

DYADIC ADJUSTMENT AMONG HEALTHY SPOUSES OF BIPOLAR I AND II DISORDER PATIENTS

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SUMMARY

Background: The aim of the study was to investigate the total dyadic adjustment (including satisfaction, cohesion, consensus and affectional expression) among spouses of bipolar patients with I and II subtypes.

Subjects and methods: 82 subjects (46 women/ 36men) were enrolled in the study - 50 spouses of bipolar I (BD I) patients and 32 spouses of bipolar II (BD II) patients. We used an interview, the Dyadic Adjustment Scale (DAS), and a questionnaire including questions concerning basic socio-demographic data, the duration of marriage, as well as information about the patient's illness.

Results: The results indicate that BD I is likely to be more disruptive for life-partners and is associated with a lower dyadic adjustment (assessed by the healthy spouse) than BD type II ($p \leq 0.05$). There are differences in DAS scales when specific episodes are compared with each other as well ($p \leq 0.01$). Also patients' illicit substance use and co-morbidity were significant factors ($p \leq 0.01$).

Conclusions: We would like to emphasize that bipolar disorder affects marriage (even the healthy spouse) and that its different subtypes (especially type I) as well as additional factors may be associated with significant deterioration of a relationship.

Key words: bipolar disorder - dyadic adjustment - caregiving burden

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INTRODUCTION

Marital quality and bipolar disorder

Marital relationships are particularly vulnerable to stress associated with the caregiving burden, which is evidenced by many studies indicating a significant deterioration in the condition of relationships amongst the mentally ill (Janowsky 1970, Hoover & Fitzgerald 1981, Lesser 1983, Dore & Romans 2001, Crowe 2004, Lam et al. 2005, Tranvåg & Kristoffersen 2008). An increased likelihood of divorce or separation in marriages of psychiatric patients (especially those diagnosed with bipolar disorder) were also reported (Kessler et al. 1998, Baker 2002).

Difficulties that can be faced within marriages in which one person is suffering from mental illness are those related to the specifics of male-female relationship (in particular marital relationships), namely: the need for closeness and intimacy, the reorganization of daily schedules and a new division of responsibilities, as well as changes in life plans (Dembińska 2010). Sexual dysfunction can also be very common (Dore & Romans 200, Lam et al. 2005, van der Voort et al. 2009, Borowiecka-Karpiuk et al. 2014, Bossini et al. 2014). Healthy spouses are almost always influenced by suffering and stigmatizations associated with the illness (Angermeyer 2003, Angermeyer et al. 2003a, b, Angermeyer & Matschinger 2003, Ostman et al. 2005) and they also engage in their treatment (Jeon & Madjar, 1998, Crowe 2004, Ostman et al. 2005). They are often forced to give up their leisure time or work, they experience mental health problems of their own, and can need care and support themselves. Eventually, they

are almost regularly concerned about relapses or the patient attempting suicide; they also could be exposed to physical and verbal violence (Ostman et al. 2005).

In contrast to the families of patients treated for schizophrenia, among close relatives of patients with affective disorders, it is the life partners or spouses who primarily experience severe burden and less satisfaction with marriage (Perlick et al. 1999, Borowiecka-Kluza et al. 2013, Borowiecka-Karpiuk et al. 2014, Arciszewska et al. 2015).

Spanier (1976, 1979), whose scale was used in this study, worked on the concept of general relationship quality, that can be defined as both an individual property (perception of the individual's feeling) and a dyadic index (perception of the couple's feeling). Marital or dyadic adjustment has been described as a dynamic process, the outcome of which is determined by the degree of troublesome differences in the marital relationship, interpersonal tensions and personal anxiety, satisfaction, cohesion and consensus on important couple's matters. Some authors postulate that marital conflict affecting BD patients' relationships is so ubiquitous that it can act as an indicator of the presence of illness in one of the partner. What is more, it has been proven that there is a higher conflict level in these marriages/families than in others (Hoover & Fitzgerald 1981, Lesser 1983, Romans & McPherson 1992, Lam et al. 2005, Barron et al. 2014). In the study conducted by van der Voort et al. (2009), the spouses of patients diagnosed with bipolar disorder (BD) experienced a heavy burden and found themselves to be "alone together". The life partners of BD patients who took part in the study of Tranvåg and Kristoffersen (2008) described their life with ill partners

as lacking in affection and stressed the feeling of not being appreciated. One set of determinants of marital strain in BD is: illness consequences or patient's behaviours and attitudes such as shifting responsibility for their own actions to others, insensitivity, as well as overstepping cultural and relationship norms which all are related to interpersonal difficulties (Lam et al. 2005). It is important as well that patients with BD may be more likely to be addicted to psychoactive substances and have co-morbid psychiatric disorders (McElroy et al. 2001, Grabski et al. 2008, Klimkiewicz et al. 2015) which are another factors leading to escalation of the spousal burden and causing the deterioration in their relationship (Whisman 2007).

Bipolar disorder is a very heterogeneous nosological entity with few separated subtypes (Akiskal & Pinto 1999), which differ in their courses, process of treatment and potential consequences. When considering the impact the illness has on marriage, it is important to take into consideration this division; without this generalisations cannot be made. While the impact of affective disorders (including bipolar disorder) on spouses has been the subject of many studies, we know much less about how the subtypes of bipolar disorder and their specific symptomatology influence marital quality. However, it seems that the diverse clinical picture of BD subtypes (I and II) may be associated with the potential differences in total dyadic adjustment. It should be also noted that in most analyses manic (BD type I) and hypomanic (BD type I and BD type II) phases are included into the same comparative group, which results in a lack of differentiation between the serious consequences of mania and potentially positive aspects of hypomania (Beentjes et al. 2012). Depressive episodes also have a dissimilar course and during remission in particular BD subtypes the different subclinical symptoms may be present (Judd et al. 2003, Rybakowski et al. 2007). One can conclude that these issues have a significant impact on the perception of the ill life-partners by healthy spouses, and thus may be associated with dyadic adjustment as well.

Hypothesis

This cross-sectional study has a preliminary character and its most important aim is to investigate whether BD subtypes may differentiate (from the spouse's point of view) the functioning of a relationship. In our first study (Arciszewska et al. 2015), concerning the caregiving burden among partners of BD patients, we found that the negative changes in the relationship with BD patients (which are postulated by literature) were seen as a result of the presence of illness and this effect was more frequent among spouses of bipolar I patients (BD I), in comparison to partners of patients diagnosed with bipolar II disorder (BD II). In view of these findings we hypothesize that BD subtypes (I and II) and their episodes create a different image of marriage and that type I may be more disruptive for life-partners as well

as be associated with poorer marital functioning than BD II. We suppose that this factor is so strongly associated with marital quality that it will remain significant even after adjusting for potential confounders. We also assume that the severity of such variable as a patient's substance use and the presence of comorbidities, which are characteristics of bipolar disorder, may reflect in spouses' assessment.

SUBJECTS AND METHODS

Subjects

Patients with bipolar I (BD I) or II (BD II) disorder, whose diagnosis was made or confirmed (DSM-IV-TR criteria) by a clinical psychiatrist, and who are treated in the outpatient clinic, were requested to make an appointment along with their partners. Then the partners were invited to participate in the study. From the 84 subjects (patients' partners) who had been invited and came to an appointment, 82 subjects were enrolled. The sample analyzed consisted of 50 spouses of BD I patients and 32 spouses of BD II patients who gave informed consent and agreed to participate in the study (46 women and 36 men). The inclusion criterion was being in a relationship with patient diagnosed with bipolar I or II disorder. The exclusion criteria were addiction to alcohol or any other substance (except of nicotine) and diagnosis of serious somatic or mental illness.

The average age of study group was 38.5 (SD=12.3) for spouses and 38.7 (SD=12.7) for patients. The average duration of patient's illness was 9.1 (SD=8.3) years and the average duration of marriage – 13.3 (SD=12.5) years. Approximately 54% of spouses had higher education and 73% were professionally active.

Of the two people who did not take part in the study, one refused to complete the questionnaire (male, age: 25), while the second one was found to be diagnosed with bipolar disorder (female, age: 24).

Methods

To assess the level of dyadic adjustment among partners of patients which suffer from BD, authors used The Dyadic Adjustment Scale (DAS) developed by Graham B. Spanier (1976). This 32-items scale is a self-report measure of relationship adjustment as well as dyadic satisfaction (degree to which respondent feels satisfied with relationship), dyadic cohesion (degree to which respondent and partner participate in activities together), dyadic consensus (degree to which respondent agrees with partner) and affectional expression (degree to which respondent agrees with partner regarding emotional affection). The total score ranges from 0 to 151 points. The higher the sum score, the better relationship adjustment. The results greater than 115 mean high dyadic adjustment and below 100 indicate a low score. The scale was adapted to Polish conditions (Spanier 1976, Spanier & Thompson 1982, Cieślak 1989, Graham et al.

2006). The internal consistency (Cronbach's α) of the instrument ranges from 0.70-0.95 (Carey et al. 1993). In this study Cronbach's α was 0.95.

The participants were also asked to fill in a questionnaire (designed by the authors of the study) encompassing questions concerning basic socio-demographic data and duration of marriage. The information about the patient's illness such as duration, current episode, substance use (such as alcohol, illicit drugs and/or medication) and the presence of co-morbidities like panic disorder, generalized anxiety disorder, personality disorders and/or obsessive-compulsive disorder was provided by a psychiatrist.

The study was approved by the Bioethics Committee of the Jagiellonian University in Cracow.

Statistical analyses

As the DAS scores and the sociodemographic data were normally distributed, ANOVA test was imple-

mented to evaluate the differences between continuous variables. We also performed planned contrasts and made the comparisons between acute episodes in the same BD subtype (depression vs mania in BD I and depression vs hypomania in BD II) as well as between acute episodes of the same polarity and between remissions in different BD subtypes (depression in BD I vs depression in BD II, mania in BD I vs hypomania in BD II, remission in BD I vs remission in BD II). We used the χ^2 test for analyzing differences between categorical variables. For testing the relationship between the dependent (DAS scores) and independent variables (BD subtype, substance use and co-morbidity), we built the multiple regression models (for each dyadic adjustment's dimension) adjusted for the spouse's sex, duration of marriage, duration of illness and patient's current episode (only in the form of factor: "acute vs remission" because of the small sample size) as potential confounders. Statistical significance required a two-sided p-value of <0.05.

Table 1. The characteristic of study groups

Groups	BD I (n=50)	BD II (n=32)	Group I vs II t-test df=80
Age (mean \pm SD) (min.-max.)	39.7 \pm 11.9 20–62	36.6 \pm 12.9 23–66	p=0.27
Patient's age (mean \pm SD) (min.-max.)	40.3 \pm 12.1 20–65	36.5 \pm 13.7 21–68	p=0.19
Duration of illness – years (mean \pm SD) (min.-max.)	9.4 \pm 8.7 1.5m–35	8.9 \pm 7.7 1–36	p=0.78
Duration of marriage – years (mean \pm SD) (min.-max.)	13.7 \pm 11.6 0.5–40	12.6 \pm 14.0 0.5–44	p=0.71
			Test- χ^2
Sex			
Female	32 (64%)	14 (43.3%)	p=0.07
Male	18 (36%)	18 (56.7%)	
Education			
Vocational	5 (10%)	4 (12.5%)	p=0.78
Secondary	16 (32%)	8 (25%)	
Higher	29 (58%)	20 (62.5%)	
Employment status			
Employees	35 (70%)	25 (78.1%)	p=0.90*
Non-employees	6 (12%)	3 (9.4%)	
Retired/Pensioners	5 (10%)	2 (6.3%)	
Students	4 (8%)	2 (6.3%)	
Current episode (patient)			
Depression	9 (18 %)	12 (37.5%)	p=0.08*
Hypomania/Mania	21 (42%)	6 (18.7%)	
Remission	18 (36%)	12 (37.5%)	
Mixed	2 (4%)	2 (6,3%)	
History of substance use ¹ (patient)			
No	24 (48%)	20 (62.5%)	p=0.20
Yes	26 (52%)	12 (38.5%)	
Comorbidity ² (patient)			
No	39 (78%)	13 (40,6%)	p=0.001
Yes	11 (22%)	19 (59,4%)	

¹ alcohol, psychiatric medications other than prescribed and/or illicit drugs; ² panic disorder, generalized anxiety disorder, personality disorders and/or obsessive-compulsive disorder; *Fisher Exact Test (Freeman-Halton extension of the Fisher exact probability test for 2x4 contingency table); *Italics* "p-value" denotes statistically significant results

Table 2. The one-way ANOVA results for DAS scores among spouses of BD I and BD II patients (mean ± SD)

DAS	BD I (n=50)	BD II (n=32)	F	p
Dyadic Adjustment (total)	85.9±27.1	104.3±16.5	14.60*	<0.001
Dyadic Consensus	30.2±10.6	36.3±5.8	11.38*	0.001
Dyadic Satisfaction	27.7±9.2	34.6±6.4	15.85*	<0.001
Dyadic Cohesion	14.4±5.7	17.9±4.2	9.03	<0.01
Affectional Expression	7.1±2.7	8.3±2.3	4.30	0.04

* Welch's Analysis of Variance; *Italics* "p-value" denotes statistically significant results

Table 3. Planned contrasts for one-way ANOVA

DAS	F	p	Contrasts
Dyadic Adjustment (total)	6.75 ^a	<0.001	DI<DII***, M<H*
Dyadic Consensus	4.36 ^a	<0.01	DI<DII**, M<H**
Dyadic Satisfaction	6.07	<0.001	DI<DII**, M<H**
Dyadic Cohesion	4.14	<0.01	DI<DII**
Affectional Expression	4.23	<0.01	DI<DII**

DI – depression in BD I; DII – depression in BD II; M – mania; H – hypomania; [#] Welch's Analysis of Variance; *Italics* "p-value" denotes statistically significant results; *p<0.05; **p<0.01, ***p<0.001

RESULTS

Study groups did not differ in terms of basic socio-demographic data, except the rate for co-morbidities related to BD. In the group of ill patients diagnosed with BD II we reported a significantly higher percentage (59.4%) of persons with co-occurring disorders (such as panic disorder, generalized anxiety disorder, personality disorders and/or obsessive-compulsive disorder), than in group with BD I (22%) – p=0.001, which corresponds with the results obtained by other authors (Vieta et al. 2001).

BD subtypes and dyadic adjustment

Table 2. shows that in respect to the dyadic consensus, satisfaction, cohesion and affectional expression, as well as to total dyadic adjustment, spouses of BD I patients tended to score notably lower – p≤0.05.

Contrasts indicate that in case of total dyadic adjustment, consensus, satisfaction, cohesion and affectional expression, the group of spouses whose patients were diagnosed with BD I and had depression during the study, scored lower than spouses of BD II patients (also with depression) – p≤0.01. Spouses of patients with mania (BD I) in comparison with spouses of patients during hypomania (BD II) also tended to score lower on dyadic consensus, dyadic satisfaction and total dyadic adjustment scale – p≤0.05 (see Table 3.).

Comparisons such as 'remission I vs remission II', 'depression I vs mania', and 'depression II vs hypomania' turned out to be insignificant.

Other BD characteristics and dyadic adjustment

In multiple regression we found that in terms of total dyadic adjustment, dyadic consensus, satisfaction and affectional expression all three following factors were significantly and independently associated with poorer marital functioning: BD I subtype (β=-0.37, p<0.001 for total dyadic adjustment, β=-0.34, p<0.01 for dyadic

consensus, β=-0.36, p<0.001 for dyadic satisfaction and β=-0.31, p=0.01 for affectional expression), presence of co-morbid psychiatric disorders, (β=-0.25, p=0.04 for total dyadic adjustment, β=-0.27, p=0.04 for dyadic consensus, β=-0.27, p=0.02 for dyadic satisfaction and β=-0.26, p=0.04 for affectional expression) and patient's illicit substance misuse (β=-0.30, p<0.01 for total dyadic adjustment, β=-0.30, p=0.01 for dyadic consensus, β=-0.31, p<0.01 for dyadic satisfaction and β=-0.24, p=0.03 for affectional expression). In context of dyadic cohesion only BD I subtype was related to the decline in the DAS scoring (β=-0.29, p=0.01). Besides, for all aspects of dyadic adjustment we discovered that duration of illness was positively correlated with the DAS score, while association with duration of marriage was negative. The current episode, in turn, has proved to be related with dyadic cohesion and emotional expression (spouses evaluating their marriage during acute phase of patient's illness obtained lower scores on these two scales). Moreover, it is worth to notice that in this study women declared less satisfaction with the relationship than men.

All models were good fitted and explained from 24% to 46% of the dependent variable's variance (see Table 4).

DISCUSSION

The results obtained during the investigation led to the following main conclusions: 1) type I of BD is more likely to be associated with poorer total dyadic adjustment (including satisfaction, cohesion, consensus and affectional expression) than BD type II; 2) specific episodes of BD I and II differentiate the level of dyadic adjustment and its dimensions – depression and mania in BD I are associated with the increase of marital dysfunction in comparison with depression or hypomania in BD II; 3) co-morbidity and/or illicit substance use among BD patients are related to spouses' lower score on the DAS scales (such as total dyadic adjustment and consensus, as well as satisfaction and affectional expression).

Table 4. The results of multiple regression for DAS scales

Total dyadic adjustment*							
Predictor variables	R ²	adj R ²	F	p	β	t	p
Model	0.42	0.35	5.63	<0.001			
Patients's BD subtype (ref. type II)					-0.37	-3.50	0.001
Substance misuse (ref. no)					-0.30	-2.94	<0.01
Comorbidity (ref. no)					-0.25	-2.10	0.04
Current episode (ref. remission)					-0.18	-1.80	0.08
Duration of marriage					-0.48	-3.73	<0.001
Duration of illness					0.37	3.04	<0.01
Sex (ref. male)					-0.18	-1.77	0.08
Dyadic consensus*							
Model	0.33	0.24	3.80	0.001			
Patients's BD subtype (ref. type II)					-0.34	-3.01	<0.01
Substance misuse (ref. no)					-0.30	-2.69	0.01
Comorbidity (ref. no)					-0.27	-2.08	0.04
Current episode (ref. remission)					-0.17	-1.53	0.13
Duration of marriage					-0.35	-2.49	0.02
Duration of illness					0.28	2.13	0.04
Sex (ref. male)					-0.08	-0.69	0.49
Dyadic satisfaction*							
Model	0.53	0.46	8.28	<0.001			
Patients's BD subtype (ref. type II)					-0.36	-3.72	<0.001
Substance misuse (ref. no)					-0.31	-3.19	<0.01
Comorbidity (ref. no)					-0.27	-2.43	0.02
Current episode (ref. remission)					-0.08	-0.68	0.39
Duration of marriage					-0.57	-4.61	<0.001
Duration of illness					0.51	4.57	<0.001
Sex (ref. male)					-0.37	-3.84	<0.001
Dyadic cohesion*							
Model	0.36	0.28	4.50	<0.001			
Patients's BD subtype (ref. type II)					-0.28	-2.71	0.01
Substance misuse (ref. no)					-0.15	-1.38	0.17
Comorbidity (ref. no)					-0.12	-0.92	0.36
Current episode (ref. remission)					-0.21	-2.01	0.05
Duration of marriage					-0.60	-4.49	<0.001
Duration of illness					0.34	2.70	0.01
Sex (ref. male)					-0.15	-1.39	0.17
Affectional expression*							
Model	0.39	0.31	4.78	<0.001			
Patients's BD subtype (ref. type II)					-0.29	-2.63	0.01
Substance misuse (ref. no)					-0.24	-2.29	0.03
Comorbidity (ref. no)					-0.26	-2.03	0.05
Current episode (ref. remission)					-0.25	-2.32	0.02
Duration of marriage					-0.67	-4.56	<0.001
Duration of illness					0.43	3.31	<0.01
Sex (ref. male)					-0.17	-1.51	0.14

* adjusted for spouse's sex, duration of marriage, duration of illness and patient's current episode (acute vs remission)

These outcomes (especially first and second conclusions) agree with those obtained by Janowsky and his colleagues (1970), but also by Tranvåg and Kristoffersen (2008), who showed that manic behaviour (associated with BD I) had a great impact on functioning of marriage and spousal burden. What is interesting, bipolar I disorder is associated with a lower likelihood of men getting married (Lieberman et al. 2010). In the study of Morriss et al. (2013) it turned out that mania-type symptoms were correlated moderately with inter-

personal friction and impairment in marital adjustment as well. Our findings also correspond with the study of Lam et al. (2005), in which the partners of patients with bipolar disorder have declared a lower level of marital satisfaction at the time when the patient was manic. In this study, we also proved that mania (BD I) is more burdensome for marriage than hypomania (BD II). The same is true when depression in BD I was compared to depression in BD II. This is consistent with our previous results (Arciszewska et al. 2015) which indicated that

either mania or depression in BD I were more likely to be associated with an increase of spousal burden (but not of every aspect of it) than depression and hypomania in BD II. However, there is no difference in dyadic adjustment between episodes of illness of the same type, which stands in opposition to the differences that exist between episodes in the context of the caregiving burden (Arciszewska et al. 2015), but is consistent with the results obtained by Dore and Romans (2001) – in their study 46% spouses declared that both episodes (either low or high mood) are equally distressing. Nevertheless, it is worth noting that the assessment of episode changes in one patient (as in the study of Dore & Romans 2001 and Arciszewska et al. 2015) may differ from the situation when various episodes are compared between different patients (as in this study).

It should be also noted that according to our results, there is an association between the phase of the patient's illness and the spouse's assessment of relationship quality which indicates lower dyadic adjustment during acute episodes of BD. This level also decreases due to the greater length of marriage, which corresponds with the study of Sandberg and his colleagues (2002) that showed that mental illness may negatively affect older couples. In the same time it is important to add that the longer the illness lasts, the higher the evaluation of relationship quality is. This may suggest that healthy spouses are able to adjust to difficult situations and work out strategies of coping together with the patient. This may also indicate that patients suffering from BD longer are better able to manage illness and maintain a satisfying relationship.

The last conclusion concerning a negative association between patient's illicit substance misuse and dyadic adjustment is important insofar as the addiction often co-occurs with bipolar disorder – especially BD I (Grabski et al. 2008). This issue becomes even more important in the face of therapy with couples, in which one of partner (apart from being diagnosed with BD) has a problem with psychoactive substances, which may modify the course of the illness, making it more serious (Goldberg et al. 1999, Goodwin & Jamison, 2007) and thus more onerous for partners. In our study the same relationship exists in the context of the comorbidities. Both co-morbid anxiety (Otto et al. 2006) and personality disorders (George et al. 2003) have been found to modify the course of bipolar disorder, which reflects in worse marital functioning as well and should be taken into consideration. What is interesting, both of these factors turned out to be insignificant in the context of dyadic cohesion. It seems that mutual participation in activities undertaken by spouses varies more under the influence of the currently dominant phase of bipolar disorder (also depending on the subtype), rather than as a result of the presence of symptoms of co-occurring disorders (i.e. the use of drugs, symptoms of anxiety, obsessions and personality disorders).

According to a number of studies, the properly-functioning marriage system has the ability to reduce the impact of adverse life situations and stress associated with the presence of the illness among patients (e.g. by shortening the time of illness) and their spouses (e.g. through faster adaptation and adequate reactions) (Keitner & Miller 1990, Snyder & Whisman 2003).

Limitations

Although this study revealed important findings, which have meaningful implications for researchers and practitioners, limitations exist and need to be reviewed to provide a context for the results.

One of the limitations is the relatively small sample size, which resulted from the preliminary character of the study. The second one is the cross-sectional type of study, which does not provide evidence for causality. Finally, although presence of psychiatric illness and its characteristic have an association with dyadic adjustment, it is not enough. In this study we did not include e.g. temperamental fit between the two partners, as well as patients' assessment of dyadic adjustment, which could be very important for future research directions. Also including one or more scales measuring difficulties in emotion regulation, empathy or other social cognitive measures might help to identify critical components of our findings.

CONCLUSIONS

Therefore, by our results we would like to emphasize that bipolar disorder affects marriage (even the healthy spouse) and that its different subtypes (especially type I) as well as additional factors may be associated with significant deterioration of relationships. Although pharmacotherapy is a common method of treating BD, the results presented here in conjunction with the results presented by others, indicate that paying attention to the condition of marriage and role of BD and its characteristics (such as BD subtype, specific episodes, co-morbidity and substance misuse) in modifying the dyadic adjustment may have crucial meaning for the patient's treatment process, as well as for the well-being of healthy spouses.

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Contribution of individual authors:

Aleksandra Arciszewska, Dominika Dudek and Marcin Siwek designed the study. In addition, Aleksandra Arciszewska made the literature searches and analyses, statistical analyses as well as interpretation of data.

References

1. Akiskal HS & Pinto O: The evolving bipolar spectrum. Prototypes I, II, III, and IV. *Psychiatr Clin North Am* 1999; 22:517-34.
2. Angermeyer MC: The stigma of mental illness from the patient's view - an overview. *Psychiatr Prax* 2003; 30:358-66.
3. Angermeyer MC, Beck M & Matschinger H: Determinants of the public's preference for social distance from people with schizophrenia. *Can J Psychiatry* 2003; 48:663-8.
4. Angermeyer MC & Matschinger H: The stigma of mental illness: effects of labelling on public attitudes towards people with mental disorder. *Acta Psychiatr Scand* 2003; 108:304-309.
5. Angermeyer MC, Schulze B & Dietrich S: Courtesy stigma - a focus group study of relatives of schizophrenia patients. *Soc Psychiatry Psychiatr Epidemiol* 2003; 38:593-602.
6. Arciszewska A, Siwek M & Dudek D: Caregiving burden and psychological distress among spouses of bipolar patients. Comparative analysis of subtype I and II. *Psychiatr Pol* 2015; 49:1289-302.
7. Baker JA: The service and illness experiences described by users of the mood swings network. *J Mental Health* 2002; 11:453-63.
8. Barron E, Sharma A, LeCouteur J, Rushton S, Close A, Kelly T et al.: Family environment of bipolar families: A UK study. *J Affect Disord* 2014; 152-154:522-5.
9. Beentjes TAA, Goossens PJJ & Poslawsky IE: Caregiver Burden in Bipolar Hypomania and Mania: A Systematic Review. *Perspectives in Psychiatric Care* 2012; 48:187-97.
10. Borowiecka-Karpiuk J, Dudek D, Siwek M & Jaeschke R: Spousal burden in partners of patients with major depressive disorder and bipolar disorder. *Psychiatr Pol* 2014; 48:773-87.
11. Borowiecka-Kluza J, Miernik-Jaeschke M, Jaeschke R, Siwek M & Dudek D: The affective disorder-related burden imposed on the family environment - an overview. *Psychiatr Pol* 2014; 47:635-46.
12. Bossini L, Fortini V, Casolaro I, Caterini C, Koukouna D, Cecchini F et al.: Sexual dysfunctions, psychiatric diseases and quality of life: a review. *Psychiatr Pol* 2014; 48:715-26.
13. Carey MP, Spector IP, Lantinga LJ & Krauss DJ: Reliability of the Dyadic Adjustment Scale. *Psychol Assessment* 1993; 5: 238-40.
14. Cieślak K: Zadowolenie z małżeństwa a poziom wzajemnej otwartości małżonków. *Psychoterapia* 1988; 67:40-7.
15. Coryell W, Scheftner W, Keller M, Endicott J, Maser J & Klerman GL: The enduring psychosocial consequences of mania and depression. *Am J Psychiatry* 1993; 150:720-7.
16. Crowe M: Couples and mental illness. *Sex Relation Therapy* 2004; 19:309-18.
17. Dembińska E: Kryzys małżeński osoby chorej psychicznie. Unpublished doctoral dissertation. Collegium Medicum, Cracow 2010.
18. Drieling T, Scherer-Klabunde D, Schaerer LO, Biedermann NC, Post RM & Langosch JM: Interpersonal and instrumental functioning of patients with Bipolar Disorder depends on remaining depressive symptoms. *German J Psychiatry* 2010;13:61-5.
19. Dore G & Romans SE: Impact of bipolar affective disorder on family and partners. *J Affect Disord* 2001; 67:147-58.
20. George EL, Miklowitz DJ, Richards JA, Simoneau TL & Taylor DO: The comorbidity of bipolar disorder and axis II personality disorders: prevalence and clinical correlates. *Bipolar Disorder* 2003; 5:115-22.
21. Goldberg JF, Grano JL, Leon AC, Kocsis JH & Portera L: A history of substance abuse complicates remission from acute mania in bipolar disorder. *J Clin Psychiatry* 1999; 60:733-40.
22. Goodwin FK & Jamison KR: *Manic-Depressive Illness*. Oxford University Press, New York, 2007.
23. Grabski B, Dudek D, Datka W, Mączka G & Zięba A: Lifetime anxiety and substance use disorder comorbidity in bipolar disorder and its relationship to selected variables. Gender and bipolar subtype differences in comorbidity. *Arch Psychiatr Psychother* 2008; 3:5-15.
24. Graham JM, Liu YJ & Jeziorski JL: The Dyadic Adjustment Scale: A Reliability Generalization Meta-Analysis. *J Marriage Fam* 2006; 68:701-17.
25. Hoover CF & Fitzgerald RG: Marital conflict and manic-depressive patients. *Arch Gen Psychiatry* 1981; 38:65-7.
26. Janowsky D, Leff M & Epstein R: Playing the manic game; interpersonal maneuvers of the acutely manic patient. *Arch Gen Psychiatry* 1970; 22:252-61.
27. Jeon YH & Madjar I: Caring for a family member with chronic mental illness. *Qual Health Res* 1998; 8:694-706.
28. Judd LL, Akiskal HS, Schettler PJ, Coryell W, Endicott J, Maser JD et al.: A prospective investigation of the natural history of the long-term weekly symptomatic status of bipolar II disorder. *Arch Gen Psychiatry* 2003; 60:261-9.
29. Kessler RC, Walters EE & Forthofer MS: The social consequences of psychiatric disorders, III: probability of marital stability. *Am J Psychiatry* 1998; 155:1092-6.
30. Klimkiewicz A, Klimkiewicz J, Jakubczyk A, Kieres-Salomoński I & Wojnar M: Comorbidity of alcohol dependence with other psychiatric disorders. Part I. Epidemiology of dual diagnosis. *Psychiatr Pol* 2015; 49:265-75.
31. Lam D, Donaldson C, Brown Y & Malliaris Y: Burden and marital and sexual satisfaction in the partners of bipolar patients. *Bipolar Disorder* 2005; 7:431-40.
32. Lesser A: Hypomania and marital conflict. *Can J Psychiatry* 1983; 28:362-6.
33. Lieberman DZ, Massey SH & Goodwin FK: The role of gender in single vs married individuals with bipolar disorder. *Compr Psychiatry* 2010; 51:380-5.
34. McElroy SL, Altshuler LL, Suppes T, Keck PE Jr, Frye MA, Denicoff KD et al.: Axis I psychiatric comorbidity and its relationship to historical illness variables in 288 patients with bipolar disorder. *Am J Psychiatry* 2001; 158:420-6.
35. Morriss R, Yang M, Chopra A, Bentall R, Paykel E & Scott J: Differential effects of depression and mania symptoms on social adjustment: prospective study in bipolar disorder. *Bipolar Disorder* 2013; 15:80-91.
36. Ostman M, Wallsten T & Kjellin L: Family burden and relatives' participation in psychiatric care: are the patient's diagnosis and the relation to the patient of importance? *Int J Soc Psychiatry* 2005; 51:291-301.
37. Otto MW, Simon NM, Wisniewski SR, Miklowitz DJ, Kogan JN, Reilly-Harrington NA et al.: Prospective 12-month course of bipolar disorder in out-patients with and without comorbid anxiety disorders. *Br J Psychiatry* 2006; 189:20-5.
38. Perlick DA, Clarkin JF, Sirey J, Raue P, Greenfield S, Struening E et al.: Burden experienced by care-givers of

- persons with bipolar affective disorder. *Br J Psychiatr* 1999; 175:56–62.
39. Romans S & McPherson H: The social networks of bipolar affective disorder patients. *J Affect Disord* 1992; 25:221–8.
40. Rybakowski JK, Suwalska A, Łojko D, Rymaszewska J & Kiejna A: Types of depression more frequent in bipolar than in unipolar affective illness: results of the Polish DEP-BI study. *Psychopathology* 2007; 40:153–8.
41. Sandberg JG, Miller RB & Harper JM: A qualitative study of marital process and depression in older couples. *Fam Relat* 2002; 51:256–64.
42. Spanier GB: The measurement of marital quality. *J Sex Marital Ther* 1979; 5:288–300.
43. Spanier GB: Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. *Journal of Marriage and the Family* 1976; 38: 15–28.
44. Spanier GB & Thompson L: A confirmatory analysis of the dyadic adjustment scale. *J Marriage Fam* 1982; 44:731–8.
45. Tranvåg O & Kristoffersen K: Experience of being the spouse/cohabitant of a person with bipolar affective disorder: a cumulative process over time. *Scand J Caring Sci* 2008; 22: 5–18.
46. van der Voort TYG, Goossens PJJ & van der Bijl JJ: Alone together: A grounded theory study of experienced burden, coping, and support needs of spouses of persons with a bipolar disorder. *Inter J Ment Health Nurs* 2009; 18:434–43.
47. Vieta E, Colom F, Corbella B, Martinez-Aran A, Reinares M, Benabarre A et al.: Clinical correlates of psychiatric comorbidity in bipolar I patients. *Bipolar Disorder* 2001; 3:253–8.
48. Whisman MA: Marital distress and DSM-IV psychiatric disorders in a population-based national survey. *J Abnorm Psychol* 2007; 116:638–43.

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