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Acceptance, Values and Mindfulness May Differentially Affect Functioning on Bipolar Disorder in Remission; A Single-Center Study

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Abstract

Background: It is known that psychosocial functioning is low in bipolar disorder (BD) euthymic period. We aimed to demonstrate the impact of some psychological flexibility proceses (experiential avoidence, present-to-moment and being contact with values) on psychosocial functioning in BD euthymic state.
Methods: The study was carried out with 106 patients diagnosed with BD. All patients were in remission and the remission state was confirmed by a 17-item Hamilton Depression Rating Scale score less than 7 and a Young Mania Rating Scale score less than 5 and characteristic of BD was assessed by The Bipolarity Index (BI). For the assessment of psychological flexibility processes Acceptance and Action Questionnaire-II (AAQ-II), Freiburg Mindfulness Inventory (FMI) and The Valued Living Questionnaire (VLQ) were used. In the assessment of functioning, Functioning Assessment Short Test (FAST) was applied which includes the dimensions such as autonomy, occupational functioning, cognitive functioning, financial issues, interpersonal relations, and leisure time. In the statistical analysis, regression analysis was performed.
Results: Higher scores of AAQ-II were positively and higher scores of VLQi were negatively correlated with the functioning in the correlation analysis. FMI, BI and VLQc didn't show a significant correlation with functioning. In the multiple regression analysis, the models including both total score ($R2= 0.150$, $F= 3.535$, $p=0.006$) and leisure ($R2= 0.184$, $F=4.511$, $p=0.001$), autonomy ($R2= 0.156$, $F= 3.704$, $p=0.004$) and interpersonal relationship ($R2= 0.122$, $F= 2.786$, $p=0.02$) dimensions were found statistically significant in the model established for each of the dimensions related to psychosocial functioning. AAQ-II and VLQi have been assessed as the strongest predictive variables in the relevant functioning models in regression analyses.
Conclusions: It is concluded that experiential avoidence has an negative impact on general functioning and some specific areas of functioning like interpersonal, leisure, autonomic dimentions. But being in contact with values had a positive effect on improving autonomic, financial, leisure and general functionality in euthymic BD patients. On the other hand present-to-moment and commited actions processes does not show any effect on functioning.

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INTRODUCTION

Bipolar disorder (BD) is a multidimensional condition, involving a complex and dynamic interaction between biological and psychosocial factors [1]. The first line treatment for BD remains pharmacotherapy, and the advent of lithium and other drugs have undoubtedly improved the quality of life for many individuals. However, it became increasingly apparent that medication offered only partial relief from bipolar disorder. Treatment with pharmacologic interventions alone was associated with disappointingly low rates of remission, high rates of recurrence, residual symptoms and psychosocial impairment [2,3]. For this reason many psychological and psychosocial interventions have been added into the treatment modality of bipolar disorders. The evidence demonstrates that bipolar disorder-specific psychotherapies, when added to medication for the treatment of BD, consistently show advantages over medication alone on measures of symptom burden, risk of relapse, social functioning and quality of life [3,4].

In recent years, studies have focused on treatment modalities for the problems in remission period rather than affective period problems of BD. It has been shown that residual depressive/anxiety symptoms and inter-episodic impulsivity have a negative impact on quality of life in patients with BD patients in remission periods [5]. Hence, BD is associated with higher rates of unemployment, disability, higher levels of stress, higher mortality, and

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decreased access to healthcare as results of these remission period symptoms of disorder [5]. Subsyndromal depression, anxiety, sleep quality and neurocognitive variables were reported as factors affecting the functioning in the remission periods of BD, in a recent review [6]. In the last decades, the new generation cognitive behavioral therapies (such as mindfulness or acceptance-based therapies) were developed for remission periods have become more frequent in the field of psychological intervention for BD [7-10].

Acceptance and Commitment Therapy (ACT), one of the new generation CBTs, aim to increase *psychological flexibility (PF)*, which refers to the ability to non-judgmentally experience to inner events like thoughts, emotions, and body sensations and act effectively upon situational demands according to personally chosen goals and values [11]. In ACT, PF increases mainly through two sets of procedures: mindfulness and acceptance skills training, and behavior change techniques based on important life directions of clients. PF consists of six processes that interact with each other; acceptance, cognitive defusion, present to moment, values, committed action, self-as-context [12]. In an ACT intervention study of alcohol use disorder and comorbid affective disorder, ACT group reported higher cumulative abstinence duration, lower depression, anxiety and obsessive compulsive drinking scores [13]. In a open pilot study of group ACT for BD, participants showed reduction in anxiety and depression scores with improvements in quality of life scores [14]. The importance of our study is that psychological flexibility processes have not been previously studied in BD functioning. We hypothesize that decreased psychological flexibility is associated with poor functionality. In this study, we aim to investigate the effects of acceptance, values and present to moment processes on general functionality in patients with bipolar disorder during remission period.

METHODS

Participants

One hundred and seventeen patients who received outpatient treatment for bipolar disorder type 1 in Istanbul Medeniyet University Göztepe Research and Training Hospital, participated in the study. Eleven participants were excluded from the study because they could not fill the meaures completely. One hundred and six patients who filled the relevant measurements appropriately, were included in the study. The study was approved by the Istanbul Medeniyet University School of Medicine's Göztepe Research and Training Hospital Ethics Review Board (date 06/03/2018 with decree number 2018/0065) . Written informed consents were obtained from the participants following the study protocol was thoroughly explained. All participants were between 18-60 years old. Exclusion criteria included; to have a disorder such as mental retardation, schizophrenia and other psychotic disorders, dementia and other organic mental disorders that may restrain the filling of self-report measurements. Inclusion criteria are; confirmed bipolar disorder diagnosis, getting a score of 5 or lower on the Young Mania Rating Scale and getting a score of 7 or lower on the Hamilton Depression Rating Scale.

Psychometric measurements

Sociodemographic data form: This form was formed by the researchers includes demographic variables including gender, age, marital status, education, occupation, employment status, and alcohol, psychoactive substance and tobacco use attitudes.

Acceptance and Action Questionnaire-II (AAQ-II): AAQ-II is a common ACT measure which assesses the construct referred to as, variously, acceptance, experiential avoidance, and psychological inflexibility [15]. Higer scores indicate experiential avoidance, lower scores shows more acceptance and PF state. AAQ-II is a seven-item one-factor structure with 7-point Likert style scale and respondents rate items from 1 ('never true') to 7 ('Always true'). AAQ-II was developed by Bond and colleagues and Turkish validity and reliability study of the scale was conducted by Yavuz et al [15,16].

Freiburg Mindfulness Inventory (FMI): The FMI is a useful, valid and reliable questionnaire for measuring mindfulness. It is most suitable in generalized contexts, where knowledge of the Buddhist background of mindfulness cannot be expected. The 14 items cover all aspects of mindfulness. FMI is a Likert type self-report scale consisting of fourteen items with a rating between 1 (rarely) and 4 (always) and higher scores shows mindfulness state. FMI was developed at 2006 by Walach and colleagues and Turkish validity and reliability study of the FMI was performed by Karatepe and Yavuz [17, 18].

The Valued Living Questionnaire (VLQ): VLQ is a self-report scale that enables individuals to assess themselves about whether they live value-oriented in their daily lives and in general lives. The VLQ, developed by Wilson and Groom is a two-part scale that measures value-oriented life in 10 main areas of life [19]. In the first part, participants rate the *importance* of each value in their lives from 1 (not important) to 10 (very important). In the second part, the participants evaluate the extent to which their behavior is *consistent* with their values during the last week. It can be assumed that VLQ*i* indicates level of contact with values and VLQ*c* indicates the level of committed action during previous week. Turkish validity and reliability study of VLQ was performed by Çekici and collagues [20].

Functioning Assessment Short Test (FAST) in Bipolar Disorder: The FAST is a 24-item interview constructed to assess areas that have been impaired in BD. The FAST was developed by Rosa et al. and it evaluates functionality in 6 different areas. [21]. These subgroups are; *Autonomy* refers to the capacity of the patient of doing things alone and taking his/her own decisions; *occupational functioning* refers to the capacity to maintain a paid job, efficiency of performing tasks at work, working in the field in which the

patient was educated and earning according to the level of the employment position; *cognitive* functioning is related to the ability to concentrate, perform simple mental calculations, solve problems, learn new information, and remember learned information; *financial* issues involve the capacity of managing the finances and spending in a balanced way; *interpersonal relationships* refer to relations with friends, family, involvement in social activities, sexual relations, and the ability to defend ideas and opinions; *leisure* time refers to the capacity of performing physical activities (sport, exercise) and the enjoyment of hobbies. Scores are determined by the sum of items, which range from 0 (indicating no problems) to 3 (indicating a severe limitation) in the 15 days before assessment. By the way higher scores indicate poor functioning in the assessment of FAST. Turkish validity and reliability study of FAST was performed by Aydemir and Uykur [22].

The Bipolarity Index (BI): BI is a clinician-rated instrument that is scored using all available clinical information for each of the five dimensions on a 0-20 ordinal rating. Higher scores correspond to items considered most characteristic of BD. The BI evaluate bipolar disorder not only focusing on descriptive features of disorder but assesses the dimensional aspects of BD including mood symptoms, age of onset of symptoms, course of illness, response to medications, and family history of mood and substance use [23]. The research about the BI in the clinical settings of Turkey context studied by Aküzüm [24]. This research reveals that BI is useful in the diagnosis, dimensional evaluation of the disease, and therefore in the development of appropriate treatment approach, as close as it is calculated as a result of long-term follow-up in Turkey clinical situations. [24].

Statistical Analysis

All variables were screened for the accuracy of data entry, missing values, and homoscedasticity using SPSS 20. The data had less than 5% of missing items, and no pattern was detected. Descriptive statistic was reported using means and standard deviations for continues variables and frequencies and percentages for categorical variables. Missing data were contolled by visual inspection. Reliabilities of psychological flexibility measures were assessed by calculating Cronbach's alpha coefficient for bipolar disorder group. Relationships between experiential avoidance/psychological inflexibility (AAQ-II), mindfulness (FMI), value oriented life attitude (VLQ), characteristic of BD (BI) and functioning (FAST) were calculated using Pearson's rank-order correlation coefficient with a significance level of $p < 0.05$. A stepwise regression model was established in order to reveal the effect of AAQ-II, VLQ, FMI and BI on psychosocial functioning. The model was tested by multiple linear regression analysis. In this model, in addition to the experiential avoidance (EA), ability to present to moment, valued living and committed action levels and bipolar disorder characteristics were taken for each psychosocial functioning dimension. Accordingly, the scores obtained from AAQ-II scales in the first step, valued living and mindfulness scales in the second step and bipolarity index in the third step were included in the model. This model was repeated for each psychosocial functionality dimension and the analysis was completed.

RESULTS

The sociodemographic characteristics of the study group are given in Table 1.

Table 1. Sociodemographic features of research group

	Mean	
Age	39.46	±8.853
Sex		
Male	47	%44.3
Female	59	%55.7
Marital s		
Single	33	%31.1
Married	60	%56.6
Divorced	13	%12.3
Education		
Primary	34	%32
High S	36	%34
University	36	%34

The mean scores and standard deviations of the measures and bipolar index are given in Table 2.

Table 2. Descriptive statistics of measures

	Mean	Std. Dev
BI	73.4245	15.65640
VLQi	83,3208	12,73656
VLQc	74,3585	17,18592
FMI	36,7547	7,19101
AAQ-II	23,9057	10,59607
FAST	32,1509	16,41492

BI; Bipolarity Index, VLQi-c; Valued Living Questionnaire (importance and consistent), FMI; Freibug Mindfulness Inventory, AAQ-II; Accceptance and Action Questionnaire, FAST; Functioning Assessment Short Test

The Cronbach's alpha coefficient of AAQ-II, FMI and VLQ*i-c* measures are 0.887, 0.794, 0.809 and 0.841 respectively. All these scores are above 0.70 and these results shows sufficient internal consistency for using in our sample. Table 3 presents the pearson correlations between the psychological flexibility processes, bipolarity index and

functioning variables. FAST was significantly correlated with AAQ in positive manner (r = 0.265, p < 0.01) and VLQi in negative manner (r = – 0.226, p < 0.05). This result shows that there is a significant relation between acceptance, value oriented life attitude and psychosocial functioning. FAST did't show a significant correlation with VLQc, FMI and BI. AAQ-II was significantly correlated with FMI, VLOi as expected through the acceptance and commitment therapy but it's interesting that AAQ-II didn't show a significant correlation with VLQc.

Table 3. Pearson Correlations Analyses of PF, BI and FAST

	AAQ-II	VLQi	VLQc	FMI	BI	FAST
AAQ-II	—					
VLQi	-0.234*	—				
VLQc	-0.190	0.589***	—			
FMI	-0.322***	0.373***	0.355***	—		
BI	-0.023	0.135	0.063	0.060	—	
FAST	0.265**	-0.226*	-0.073	-0.095	-0.163	—

* p < .05, ** p < .01, *** p < .001. BI; Bipolarity Index, VLQi-c; Valued Living Questionnaire (importance and consistent), FMI; Freibug Mindfulness Inventory, AAQ-II; Accceptance and Action Questionnaire, FAST; Functioning Assessment Short Test

A summary of stepwise multiple regression analyses for psychological flexibility and bipolarity index variables yielding significant (p< 0.05, p< 0.01) contributions to the prediction of functioning are presented in Tables 4. In the multiple regression analysis, the models including both general functioning (R^2= 0.150, F= 3.535, p=0.006) and the three dimensions of functioning; leisure (R^2= 0.184, F=4.511, p=0.001), autonomy (R^2= 0.156, F= 3.704, p=0.004) and interpersonal relationship (R^2= 0.122, F= 2.786, p=0.02) were found statistically significant (Table 3).

For evaluating each of the independent variables on functioning we analyzed the standardized coefficients (ß scores) of independent variables on table 3. We can see the AAQ-II shows the largest ß coefficients in leisure, interpersonel dimensions and general functioning models (respectively 0.281**, 0.280**, 0.283**, p<0.01). VLQ*i* shows the largest ß coefficients in the autonomy dimension model (0.297**, p< 0.01). In the whole model, BI appears to affect only the autonomy dimension model with the beta coefficient of – 0.184* (p<0.05). This means that AAQ-II and VLQ*i* makes the strongest unique contribution to explaining the relevant dependent variable model.

Occupational and cognitive dimensions of FAST were not found statistically significant on the model in the regression analyses.

Table 4. Stepwise Multiple Regression analyses of FAST and processes of PF and BI

	Autonomy	Occupational	Cognitive	Financial	Interpersonal	Leisure	T.Score
Constant							
AAQ-II (ß)	0.205*	0.104	0.251	0,196	0,280**	0,281**	0,283**
VLQi (ß)	-0.297**	-0.060	-0.161	-0,280*	-0,148	-0,273*	-0,230*
VLQc (ß)	0.100	0.010	0.083	0,176	0,086	0,108	0,100
FMI (ß)	0.082	0.077	0.034	0,060	0,035	0,022	0,073
BD-I (ß)	-0.184*	0.036	0.095	-0.065	-0,144	-0,157	-0,147
R2	0.156	0.093	0.097	0.103	0,122	0,184	0,150
Adjusted R2	0.114	0.047	0.052	0.059	0,078	0,1432	0,1077
Std. Err	2.4865	4.6318	3.6950	1.7253	4,3071	1,5013	15,5082
F	3.704	2.041	2.156	2.307	2,786	4,511	3,535
Statistical M (Sig.)	0.004	0.070	0.065	0,050	0,021	0.001	0.006

BI; Bipolarity Index, VLQi-c; Valued Living Questionnaire (importance and consistent), FMI; Freibug Mindfulness Inventory, AAQ-II; Accceptance and Action Questionnaire, FAST; Functioning Assessment Short Test

*Correlation is significant at the 0.05 level (2-tailed); **.Correlation is significant at the 0.01 level (2-tailed).

DISCUSSION

To summarize our main findings;

1. The mean of the functioning (FAST) total score was 32.15. This score shows that the participants exhibit poor functioning.

2. Poor functioning was significantly related with experiential avoidance and psychological inflexibitiy in a positive manner in our Pearson correlation analysis. In the same analyses it was shown that lack of contact with values was associated with poor functioning (Table 3). We didn't find a significant relation between functioning and mindfulness, bipolarity index and commited action in the correlation analysis.

3. In the stepwise multiple regression analysis the models with general functioning and the three dimentions of functioning (leisure, interpersonal relationship and autonomy) were found statistically significant. The strongest predictive variables towards

to relevant functioning model were psychological inflexibility/experiential avoidance and lack of contact with values in the regression analysis.

When we look at the spectrum of BD symptoms in the group we can see the mean BI score of the group is 73.42. In a recent diagnostic reliability study conducted by researchers including the BI developer, the BI cut-off score for bipolar disorder was found to be 50 [25]. It was reported that the cut-off score of BI for bipolar disorder type I was calculated 65 for Turkish sample in the research that investigated Turkish clinical use of BI [24]. This score shows that majority of the group was BD type I.

The mean functioning total score of the group was 32.15. The putative cut-off point of FAST was suggested higher than 11 in the validity and reliability research of the FAST [21]. This means FAST scores above 11 indicate the loss of psychosocial functioning in bipolar disorder. Although the group included in the study was in remission, psychosocial functioning was significantly impaired. This result is consistent with previous studies, suggesting that functional impairment is not restricted to acute episodes and remitted patients may show functional impairment despite symptomatic recovery [26-28].

When we look at the relations between functioning and other variables we see two significant relation was established (Table 3). One of them was between functioning and experiential avoidance ($r = 0.265$, $p < 0.01$). And the second significant relation was established between functioning and importance of valued living questionnaire ($r = -0.226$, $p < 0.05$). These results shows poor functioning is related with experiential avoidance and losing contact with the values in patients with BD in remission. There is no significant relation between characterics of bipolar disorder, mindfulness, consistent with the choosen values and functioning.

Findings that was similar to the results related to the experiential avoidance and value in the correlation analysis appeared in the regression analysis. It is obvious that the predictive effect of experiential avoidance (EA) on psychosocial functioning is superior to other parameters in the regression analysis (Table 4). Our findings show that the EA has a negative impact on leisure activities, autonomy and interpersonal dimensions of functionality, and the general level of functionality. EA involves the unwillingness to remain in contact with private experiences such as painful thoughts, emotions, sensations, imaginations etc. and is often proposed to be critical to the development and maintenance of many psychopathological situation [12, 29]. Our findings are consistent with the data between EA and functionality in the literature; EA has been reported to be a strong predictor of quality of life in chronic psychological problems such as post-war PTSD, post-cancer therapy, and chronic pain [20-32]. These results can be interpreted that especially in the case of acting on its own, in the field of leisure activity and social relations, EA negatively affects functionality. Our study shows that EA does not have a predictive effect on financial, cognitive and occupational functioning in euthymic BD patients.

Another important process of PF is contact with values and committed action. In our study, it has been shown that to be in contact with the values (VLQ*i*) is a positive predictor of autonomy, financial, leisure and general functionality. Being in contact with the values means that keeping the importance of what is meaningful to the person in a conscious way. In other words, it means to have a strong sense of what is important and meaningful to the person in his/her life. ACT extends other intervention approaches in developing and maintaining health behavioral improvements by targeting reducing EA for internal negative processes, and by fostering connection and commitment to personal values associated with self-management of positive health behaviors [33,34]. From this point of view our finding (predictive impact of contact with values on functionality) is consistent with the literature.

But the second part of the value scale-VLQ*c* - was found to have no predictive effect on functionality. Similarly we didn't find a significant relationship between VLQ*c* and functioningin the correlation analyses (Table 3). VLQ*c* assesses the commited behaviors that was performed in the last one week but FAST measures functioning in the last two weeks. This temporal difference may explain these unexpected results between VLQ*c* and functioning. The using of self-report measures and the low number of participant may have led to these results.

Like committed action, mindfulness has no predictive effect on functioning in our analysis (Table 4). Similarly, mindfulness didn't show a significant relationship with functioning in our correlation analysis (Table 3). The effectiveness of mindfulness-based intervention on bipolar disorder has been reported in two recent systematic reviews [35, 36]. It was show that mindfulness-based cognitive therapy was especially effective in depressive and anxiety symptoms in bipolar disorder in a systematic review study in which 13 intervention studies were evaluated [35] . The other systematic review and meta-analysis study indicate that patients with BD may experience significant improvements in depressive and anxiety symptoms after receiving mindfulness-based interventions [34]. We did't include participants with a score higher than 7 at Hamilton Depression Scale. In our study, the lack of effectiveness of mindfulness on functionality may be related to the fact that the participants' symptoms of depression were under the diagnostic level.

Limitations

We examined the present to moment, experiential avoidance and values processes of PF but the other processes (like cognitive fusion and self-as-context) of PF were not included in the study. Especially it will be important to investigate the effect of self-concept on functionality which patients conceptualize on the basis of bipolar disorder in the further studies. Other limitation factor is the measurement of the committed action in life. Using methods such as Ecological Momentary Assesment

that allows to measure changes in daily life, can reveal the relationship between committed aciton and functioning more clearly in further studies. Another limitation of our study is the absence of a control group; in the following studies, psychological flexibility processes in euthymic bipolar disorder patients and healthy control group can be compared.

CONCLUSION

Impairments in functioning are seen not only during the affective episodes in bipolar disorder but also in euthymic periods in BD due to our findings. In our study, it was shown that the model formed with psychological flexibility processes was effective in loss of functioning during the euthymic period.

It was found that experiential avoidance had a negative impact on interpersonal, leisure, autonomic and general functioning. However, being in contact with values had a positive effect on improving autonomic, financial, leisure and general functionality in euthymic BD patients.

Our findings suggest that the further researches focused on acceptance and value-clarification interventions may be effective in bipolar disorder therapy studies.

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REFERENCES

[1] Sanchez-Moreno J, Martinez-Aran A, Tabarés-Seisdedos R, Torrent C, Vieta E, Ayuso-Mateos JL. Functioning and disability in bipolar disorder: an extensive review. Pychother Psychosom. 2009; 78(5): 285-297.

[2] Swartz HA, Swanson J. Psychotherapy for bipolar disorder in adults: a review of the evidence. Focus. 2014; 12(3): 251-266.

[3] Treuer T, Tohen M. Predicting the course and outcome of bipolar disorder: a review. Eur Psychıat. 2010; 25(6): 328-333.

[4] Jones S. Psychotherapy of bipolar disorder: a review. J. Affect. Disord. 2004; 80(2-3): 101-114.

[5] Sylvia LG, Montana RE, Deckersbach T, Thase ME, Tohen M, Reilly-Harrington N et al. Poor quality of life and functioning in bipolar disorder. Int. J. Bipolar Disord. 2017; 5(1): 10.

[6] Bonnín CDM, Reinares M, Martínez-Arán A Jiménez E, Sánchez-Moreno J, Solé B et al Improving Functioning, Quality of Life, and Well-being in Patients With Bipolar Disorder. Int J Neuropsychoph. 2019; 22(8): 467-477.

[7] Williams JMG, Alatiq Y, Crane C, Barnhofer T, Fennell MJ, Duggan DS et al. Mindfulness-based cognitive therapy (MBCT) in bipolar disorder: Preliminary evaluation of immediate effects on between-episode functioning. J. Affect. Disord. 2008; 107(1-3): 275-279.

[8] Perich T, Manicavasagar V, Mitchell PB, Ball JR, Hadzi-Pavlovic D. A randomized controlled trial of mindfulness-based cognitive therapy for bipolar disorder. Acta Psychiatr. Scand. 2013; 127(5): 333-343.

[9] Stange JP, Eisner LR, Hölzel BK, Peckham AD, Dougherty DD, Rauch SL et al. Mindfulness-based cognitive therapy for bipolar disorder: effects on cognitive functioning. J. Psychiatr. Pract. 2011; 17(6): 410.

[10] Deckersbach T, Hansen N, Holzel B. Mindfulness-based cognitive therapy for bipolar disorder. In Baer RA editor, Mindfulness-Based Treatment Approaches. San Diago: Academic Press; 2014; pp. 77-94.

[11] Hayes SC. Acceptance and commitment therapy, relational frame theory, and the third wave of behavioral and cognitive therapies-republished article. Behav Ther, 2016; 47(6): 869–885. https://doi.org/10.1016/j.beth.2016.11.006.

[12] Hayes SC, Luoma JB, Bond FW, Masuda A,Lillis J. Acceptance and Commitment Therapy: Model, processes and outcomes.Behav Res Ther. 2006; 44(1): 1-25.

[13] Thekiso TB, Murphy P, Milnes J, Lambe K, Curtin A, Farren CK. Acceptance and commitment therapy in the treatment of alcohol use disorder and comorbid affective disorder: a pilot matched control trial. Behav Ther. 2015; 46(6): 717-728.

[14] Pankowski S, Adler M, Andersson G, Lindefors N,Svanborg C. Group acceptance and commitment therapy (ACT) for bipolar disorder and co-existing anxiety-an open pilot study. Cogn Behav Ther. 2017; 46(2): 114-128.

[15] Bond FW, Hayes SC, Baer RA, Carpenter KM, Guenole N, Orcutt HK. et al. Preliminary psychometric properties of the acceptance and action questionnaire–II: a revised measure of psychological inflexibility and experiential avoidance. Behav Ther. 2011; 42(4): 676-88.

[16] Yavuz F, Ulusoy S, Iskin M, Esen FB, Burhan HS, Karadere ME. Turkish version of Acceptance and Action Questionnaire-II (AAQ-II): A reliability and validity analysis in clinical and non-clinical samples. Bull Clin Psychopharmacol. 2016; 26(4): 397-408.

[17] Walach H, Buchheld N, Buttenmüller V, Kleinknecht N, Schmidt S. Measuring mindfulness—the Freiburg mindfulness inventory (FMI). Pers Individ Differ. 2006; 40 (8):1543-1555.

[18] Karatepe HT, Yavuz KF. Reliability, validity, and factorial structure of the Turkish version of the Freiburg Mindfulness Inventory (Turkish FMI). Psychiat Clin Psych. 2019; 29(4): 1-7. https://doi.org/10.1080/24750.573.2019.1663582.

[19] Wilson KG, Sandoz EK, Kitchens J, Roberts M. The Valued Living Questionnaire: Defining and measuring valued action within a behavioral framework. Psychol Rec. 2010; 60(2): 249-272.

[20] Çekici F, Aydın Sünbül Z, Malkoç A, Aslan GM, Arslan R. Değer Odaklı Yaşam Ölçeği: Türk Kültürüne Uyarlama, Geçerlik ve Güvenirlik Çalışması (Value Living Questionnaire: Adaptation to Turkish Culture, Validity and Reliability Study). Electronic Turkish Studies. 2018; 13(19): 459-471. [Turkish]

[21] Rosa AR, Sánchez-Moreno J, Martínez-Aran A, Salamero M, Torrent C, Reinares M.Validity and reliability of the

Functioning Assessment Short Test (FAST) in bipolar disorder. Clinical Practice and Epidemiology in Mental Health. 2007; 3(1): 5. https://doi.org/10.1186/1745-0179-3-5.

[22] Aydemir Ö, Uykur B. Reliability and Validity Study of The Turkish Version of Functioning Assessment Short Test in Bipolar Disorder. Turk Psikiyatri Derg. 2012; 23(3): 193-198. [Turkish]

[23] Sachs GS. Strategies for improving treatment of bipolar disorder: integration of measurement and management. Acta Psychiatr. Scand. 2004; 422 (Suppl.): 7–17.

[24] Aküzüm ZN. Bipolarite indeksi ilk görüşmede hesaplandığında ayrıntılı değerlendirme ile elde edilen sonuçları ön görebilir mi? (Can bipolarity index can predict the results with detailed examination when calculate in the first interview?) Postgraduate thesis. Bakırkoy Research and Training Hospital for Mental and Nervous Diseases, Istanbul. 2007. [Turkish]

[25] Aiken CB, Weisler RH, Sachs GS. The Bipolarity Index: a clinician-rated measure of diagnostic confidence. J. Affect. Disord. 2015; 177: 59-64.

[26] Fagiolini A, Kupfer DJ, Masalehdan A, Scott JA, Houck PR ,Frank E. Functional impairment in the remission phase of bipolar disorder. Bipolar Disord. 2005; 7:281-285.

[27] Depp CA, Davis CE, Mittal D, Patterson TL, Jeste DV. Health – related quality of life and functioning of middle-aged and elderly adults with bipolar disorder. J Clin Psychiatry. 2006; 67:215-221

[28] Gazalle FK, Andreazza AC, Hallal PC, Kauer-Sant'Anna M, Ceresér KM, Soares JC.Bipolar depression: the importance of being on remission. Rev Bras Psiquiatr. 2006; 28: 93-96.

[29] Smout MF, Hayes L, Atkins PW, Klausen J, Duguid JE. The empirically supported status of acceptance and commitment therapy: An update. Clin Psychol. 2012; 16: 97-109.

[30] Wicksell RK, Ahlqvist J, Bring A, Melin L, Olsson GL. Can exposure and acceptance strategies improve functioning and life satisfaction in people with chronic pain and whiplash-associated disorders (WAD)? A randomized controlled trial. Cogn Behav Ther, 2008; 37(3): 169-182.

[31] Morina N. The role of experiential avoidance in psychological functioning after war-related stress in Kosovar civilians. J Nerv Ment Dis. 2007; 195(8): 697-700.

[32] Gillanders DT, Sinclair AK, MacLean M, Jardine K. Illness cognitions, cognitive fusion, avoidance and self-compassion as predictors of distress and quality of life in a heterogeneous sample of adults, after cancer. J Contextual Behav Sci. 2015; 4(4): 300-311.

[33] Feros DL, Lane L, Ciarrochi J, Blackledge JT. Acceptance and Commitment Therapy (ACT) for improving the lives of cancer patients: a preliminary study. Psycho-oncology. 2013; 22(2): 459-464.

[34] Gregg JA, Callaghan GM, Hayes SC. Glenn-Lawson. Improving diabetes self-management through acceptance, mindfulness and values: A randomised controlled trial. J Consult Clin Psychol. 2007; 75: 336-343.

[35] Lovas DA, Schuman-Olivier Z. Mindfulness-based cognitive therapy for bipolar disorder: A systematic review. J. Affect. Disord, 2018; 240: 247-261.

[36] Chu CS, Stubbs B, Chen TY. The effectiveness of adjunct mindfulness-based intervention in treatment of bipolar disorder: a systematic review and meta-analysis. J. Affect. Disord. 2018; 225: 234-245.