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The Association Between Quality of Life and Severity of Specific Symptoms of Major Depressive Disorder Amenable to Effective Nursing Interventions

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Keywords

Depressive disorder, major; quality of life; pessimism; sadness; self concept; psychiatric nursing

Abstract

Aim: Some of the symptoms of major depressive disorder and some aspects of quality of life (QoL) are amenable to effective nursing interventions. The specific aim of this research was to examine the association of QoL of patients with major depressive disorder with the severity of individual symptoms amenable to effective nurse intervention. **Subjects and Methods:** A unicentric, cross-sectional study was performed on a consecutive sample of 72 outpatients diagnosed with a major depressive disorder (ICD - 10: F32 and F33). Inclusion criteria were diagnosis of major depressive disorder, age 18-65 years, both sexes, outpatient treatment. The primary outcome was the subjective assessment of health-related QoL as measured by the visual-analogue scale of the EQ - 5D - 5L questionnaire. **Results:** We found a negative association between more severe pessimism as well as self-dislike of any intensity with QoL in patients with major depressive disorder. We have not confirmed the hypothesis regarding the association between sadness and QoL. **Conclusion:** Nurse interventions that decrease patient pessimism and self-dislike could contribute to QoL improvement in patients with major depressive disorder. This investigation could contribute to focused cognitive-behavioral interventions of psychiatric nurses in multidisciplinary care for outpatients with major depressive disorder, achieving better treatment outcomes and particularly improvements of QoL.

Introduction

Major depressive disorder (MDD) is one of the most common affective disorders, characterized by various proportions of different emotional, cognitive, and somatic symptoms during separate episodes. Depressed mood, problems with concentration/attention, and physical symptoms are core criteria used to diagnose MDD. Impairment in cognitive function has been

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well-confirmed in MDD, and cognitive symptoms seem to be a core feature of the disorder [1]. Various studies have confirmed that depression is twice more common in women than in men, while American authors also stressed that the sex difference peaked in adolescence but later on declined and remained stable in adulthood [2]. For both sexes, the median age at disorder onset is about the 25th year of life [3]. MDD is one of the main causes of disability globally [4]. According to World Health Organization data, approximately 322 million people currently suffer from depression [5]. The prevalence of MDD in the Republic of Croatia is similar to that in neighbouring countries [6].

MDD is associated with lower quality of life (QoL). A Korean study found that older age, lower educational level, worse subjective health perception, lower income, unemployment, adiposity, and difficulties with mental health are important risk factors associated with lower QoL in patients with MDD [7]. A Canadian study found moderate improvements of QoL in MDD patients treated with selective serotonin reuptake inhibitors (SSRIs) as well as in those treated with cognitive-behavioural therapy (CBT) – either Internet-delivered or face-to-face (two first-line treatments for MDD) [8]. It seems that this improvement was mediated by different mechanisms. Various psychotherapies have been shown to be beneficial for the QoL of patients with MDD. QoL related improvements cannot be completely explained by improvements in MDD symptom severity [9]. Psychotherapy has a positive effect on various domains of a patient's life, including mental functioning, social and work interactions/relations, level of discomfort, and involvement in everyday activities. QoL was not extensively investigated in treatment-resistant MDD. In a study by Lex and associates on treatment-resistant MDD, QoL was evaluated through four domains: physical, psychological, social, and environmental [10]. This study found that, in patients with MDD and treatment-resistance, QoL was the worst in the psychological and physical domain. It also found that QoL was just partially associated with depressive symptoms measured by self-rating scales and functioning, and even less with the severity of symptoms assessed by clinicians. Many other factors, such as personality traits, social support availability, financial stability, and life success level, affect QoL equally [11]. A study by Saragoussi and associates published in 2018 showed an association between more prominent residual symptoms (including cognitive) and lower QoL in patients with MDD [12].

Various target points, including specific MDD symptoms, can be positively influenced by psychiatric nurses in patients with MDD. MDD is characterized by cognitive symptoms, mood changes, and behavioural symptoms that frequently interfere with the patient's capacity for socialization, planning, organization, or general functioning. Various nursing interventions aim to stimulate and maintain these important aspects of everyday functioning [13]. Some previous studies provided clear insights into which MDD symptoms are associated with negative cognitive biases in depression and stress: sadness, self-dislike, and pessimism appear to be the most important [14]. These symptoms could represent potentially important targets for additional nursing cognitive therapeutic interventions (within the complex, multidisciplinary treatment of MDD) with consequently superior QoL improvements.

The objective of our study was to investigate the association between QoL and the severity of specific MDD symptoms amenable to effective psychiatric nursing (cognitive-behavioural) interventions. We hypothesized that QoL is associated with the severity of at least one of the following MDD symptoms amenable to nursing intervention: sadness, pessimism, and dissatisfaction with oneself/ self-dislike.

Subjects and Methods

This unicentric, cross-sectional study was performed at the Department of Psychiatry, University Hospital Centre Sestre Milosrdnice, Zagreb, Croatia, between February and May 2019.

The study was approved by the institution's Ethics Committee and was conducted in accordance with the World Medical Association's Declaration of Helsinki from 1975, as revised in 2013 [15]. All patients signed informed consent for participation and their identities were concealed.

The target population was outpatients treated at the Department of Psychiatry who were diagnosed with MDD (ICD-10: F 32 and F 33), of both sexes, aged between 18 and 65. We selected a consecutive sample in the order of patient arrival for the outpatient exam. We set target statistical power at 80 % and statistical significance at $p \leq 0.05$. We defined the minimal association for statistical significance as Spearman's rank correlation coefficient of $\varrho = 0.40$. Under these assumptions, we needed 46 participants in the final sample. With an expectation of up to 10 % of missing data, we estimated the initial sample size at 52 patients. We ultimately decided to include 72 participants. We calculated the required sample size using the PASS 14 Power Analysis and Sample Size Software (2015). NCSS, LLC. Kaysville, Utah, USA, ncss.com/software/pass.

The primary outcome was a subjective evaluation of health-related QoL measured using the visual-analog (VAS) scale of the EQ - 5D - 5L questionnaire [16]. EQ - 5D - 5L is a generic questionnaire for measuring health-related QoL. The questionnaire was translated and validated for use in the Croatian population. It includes five questions for measuring QoL in five dimensions: mobility, self-care, usual activities, pain/discomfort, and anxiety/depression. Five responses are offered for each

question: no problems, slight problems, moderate problems, severe problems, and extreme problems). The sixth question includes VAS ranging from 0 to 100, where 0 represents "the worst health", while 100 represents "the best health that the participant can imagine".

The secondary outcome was the result from the five dimensions of EQ - 5D - 5L questionnaire: mobility, self-care, usual activities, pain/discomfort, and anxiety/depression.

Independent variables were specific symptom severity measured using the Beck Depression Inventory-II (BDI-II) [17]. BDI-II is a self-rating scale for depression severity objectification that includes 21 items with 4 possible answers ranging from the absence of a particular symptom to severe intensity of a particular symptom. The inventory was translated and validated for use on the Croatian population [18]. In that study, BDI - II had high internal consistency (Cronbach's $\alpha = 0.94$) and its two-factor structure – somatic-affective and cognitive dimension – was confirmed. Symptoms measured / objectified in separate BDI - II items were: 1) sadness, 2) pessimism, 3) past failure, 4) loss of satisfaction, 5) guilty feelings, 6) punishment feelings, 7) self-dislike, 8) self-criticism, 9) suicidal thoughts or desires, 10) crying, 11) agitation, 12) loss of interest, 13) indecision, 14) feeling of worthlessness, 15) loss of energy, 16) changes in sleeping patterns (sleeping more or less than usual), 17) irritability, 18) changes in appetite (appetite increase or appetite decrease), 19) concentration difficulties, 20) tiredness, and 21) loss of interest in sex.

The variables potentially causally related to QoL and MDD symptoms severity for which the potentially confounding effect was controlled by the multivariable analysis were: age (in years), sex, marital status (married or in a stable relationship, single), having children (binary variable with categories: yes/no), work status (employed or students, unemployed, retired), number of household members, level of education (finished elementary school, high school, higher school or university), duration of the disorder in years from the first MDD diagnoses, and chronic somatic illnesses (binary variable with categories: yes/no; chronic illnesses were defined as illnesses or conditions with at least six months duration at study enrolment or were expected to last at least six months into the study). A questionnaire for collecting data regarding potentially confounding variables was created specifically for this study.

Hypothesis evaluation was performed by multivariable quantile regression analysis with adjustment for potentially confounding effects of: age, sex, education, marital and employment status, number of household members, total household income, chronic somatic illness, body mass index (BMI), MDD duration, number of antidepressants, total daily antidepressant doses, antipsychotic treatment, and psychotherapy. All this variables can be causally associated with MDD therapy outcomes as well as with QoL, and can therefore have a confounding effect on our main conclusions. We calculated and presented medians of the VAS scale of the EQ - 5D - 5L questionnaire, adjusted for the previously mentioned variables with their 95 % confidence intervals (CI). Before analysis, data regarding the severity of three symptoms amenable to clinical-academic nursing interventions were grouped into three categories by adding two categories with the most severe specific / separate symptoms. Statistical significances were corrected for multiple testing using the Benjamini-Hochberg method, with a false discovery rate set at FDR < 5 %. Statistical significance was set at $p < 0.05$, and confidence intervals were set at 95 %. Statistical analysis was performed using StataCorp. 2019. Stata Statistical Software: Release 16. College Station, TX: StataCorp LLC.

Results

We enrolled 72 participants with a median (IQR) age of 53 (48-59), total age range from 24 to 65, and 47 (65 %) of them were women (Table 1).

Median (IQR) of MDD duration was 4 (2-10) years; in 13 (18.1 %) patients, MDD duration was up to one year, in 19 (26.4 %) it was two to three and four to nine, while in 21 (29.2 %) patients MDD duration was ten or more years. Most of the patients, 27 (42.9 %), were treated with SSRI, more than 80 % with benzodiazepines, and 9 (14.3 %) with antipsychotics.

EQ - 5D - 5L VAS median (IQR) was 49 (42-55) points. Participants had the most difficulties with anxiety and depression and the least difficulties with self-care.

Total results range on BDI-II was from 2 to 52 with an arithmetic mean (SD) of 26 (13.4) (Table 1).

Three target symptoms amenable to effective nursing interventions were, in order from the most severe to the least severe: pessimism, dissatisfaction with oneself/self-dislike, and sadness.

The correlation between total QoL measured using EQ - 5D - 5L VAS and total MDD symptom severity measured using BDI-II was statistically significant, negative, linear and moderately high (Spearman's rank correlation coefficient; $\varrho = -0.64$; 95 % CI -0,47 to -0,76; $p = 0.001$; FDR < 5%). This correlation remained statistically significant after adjusting for age, sex, education, marital and employment status, number of household members, total household income, chronic somatic comorbidities, BMI, duration of MDD, number of antidepressants used, total antidepressants daily dose, treatment with antipsychotics and psychotherapy (Quantile regression, $\Delta = -0.39$; 95 % CI -0,71 to -0.07; $p = 0.018$; FDR < 5 %).

In bivariate analysis, severity or more precisely frequency and duration of sadness were not statistically significantly associated with total QoL measured using EQ - 5D - 5L VAS (Table 2). Participants that selected "I do not feel sad" on that BDI-II item had median (IQR) results on the VAS scale for total quality of life of 51 (50-70) points. Participants that answered "I feel sad much of the time" had lower unadjusted results median on the

Table 1. Participants characteristics (n = 72)

	n	%
Age (years), median (IQR)	53	48 - 59
Sex		
male	25	34.7
female	47	65.3
Education		
elementary or high school	54	75.0
university	18	25.0
Marital status		
married or in a stable relationship	54	75.0
single	18	25.0
Number of household members, median (IQR)	3	2 - 4
Work status		
employed or students	47	65.3
unemployed, retired	25	34.7
Monthly household income per household member (EUR), median (IQR)	297	184 - 462
Chronic somatic illness	47	65.3
Body mass index (kg/m^2), median (IQR)	27	25 - 30
Body mass index (kg/m^2)		
normal (< 25.0)	21	29.2
obese (25,0-29.9)	34	47.2
adipose (≥ 30.0)	17	23.6
Smoking tobacco	34	47.2
MDD duration in years, median (IQR)	4	2 - 10
Antidepressants therapy (number of medicaments)		
monotherapy	60	83.3
combination of two or more medicaments	12	16.7
Antidepressants therapy		
SSRI	31	43.1
NaSSA	16	22.2
SNRI	15	20.8
SSM	12	16.7
TCA	8	11.1
GSM	3	4.2
Antidepressants daily dose (fluoxetine 40 mg equivalents), median (IQR)	26	20 - 41
Benzodiazepine therapy	67	93.1
Therapy with particular benzodiazepines		
diazepam	35	48.6
alprazolam	19	26.4
other	13	18.1
Antipsychotics therapy	10	13.9
Psychotherapy	51	70.8
BDI-II, arithmetic mean (SD)	26	13.4
Depression severity (BDI - II)		
no depression (≤ 10)	10	13.9
mild (11-16)	9	12.5
mild-moderate (17-20)	7	9.7
moderate (21-30)	20	27.8
severe (31-40)	13	18.1
extremely severe (≥ 41)	13	18.1

Data presented as number of number (percentage) of participants if not stated otherwise
Abbreviations: IQR, interquartile range; SSRI, Selective serotonin reuptake inhibitors; SNRI, serotonin-noradrenaline reuptake inhibitors; NaSSA, noradrenergic and specific serotonergic antidepressants; MSS, serotonin system modulators; TCA, tricyclic antidepressants; GSM, glutamatergic system modulators; SD = standard deviation

VAS scale by 5 (95 % CI - 13 to 3) points. That difference was not statistically significant when compared with patients that did not feel sad (p = 0.230; FDR > 5 %). Participants who answered: "I feel sad most of the time" and "I am so sad or unhappy that I can't stand it" on the relevant BDI-II items had a six points lower unadjusted results median on the VAS scale (p = 0.290; FDR > 5 %).

The other two specific MDD symptoms amenable to effective mental health nursing interventions had a bivariate statistically significant association with total QoL (Table 2). Patients that "felt more discouraged about their future than they used to" had 12 (95 % CI -21 to -3) points worse QoL when compared with patients that did not present with pessimism at all (p = 0.007; FDR < 5%). Participants that qualified their pessimism on that BDI-II item as: "I do not expect things to work out for me" or "I feel my future is hopeless and will only get worse", had 17 (95 % CI -27 do -7) points lower QoL measured with the VAS scale (p = 0.001; FDR < 5 %). Finally, participants that "had lost confidence in themselves" and those that "were disappointed in them-

Table 2. Bivariate (unadjusted) and multivariable (adjusted) analysis of the association between quality of life measured with a visual analog scale of the EQ - 5D - 5L questionnaire and severity of specific MDD symptoms amenable to effective nursing intervention, measured with items 1, 2, and 7 of BDI - II and grouped into the three categories (n = 72)

	n	Bivariate (unadjusted analysis)					Multivariable (adjusted) analysis				
		Median	(IQR)	Δ	(95 % CI)	p	Adjusted median†	(95 % CI)	Δ	(9 5% CI)	p
Sadness											
0. I do not feel sad	27	51	(50-70)	0			57	(54 to 59)	0		
1. I feel sad much of the time	34	46	(40-50)	-5	(-13 to 3)	0.230	48	(46 to 51)	-9	(-18 to 1)	0.075
2 or 3	11	45	(30-47)	-6	(-17 to 5)	0.290	48	(44 to 52)	-9	(-23 to 5)	0.200
Pessimism											
0. I am not discouraged about my future	17	60	(50-75)	0			56	(-3 to 115)	0		
1. I feel more discouraged about my future than I used to	36	48	(45-55)	-12	(-21 to -3)	0.007*	51	(17-85)	-5	(-17 to 6)	0.336
2 or 3	19	43	(30-47)	-17	(-27 to -7)	0.001*	43	(-4 to 90)	-13	(-25 to -1)	0.032*
Dissatisfaction with oneself / self-dislike											
0. I feel the same about myself as ever	24	60	(50-75)	0			59	(56 to 62)	0		
1. I have lost confidence in myself	29	46	(41-50)	-15	(-25 to -5)	0.005*	49	(47 to 51)	-10	(-18 to -1)	0.028*
2 or 3	19	45	(30-50)	-15	(-26 to -4)	0.010*	46	(43 to 48)	-13	(-23 to -3)	0.008*

Data presented as median (IQR)

Abbreviations: n = number of participants; IQR = interquartile range; Δ = absolute difference of unadjusted and adjusted median in comparison with median in patients without particular symptom; CI = confidence interval; p = statistical significance of median difference calculated by quantile regression

† Medians and analysis are adjusted for age, sex, education, marital and working status, number of household members, total household incomes, chronic illness presence, BMI, MDD duration, antidepressants number, a total daily dose of antidepressant(s), therapy with antipsychotics and psychotherapy

* FDR < 5%

selves" or "disliked themselves" had 15 (95 % CI -25 to -5, -26 to -4, respectively) points lower results for total QoL ($p = 0.005$; FDR < 5 %, $p = 0.010$; FDR < 5 %, respectively).

After adjustment for all measured confounders, sadness intensity was not statistically significantly associated with total QoL result on the VAS scale (Table 2). After adjustment for possible confounders, association with the lowest level of pessimism was no longer statistically significantly associated with the total QoL, while the two highest pessimism levels were. Participants with the highest prominent pessimism had a 13 (CI -25 to -1) points lower adjusted median QoL on the VAS scale when compared with patients without pessimism. That difference was statistically significant ($p = 0.032$), with FDR < 5 %. Dissatisfaction with oneself/self-dislike was statistically significantly associated with total QoL independently of its intensity and even after the adjustment for all covariates. When compared with patients who were not dissatisfied with themselves, participants with low self-dislike had a 10 (95 % CI -18 to -1) points lower result on the VAS scale for quality of life, which was less statistically significant ($p = 0.032$), with FDR < 5%. Participants with the most prominent self-dislike had a 13 (CI -23 to -3) points lower result on the VAS scale for QoL when compared with participants without self-dislike. That difference was statistically significant ($p = 0.008$) with FDR < 5% even after adjusting for covariates.

Discussion

We found a negative association between higher pessimism as well as self-dislike of any intensity and total QoL in patients with MDD. We did not confirm the hypothesis on the association between sadness and total QoL.

Different previous studies explored the association between total depression severity and QoL. Most of these studies were performed on a middle-aged population. A study by Gao and associates published in 2019 found a negative correlation between total depression severity and QoL in patients with MDD (this study also found a negative correlation in patients with another affective disorder – bipolar affective disorder) [19]. American authors found that quality of life was further decreased if MDD was accompanied by some other psychiatric and/or somatic disorders (comorbidity) [20]. A Malaysian study analysed the correlation strength of the severity of the patient's depression symptoms with subdomain QoL scores. In patients with MDD, a higher depressive symptoms score correlated with all subdomains of impaired QoL with moderate to strong strength [21]. A Chinese study explored QoL in euthymic patients with MDD. They found that the QoL of patients with MDD in remission was inferior to that of the normal population [22].

The association between specific aspects/components of depression (particular depressive symptoms) and QoL was explored by only a very small number of studies when compared with the number of studies that explored the association between total depression severity and QoL. In one such study conducted in Canada, the authors found an association between an important component of the clinical picture of depression – biological rhythm disturbance (particularly the wake-sleep rhythm/cycle) and worse functioning – and lower QoL in patients with MDD [23].

Our study found a negative association between higher pessimism and QoL in patients with MDD. A similar finding, but in the general population, was reported in a Japanese study published in 2019. Their study emphasized that the optimism/pessimism ratio was positively correlated with outward oriented behaviour, subjective well-being, and QoL [24].

Our study also found a negative correlation between self-dislike of any intensity and total QoL in patients with MDD.

Some previous studies were focused on the implication of various/different depressive symptoms (including sadness) on the aetiology, prevention, and treatment of MDD. Other research explored the position of sadness within the complex network of depressive symptoms and demonstrated that sadness (along with fatigue and loss of interest) was the most centrally situated symptom within the network of depressive symptoms [25]. However, previous studies did not investigate the association between sadness and total QoL in patients with MDD. Our study explored this association and did not confirm our hypothesis regarding the association between sadness and total QoL. We assume that the effect of sadness on the QoL of depressed patients is not significant. If sadness is considered to be a normative and evolutionary response to adapt to loss in the non-depressive population, it appears that even persistent and clinically obvious sadness such as that found in depressed patients seems to have (partially possible due to evolutionary protective reasons) no significant influence on such an important life aspect such as QoL [26].

Our study examined three specific symptoms of depression – pessimism, self-dislike, and sadness – based on findings from previous studies that presented good insights into which symptoms were associated with negative cognitive biases in depression and stress: sadness, self-dislike, and pessimism being the most important. One such study by American authors published in 2019 focused on cognitive models of depression, especially

on the observation that negatively biased self-referent processing has an important role in MDD. In this study, the authors found that several of the most important symptom predictors of negative self-referent processing in addition to sadness, consistent with Beck's cognitive model of depression, were: self-dislike, pessimism, and worthlessness [27]. They also found that some of these connections are straightforward – someone who had high self-dislike would be more likely to rapidly endorse negative adjectives more self-descriptive than a person who was low in self-dislike [14]. The results from our study regarding the negative association between higher pessimism as well as self-dislike of any intensity and total QoL in patients with MDD could indicate pessimism and self-dislike might be two potentially important targets for additional cognitive therapy interventions in the complex treatment of MDD, with the aim of improving QoL.

In terms of implications for psychiatric nursing practice, well-educated and professionally trained psychiatric nurses can influence specific MDD symptoms that are amenable to nursing interventions via clinical practice through different particularly cognitive behavioural therapy (CBT) interventions. By reducing symptom intensity, frequency, and/or clinical significance, psychiatric nurses can indirectly influence the QoL of a person with MDD, bearing in mind that QoL is a category influenced by various elements (MDD symptoms are just one of them).

Cognitive behavioural therapy is a time-limited, present-focused, and goal-oriented psychotherapy that helps patients learn and apply specific strategies to modify cognitions and behaviours in their own environment through homework. Psychiatric nurses, traditionally, have played a significant role in applying this psychotherapy through medical history. Today, CBT practiced by psychiatric nurses can significantly decrease the wide spectrum of MDD symptoms, including cognitive. Furthermore, after group CBT delivered by a psychiatric nurse, patients with MDD can gain important knowledge about their disorder and treatment, as well as improve their speaking skills. Finally, related to the socioeconomic aspect of health care, should be emphasized that CBT practiced by medical nurses is cost-effective [28].

After further independent studies on new samples from the same population, this study could contribute to choosing the correct focused intervention targets for psychiatric nurses in treating outpatients with MDD. Finally, this study could contribute to increasing care quality for patients with MDD, to increasing their QoL, and indirectly to improving QoL of their family members.

As far as limitations of this study are considered, the main limitation was related to poorer metric characteristics of three main independent variables. They were each measured with a BDI - II item, despite that instrument not being intended for such use. Therefore, it is not possible to determine the presence and intensity of that potential systematic sampling error, respectively attenuation of investigation internal validity. The solution to this weakness would require a new, independent study in which sadness, pessimism, and self-dislike would be measured with scales with demonstrated high validity and reliability. This first weakness is associated with the second weakness of our study. This is the categorical, ordinal character of the scale with which our three independent variables were measured, despite the fact that these are three continuous phenomena. The third weakness/limitation may reduce the generalizability of our results due to the fact that the study was performed in one psychiatric institution - University Hospital Centre, in the centre of the big/capital city. The fourth limitation is related to the increased risk of sampling error. Namely, instead of a random sample, we used a consecutive sample from the general population of patients with MDD treated in University Hospital Centre Sestre Milosrdnice. Such a sample could be biased in favour of patients with better compliance, whose frequency of coming for regular outpatient psychiatric treatment is higher than in the average population. The only solution for this weakness is using a random sample that ensures all members of the target population have an equal likelihood to be included. However, the technical, temporal, and financial requirements for choosing such a sample were unavailable to us. The fifth limitation stems from the type of sample we used. If an investigation lasts less than 12 months, a consecutive sample has a higher risk of seasonality bias. Our results should thus be generalized only to the spring season. This weakness is not relevant to exist if there are no seasonal differences in the association between sadness, pessimism, and self-dislike and total QoL. The last limitation should be addressed to EQ - 5D - 5L questionnaire and the BDI - II as two self-report instruments. As self-rating instruments, they rely on the patient's own perception of his/her health status/QoL (EQ - 5D - 5L) and depression symptoms (BDI - II). Some patients with MDD may underestimate their level of distress/symptoms, while others may exaggerate their symptoms. This weakness could be solved by using clinician-administered scales in future research.

In conclusion, higher pessimism and self-dislike of any intensity were negatively associated with total QoL in patients with MDD. We did not confirm our hypothesis on the association between sadness and total QoL. Group CBT along with the individual CBT interventions delivered by a psychiatric nurse could represent two im-

portant therapeutic procedures within the complex, multidisciplinary treatment of patients with MDD. An important aim and imperative for all healthcare professionals involved in the treatment of patients with MDD should be the achievement of the highest possible level of QoL in such patients.

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Conflict of Interest

None to declare.

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