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Published online: 04 Dec 2009.

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ORIGINAL ARTICLE

Gender differences in the symptoms of major depression and in the level of social functioning in public primary care patients

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Abstract
Background: There are no great differences in the symptom profiles of depression between the genders in observer rating scales, but women self-report more symptoms. *Objective:* To compare gender differences in symptom profiles of clinical depression in primary care with a short self-report depression scale and an observer-rated scale for social functioning. *Methods:* A sample of 436 primary care patients aged 18–64 years were screened using the Depression Scale (DEPS) and interviewed using the Present State Examination (PSE). Level of social functioning was also assessed. Sum scores and single items of DEPS were compared between men and women in the groups of both depressive and non-depressive patients, and the interactions between gender and depression were analysed. *Results:* Depressive men scored poorer on both instruments. Feeling that everything is an effort and feeling worthless were typical for depressive men. Feeling blue was more typical for non-depressive women than for non-depressive men.

Conclusion: In this sample of primary care patients, there were differences in the symptom profiles of depression between men and women. Depressive men more commonly had serious symptoms than depressive women. Clinically, male depression deserves more attention. The psychosocial profile of public primary care patients in Finland warrants further research.

Key words: *Depressive disorder, symptom, gender, primary healthcare*

Introduction

Gender differences in types and severity of depression symptoms have received less research attention than gender differences in the prevalence of depression, the gender ratio being nearly constant (1:2) with a female preponderance (1,2). It is possible that genders differ in depression symptom profiles. Symptoms of depression can be evaluated with different kinds of instruments: by self-report questionnaire, by rating scale or standardized interview, or by clinical assessment. It is possible that the instruments used for research purposes are biased: they may identify more women than men.

With primary care patients, there are two studies using the two-level PRIME-MD system, with similar results: no gender differences in physician ratings of patients' health, but women themselves assessed their health to be poorer than did men (3,4). Women rated loss of appetite/overeating and a sense of failure or guilt more commonly than men and also had significantly lower functional impairment scores than men (4). Only pain or problems during sexual intercourse were more commonly reported by men (3). In a large Danish study (5) without self-report questionnaires and with only GPs' assessment using the ICD-10 criteria, no gender differences were found in the severity or symptomatology of depression.

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General population studies report partially similar results. In a twin study using the Structured Clinical Interview for DSM-III-R (SCID) but no self-report instruments, women had significantly more fatigue, hypersomnia, and psychomotor retardation during the most severe major depressive episode, whereas male twins reported insomnia and agitation more frequently (6). In another study on elderly people, and using the Composite International Diagnostic Interview (CIDI), women in the general population suffered from more depressive symptoms than did men and reported appetite disturbance and joy-lessness more frequently (7).

Female psychiatric patients also seem to self-report more depressive symptoms than male patients. Female symptoms, according to the Beck Depression Inventory (BDI) questionnaire, included greater appetite and weight increase, hypochondria, somatic anxiety, and expressed anger and hostility, although there were no differences based on the two observer-rating scales, the Hamilton Rating Scale for Depression (HAM-D) and the Global Assessment Scale (GAS) (8). Thase et al. (9) have reported results inconsistent with the preceding study: higher HAM-D scores in women but no differences in BDI or GAS scores in 84 outpatients with major depression. In an outpatient study using both clinician-rated and self-report instruments (10), symptom profile was similar in men and in women, with the exception of more sleep changes, psychomotor retardation, and anxiety/somatization in women. Greater functional impairment was found among women in the area of marital adjustment, while men showed more work impairment. In a similar study (11), depressed females reported significantly more appetite increase, weight gain, and carbohydrate craving.

The Depression Scale (DEPS), a 10-item questionnaire (12), is based on a screening instrument developed by Barrett et al. (13) and supplemented with a question on insomnia. The DEPS has shown gender neutrality in a population-based study comparing DEPS and BDI. In that study, the mean BDI scores were borderline higher in females than in males, with no gender difference in DEPS scores (14).

The majority of depressive patients are treated in general practice (15,16). In order to treat, it is essential to recognize depression (17). Paying attention to gender differences may be helpful in this respect. The aim of this study was to compare gender differences in the symptom profiles of clinical depression in primary care using two different methods: a self-report questionnaire (DEPS) and a clinical assessment (level of social functioning according to DSM-III-R) (18). In order to explore the role of gender in the item responses without the impact of depression, both depressive and non-depressive patients were analysed separately.

Methods

Design and participants

This study forms part of the Tampere Depression Project (TADEP), completed in 1991–1992 (12, 19,20). A total of 1643 public health centre patients aged 18 to 64 years participated in a two-stage psychiatric field study. They returned by mail DEPS questionnaires appropriately filled in. All screen-positive subjects (DEPS score >8, $n=372$) and every tenth screen-negative subject were invited for interview. Of these, 436 subjects were interviewed (319 screen-positives and 117 screen-negatives). The characteristics of the participants are presented in Table I. Men perceived their (physical) health to be poor more frequently than women. The study protocol was approved by the Tampere University Hospital Ethics Committee, and subjects' written informed consent was obtained.

Measures of depression and social functioning

DEPS was the screening method. This is a self-rating instrument with a very short introduction, 10 items, and four response alternatives scored 0–3: not at all, a little, quite a lot, extremely.

To assess depression, the Present State Examination (PSE, 9th version, based on the criteria of the ICD-9) was conducted in the interview and analysed by the CATEGO program (21). The cases thus identified were subdivided into six PSE categories: 1) severe depression, $n = 63$; 2) mild depression, $n=55$; 3) some depressive symptoms, $n = 60$; 4) other psychiatric symptoms, $n = 174$; 5) other psychiatric diagnosis, $n = 29$; 6) no psychiatric symptoms or diagnosis, $n=55$. The questions concerning the occurrence of psychiatric symptoms referred to the previous month.

Assessments concerning the highest level of social functioning were also made by the researchers on the basis of all information obtained in the interviews. There were seven levels of social functioning: 1 = excellent, 2= very good, 3 = good, 4 = adequate, 5 = impaired, 6 = greatly impaired, 7 = severely impaired.

The researchers (one psychiatrist, one social psychologist, two psychologists, and one medical student) were blind to DEPS screening results. They had all received thorough official training in the use of the PSE, and training by two experienced psychiatrists in the use of the DSM-III-R.

Table I. Characteristics of participants by gender

Background characteristic	All participants ($n = 432$–36)*		p†
	men ($n = 133$–134)*,%	women ($n = 299$–302)*,%	
Age, years			0.195
18–29	11.2	16.9	
30–39	19.4	18.2	
40–49	20.9	25.5	
50–64	48.5	39.4	
Marital status			0.442
Married	66.4	62.6	
Other	33.6	37.4	
Basic education			0.108
≤9 years	88.0	81.8	
>9 years	12.0	18.2	
Professional training‡			0.481
Lower education	75.2	78.3	
Higher education	24.8	21.7	
Income level in childhood home			0.234
High or average	70.1	75.6	
Low	29.9	24.4	
Perceived health§			0.019
Good	25.4	35.5	
Average	40.3	41.9	
Poor	34.3	22.6	
Depression according to PSE			0.319
Depression	23.9	28.5	
No depression	76.1	71.5	

*Because of missing information on background characteristics, the number of patients varies.
†Chi-square test; distributions were compared between the genders.
‡Lower education: vocational school at most; higher education: at least college/higher professional institutes.
§Good: good or fairly good health; poor: fairly poor or poor health.

Statistical procedure

The gender differences of background variables, sum scores, and single items of DEPS, and the level of social functioning were compared separately for depressive and non-depressive subjects using the Mann-Whitney U test for sum scores and level of social functioning, and the chi-square test for background variables and single items of DEPS. In addition, the crosstabulations concerning the level of social functioning and gender were computed separately in all PSE classes. Logistic regression analyses with the enter method, using gender, PSE assessment of depression, and their interaction as independent variables, were conducted for each DEPS item as well as for level of social functioning. Each logistic regression analysis was controlled for those covariates that, in the crosstables, significantly differed between the gender groups as well as those with p values less than 0.25: basic education, vocational education, level of income in the childhood home, age, and perceived physical health.

For crosstables and logistic regression, the psychometric instruments were dichotomized: 0–1 = negative DEPS item result, 2–3 = positive DEPS item result; 1–3 = good level of social functioning, 4–7 = poor level of social functioning; PSE classes 1–2 = clinical depression, and PSE classes 3–6 = no clinical depression.

P values less than 0.05 were considered statistically significant. Analyses were done using SPSS for Windows version 13.0 statistical software.

Results

The two psychometric instruments in general

The descriptive statistics of DEPS and the level of social functioning are presented in Table II. Depressive men had poorer scores than depressive women on both scales. The level of social functioning was also significantly poorer among the non-depressive men.

Table II. Descriptive statistics for DEPS (Depression Scale) sum score, level of social functioning score by gender, and clinical depression according to PSE (Present State Examination)

| | Depression as measured by PSE | | | | | |
| | Depression | | | No depression | | |
Psychometric instrument	men	women	p^*	Men	women	p^*
DEPS	$n = 127$	$n = 283$	0.017	10 (0–28)	9 (0–25)	0.149
median (minimum-maximum)	17 (9–26)	14 (0–26)		9.7 (5.5)	8.8 (4.9)	
mean (standard deviation)	16.6 (4.6)	14.2 (4.9)				
Level of social functioning†	$n = 133$	$n = 295$	0.007	3 (1–7)	2 (1–5)	0.010
median (minimum-maximum)	4 (2–7)	3 (2–6)		2.8 (1.0)	2.5 (0.7)	
mean (standard deviation)	4.0 (1.2)	3.4 (0.8)				

*Mann–Whitney U test; medians were compared between genders.
†By the DSM-III-R.

DEPS scale items

In the crosstables of DEPS, there was a significant preponderance of males in items 3 (*I have felt every-thing was an effort*) and 8 (*I have had feelings of worth-lessness*), when analysing the depressive patients. With non-depressive patients, there was a significant pre-ponderance of males in items 1 (*I have suffered from insomnia*) and 8, and a preponderance of females in item 2 (*I have felt blue*) (Table III).

The multivariate analyses showed an interaction between gender and depression in items 2 (*p* = 0.035, odds ratio [OR] 3.26, 95% confidence interval [CI] 1.1–9.8) and 3 (*p* = 0.004, OR 5.48, 95% CI 1.7–17.7). In item 2, the depressive men and women responded quite similarly, but in the

non-depressive group only 15.0% of the men but 28.6% of the women gave a positive response to this item. In item 3, the non-depressive men and the non-depressive women responded similarly, but the depressive men gave a positive response to this item much more frequently (81.3%) than the depressive women (48.2%).

Highest level of social functioning

In the crosstables, men had significantly poorer levels of social functioning than women, whether they were depressive or not. Of the depressive men 59.4% and of the depressive women 34.5% had low level of social functioning. The corresponding percentage for the

Table III. Percentages of positive DEPS (Depression Scale) items by gender, and clinical depression according to PSE (Present State Examination)

| | Depression ($n = 113$–118)* | | | No depression ($n = 310$–315)* | | |
| | men | women | | men | women | |
Positive DEPS item result	($n = 30$–32)*,%†	($n = 83$–86)*,%†	p‡	($n = 99$–102)*,%†	($n = 209$–214)*,%†	p‡
During the last month I have:						
1) suffered from insomnia	43.8	35.7	0.425	25.5	12.3	0.003
2) felt blue	62.5	56.5	0.556	15.0	28.6	0.009
3) felt everything was an effort	81.3	48.2	0.001	35.0	33.2	0.750
4) felt low energy or slowed down	58.1	52.4	0.587	33.3	31.5	0.738
5) felt lonely	45.2	36.9	0.421	18.2	10.7	0.070
6) felt hopeless about the future	53.1	40.0	0.202	28.3	19.6	0.087
7) not got any fun out of life	46.7	34.9	0.257	22.8	23.0	0.970
8) had feelings of worthlessness	54.8	33.3	0.036	26.0	9.3	<0.001
9) felt all pleasure and joy has gone from life	50.0	41.2	0.391	16.8	12.6	0.314
10) felt that I cannot shake off the blues even with the help of family and friends	43.8	39.5	0.679	15.0	15.4	0.923

*Because of incomplete DEPS scores the number of patients varies.
†Percentage of those with positive DEPS item results (2–3 points/item).
‡Chi-square test compared between genders.

non-depressive men was 15.8% and for the women 6.6%. In light of this result, the percentage of those patients with low level of social functioning was counted by gender in all PSE classes. In PSE class 1, of the men 62.5% had low level of social functioning and of the women 40.0%. In the other PSE classes, the corresponding figures were as follows: PSE class 2, 56.3% and 28.2%; PSE class 3, 12.5% and 11.1%; PSE class 4, 19.6% and 4.0%; PSE class 5, 57.1% and 22.7%; and PSE class 6, 0% and 0%. In the multivariate analysis, no interaction was found between gender and level of social functioning.

Discussion

Principal findings

The depression of men in primary care was more severe than that of women. The symptoms of feeling worthless and feeling everything was an effort were typical for clinically depressed men. Feeling blue was more typical for non-depressive women than for non-depressive men. The level of social functioning was lower in both depressive men and in non-depressive men with some other kind of psychiatric symptomatology.

General discussion of the results

Instead of the items of the PSE, those of the screening instrument, the DEPS, were used in order to assess symptoms of depression. There were two reasons for this. Firstly, we wanted to have the gold standard PSE intact and to compare symptoms perceived by other measures with the PSE. Secondly, we wanted to use questions and symptoms which are easily elicited during an ordinary general practice consultation, as is the case with the DEPS items. DEPS has been a useful screening instrument for depression, with both diagnostic and predictive validity (22), and it has been a very popular depression screening instrument in Finnish primary healthcare for more than 10 years.

The finding that, with clinical assessment, the results for depressive men and depressive women are not similar is inconsistent with earlier studies (3-5,8), especially as men had poorer results. The depressive male patients had higher scores than the depressive female patients on each of the DEPS items, which is an unusual finding, as in other studies female depressive primary care patients have either scored higher than men on depression scales (3,6,7) or there have been no gender differences in the symptomatology of depression (4,5,8). When BDI and DEPS were compared in another study, item-by-item comparison showed that women had higher scores than men only in item 2 (*feeling blue*), but non-depressive men scored higher on items 8 (*I have had feelings of worthlessness*) and 9 (*felt all pleasure and joy has gone from life*) (14).

Gender alone may have an impact on responses. In order to explore the role of gender in the item responses without the impact of depression, we also analysed the non-depressive patients. However, PSE classes 3–7, representing the non-depressive patients, comprised patients with neither severe nor mild (clinical) depression but who might have had various other (kinds of) psychiatric symptoms, including some depressive symptoms, non-affective psychiatric symptoms or diagnosis, or no psychiatric symptoms or diagnosis at all. Therefore, the crosstabulations for the level of social functioning and gender were computed in all PSE classes separately. The level of social functioning was lower in depressive men and in men with non-affective psychiatric diagnoses or symptoms, but not in men with no psychiatric symptoms at all or with merely some depressive symptoms. Also consistent with this was the result of DEPS item 8 (*I have had feelings of worthlessness*). There is a study on psychiatric outpatients in which men showed more work impairment than women (10), but there is also a study (4) reporting contradictory findings. Why did the men score so poorly in our study? The study material consisted of working-aged primary care patients only. Males accounted for 30.7% of the sample. In an earlier study with this same material, it was found that clinical depression according to the PSE was as common among male as among female patients (17), which was quite an unusual finding. The subjects were screened with DEPS, and 73.2% of the participants were screen positive. Was DEPS especially good at picking out severely depressive male patients? DEPS recognized depressive men exceptionally well, and was equally good with both genders. However, the men with other kinds of psychiatric symptoms or diagnoses also scored lower on social functioning, so perhaps the male patients having psychiatric problems and using primary health centre services in Finland are in some ways selected. Men seem to consult their GP later than women. This finding is consistent with earlier studies, as masculinity is overall associated with less psychological help-seeking (23). It is also possible that male patients with better social functioning ability may use other kinds of health services, e.g., private occupational health services. Thus, the results of our study give only a limited picture of the symptoms of depression and level of social functioning in working-age Finnish men. In any case, these results warrant further research.

The picture of male depression seemed to include feelings of worthlessness while everything was an effort. It has been proposed that normative male gender-role expectations, such as activity, efficiency,

independence, and success, contribute to the ways in which male depression manifests itself as well as to reduced help-seeking in men (24). It has also been proposed that the prevention of suicides could be improved by enhanced diagnosis of male depression, since female overrepresentation in depression and male overrepresentation for suicides may be partly an artefact (25). Changing public attitudes and the use of newer antidepressants may have changed gender differences in current healthcare-seeking behaviour. However, women still report more depression-related help-seeking behaviour (6), and antidepressant medication is prescribed for depressive women but not for men (4).

Strengths and limitations

All the interviewers had received good training in the use of the specific methods, and the study material was representative, including diverse functions of public primary healthcare: ordinary office hour visits, emergency unit visits, antenatal clinics, and occupational health services.

The number of depressive men was rather small. As the patients considered non-depressive mostly had non-affective psychiatric symptoms or diagnoses or milder depressiveness, the results should be regarded with caution in this respect.

Conclusion

According to our results, depressive men have feelings of tiredness, worthlessness, and lower level of social functioning more frequently than women. According to other studies, depressed men and depressed women generally present with similar symptoms and functional impairment, but women self-report more symptoms and women tend to report more distress and have more appetite and weight increase, anxiety, and somatic symptoms (4,8,10,11,26). Our findings do not corroborate these studies. As to social functioning, there is some consistency with the study by Kornstein et al. (10), in which greater functional impairment was reported by women in the area of marital adjustment, while men showed greater work impairment. Clinically, as male depression seems to be associated with feelings of worthlessness and lower level of social functioning, it probably means greater vulnerability, as demonstrated by their seeking help later than women and their greater suicidality (27,28). According to Mo¨ller-Leimku¨hler (29), traditional masculinity is a key risk factor for male vulnerability, promoting maladaptive coping strategies such as lack of emotional expressiveness, reluctance to seek help, or alcohol abuse. Men's help-seeking is more quickly embraced when it is perceived as a means to preserve or restore another, more valued, enactment of masculinity (e.g., working as a fire-fighter, or maintaining sexual performance or function) (30). When personal accounts of depression were presented in three Swedish newspapers, with a focus on the gendered representation of laypersons' experiences of depression, the women's stories were more detailed, relational, emotionally oriented, and embodied, and the descriptions by men were less emotional and expressive, noting a more dramatic onset of depression, reflecting hegemonic patterns of masculinity (31).

On the whole, male depression deserves more attention; as the level of social functioning was lower in both depressive and non-depressive men, the psychosocial profile of primary care patients in Finland warrants further research.

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