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Depressive disorders in spouses of mentally ill patients

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Abstract *Background* According to the literature on stress and coping, the burden of caregiving to a mentally ill partner might have an impact on the mental health of the spouse. *Method* As part of a study on the burden of caregiving to mentally ill family members, a structured psychiatric interview (DIA-X-M-CIDI) was conducted with spouses of patients suffering from depression, anxiety disorders, or schizophrenia (n = 151). *Results* Covarying with the partner's gender and the severity of the patient's illness a significantly increased prevalence of depressive disorders could be found. *Conclusion* Psychiatric patients' partners are at a high risk of developing a depressive disorder. It appears necessary to develop special interventions for spouses reducing stress and the risk of getting depressed.

Key words Depression – spouses – burden of caregiving – CIDI – prevalence rates

Introduction

Regarding the situation of spouses who are living together with a mentally ill patient, on first sight it appears to be obvious that this group of people will experience a significant amount of burden. But the term "burden" unspecifically describes the situation of relatives. To give a more accurate description it seems necessary to differentiate between burdens in terms of daily hassles in everyday life (De Longis et al. 1988) and central hassles from a biographical point of view (Gruen et al. 1988). Daily hassles refer to the necessity of spouses to cope with psychiatric symptoms of their partners such as a lack of concentration, depressive mood, and avoidance behavior. These symptoms often lead to increased work loads for the spouses, as the mentally ill partners are unable to share the household tasks. Another burden in day-to-day living is related to a lack of social support. Many relatives feel ashamed, afraid, or both to ask friends or neighbors to assist them in daily situations such as picking the children up from school. For the spouses, questions of social support are frequently associated with aspects of stigma: "What will they think of me when they find out that my spouse suffers from schizophrenia? If I do not tell them, how can I explain why he/she is not going to work or avoids invitations in the neighborhood?" Most often this kind of worrying leads to avoidance of social situations initiated by the spouses themselves hoping to avoid questions and anticipated shame in the first place.

Yet looking at the situation of spouses in terms of central hassles from a biographical perspective, another aspect of burden seems to be associated with the problem of different role-taking in the partnership and the family. Many spouses talk about their mentally ill partners in terms of "having another child" instead of a friend, a husband, a lover, etc. The experience of their life with a mentally ill partner most often is very different from their own ideas of living and having biographical development. Thus, examining their lives very frequently means looking upon a huge amount of multiple limitations and losses: loss of expectations about partnership, limitations in their own professional career, social acceptance, limitations in leisure actvities and in life style, etc. (Bischkopf et al. 2002). Taking into account the concepts of centrality (Gruen et al. 1988), daily strains as described above might become even more important and drastically diminish the perceived quality of the spouses' lives, and, in fact, there is a growing body of research which is dealing with these accumulating perceived burdens of families with mentally ill family members (e. g., Dura et al. 1990). However, in addition to the classification of different types of burdens, it seems to be necessary to ask what the consequences of burden experienced throughout the years of living together with a mentally ill partner are.

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Burdens of spouses as a part of psychosocial distress may increase the risk of developing a psychiatric illness (Lazarus 1991). But what kind of psychiatric disorder do we think of? Especially in the case of depressive disorders and anxiety disorders psychosocial distress is described as a possible factor which may be responsible for the development of the illness (Fabian and Becker 2001). Finlay-Jones and Brown (1981) highlight different emotional qualities which seem to be important for the development of a specific psychiatric disorder. The authors describe loss and grief as being responsible for most of the depressive syndromes developing from psychosocial distress, whereas threat and danger seem to lead to anxiety disorders. Thus, in the case of spouses with mentally ill partners the risk of depressive disorders should increase as opposed to that of anxiety disorders.

Following this argument, an additional question is whether the severity of the patient's illness is another important predictor with regard to the development of depressive episodes among the spouses. On one hand, severity may be expressed by differences in the quality of a specific disorder; for example, a psychotic illness such as schizophrenia as opposed to an anxiety disorder. On the other hand, quantitative aspects of severity may be expressed by the extent of impairment in day-to-day functioning caused by any psychiatric syndrome such as the extent to which the patient is disabled with regard to work or social interactions. From the clinical point of view, this leads to the hypothesis that spouses of schizophrenic patients more often suffer from depression than spouses of patients with affective disorders. Spouses of patients with anxiety disorders might have an even lower risk of depression than those who care for a depressive patient. A higher level of impairment in everyday functioning could also increase the risk of the spouse becoming depressed. Additionally, an increasing prevalence of depressive episodes in spouses of mentally ill patients might be predicted by the duration of the patient's illness and/or the length of the time in which the spouse experienced his or her partner as mentally impaired.

However, with regard to prevalence rates of psychiatric disorders, another important aspect is "assortative mating" (Galbaud du Fort et al. 1998). Whether patients get to know each other in psychiatric contexts or whether patients are living in social circumstances which increase the probability of meeting a person suffering from psychiatric illness may have an important influence on the prevalence of psychiatric disorders in their spouses. Studies on this topic most often refer to depressive disorders, anxiety disorders, and personality disorders, including alcoholism (Maes et al. 1998), with research findings and discussions appearing to be very controversial (Heun and Maier 1993; McLeod 1993). Thus, different factors may influence the prevalence rates of depression in spouses who take care of a mentally ill patient.

Subjects and methods

As part of a panel study on the burden of care giving to mentally ill family members with three points of measurements over a 24-month period, spouses of patients who suffer from depression (F32/33/34.1), anxiety disorders (F40/41), or schizophrenia (F20) were examined. Inclusion criteria required that the spouse had to live together with the patient in the same household. Beginning in October1998, the study participants were consecutively recruited from patients with the above-mentioned diagnoses treated in inpatient and outpatient psychiatric services in the city of Leipzig. Besides the inpatient services of the Department of Psychiatry of the University of Leipzig, participants were selected from the Sächsisches Fachkrankenhaus for Psychiatry, Alt-Scherbitz, and the Department of Psychiatry at the Parkkrankenhaus Dösen. The outpatient units associated with these institutions were considered as well as the outpatient units of the community mental health services of the city of Leipzig (Verbund Gemeindenahe Psychiatrie). Patients treated in these institutions usually suffer from considerable impairments in everyday functioning due to severe mental illness. Altogether 336 patients were contacted with 61 % of them agreeing to ask their spouses to cooperate. Of the 205 spouses, 74 % agreed to participate in the study. Thus, 151 partners, 45.8 % of the patients contacted, were included in the study. In this paper the baseline data are presented.

The psychiatric disorder was assessed with a CAPI-version of the Composite International Diagnostic Interview (CIDI) as used in the German Health Survey of 1998 (Bellach et al. 1999). As suggested by Wittchen (1998), a two-step approach was chosen: during the first interview contact every participant of the study completed a screening questionaire with 13 so-called "core questions", referring to any previous and current psychiatric disorder. If at least one of these questions was answered positively, another appointment was arranged to conduct the full clinical interview (DIA-X-M-CIDI, laptop version: Wittchen 1998; Wittchen et al. 1999a). The actual level of the patients' functional impairment was assessed by their physicians through the GAF (Global Assessment of Functioning; Sass et al. 1998).

Forty-five participants are partners of patients with anxiety disorders, 54 are partners of patients with depression, and 52 are partners of patients with schizophrenia. Of the participants 44.4 % are female and 78.8 % are married. Mean age is 46.4 years (sd = 12.5) for the spouses and 45.4 years (sd = 11.8) for the patients. At the time of the interview mean duration of the partnership was 19.3 years (sd = 12.1). For 68.9 % of the patients the onset of psychiatric illness started during the partnership, with 27.8 % being diagnosed mentally ill before meeting their partner for the first time. For 3.3 % of the participants onset of the patient's illness was at the beginning of the relationship. On average, the duration of the patient's illness in this sample was 10.2 years (sd = 9.6) (Table 1).

When examining subsamples according to the illness of the cared-for patient, no gender differences but significant age differences can be observed. Spouses of the patients who suffer from depression are significantly older (51.8 + 11.6 years) as compared to the other subsamples. Spouses of patients with a schizophrenic illness are, on average, 5.5 years younger, with spouses of patients with anxiety disorders being the youngest (39.9 + 11.6 years) (Table 1).

No significant differences could be found between the three subsamples with regard to the severity of the patient's illness in terms of impairment in everyday functioning as measured by the GAF (Sass et al. 1998).

Data from the German Health Survey for the new states, which was conducted in 1998, were used for comparison. To assure comparability only participants up to the age of 65 were considered. Thus, for these analyses the number of participants in the spouses' sample was reduced to n = 142. Between both samples no differences with regard to relative percentages within age decades [Chi^2 (3) = 0.1; p = 0.99] or with regard to mean age [t(1406) = –0.45; p = 0.75] were observed. Additionally, no difference in the homogeneity of the variances for both samples could be observed (Levene-Test: F = 0.09; p = 0.75). Thus, a weighing of the data according to age did not seem neccessary. However, significant differences between both samples with regard to the gender distribution [Chi^2 (1) = 3.9; $p < 0.05$] made weighing necessary.

Table 1 Sociodemographic characteristics of the total sample and the three subsamples

		Illness of the patient			
	sample (n = 151)	anxiety (n = 45)	depression (n = 54)	schizophrenia (n = 52)	$Chi^2(2)$/ F(2,148); p <
Gender of spouse female (n = 67)	44.4%	35.6%	50.0%	46.2%	2.2; n. s.
Age of spouse M (± SD)	46.4 (± 12.5)	39.9 (± 11.6)	51.8 (± 11.6)	46.3 (± 11.6)	12.8; 0.001
Duration of partnership (years) M (± SD)	19.3 (± 12.1)	15.2 (± 10.8)	26.4 (± 11.5)	15.4 (± 10.4)	17.8; 0.001
Duration of illness (years) M (± SD)	10.2 (± 9.6)	5.2 (± 5.6)	8.5 (± 9.0)	16.1 (± 9.9)	20.4; 0.001
Duration of experienced illness of partner (years) M (± SD)	8.3 (± 7.9)	4.7 (± 4.8)	8.4 (± 8.8)	11.2 (± 8.0)	8.9; 0.001
Severity of illness (GAF) M (± SD)	55.2 (± 14.3)	52.2 (± 12.0)	58.5 (± 14.4)	54.3 (± 15.5)	2.5; n. s.

Results

The first question to be answered is whether spouses of patients who suffer from depression, anxiety disorders, or schizophrenia develop psychiatric disorders themselves. Concerning lifetime prevalences for a psychiatric disorder, 41.1 % of the spouses fulfill the diagnostic criteria of ICD-10. As expected, there is a significant gender difference (52.2 % of women vs. 32.1 % of men). Female spouses most often suffer from affective disorders (38.8 %, 96 % depressive disorders), 23.9 % from anxiety disorders and 20.9 % from somatoform disorders. In all three disorders, prevalences are 1.8–2.5 times higher for female than for male spouses. Of male spouses, 21.4 % suffer from affective disorders (94 % depression), 9.5 % from anxiety disorders, 9.5 % from schizophrenia, 8.3 % from somatoform disorders, and 7.1 % from alcohol addiction (Table 2). Additionally, it has to be pointed out that 25.2 % of the spouses fulfill the criteria of "more than one diagnosis" – which are almost two-thirds of those with a psychiatric disorder.

Looking at 4-week prevalence rates, which are more important with regard to the burden hypothesis, 23.8 % of the spouses suffered from a mental disorder during 4 weeks before the baseline interview, again most frequently from affective disorders (12.6 %, 94 % depression), anxiety disorders (9.3 %), and somatoform disorders (4.6 %).

Comparing our data with the German Health Survey of 1998 (Wittchen, et al. 1999b), in which the same methodology had been used for the assessment of psychiatric disorders, no significant differences in lifetime prevalences of "any psychiatric disorder" for partners could be observed. However, significant differences could be found with regard to comorbidity. In the Leipzig sample the proportion of subjects with two or more different diagnoses is about 10 % higher (OR = 1.8) (Table 3). The most frequent combinations are depression and anxiety disorders, anxiety and somatoform dis-

Table 2 Psychiatric disorders differentiated according to gender of spouse

		Sample (n = 151)	Women (n = 67)	Men (n = 84)	Chi^2 (1) = /p <
Life time prevalence					
Any psychiatric disorder:		41.1%	52.2%	32.1%	6.22/0.05
F3	Affective disorders	29.1%	38.8%	21.4%	5.45/0.05
F40/41	Anxiety disorders	15.9%	23.9%	9.5%	5.74/0.05
F45	Somatoform disorders	13.9%	20.9%	8.3%	4.91/0.05
F2	Schizophrenia/psychosis	8.6%	7.5%	9.5%	0.20/n. s.
F10	Dependencies (alcohol)	5.3%	3.0%	7.1%	1.28/n. s.
	Comorbidity:	25.2%	31.4%	20.3%	2.44/n. s.
4-week prevalence					
Any psychiatric disorder:		23.8%	32.8%	16.7%	5.37/0.05
F3	Affective disorders	12.6%	19.4%	7.1%	5.09/0.05
F40/41	Anxiety disorders	9.3%	14.9%	4.8%	4.58/0.05
F45	Somatoform disorders	4.6%	9.0%	1.2%	5.08/0.05
F2	Schizophrenia/psychosis	1.3%	1.5%	1.2%	0.03/n. s.
F10	Dependencies (alcohol)	2.0%	0.0%	3.6%	2.44/n. s.
	Comorbidity:	5.3%	9.0%	2.4%	3.21/n. s.

Table 3 Comparison of prevalence data with data from the German Health Survey 1998

			Sample (spouses)				
	Spouses (n = 142)[b]	GHS[a] 1998 (n = 1266)	OR[c]	z/p <[c]	Log likelihood[c]	Chi² (3)/p <[c]	Pseudo R²[c]
Lifetime prevalence							
Any psychiatric disorder:	44.1%	43.4%	1.01	0.1/n. s.	–946.3	33.7/0.001	0.018
F32–34 Depression	30.3%	18.2%	1.97	3.4/0.001	–669.1	41.1/0.001	0.030
F40/41 Anxiety disorders	17.6%	18.5%	0.92	–0.3/n. s.	–645.3	47.5/0.001	0.036
Comorbidity:	26.8%	17.0%	1.83	2.9/0.01	–650.2	22.7/0.001	0.017
1-year prevalence							
Any psychiatric disorder:	35.5%	31.7%	1.23	1.1/n. s.	–857.3	49.7/0.001	0.028
F32–34 Depression	22.5%	10.7%	2.43	3.9/0.001	–492.1	37.2/0.001	0.036
F40/41 Anxiety disorders	16.9%	17.0%	0.97	–0.1/n. s.	–617.8	40.6/0.001	0.032
Comorbidity:	15.5%	9.9%	1.69	2.0/0.05	–460.3	17.4/0.001	0.019
4-week prevalence							
Any psychiatric disorder:	25.5%	20.1%	1.39	1.6/n. s.	–702.2	27.8/0.001	0.019
F32–34 Depression	14.1%	6.0%	2.43	3.1/0.01	–332.2	26.0/0.001	0.038
F40/41 Anxiety disorders	9.9%	10.7%	0.91	–0.3/n. s.	–460.0	26.7/0.001	0.028
Comorbidity:	6.3%	6.0%	0.97	–0.1/n. s.	–315.1	6.4/n. s.	0.010

[a] German Health Survey 1998: reference data for the new states; age range 22–65 years
[b] reduced sample; age range 22–65 (weighted by gender)
[c] controlled for gender and age

orders, depression and somatoform disorders, depression and schizophrenia, and a combination of depression, anxiety, and somatoform disorders. Four-week prevalence rates of recent psychiatric syndromes ("any psychiatric diagnosis") are increased by 5% as compared to the reference data; however, this difference does not reach a statistical significant level.

On all three indicators, e. g., 4-week prevalence (14.1% vs. 6%), 1-year prevalence (22.5% vs 0.7%) as well as life time prevalence (30.3% vs. 18.2%), the odds ratios for depression are significantly increased and at least twice as high as compared to the reference data (Table 3). Odds ratios are even higher for the more recent indicators, e. g., of 4-week and 1-year prevalence rates (OR = 2.4) as compared to life time prevalence rates (OR = 2.0). Broken down by gender, the difference is significant only for females (19.7% vs. 7.3%). Summarizing these results, one can say that female spouses especially seem to suffer more frequently from depressive disorders as compared to the general population.

To test the hypothesis that caregiving burdens of spouses may result in a higher risk for depressive illnesses of the caregiver, a set of logistic regression analyses was conducted (Table 4). Dependent variables included the 4-week, 1-year, and the lifetime prevalence rates of depression. As an indicator of burden the severity of the patient's illness as measured by the "Global Assessment of Functioning" score (GAF, Sass et al. 1998) was chosen. Influences according to the "assortative mating" hypothesis were controlled for by taking into account the relationship between the date of onset of the patient's psychiatric disorder and the date of the beginning of the partnership (before, during, or after the onset of the psychiatric disorder). Additionally, the impact of sociodemographic and partnership-related characteristic differences (Table 1) such as gender, age, and severity in terms of the type of the disorder (anxiety, schizophrenia, or depression) was also controlled for.

Logistic regression analyses reveal that the most powerful predictor with regard to all three prevalence

Table 4 Predictors of lifetime, 1-year, and 4-week prevalence of depression

	Lifetime prevalence of depression		1-year prevalence of depression		4-week prevalence of depression	
Predictor variables	OR	z/p (z)	OR	z/p (z)	OR	z/p (z)
Severity of illness of the patient (GAF)	1.00	–0.24/n. s.	0.96	–2.40/0.05	0.95	–2.44/0.05
Gender (female)	2.61	2.39/0.05	3.38	2.63/0.01	4.73	2.59/0.05
Duration of partnership	0.97	–0.98/n. s.	1.00	0.08/n. s.	0.98	–0.42/n. s.
Duration spouse experienced partner as mentally ill	1.00	0.04/n. s.	1.00	0.10/n. s.	1.01	0.29/n. s.
Age	1.03	1.35/n. s.	1.02	0.76/n. s.	1.01	0.31/n. s.
Diagnosis of patient: depression	1.71	0.99/n. s.	1.46	0.64/n. s.	1.48	0.57/n. s.
Diagnosis of patient: schizophrenia	1.68	0.94/n. s.	0.82	–0.30 /n. s.	0.41	–1.05/n. s.
	Chi² (7) = 10.11 n = 151	p > 0.05	Chi² (7) = 15.99 n = 151	p < 0.05	Chi² (7) = 15.68 n = 151	p < 0.05
	Log likelihood	= –84.21	Log likelihood	= –67.29	Log likelihood	= –47.32
	Pseudo R^2	= 0.057	Pseudo R^2	= 0.106	Pseudo R^2	= 0.142

rates of depression is gender. However, huge differences in odds ratios can be observed, ranging from 2.6 for lifetime prevalence rates to 3.4 for 1-year prevalence rates and 4.7 for 4-week prevalence rates (Table 4). Thus, beyond the expected risk for a lifetime diagnosis, women are suffering more than twice as often from depressive disorders as assessed by the 4-week prevalence rates. The second most influential predictor is the severity of the illness of the cared-for patient as measured by the GAF. However, as could be expected, it shows a significant impact only for the 4-week prevalence of depression, which underscores its burden-relatedness. Both predictors, gender and severity, are independent of each other since gender by severity interactions were not significant in either one of the models. With regard to the second indicator of severity, the type of the patient's illness, no significant influence on the 4-week prevalence of spouse's depression could be found. Therefore, the increased risk of depression for the spouse seems not to be influenced, whether the patient suffers from depression, schizophrenia or anxiety disorders.

With regard to the hypotheses that the probability of a depressive illness of a spouse might be associated with the duration of the patient's illness and the period during which the spouse experienced the partner as mentally impaired, we found that relationships of spouses with patients who suffer from depression last significantly longer (26.4 + 11.5 years) (Table 1) as compared to the other subsamples. The duration of the patient's illness amounts to about one-third of the duration of the relationship. For spouses of patients with a schizophrenic disorder, the duration of the patient's illness is two to three times longer as compared with the other two subsamples. In this group, the average duration of the patient's illness is almost identical with the average length of partnership. The average duration of the anxiety patient's illness is the shortest of the three groups (5.2 + 5.6 years) and amounts to about one-third of the duration of the partnership (Table 1). However, regression analyses revealed that the type and duration of the patient's illness as well as the period in which the spouse experienced the partner as mentally impaired and aspects of "assortative mating" do not have predictive power with regard to prevalence rates of depression in spouses of mentally ill patients.

Discussion

As part of a study on the burden of caregiving to mentally ill family members, the situation of the spouses of mentally ill patients has been examined under the perspective of risk for depression. According to our hypothesis, we found that in comparison to reference data from the German Health Survey of 1998 (Wittchen et al. 1999b) prevalence rates of depression for the Leipzig sample of spouses are significantly higher. No evidence was found with regard to the type of patient's illness. The clinical impression of anxiety disorders being less severe as compared to psychotic disorders and, therefore, less burdening for spouses is not supported by our results. However, the impairment in everyday functioning measured by the GAF showed a significant influence across the various types of disorders. Thus, the burden of caring does not seem to be related to the type of diagnosis but to the degree of impairment of the patient in everyday life.

No association could be found with the date of onset, i. e., whether the couple got to know each other before or after the beginning of the patient's illness. Regarding the 4-week prevalences spouses' diagnoses did not seem to be associated with those of their partners. However, with regard to lifetime prevalences, there is an exception: in the group of spouses who take care of a patient with schizophrenia, the frequency of schizophrenic disorders is significantly higher than in the other two groups. The fact that a subgroup of spouses with a schizophrenic patient got to know the later partner within the context of mental health services suggests some kind of "assortative mating" in these cases. For spouses of patients with depressive and anxiety disorders, "assortative mating" does not seem to explain mental illness, but it does for some spouses of schizophrenic patients. Nevertheless, no impact could be observed with regard to 4-week prevalences of the whole sample. Other hypothesized factors, such as the duration of the patient's illness or the period in which the spouse experienced his or her partner as mentally ill, do not seem to influence the probability of developing a depressive disorder.

There are some limitations to our study. First of all, there is a selection bias: we considered spouses of patients who underwent institutional treatment and were, therefore, more severely impaired in everyday functioning (GAF: M = 55.2) (Table 1). Additionally, we met the spouses only if the patient accepted this, and 39 % of the patients refused to ask their partner. Conclusions, therefore, should be made very cautiously. Stress, in form of daily strains might be enhanced if the patient needs a lot of help in everyday functioning which is measured by the GAF. However, the GAF might also be an indicator for central hassles from the biographic perspective as, for example, the GAF score decreases if a person is not able to work anymore. In this case, the patient perhaps reaches a relatively high level of functioning in other areas of everyday life and might even be able to reduce daily strains for the spouse, but, on the other hand, is not able to build a career, so that the female spouse has to take the role of earning money for the family. With regard to the concept of centrality mentioned above this might influence the perception of daily tasks as well as lead to a higher probability of depression for the spouse. With the presented data it is not possible to differentiate these aspects.

Considering these limitations, from the rehabilitation perspective as well as the perspective of acute psychiatric treatment, the results seem to underscore the necessity of a different view on the support of spouses of mentally ill patients. Especially female spouses seem to

have a burden-related increased risk of depression, independent of the partner's type of illness. Thus, development of adequate interventions for these spouses appears to be necessary in order to reduce psychosocial distress and the risk of getting depressed.

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