety/obsessive-compulsive/stress-related disorders, depressive disorders, and bipolar/psychotic spectrum-other disorders. Among patients who discontinued follow-up, early discontinuation was defined as discontinuation after four or fewer follow-up visits.

Statistical Analysis

Statistical analyses were performed using SPSS 25.0 software. Continuous variables were presented as median (interquartile range), and categorical variables as number and percentage. The Mann-Whitney U test was used for continuous variables in intergroup comparisons. Chi-square or Fisher's exact test was used for categorical variables. Variables related to discontinuation were examined using univariate logistic regression. The follow-up interval was evaluated both per 30-day increase and as a categorical variable using a cut-off of >90 days. In the multivariable model, illness duration, antipsychotic use, and follow-up interval were included. Sensitivity analysis was performed by adding age and gender. Additional univariate regression analyses were done for diagnostic groups. Early and late discontinuation groups were also compared among patients who stopped follow-up. Statistical significance was set at $p<0.05$.

Ethical Approval: Approval for the study was obtained from the Balıkesir University Faculty of Medicine Health Research Ethics Committee (2025/298; 16.09.2025). As this was a retrospective file review, written informed consent was not obtained from the patients. The research was conducted in accordance with the Helsinki Declaration.

RESULTS

Of 100 patients with clinical and follow-up data, 5 were excluded due to insufficient demographic data, leaving 95 patients with sufficient data for analysis.

General Characteristics of The Sample

Of the 95 patients analysed, 55 (57.9%) discontinued treatment and 40 (42.1%) continued. The median age was 48 years, with women comprising a higher proportion.

Among the 55 patients who discontinued follow-up, 49 (89.1%) were classified as having spontaneous or unplanned discontinuation, 3 (5.5%) discontinued because of side effects, and 3 (5.5%) discontinued for other reasons, such as moving to another city.

Comparison of Those Continuing Treatment and Those Discontinuing Follow-Up

No significant difference in age was found between the groups. The median age in the continuing group was 43.5 years, while in the discontinuing group it was 50.0 years (p=0.854). Similarly, no significant differences were observed between the two groups in terms of gender, marital status, education level, employment status, place of residence, presence of comorbidities, and history of adherence to previous treatment (p>0.05 for all comparisons) (Table-1).

In contrast, significant differences were observed in some clinical variables. The illness duration at the evaluation date was longer in the continuing group compared to the discontinuing group [median 6.9 years vs 4.0 years, p<0.001]. The number of medications used was also higher in the continuing group [median 2 vs 1, p=0.010]. The follow-up interval was significantly longer in the discontinuing group [median 90 days vs 56 days, p=0.006] (Table-1).

When categorical clinical variables were examined, the use of 2 or more medications was more frequent among those continuing treatment (70.0% vs 45.5%, p=0.019). The history of hospitalisation was also higher in the continuing group (37.5% vs. 16.4%, p=0.022). Similarly, antipsychotic use was more frequently detected in the continuing group (57.5% vs. 23.6%, p=0.002). There were no statistically significant differences between the groups in terms of side effect history, benzodiazepine use, and augmentation (p>0.05 for all comparisons) (Table-1).

Table-1. Comparison of demographic and clinical characteristics between patients who remained in treatment and those who discontinued follow-up

Variable	Remained in treatment (n=40)	Discontinued follow-up (n=55)	p
Age, median (IQR)	43.5 (40.0–63.5)	50.0 (38.0–65.0)	0.854
Male sex	15/39 (38.5%)	18/50 (36.0%)	0.986
Married	23/37 (62.2%)	33/48 (68.8%)	0.460
University education or higher	8/37 (21.6%)	16/48 (33.3%)	0.378
Employed	14/37 (37.8%)	19/48 (39.6%)	0.810
Living in a rural area	12/36 (33.3%)	14/46 (30.4%)	0.967
Diagnostic group			0.100
└ Anxiety/OCD/stress-related	13/40 (32.5%)	25/55 (45.5%)	
└ Depressive disorder	16/40 (40.0%)	24/55 (43.6%)	
└ Bipolar/psychotic-other	11/40 (27.5%)	6/55 (10.9%)	
Presence of comorbidity	13/40 (32.5%)	16/55 (29.1%)	0.896
Illness duration (years), median (IQR)	6.9 (4.4–7.0)	4.0 (2.3–6.0)	<0.001
Polypharmacy (≥2 medications)	28/40 (70.0%)	25/55 (45.5%)	0.019
History of adherence to previous treatment	25/40 (62.5%)	34/55 (61.8%)	1.000
History of side effects	19/40 (47.5%)	17/55 (30.9%)	0.152
History of hospitalization	15/40 (37.5%)	9/55 (16.4%)	0.022
Antipsychotic use	23/40 (57.5%)	13/55 (23.6%)	0.002
Benzodiazepine use	10/40 (25.0%)	7/55 (12.7%)	0.204
Augmentation	19/40 (47.5%)	18/55 (32.7%)	0.213
Follow-up interval (days), median (IQR)	56.0 (45.0–84.5)	90.0 (50.0–180.0)	0.006

Abbreviations: IQR, interquartile range; OCD, obsessive-compulsive disorder.

Note: Unless otherwise stated, data are presented as n (%) or median (IQR). Percentages were calculated based on patients with available data for the relevant variable. Continuous variables were compared using the Mann–Whitney U test, and categorical variables were compared using the chi-square test or Fisher's exact test when appropriate.

Univariate Logistic Regression Analysis Related To Discontinuation

According to the results of the univariate logistic regression analyses, the probability of discontinuation decreased with increasing illness duration (OR=0.70, 95% CI: 0.57–0.87, p=0.001). This finding shows that each 1-year increase in illness duration is associated with a decreased likelihood of discontinuation

The use of two or more medications was inversely associated with discontinuation (OR=0.36, 95% CI: 0.15–0.84, p=0.019). Similarly, patients with a history of hospitalisation were less likely to discontinue (OR=0.33, 95% CI: 0.13–0.85, p=0.022). Antipsychotic use was also inversely associated with discontinuation (OR=0.23, 95% CI: 0.09–0.55, p=0.001) (Table-2).

The likelihood of discontinuation increased with increasing follow-up interval. Each 30-day increase in the follow-up interval was associated with an increased likelihood of discontinuation (OR=1.40, 95% CI: 1.10–1.78, p=0.006). Furthermore, the likelihood of discontinuing follow-up was approximately 3.3 times higher if the follow-up interval was longer than 90 days (OR=3.33, 95% CI: 1.30–8.53, p=0.012) (Table-2).

Age, male gender, marital status, education level, employment status, place of residence, presence of comorbidities, and history of adherence to previous treatment did not show a significant association with discontinuation of follow-up in univariate analyses (p>0.05 for all variables) (Table-2).

Table-2. Univariable logistic regression analysis of factors associated with dropout from follow-up

Variable	n	OR (95% CI)	p
Age (per 1-year increase)	87	1.00 (0.97–1.03)	0.963
Male sex	89	0.90 (0.38–2.14)	0.811
Being married	85	1.34 (0.54–3.30)	0.526
University education or higher	85	1.81 (0.68–4.86)	0.237
Being employed	85	1.08 (0.45–2.60)	0.870
Living in a rural area	82	0.87 (0.34–2.23)	0.780
Diagnostic group (reference: anxiety/OCD/stress-related)	95		
└ Depressive disorder	95	0.78 (0.31–1.96)	0.597
└ Bipolar/psychotic-other	95	0.28 (0.09–0.94)	0.039
Presence of comorbidity	95	0.85 (0.35–2.06)	0.722
Illness duration (per 1-year increase)	95	0.70 (0.57–0.87)	0.001
Polypharmacy (≥2 medications)	95	0.36 (0.15–0.84)	0.019
History of adherence to previous treatment	95	0.97 (0.42–2.25)	0.946
History of side effects	95	0.49 (0.21–1.15)	0.102
History of hospitalization	95	0.33 (0.13–0.85)	0.022
Antipsychotic use	95	0.23 (0.09–0.55)	0.001
Benzodiazepine use	95	0.44 (0.15–1.27)	0.129
Augmentation	95	0.54 (0.23–1.24)	0.147
Follow-up interval (per 30-day increase)	95	1.40 (1.10–1.78)	0.006
Follow-up interval >90 days	95	3.33 (1.30–8.53)	0.012

Abbreviations: OR, odds ratio; CI, confidence interval; OCD, obsessive-compulsive disorder.

Note: In the univariable logistic regression analysis, the dependent variable was discontinuation of treatment follow-up. An OR <1 indicates a lower likelihood of dropout, whereas an OR >1 indicates a higher likelihood of dropout. For follow-up interval, the OR was calculated per 30-day increase.

Multivariable Logistic Regression Analysis Related To Discontinuation Of Follow-Up

To account for potential confounding factors, multivariable logistic regression analysis was then performed. In the multivariable logistic regression analysis, illness duration, antipsychotic use, and follow-up interval were included in a single model, given the data structure and clinical significance. In this model, illness duration was inversely and independently associated with discontinuation of follow-up (adjusted OR=0.62, 95% CI: 0.48–0.80, p<0.001). In other words, the likelihood of discontinuing follow-up decreased with increasing illness duration (Table-3).

The follow-up interval remained independently associated with discontinuation. Each 30-day increase in the follow-up interval was associated with about a 56% higher likelihood of stopping follow-up (adjusted OR=1.56, 95% CI: 1.15–2.11, p=0.004). Antipsychotic use was also inversely associated with follow-up discontinuation in the main multivariable model (adjusted OR=0.35, 95% CI: 0.13–0.98, p=0.045) (Table-3).

Table-3. Multivariable logistic regression analysis of factors associated with dropout from follow-up

Variable	Model 1, adjusted OR (95% CI)	p	Model 2*, adjusted OR (95% CI)	p
Illness duration (per 1-year increase)	0.62 (0.48–0.80)	<0.001	0.64 (0.49–0.83)	0.001
Antipsychotic use	0.35 (0.13–0.98)	0.045	0.40 (0.14–1.14)	0.087
Follow-up interval (per 30-day increase)	1.56 (1.15–2.11)	0.004	1.54 (1.11–2.15)	0.011
Age	—	—	1.00 (0.97–1.03)	0.836
Male sex	—	—	0.76 (0.26–2.24)	0.618

Abbreviations: OR, odds ratio; CI, confidence interval.
Note: In the multivariable logistic regression analysis, the dependent variable was discontinuation of treatment follow-up. Model 1 represents the main model, whereas Model 2 shows the sensitivity analysis including age and sex. For follow-up interval, the OR was calculated per 30-day increase.

Sensitivity Analysis

A sensitivity analysis was performed by adding age and gender to the main model. In this model, illness duration (adjusted OR=0.64, 95% CI: 0.49–0.83, p=0.001) and follow-up interval (adjusted OR=1.54, 95% CI: 1.11–2.15, p=0.011) remained significant. However, antipsychotic use did not reach statistical significance in this extended model (adjusted OR=0.40, 95% CI: 0.14–1.14, p=0.087).

These findings indicate that shorter illness duration and longer follow-up intervals were the most consistent independent correlates of follow-up discontinuation, whereas the association with antipsychotic use was attenuated after adjustment for age and sex.

Additional Analysis According To Diagnostic Groups

The diagnostic variable was grouped into three main categories for statistical analysis to achieve adequate cell counts and to allow clinically similar conditions to be evaluated together. When dropout rates were examined according to diagnostic groups, the dropout rate was found to be 65.8% in anxiety/OCD/stress-related disorders, 60.0% in depressive disorders, and 35.3% in the bipolar/psychotic group. A trend close to the limit of statistical significance was observed in the overall group comparison (p=0.100).

In univariate logistic regression, compared with the reference group, anxiety/OCD/stress-related disorders, the probability of dropping out was lower in patients with bipolar/psychotic spectrum disorder (OR=0.28, 95% CI: 0.09–0.94, p=0.039). No significant difference was found for depressive disorders (OR=0.78, 95% CI: 0.31–1.96, p=0.597).

Early Discontinuation Analysis Among Patients Who Discontinued Follow-Up

Finally, among those who discontinued follow-up, an additional analysis was conducted to characterise early versus late discontinuation patterns.

When comparing patients who discontinued early and those who discontinued later, illness duration was significantly shorter in those who

discontinued early [median 2.3 years vs 4.25 years, p=0.024]. In addition, the level of higher education was lower in those who discontinued early (8.3% vs. 41.7%, p=0.040) (Table-4).

In contrast, no significant differences were found between the early and later discontinuation groups in terms of age, polypharmacy, antipsychotic use, and follow-up interval (p>0.05 for all variables) (Table-4).

Table-4. Analysis of early discontinuation among patients who discontinued follow-up
Definition: Early discontinuation = discontinuation after four or fewer follow-up visits
Early discontinuation: n=15; Later discontinuation: n=40

Variable	Early discontinuation (n=15)	Later discontinuation (n=40)	p
Age, median (IQR)	46.0 (43.0–58.0)	51.5 (36.8–65.3)	0.347
Illness duration (years), median (IQR)	2.3 (1.0–4.3)	4.25 (2.88–6.05)	0.024
University education or higher	1/12 (8.3%)	15/36 (41.7%)	0.040
Polypharmacy (≥2 medications)	6/15 (40.0%)	19/40 (47.5%)	0.764
Antipsychotic use	2/15 (13.3%)	11/40 (27.5%)	0.477
Follow-up interval (days), median (IQR)	167.0 (50.0–361.0)	88.5 (57.0–146.0)	0.281

Abbreviations: IQR, interquartile range.
Note: Early discontinuation was defined as discontinuation after four or fewer follow-up visits. Unless otherwise stated, data are presented as n (%) or median (IQR). Continuous variables were compared using the Mann–Whitney U test, and categorical variables were compared using the chi-square test or Fisher's exact test when appropriate.

DISCUSSION

The high dropout rate in this retrospective outpatient sample (n=95) demonstrates the fragile nature of continuity in psychiatric care. The most notable finding of our study was that shorter illness duration and longer planned follow-up intervals were independently associated with follow-up discontinuation. Specifically, each 30-day increase in the planned follow-up interval was associated with a 56% increase in the odds of discontinuation (adjusted OR=1.56, 95% CI: 1.15–2.11, p=0.004). The results indicate that addressing follow-up loss requires consideration of both patient characteristics and the arrangement of follow-up procedures.

Multi-national evaluations derived from the World Health Organisation's World Mental Health Survey effort indicate that attrition is prevalent in outpatient mental health treatments, frequently occurring within the initial two visits (1). In a substantial cohort utilising electronic health records, the failure to attend any psychiatric follow-up appointment following a change of antidepressant prescriptions was recognised as a significant negative outcome, with follow-up communication not being established in roughly one-quarter of medication alterations (10). The findings of this study support the conclusion that "non-return to follow-up" represents a widespread issue across multiple medical systems and diagnostic categories.

Illness duration, early-stage characteristics, and therapy adherence

Multivariable analysis identified shorter illness duration as a predictor of increased likelihood of follow-up termination. Although causality cannot be established due to the retrospective design, individuals in the early stages of disorder may be more susceptible to obstacles in accepting diagnosis and long-term treatment. They may perceive a reduced need for treatment after partial symptom improvement or experience difficulty sustaining motivation for consistent follow-up due to varying levels of insight.

This conclusion is consistent with research showing a correlation between insight and treatment adherence. For example, a study conducted in Turkey found a strong positive correlation between insight and medication adherence among individuals with schizophrenia (8). A study analyzing CATIE data suggested that decreased insight correlated with non-adherence to antipsychotic medication and early treatment discontinuation (11). Although our sample was heterogeneous, it is conceivable that the illness duration may partially reflect experiential contact with the disorder and the habits established with the healthcare system. In light of this, the finding points to the importance of systematic retention strategies, especially during the initial presentation period.

In our study, the follow-up interval was one of the most clinically significant and manageable variables. The longer the planned follow-up interval, the more likely patients were to discontinue treatment follow-up. This suggests that continuity of care is shaped by both patient attributes and the monitoring framework. Longer intervals between sessions may cause forgetfulness. Delays in attending appointments are often due to work or school commitments. Additionally, individuals may perceive less urgency to attend follow-up appointments as their symptoms improve. A study investigating reasons for missed MHRS (Centralized Hospital Appointment System) appointments in Turkey identified forgetfulness and scheduling conflicts as the most prevalent factors (12). In psychiatric practice, follow-up is essential not only for prescription renewal but also for sustaining a strong therapeutic relationship and facilitating psychoeducation (13,14). Extending the interval between appointments may weaken the therapeutic alliance, particularly during the initial stages of treatment. Prolonged follow-up intervals do not always reflect clinical preferences. Instead, factors such as clinic congestion, limited appointment availability, and service capacity constraints may contribute to longer intervals (15).

This finding raises the question of what the “ideal” follow-up interval should be. While a single follow-up frequency cannot be recommended for all patients, our results suggest that shorter intervals may be beneficial in the early stages, at the start of new treatment, or after medication changes. Current studies also show that closer monitoring in the early stages of treatment is important for tolerability, side effect management, and maintaining treatment adherence (16). Conversely, in clinically stable, low-risk patients, the follow-up interval may be gradually extended; however, it is important to note that unnecessarily prolonged intervals in the early phases of treatment may increase discontinuation (16,17). In circumstances where in-person visits are difficult, alternative communication methods, such as telephone calls or telehealth applications, may also support continuity. The finding that telemedicine appointments are associated with higher completion rates in large cohort data supports this approach (18).

In univariate analyses, antipsychotic use, polypharmacy, and history of hospitalization were associated with a lower likelihood of follow-up discontinuation. However, the attenuation of some of these associations in multivariable and sensitivity analyses suggests that they may reflect more complex clinical processes rather than direct protective effects. These findings suggest that these variables do not inherently increase persistence; but rather, that patients with these characteristics represent a group that is clinically more severe, more closely monitored, or in more intensive contact with the healthcare system. These patients may be perceived as higher risk by clinicians and placed under closer monitoring. In this context, family or caregiver support may also be important. Caregiver involvement in the treatment process is generally more pronounced in psychotic disorders or more severe mood disorders. Furthermore, actively scheduling follow-up appointments as part of the discharge plan after hospitalization can increase follow-up participation (19). Therefore, hospitalization history may reflect not only the severity of the disorder but also a stronger and more persistent connection with the healthcare system in some patients. The findings regarding polypharmacy are heterogeneous. While it has been reported that antipsychotic polypharmacy may be associated with a higher burden of side effects and a more complex treatment pattern, some studies have also found polypharmacy to be associated with lower treatment discontinuation rates or better treatment retention (20,21). Our findings also suggest that the assumption that "polypharmacy causes dropout" is not universal.

Although antipsychotic use was inversely associated with discontinuation in univariate analysis and in the main multivariable model, this association did not remain statistically significant in the sensitivity analysis. In contrast, a history of side effects was not significantly associated with dropout. This may be due to the preservation of continuity through early recognition and management of side effects in the clinic, or to the fact that details could not be captured because side-effect information was recorded in files as "yes/no". However, longitudinal analyses based on electronic health records in a first-episode psychosis sample show that some side effects may be associated with the timing of antipsychotic treatment discontinuation (22). Therefore, side effects should be evaluated not in isolation, but within the context of service organization and close monitoring.

It is also noteworthy that in our study, basic sociodemographic variables such as age, gender, marital status, education level, and employment status did not show a significant relationship with dropout. This finding suggests that treatment continuity cannot be explained solely by classical sociodemographic vulnerabilities. Indeed, multi-country analyses based on the World Mental Health Survey initiative have shown that dropout is associated with system-level variables, such as the sector in which services are received and financial protection, as well as patient characteristics (1). In addition, a prospective study following first-referral patients in a community-based mental health service reported that treatment continuation was also associated with variables reflecting the mode of service contact, such as referral from other psychiatric services (23). Nonetheless, the restricted sample size limits the assumption that these variables lack efficacy.

When examined by diagnostic groups, the lower rate of loss to follow-up in the bipolar/psychotic spectrum group suggests a clinically meaningful trend; however, attributing this finding solely to the diagnosis itself may not be accurate. In a prospective study of first-admission patients in a community-based mental health service, a schizophrenia-spectrum diagnosis and referral from other psychiatric services were reported to be associated with better treatment adherence (23). Furthermore, greater family involvement in first-episode psychosis services has been linked to increased treatment visits and stronger engagement indicators, suggesting that lower loss to follow-up in the psychotic disorders group may be related to family or caregiver support and more structured follow-up models (24). In contrast, the present multivariable analysis identified illness duration and follow-up interval as the primary determinants, indicating that loss to follow-up may be more closely associated with patterns of care than with diagnostic category.

CONCLUSION

The noteworthy contribution of this study is that it examined follow-up dropout in a psychiatric outpatient clinic not only through patient characteristics and medication use patterns, but also through the planned follow-up interval, a modifiable service-delivery variable. This finding suggests that the organization of care may also be important.

However, the findings should be evaluated in light of certain limitations. The retrospective, single-center design limits causal inference and generalizability. The relatively small sample size, especially the decrease in the number of diagnostic subgroups, may have reduced statistical power in some analyses. In addition, variables such as symptom severity, level of insight, social support, and access to appointments could not be obtained in a standardized manner. The most important methodological limitation is the quality of the historical data. Follow-up dropout was defined primarily based on appointment dates; however, it was not always possible to distinguish whether the patient actually attended, postponed their appointment, or received service through other channels. This situation may lead to errors in the classification of follow-up dropout and prevent the reliable application of event-time based analyses such as Kaplan–Meier or Cox regression. In conclusion, individuals with shorter illness duration may be more vulnerable to follow-up discontinuation, and longer follow-up intervals may represent a modifiable risk factor. Therefore, especially after the initial assessment, shorter follow-up intervals, structured psychoeducation, appointment reminder systems, and, when necessary, intermediary contact methods such as teleconferencing can be effective strategies to reduce follow-up loss. Structured approaches to recalling patients who miss their appointments can also support continuity of care. To test these findings, prospective studies that meticulously record the actual application date, appointment postponement or cancellation information, and the time of discontinuation from follow-up are needed.

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