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RESEARCH ARTICLE

Evaluation of the diagnostic continuity of unspecified mood disorders

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ABSTRACT

Objective: According to ICD-10, the diagnosis of unspecified mood disorder (UMD), coded 'F39,' is used when there is insufficient or contradictory information about the patient and the symptoms of mood disorder are not sufficient to diagnose a specific mood disorder. Information about the frequency, diagnostic validity and continuity of this diagnosis is unsatisfactory. Therefore, we aimed to evaluate the prevalence and diagnostic continuity of this diagnosis among individuals diagnosed with UMD in our outpatient clinic.

Method: Included in the study were patients who presented to the psychiatry outpatient unit for the first time between January 2011 and December 2017, were diagnosed with mood disorder code 'F39' at the first admission, and presented at least three times in different periods (n=48). Outpatient unit records were evaluated retrospectively and the data were analyzed with SPSS version 19.0.

Results: The mean follow-up period of 48 patients included in the study was 14.4±13.9 months. The final diagnoses of the patients after follow-up were UMD (42%), depressive disorder (25%), bipolar disorder (17%), and anxiety disorder (10%). It was found that the duration of the follow-up for individuals diagnosed with UMD was significantly shorter than for those with a different diagnosis. No significant difference was found between final diagnoses in terms of age, gender, level of education, and marital status.

Conclusion: UMD has less diagnostic stability than other mood disorders. Therefore, longer follow-up durations are needed in patients with UMD, and it is crucial to reconsider the diagnosis during follow-up. Further studies with larger samples are needed to elucidate the stability of UMD.

Keywords: Bipolar disorder, diagnostic continuity, unspecified mood disorder

INTRODUCTION

Diagnostic stability can be defined as the degree to which a diagnosis is confirmed during repeated assessments (1). While modern classifications of mental disorders facilitate communication between clinicians and researchers, the validity of diagnoses and the boundaries between groups of diagnoses have also caused concerns (2). A number of studies have addressed the insufficient stability and continuity of diagnoses made according to the American Psychiatric Association's Diagnostic and Statistical Manual for Mental Disorders (DSM) and the World Health Organization's International Classification of Disease (ICD) (3-9). As reasons for the insufficient stability and continuity, we can list the non-applicability to subthreshold symptoms, the impossibility of longitudinal assessment, a comorbidity of substance abuse, onset age, and the similarity of the symptom sets

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of different disorders (8,10). The DSM-IV uses the diagnosis "mood disorder not otherwise specified" (MD-NOS) for conditions where mood symptoms are present without meeting the criteria for the diagnosis of a specific mood disorder and for situations where the decision between depressive and bipolar disorders is hard to make (11). The ICD-10 uses the term "unspecified mood disorder" (code 'F39') as a last resort in cases considered to be mood disorders where no other diagnosis can be applied (12). After a follow-up of 4 years, for schizophrenia and bipolar disorder according to ICD-10 and DSM-IV a diagnostic stability of 80-100% has been established (13-17). For mood disorders, a study following 10,016 outpatients found a retrospective diagnostic stability of 55.6% (9).

Mood disorders manifest with recurrent attacks and show a chronic course. For long-term treatment and follow-up, a correct psychiatric diagnosis during the illness process is of great importance (11). In clinical practice, however, psychiatric diagnoses tend to change for a variety of reasons. Among these reasons are problems with the reliability of diagnostic methods, incomplete or inaccurate information recorded at first examination, and changes in the clinical characteristics over the course of the disease (14). A follow-up study examining the diagnostic stability of depressive disorder according to ICD-10 found that in the 39,741 patients diagnosed with depressive disorder, the diagnosis of 56% had changed (18). Another similar study established that 30% of diagnoses of bipolar disorder changed during the follow-up period (7). In studies with adolescents diagnosed with bipolar disorder–not otherwise specified, at the end of 2, 4, and 5 years' follow-up a conversion to the diagnosis bipolar disorder I or II was found in 25, 38, and 45%, respectively (17-19). Diagnostic stability is an important measure for the reliability and validity of psychiatric diagnoses. Pharmacological and psychosocial interventions can change depending upon the diagnosis that has been given (3,20). Reaching diagnostic validity for the diagnosis of UMD according to ICE and measuring diagnostic inconsistencies appears to be important for finding a suitable long-term therapy for the condition. Aim of our study is to assess the diagnostic continuity of patients diagnosed with UMD and to examine the correlation between final diagnosis and demographic data.

METHOD

In our study, we assessed patients who had presented to the psychiatric policlinic of Canakkale 18 March University's Health Application and Research Hospital between January 2011 and December 2017, receiving a baseline diagnosis of UMD. As the study was only a retrospective patient record review and analysis, ethics committee approval was not sought, but institutional permission was received. Criteria for inclusion in the analysis were having presented at least two more times to psychiatry after the initial consultation (not only for provision of drugs) and not having had any previous psychiatric consultation before receiving the diagnosis of UMD. The reason for requiring having attended the psychiatric policlinic at least three times was the consideration that this was the minimum number of consultations for an assessment of diagnostic continuity. Of the retrospectively reviewed files with a baseline diagnosis of UMD, a total of 48 individual cases were included in the analysis. Four cases who had previously attended the policlinic of a different institution and 3 cases who had presented less than 3 times to the psychiatric policlinic were excluded from the evaluation.

Statistical Analysis

The data of our study were analyzed using SPSS version 19.0. In reporting the data, we used number, percentage, mean value, standard deviation, and median, minimum, and maximum values. Normal distribution was tested using Shapiro-Wilk test. For a comparison of age and follow-up period between groups with UMD and other mental illnesses which did not follow normal distribution, Mann-Whitney U-test was used. For a comparison of sex, level of education, and marital status between groups with UMD and other mental illnesses, chi-square test was used. In analyzing factors affecting the final diagnosis, logistic regression analysis with an enter model was applied. The dependent variable was diagnostic continuity, while the independent variables included use of antidepressants, antipsychotics, and mood stabilizers, duration of follow-up, age, and change in therapy. For statistical significance, a value of $p<0.05$ was accepted.

RESULTS

Sample Sociodemographic and Clinical Characteristics

The mean age of the 48 patients enrolled in the study was 38.4±14.5 years (min: 17, max: 67). Around two thirds of the participants were women. Of the participants, 29.2% (n=14) were single, 58.3% (n=28) were married. Almost half of the participants had

Table 1: Study participants' sociodemographic characteristics

Variables (n=48)	Mean	SD	Min-Max
Age	38.4	14.5	18-67
Sex	**n**	**%**	
Female	27	56.2	
Male	21	43.8	
Marital status			
Single	14	29.2	
Married	28	58.3	
Widowed, divorced	6	12.5	
Education level			
Illiterate	1	2.1	
Primary education	6	12.5	
High school	23	47.9	
University	18	37.5	

Min: Minimum, Max: Maximum, n: Number, %: Column percentage

graduated from high school (Table 1). Ten point four per cent of the study participants presented 3 times to the policlinic, 58.4% were seen between 4 and 9 times, and 31.2% 10 or more times.

Evaluation of Diagnostic Continuity and Correlation with Demographic Variables

The patients' final diagnoses were UMD (n=20, 41.7%), depressive disorder (n=12, 25%), bipolar disorder (n=8, 16.7%), anxiety disorder (n=5, 10.3%), and psychosis (n=1, 2.1%), while in 2 cases (4.2%), no active psychopathology was found (Table 2). The mean age of patients with a diagnosis of UMD was 36.3±15.3 years, mean age of patients with other mental illnesses 40. 0±13.9 years; the age difference between the groups was not statistically significant (p=0.391). No statistically significant differences between patients with UMD and groups with other mental illnesses were found for sex (p=0.461), level of education (p=0.560), and marital status (p=0.235). The mean duration of follow-up was 8.5±10.7 months for patients with a diagnosis of UMD and 18.2±14.8 months for patients diagnosed with other mental illnesses, and the difference between the groups was not statistically significant (p=0007).

The most common initial treatment for individuals diagnosed with UMD was using antidepressants (54.2%), with antipsychotics (18.8%) being in second place. Interestingly, in the final treatment, while 47.9% received antidepressants, the use of combination therapy increased (Table 3). However, 60.4% of the participants had not changed between initial and final treatment.

Table 2: Patients' psychiatric diagnoses at last consultation

Diagnosis (n=48)	n	%
Unspecified mood disorder	20	41.7
Depressive disorder	12	25.0
Bipolar disorder	8	16.7
Anxiety disorders	5	10.3
Other	3	6.3

Table 3: Baseline and final treatment

	Baseline treatment		Final treatment	
	n	**%**	**n**	**(%)**
No treatment	6	12.5	1	2.1
AD	26	54.2	23	47.9
AP	9	18.8	9	18.8
MS	1	2.1	2	4.2
AD and MS	1	2.1	2	4.2
AD and AP	3	6.3	4	8.3
AP and MS	2	4.2	7	14.6

AD: Antidepressant, AP: Antipsychotic, MS: Mood stabilizer

The risk factors for a diagnostic change were assessed using logistic regression analysis. The dependent value was the presence or absence of UMD as the final diagnosis. Independent variables were the use of antidepressants, antipsychotics, and mood stabilizers being started in baseline treatment, change between initial and final treatment, and follow-up period (in months). The analysis showed that with increasing follow-up time, the diagnosis of UMD decreased (OR: 0.904; 95% CI 0.832-0.982) (Table 4).

DISCUSSION

The number of studies investigating the diagnostic continuity of unspecified mood order is very limited, which means that there are not enough data to compare with our results. A study by Baca-Garcia et al. (9) reported a general diagnostic continuity for mood disorders of 55.6%. Various studies found a diagnostic continuity for bipolar disorder between 49 and 93.5% (5,7,9,13,15) and for major depressive disorder of 44-84.8% (5,9,16,21,22). A study observing long-term change in the most common psychiatric diagnoses evaluated the diagnoses of 485 patients (13). At first consultation, the most frequent diagnoses were bipolar disorder (48.5%) and major depressive disorder (18.8%),

Table 4: Factors affecting diagnostic continuity

	B	p	OR	95% CI	
Constant					
AD use					
AD use (1)	0.739	0.445	2.094	0.315	13.926
No AP use					
AP use (1)	1.674	0.090	5.334	0.769	36.985
MS use					
MS use (1)	1.272	0.408	3.567	0.175	72.610
Age	-0.032	0.198	0.968	0.922	1.017
Change of treatment	0.631	0.408	1.879	0.422	8.357
Follow-up period (months)	-0.101	0.017	0.904	0.832	0.982

p: Logistic regression analysis with an enter model, Dependent variable: Unspecified mood disorder present (1).
AD: Antidepressant, AP: Antipsychotic, MS: Mood stabilizer

the most stable diagnosis was bipolar disorder (71% prospective, 69.4 retrospective stability), while the most instable was schizoaffective disorder (28.5% prospective, 16.6% retrospective stability). A study examining the prospective stability of DSM-IV diagnoses showed that after two years' follow-up, diagnoses remained the same for 79% of patients with major depressive disorder, 89.3% for bipolar disorder, and 86.9% of patients diagnosed with schizophrenia (14). In our study, the diagnosis for UMD remained unchanged for 41.7% of patients; the diagnostic continuity for UMD was lower than for other mental illnesses such as bipolar disorder and depressive disorder. An explanation may be that most other psychiatric symptoms require categorical assessment and longitudinal evaluation; therefore, clinicians may tend to assign ambiguous "temporary" or "interim" diagnoses such as NOS or "unspecified." Another possibility to consider is that clinicians may shy away from stigmatization and try to avoid making permanent diagnoses. The difference in diagnostic continuity between mood disorders may be related to various reasons, such as the studies' follow-up periods, sex, mean age, and measuring instruments used (8,10). Our study data are the result of different psychiatric physicians' assessments over a period of 6 years of follow-up. Not only were the assessments carried out by different doctors, but the duration of follow-up also varied, and the attitude and cooperation of patients' families may also be considered factors that could affect diagnostic continuity.

Of the patients diagnosed with UMD in our study, 25% changed to depressive disorder and 16.7% to bipolar disorder. A study following adolescents with a diagnosis of NOS bipolar disorder found a rate of conversion to a diagnosis of bipolar disorder after 5 years' follow-up of 45% (19), while another study with a follow-up period of 10 years showed that 76% of individuals with a diagnosis of bipolar disorder with psychotic features received the same diagnosis again after 10 years of follow-up, and 4% of the patients diagnosed at baseline with schizophrenia and 13% of those diagnosed with major depression with psychotic features converted to a diagnosis of bipolar disorder (23). The same study reported that 4.5% of persons with a baseline diagnosis of schizophrenia and 3.6% of those with a diagnosis of bipolar disorder with psychotic features converted to a diagnosis of major depression with psychotic features. As our study sample consisted of individuals with a high probability of being on the bipolar disorder and depressive disorder spectrum, it is unsurprising that diagnostic conversion occurred mostly towards these two disorders.

Another finding of our study is that individuals with a final diagnosis of UMD have been followed for a shorter period than other patients: Patients with a diagnosis of UMD were on average followed for 8 months, while the average follow-up period for other diagnostic categories was 18 months. A study evaluating the diagnostic consistency of the baseline diagnosis unspecified psychotic disorder over 4 years followed individuals with a final diagnosis of unspecified psychotic disorder for 21 months on average (24). The same study followed patients with a final diagnosis of schizophrenia for an average 29 and persons with mood disorder for an average of 25 months. The follow-up period for persons with a final diagnosis of UMD in our study was shorter than that in the literature. A longer follow-up for the diagnosis of UMD might reduce clinicians' concerns to assign a more distinctive diagnosis. Another possible explanation for the shorter

follow-up period of patients with a final diagnosis of UMD compared to other disorders is that they may not have continued the outpatient follow-up. A study following the therapeutic process of mood disorders reported that factors such as a comorbidity of personality disorder or the absence of an early response to treatment may lead patients to abandon the therapy without being followed for a sufficient period (25). The fact that comorbidities of the patients in our study were not assessed and sufficient observations of the course of the illness could not be made might account for the shorter follow-up period of patients with UMD.

As studies of psychiatric diagnostic continuity focus on more commonly seen diagnoses, we did not find any samples with UMD in the literature. Thus, our study, evaluating the diagnostic continuity of UMD, offers an original contribution to the literature.

We found no correlation between the diagnostic continuity of UMD and age, sex, level of education, and marital state. In this sense, we can consider the sample selection from a single university clinic and the retrospective study design as limitations.

The most important limitation is the low number of cases in our study sample. While not having used a measuring instrument may look like a limitation, all cases have been assessed by clinicians. Another limitation of our study might be that each patient was not assessed by the same doctor during the six-year follow-up process, and the conditions of practice (length, insufficient information received) changed. The impossibility to collect enough data and incomplete sociodemographic data of patients leaving the follow-up are further limitations. Therefore, to research the continuity and validity of the diagnosis of UMD, follow-up studies with a larger sample would be desirable.

Our study showed that the diagnoses of 41.7% of patients diagnosed with UMD at first admission did not change during the follow-up period. Of those whose diagnoses changed, 25% were then diagnosed with depressive disorder, 16.7% with bipolar disorder, 10.3% with anxiety disorder, and 2.1% (n=1) were diagnosed with psychosis. The follow-up period of UMD patients was significantly reduced, and a correlation between diagnostic continuity of UMD and age, sex, choice and change of therapy, education level, and marital state was not found. Lack of sufficient information about persons diagnosed with UMD and doctors' tendency to choose this diagnosis in cases not completely matching more specific diagnostic criteria may lead to a lower diagnostic continuity compared to mood disorders in general. Therefore, it is essential to revise the diagnosis during follow-up. This study is the first in Turkey with this diagnostic category. There is a need for long-term follow-up studies with a bigger sample that take into account the variables leading to this diagnosis.

Contribution Categories		Author Initials
Category 1	Concept/Design	H.I.T.
	Data acquisition	O.O.
	Data analysis/Interpretation	H.I.T., O.O.
Category 2	Drafting manuscript	H.I.T., O.O.
	Critical revision of manuscript	H.I.T.
Category 3	Final approval and accountability	H.I.T., O.O.
Other	Technical or material support	O.O.
	Supervision	N/A

Ethics Committee Approval: Ethical committee approval was not obtained since retrospective data was screened and evaluated. Our study was conducted in accordance with the Declaration of Helsinki and the permission was obtained from the institution for the use of the data.

Informed Consent: Hospital records were screened retrospectively. Thus, informed consent was not taken.

Peer-review: Externally peer-reviewed.

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