

Patient-reported depression treatment and future treatment preferences: an observational study in general practice

Running title: Patient-reported depression treatment in general practice

Article category: Health Service Research

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KEY MESSAGES

- One out of three GP patients had received depression care from their GP
- Higher age and lower educational level were associated with drug treatment
- Prior talking therapy by GP predicts the same as a future treatment preference

ABSTRACT

Background. Depression is prevalent in general practice, but few studies have explored patient-reported depression care.

Aim. To investigate patient-reported treatment received for depression and future treatment preferences among adult patients visiting their general practitioner (GP), and to evaluate the associations with sex, age, and educational level.

Design and Setting. A cross-sectional survey was conducted in general practices in Norway from 2016 to 2017.

Methods. Altogether, 2335 consecutive patients (response rate, 89.2%) in the GPs' waiting rooms answered a questionnaire about their received depression treatment and treatment preferences in case of future depression.

Results. The study population (N=2239) had a mean age of 48.6 ± 17.7 years (range 18–91), 60.1% were women. Of the 770 patients reporting to have received depression treatment, 39.1% were treated exclusively by their GP while 52.5% also were referred to a psychologist/psychiatrist. Older age was positively associated with medication and negatively associated with referrals to psychologist/psychiatrist. People with high education had lower odds for receiving medication (OR, 0.49; 95% CI: 0.30–0.80) compared to those with low education. If future depression, 81.6% of the respondents would discuss this with their GP, 60.9% would prefer talking therapy with their GP, 22.5% medication, and 52.9% referral to psychologist or psychiatrist.

Conclusion. One third of the patients attending their GPs had consulted with them at some time concerning depression the case of future depression, most patients preferred talking therapy with the GP. This finding warrants an increased research focus on the GP's role in depression care.

Keywords: depression, general practice, patient, patient preference, therapy, questionnaire

BACKGROUND

Managing depression is challenging for society ^{1,2}. The lifetime prevalence of depression in rural and urban Norway varies between 8.3% and 17.8%, respectively, and annual prevalence estimates vary between 3.7% and 7.3%, respectively ^{3,4}, which is similar to Canadian figures ⁵. Because the first episode of depression tends to appear early in adult life, on average at the age of 30 years ⁶, and episodes often reoccur, depression contributes strongly to years lived with disability ⁷⁻⁹. The prevalence of depression is higher in women than in men, and in people with lower socioeconomic status (SES) compared to people with higher SES ^{3,4,8,10}.

In Norway, as in many other European countries, consultation with the GP is usually the first contact many have with health care for managing their mental health problems ¹¹. In 2001, a patient-list system for GPs was introduced in Norway and 70% of the Norwegians consult their GP annually. About 130,000 (33.7 per 1000) persons aged 20 years and older consulted their GP for depression according to the diagnoses recorded by GPs ¹². Similar figures are found in Dutch general practices (28.5 per 1000 in 2008) ¹³. The GPs' main treatment options for depression are some sort of psychological treatment, antidepressant medication, and referral to psychologist or psychiatrist. Throughout this paper we use the term 'talking therapy' for GPs' psychological treatment ¹⁴, including a wide variety of approaches from supportive talk as described by Malt et al ¹⁵ as 'simple psychological treatment' to counselling ¹⁶ and acknowledged structured psychotherapeutic methods such as cognitive behavioral therapy.

According to guidelines in UK and Norway, there should be a stepped-care approach, i.e. when initial care is unsuccessful, the GP refers the patient to a psychologist or psychiatrist for specialised mental health care. In such cases, the GP is supposed to continue following up the patient alongside treatment from other helpers ^{11,17,18}. In Norway a referral from a GP is mandatory for refundable help from

psychologist or psychiatrist usually working together in hospitals, outpatient clinics, or practices that are private but contracted to the public health system.

During the last decade, treatment with antidepressant drugs has increased and in 2015, they were issued to 7% of the general population in Norway¹⁹. About 80% of antidepressants are prescribed by GPs, with higher prescription rates for women and older people²⁰. According to a Belgian study, about 75% of patients with depression were prescribed antidepressants²¹, but the corresponding figure for patients in Norway is unknown.

In Norway, GPs have a key role in certifying sick leave. A register-based study revealed that GPs recorded a new episode of depression in approximately 2% of the employed adult population annually, and issued a sick-leave certificate to nearly half of them²². However, the governmental policy is to focus on the positive mental health effects of staying at work, urging GPs to limit sick-leave certification¹.

A review of European community studies showed that only 26% of patients with a mental disorder had sought medical care²³. Patients' understanding of their own symptoms, and their expectations and experiences of their GPs' ability to help, have an impact on which issues they will raise in their consultations with the GP^{24,25}. Although several studies have shown that most patients would prefer psychotherapy rather than medications if in need of treatment for depression^{26,27}, few studies have examined what help patients with depression have received from their GP. The patient's perspective on health-care delivery is important to improve health-care services and patients increasingly take part in decision-making regarding their health care^{11,28}.

The aims of this study were to investigate patient-reported treatment received for patient-reported depression and future treatment preferences among adult patients visiting their GP, and further to evaluate the associations between treatment and sex, age and educational level.

METHOD

Study population

We conducted a cross-sectional survey based on questionnaire data collected in general practices during the fall of 2016 and the spring of 2017.

In their sixth year of medical study at the University of Bergen, all students are deployed in different general practices in Western Norway for a 4-week period. We instructed these students to collect questionnaire data from 20 consecutive patients aged 18 years and older sitting in GPs' waiting rooms on random days during this period. The student (or secretary at the GP office) provided a letter presenting information about the study and a one-page questionnaire. The patients completed the questionnaire in the waiting room and returned it in a sealed envelope to the secretary. No compensation for study participation was granted.

In total, 131 of 141 medical students collected data for the study, recruiting an average of 17.9 patients. The response rate of 89.2% was calculated on reports from 124 students. Seven students did not systematically report the number of patients who declined to participate. Of the 2335 completed questionnaires, 96 were excluded because the respondent's age was missing (N=67) or the patients were younger than 18 years (N=29), which resulted in 2239 valid questionnaires comprising the study population.

Measurements

The one-page questionnaire was developed by experienced researchers and GPs (authors SR, ØH, BB, and SH) and contained questions about demographics, symptoms, treatment, contentment with treatment, and future preferences in relation to depression. The questionnaire also contained a short introductory text describing common symptoms and signs of depression, i.e., feeling down, hopeless, or

depressed, and/or experiencing little interest or pleasure in activities. We present data from the following questions in this paper: Previous involvement of GP (“Have you ever discussed with your GP that you were bothered with depression?”), depression treatment received (“What kind of help did you get from your GP?”) and future treatment preferences (“In case of future depression, what kind of help would you prefer?”). The previous involvement of the GP was reported as yes or no. The two questions regarding treatment received and preferred had seven answer options (i.e. talking therapy with GP, medication, sick-leave certification, referral to psychologist/psychiatrist, referral to psychomotor physiotherapist, no help, and other (free text, where the respondent could write freely) that allowed for the choice of more than one option. The future involvement of the GP (“In case of future depression, I would seek my GP”) was reported using single statements on a 5-point scale (fully agree, agree, neutral, disagree, or strongly disagree). The noninvolvement of the GP was reported using a single question (“If you have not discussed your depression with your GP, what was the reason?”) with six answer options (I have had no problems with depression, self-limiting conditions, the GP cannot help, I do not want to talk about depression, help from others, and other (free text) that allowed for the choice of more than one option. Demographic information (sex, age and educational level) was also included. Only a few patients completed the free-text options and their responses were not suitable for qualitative analysis.

Statistical analysis

The data were analyzed using descriptive statistical methods and comparing groups using the Pearson chi-square test. Logistic regression analyses were performed to examine the associations between patients’ sex, age, and educational level (independent variables) with depression treatment; male sex, age group 18–39 years, and primary school serving as references, and fully adjusted model presented. Logistic regression models were also used to analyze associations between previous treatment measures and preferred future treatment, using the same adjusting variables listed above. The effect

estimates are presented as odds ratios (OR) with 95% confidence intervals (CI). STATA software (version 15; Stata Corp., College Station, TX, USA) was used and the level of significance was 0.05.

RESULTS

The study population comprised 2239 patients, mean age 48.6 ± 17.7 years (range 18–91 years), 60.1% were women (Table 1). Altogether, 770 (34.4%) patients reported that they had consulted their GP for depression, while 341 (15.2%) had dealt with depression without seeking help from their GP, 964 (43.1%) had had no problems with depression, and 7.3% did not answer these questions. Of the 341 patients that had dealt with depression without seeking help from their GP, 250 thought it were self-limiting conditions, 68 did not want to talk about depression, 61 had sought help from others, and 21 believed that their GP could not help.

INSERT TABLE 1 HERE

Figure 1a shows the distribution of patient-reported depression treatment received from GPs. Of the 770 patients who had sought help from their GP, 39.1% were managed in the general practice alone (talking therapy and/or medication and/or sick-leave certificate), while 52.5% were also referred to psychologist or psychiatrist. Altogether 44.7% patients reported single treatment options; 16.0% had received talking therapy with GP only, 12.6% medication only, and 16.1% referral to psychologist/psychiatrist only. The remaining 55.3% patients reported more than one treatment option, but we cannot report combinations of treatment since the responses may possibly refer to different depression episodes.

INSERT FIGURE 1 HERE

Older age was associated with more medication and fewer referrals to psychologist/psychiatrist (Table 2). Medium education level was a predictor of talking therapy with the GP. Fewer patients with high education received medication (OR, 0.49; 95% CI: 0.30–0.80) compared to those with low education. For 42% of patients in working age (18–67 years) the GP had issued a sick-leave certification related to depression and this was associated with medium (OR, 3.06; 95% CI: 1.66–5.61) or high education levels (OR, 3.04; 95% CI: 1.64–5.62), using low education as reference (not tabulated).

INSERT TABLE 2 HERE*

Of the 2239 patients, 81.6% fully agreed/agreed that they would seek their GP in case of depression in the future, 4% strongly disagreed/disagreed, and 14.3% gave a neutral response. Of 1782 respondents who stated their future treatment preferences (Figure 1b), 44.1% would choose treatment by GP only, talking therapy in particular, while 25.0% would prefer referral to psychologist/psychiatrist only and 27.9% preferred to choose combinations of treatment by GP and psychologist/psychiatrist.

Male sex, higher age, and lower education were associated with preference for talking therapy and medication, while female sex, lower age, and higher education predicted preference for referral (Table 3).

INSERT TABLE 3 HERE*

Of the 770 patients reporting prior consultation with a GP for depression, 568 also answered the question about future treatment preferences. In adjusted logistic regression we found a marked positive association between prior treatment reported and future treatment option, most pronounced for GP talking therapy and medication (Table 4). Prior experience with talking therapy with GP was inversely association with future preference for referral (OR 0.4 (0.3-0.6)).

INSERT TABLE 4 HERE*

DISCUSSION

Our study shows that one out of three patients surveyed in GPs' waiting rooms had consulted their GP for depression. Half of these patients had been managed in general practice, while the other half had also been referred to psychologist or psychiatrist. Some 50% had received talking therapy with their GP, and a similar share had been treated with medication. Higher age and lower educational level predicted treatment with medication, while younger age was associated with referral. In case of future depression, most patients would consult their GP with a preference of talking therapy. **Prior experience with talking therapy by GP markedly increased the odds for seeing this as a future option and also reduced the odds for a preference for referral in case of future depression.**

Strengths and limitations

The sample size was large and comprised patients visiting many GP offices on random days. Age < 18 years was the only exclusion criterion; therefore, the patients were representative of the adult patient population in general practices in Norway. Nevertheless, we must consider selection bias because the patients who were perceived as being able and willing to participate may have been asked preferably. Thus, the oldest and most disadvantaged patients may be underrepresented. The questionnaire was in the Norwegian language and immigrants were likely to have been excluded.

The patients received a written introduction to the questionnaire describing the main symptoms of depression but these patients' understanding of the concept of depression will vary and not necessarily align with diagnostic criteria. Information about symptoms that could describe severity of depression was not collected and the patients' definition of depression may vary from symptoms not fulfilling diagnostic criteria to severe depression. Self-reported information is also vulnerable to recall-bias, especially for depression episodes in the past. Collecting diagnoses from GP could have increased the

precision compared to patient-reported diagnoses. On the other hand, GPs' diagnoses are also unprecise when compared to a structured procedure using diagnostic tools, comprising both under- and overdiagnosis²⁹. Diagnostic uncertainty is a general problem regarding research in primary care.

Many patients experience depression as a recurrent condition; therefore, the patient-reported treatment options may apply for different recent or past depression episodes, and do not necessarily represent treatment combinations. Associations with age should be interpreted with caution because we lack information about when the treatment reported was received.

The present study is performed in a primary care system with GPs as first line service with a gate keeping role. Although the GP role varies between countries, GPs are generally the first line service dealing with a wide range of health problems, including psychological problems, and our results concerning depression care should be generalizable to countries with similar primary care models.

Comparison with existing literature

As a first-line easily accessible service offering continuity of care GPs are in position for actively using talking therapy. The patient-centered approach is a basis for GP work in general by listening to the patient's concerns and discussing choice of treatment³⁰; a Danish study based on focus groups interviews showed that the GPs were clearly aware of such factors as active elements in their psychological approach to patients with mental health problems³¹. Interestingly, Malt et al. found the effect of medication combined with talking therapy for depression in general practice comparable to treatment in specialized care¹⁵. They denoted the taking therapy as "simple psychological treatment" and instructed the GPs to establish positive relationships, convey hope and optimism, giving the patients opportunity to discuss their feelings and fears and advising about physical activity.

Half of the patients who had discussed depression with their GP reported treatment with medication, which is lower than the 70–85% found in international studies^{5,13,21,32}. In our study, we cannot relate

drug treatment to severity of depression; thus, this discrepancy can reflect the large share of patients with mild symptoms with no indication for antidepressants in our sample or reflect the differences in their GPs' treatment habits.

Every other patient treated by GPs was also referred to psychologist or psychiatrist. This finding challenges the often-described model for primary care, i.e., most mental health problems are managed exclusively in general practices³³. However, this finding must be considered as a longitudinal measure and not related to single depression episodes. In contrast to research on somatic health care in Norway, we found no variation in reported referral rates related to educational level. These findings align with a British study that found no variation in GPs' depression treatment with patients' SES³⁴. In contrast, we found less medication with higher educational level. Medication was also more commonly prescribed with increasing age, as found in other studies^{13,20}. In sum, the variations in depression care by GPs we found related to age, sex and educational level could reflect a socioeconomic inequity as shown by Jani et al³⁵, and warrants further research.

Some 42% of those treated by a GP had received sick-leave certification, in line with the 43% frequency of sick leave with new episodes of depression found in a register study in Norway²². However, the higher odds for sick leave with higher education is contradictory to the register study²². An explanation might be lower work participation in the low educational group, but work participation is not accounted for in the present study. Interestingly, only 11% of the respondents had sick leave as a future treatment preference. This may encourage GPs to emphasize the benefit of work participation for patients with mental health problems¹.

Implications for research and practice

Half of the patients who had contacted their GP for depression reported talking therapy with their GP and these patients had a clear preference for talking therapy in case of a future depression episode.

There was a less marked association between prior referral and referral as a future treatment option, and prior talking therapy with GP significantly reduced the odd for referral as future treatment preference. This indicates that patients perceive GP talking therapy as valuable but there is a need for research into the contents and effect of different kinds of talking therapy with GPs. It is difficult to incorporate formal psychotherapeutic methods in general practices ^{31,36}, but adapted methods for use in general practices have been shown to improve quality of depression care ^{37,38}. Even smaller improvement of care, reducing symptoms and improving function for patients with depression could have large societal effects because of the high prevalence.

In line with earlier studies, we found a higher preference for talking therapy than for medication ^{26,39}. However, we found that previous treatment with medication markedly increased odds for preferring medication in the future. GPs should consider such differences in treatment preferences to reduce treatment barriers ¹⁷.

We found a partial consistency across sex, age, and educational level between treatment reported and future preferences. These findings may be a result of prior experiences and what is seen as possible to achieve and reflect inequality in treatment. However, different treatment options may better suit some patients than others and may reflect different values that should be considered when planning treatment according to a shared decision-making model ²⁶⁻²⁸. The GP must consider both aspects, i.e., to give the best treatment independently of sociodemographic status and to adapt care to personal preferences. However, what is the best treatment for a patient is not easy to predict ⁴⁰ and our findings provide limited insight into possible differences in quality of care between population groups.

CONCLUSION

Based on patient reported data in a survey in GPs' waiting rooms we found that one third of the patients attending their GP had consulted at some time concerning depression, half of them treated solely by GP while the other half also had been referred to a psychologist or psychiatrist. In the case of future depression, most patients preferred talking therapy with the GP, especially patients who had experienced this in prior depression episodes. These two results warrant an increased research focus on the GP's role in depression care and the possibility of developing this role further.

DECLARATION

Funding: This study received no external funding.

Ethical approval: The Regional Committee for Medical and Health Research Ethics in Western Norway assessed our study and concluded that it was not regulated by the Health Research Act; therefore, the need for ethical approval was waived (ref. 2016/490). The patients provided implicit informed consent by completing the questionnaire. All information in the questionnaires was collected anonymously.

Conflict of interests: The authors declare no conflicts of interest in this work.

ACKNOWLEDGMENTS

We thank all patients, GP practices, and medical students who contributed to the data collection for this study.

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Table 1. Patient characteristics in total study sample and subgroups according to patient-reported prior depression (N=2239)

	Total sample (N=2239)		Subgroups used in analyses, or excluded			
	N	%	Depression discussed with GP ¹ (N=770)	Depression not discussed with GP ² (N=341)	No problems with depression ³ (N=964)	No valid answers regarding depression care ⁴ (N=164)
Sex			%	%	%	%
Male	820	36.6	30.5	33.7	41.0	45.7
Female	1,346	60.1	66.6	61.9	55.7	51.8
Missing	73	3.3	2.9	4.4	3.3	2.5
Age groups						
18-39	779	34.8	37.1	51.3	29.8	18.9
40-59	792	35.4	42.3	27.3	33.4	31.1
60+	668	29.8	20.5	21.4	36.8	50.0
Education level						
Primary school	233	10.4	13.0	7.3	8.6	15.2
Secondary school	1,011	45.2	46.4	43.4	43.7	51.8
University college / University	930	41.5	38.8	46.6	44.4	26.8
Missing	65	2.9	1.8	2.7	3.3	6.1

¹ Patients ticking off one or more answers to the question: "What kind of help did you get from your GP?"

² Patients responding to the question "Why didn't you involve your GP?" other than "I have had no problems with depression."

³ Patients responding "I have had no problems with depression" to the question "Why didn't you involve your GP?"

⁴ Patients who did not answer any of these questions were excluded from further analyses

Table 2. The association between patient-reported treatment received from the GP and sex, age, and education level (N=736)

	Talking therapy with GP		Medication		Referral to psychologist/psychiatrist	
	OR	95% CI	OR	95% CI	OR	95% CI
Age						
18-39	1		1		1	
40-59	0.79	[0.56,1.10]	1.46*	[1.05,2.04]	0.60**	[0.43,0.85]
60+	1.17	[0.77,1.78]	2.01**	[1.32,3.07]	0.29***	[0.19,0.44]
Sex						
Men	1		1		1	
Women	1.22	[0.89,1.67]	1.13	[0.82,1.55]	1.03	[0.74,1.42]
Education level						
Primary school	1		1		1	
Secondary school	1.69*	[1.06,2.71]	0.70	[0.43,1.13]	0.93	[0.58,1.50]
University college/ University	1.26	[0.78,2.04]	0.49**	[0.30,0.80]	1.17	[0.72,1.90]

Multivariate logistic regression, OR = Odds ratio, CI = confidence interval

** $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$*

Table 3: Patient-reported treatment preference in case of future depression according to sex, age, education level and prior depression (N=1782)

		Talking therapy with GP	Medication	Referral to psychologist/ psychiatrist
	N	N (%)	N (%)	N (%)
Sex				
Female	1087	644 (47.9)	221 (20.3)	630 (58.0)
Male	643	417 (64.9)	168 (26.1)	281 (43.7)
	p-value ¹	0.021	0.005	<0.001
Age				
18-39	610	296 (48.5)	87 (14.3)	450 (73.8)
40-59	628	348 (61.2)	14 (22.5)	342 (54.5)
60+	544	406 (74.6)	172 (31.6)	150 (27.6)
	p-value ¹	<0.001	<0.001	<0.001
Educational level				
Primary school	188	125 (66.5)	75 (39.9)	58 (30.9)
Secondary school	815	530 (65.0)	188 (23.1)	410 (50.3)
University college/University	743	404 (54.4)	125 (16.8)	466 (62.7)
	p-value ¹	<0.001	<0.001	<0.001
Prior depression				
Depression treated by GP	609	348 (57.1)	231 (37.9)	331 (54.4)
Depression not treated by GP	284	136 (47.9)	31 (10.9)	176 (62.0)
No prior depression	776	523 (67.4)	111 (14.3)	395 (50.9)
	p-value ¹	<0.001	<0.001	0.006

Missing data for sex (N=52), education level (N= 36), prior depression (N=113)

¹ Pearson chi square

Table 4: The association between prior treatment received for depression and treatment preferences in case of future depression (N=586)

	Future treatment preferences					
	Talking therapy with GP		Medication		Referral to psychologist /psychiatrist	
	OR	95% CI	OR	95% CI	OR	95% CI
Prior treatment options						
Talking therapy with GP	7.95***	[5.32,11.87]	0.94	[0.63,1.41]	0.42***	[0.29,0.60]
Medication	1.02	[0.69,1.50]	8.57***	[5.64,13.00]	0.87	[0.60,1.26]
Referral to psychologist /psychiatrist	0.90	[0.60,1.31]	1.11	[0.74,1.67]	2.30***	[1.59,3.32]

Multivariate logistic regression models adjusted for age, sex and educational level

Exponentiated coefficients; 95% confidence intervals in brackets

** p < 0.05, ** p < 0.01, *** p < 0.001*

Caption FIGUR 1:

Figure 1. a) Patient-reported depression treatment received from the GP (n=770)*; b) Patient-reported treatment preferences in case of future depression (n=1782)*

**More than one answer allowed per respondent*