Determinants of mental health care use among people with major depression

Boerema, A.M.

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CHAPTER 5

Perceived need for care of people with chronic versus shorter episodes of depression

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ABSTRACT

Background: Although depression is a highly disabling mental disorder, many people do not seek help. Relatively little attention has been paid to patients' need for care and especially to the need for care among people with chronic depression. Since chronic depression is characterized by more negative outcomes, it is of importance to examine need for care in this group. The aim of this paper is to examine if people with chronic depression report different needs than people with shorter episodes.

Methods: Cross-sectional data were obtained from the Netherlands Study of Depression and Anxiety (NESDA). People with a diagnosis of depression in the past six months were included (*N*=1158). Chronicity of depression was defined as having depressive symptoms for 24 months or more in the past 4 years. Overall perceived need for care was measured by the Perceived Need for Care Questionnaire (PNCQ). Analyses were performed on two groups: persons who received mental health care in the past six months and those who did not.

Results: In both, those who received care and those who did not, multivariate logistic regression analyses showed no differences in perceived need for care among people with chronic depression (*n*=393), except for a higher need for practical support among people who received care. In both groups, symptom severity and comorbid anxiety were related to higher need for care.

Conclusions: This study suggests that perceived need of care seem to be mostly determined by severity of symptoms and comorbid anxiety, rather than duration of the episode.

INTRODUCTION

Major Depressive Disorder (MDD) is a major cause of disability worldwide [1,2] due to its relation with poor health, reduced quality of life and personal burden [3-5]. MDD is associated with a poor prognosis. Almost 50% of people those who recover from an episode relapse within two years [6]. Furthermore, 20%-30% of those with depressive disorders experience a chronic course [7,8]. Although efficacious treatments are available, many people do not seek help [2]. In the past years, several initiatives in the Netherlands have been organized to address barriers to treatment seeking in people with mood disorders, including better recognition of psychological problems by the general practitioner [9,10] and improved collaboration between primary and specialized mental health care [9,11,12].

However, relatively little attention has been paid to patients' perspective on their need for care [13,14], whereas the absence of a need for care may constitute an obvious and important reason for not seeking professional help [15]. Research has shown that many people with an MDD diagnosis do not perceive a need for care [16], which may be associated with (lower) severity and (shorter) duration of the symptoms, attitudinal barriers (e.g. the belief that symptoms will abate over time or handle the problems by themselves) [17], poor recognition of depressive symptoms [18] or other factors like stigma [19] or lack of confidence in professional help [15]. In general, younger people, people with comorbid disorders and increased symptom severity are more likely to experience a need for care [14,20,21].

There are indications that patients' beliefs and attitudes about mental health care may differ from those held by health professionals' [22]. For clinical practice, it may be relevant to examine if patients' perceived need for mental health care is in line with professionals' view of preferred treatment, in order to adapt treatment better to patients' needs. Earlier research has found indications that adapting to patients' preference for a type of treatment, may result in better outcomes, at least in primary care [23,24]. From a health professionals' perspective, multidisciplinary guidelines for depression recommend a stepped-care approach in the treatment of mild to moderate depression [25-28], which aims to provide more intensive treatment only to people who do not respond to low intensity treatments [26]. Furthermore, many guidelines recommend counselling (e.g. psychotherapy) and medication (e.g. antidepressants) as the preferred treatments for moderate or severe major depression [26,27]. Since research has shown that psychotherapeutic interventions may be less effective for people with chronic depression [29,31], a recent guideline for chronic depression was developed by the European Psychiatric Association Guidance where both psychotherapy with an interpersonal focus (e.g. the Cognitive Behavioural Analysis System of Psychotherapy, CBASP) and medication are recommended as preferred treatment options for this group [32]. Furthermore, a prolonged and high intensity treatment is recommended for people with chronic depression [26].

From the patients' perspective, several needs for both general or mental health care may exist, like the need for information about their disorder, the need for receiving adequate treatment or structural support, help with financial issues, household or skills training [33,34]. A study of Prins and colleagues [14] showed that patients in primary care, with a diagnosis of depression

and/or anxiety, expressed more need to talk with a professional and more need for information, compared to need for medication [14]. Furthermore, people who were younger were more likely to report a need for information, while older people were more likely to report a need for skills training or a referral to specialized mental health care [14,21,34], suggesting that need for care may differ for various groups.

However, few studies made a distinction between people with a chronic depression and people with shorter episodes of depression. This distinction is important since research has shown that a chronic depression may differ from non-chronic depression regarding several aspects, which may influence the need for care. First, research has shown that chronic depression is associated with more disability and burden in psychological functioning, decreased quality of life, higher comorbidity rates with Axis I and Axis II disorders and a higher risk of suicide [35,36]. Furthermore, compared to people with other forms of depression, chronic depression is associated with more intensified mental health care use and the risk of hospitalization [37]. Second, research has shown that people with chronic depression are more likely to report childhood trauma, family problems in child-hood and poor parent-child relationships [38,39]. Taken together, chronic depression may be distinguished from other forms of depression not only by illness factors, but by a different etiological background as well [40]. This illustrates the importance to examine need for care for this specific group. However, this hypothesis has to the best of our knowledge not been examined. The aim of this paper is to examine if people with chronic depression report other needs than people with a shorter episode of depression. Since research has shown that receiving mental health care may influence patients' perceived need for care [15] the influence of chronicity of depression will be examined among people who did and did not receive mental health care. Furthermore, since research has shown that several demographic and other need factors (severity, comorbidity) may be associated with an experienced need for care [14,20,21], we examined these factors as well.

METHODS

Design & Sample

Data were used from the Netherlands Study of Depression and Anxiety (NESDA) [41]. The primary aim of NESDA is to examine the long-term outcome and health consequences of depressive and anxiety disorders. The rationale and methods employed have been described in greater detail elsewhere [41]. In the present study, data from wave 1 (baseline) was used to perform the analyses. Adult respondents (aged 18-65 years) were recruited between September 2004 and February 2007 from the general population (n=564), general practices (n=1610) and specialized mental health care centres in Amsterdam, Groningen and Leiden (n=807) in order to reflect the broad range of psychopathology (N_{total}=2981). Exclusion criteria included a clinically overt primary diagnosis of another psychiatric disorder, such as psychotic, obsessive compulsive , bipolar or severe addiction disorders and insufficient understanding of the Dutch language. The NESDA study was approved by the Ethical Review Committee of the VU University Medical Center and local boards of every participating center. All respondents provided written informed consent.

For the present study, we included participants with a current (6-month recency) major depressive disorder according to the Composite International Diagnostic Interview (CIDI, version 2.1). A total of 1158 participants were diagnosed with current major depressive disorder using the CIDI and these constituted the sample for the current study.

Instruments

Demographics

Information about gender, age, education and partner status was gathered at the baseline measurement. Partner status was divided into two categories: 'partner/married' (1) and 'no partner/not married' (0). Education was defined as education followed in years.

Depression diagnosis & Definition of chronic depression

Depression was diagnosed using the CIDI (version 2.1), a fully structured and standardized questionnaire designed by the World Health Organization (WHO) [42]. The CIDI is used to assess mental disorders based on the DSM-IV-TR criteria and is designed for scientific purposes [42]. For the present study, the depression section of the CIDI 2.1 was used to determine the presence of a major depressive disorder. Research has shown that the CIDI 2.1 interview is a valid and reliable instrument [43].

Definition of chronic depression was based on the CIDI 2.1 interview and the Life-Chart Interview (LCI) [44]. For all participants who were diagnosed with a current depressive disorder according the CIDI 2.1 interview (past six months), the LCI was conducted. The LCI method is used to determine the course of depressive symptoms in the past four years before baseline. In the LCI method, the presence and severity of depressive and anxiety symptoms were assessed at each month using a calendar method [44]. Severity in the LCI ranged from no or minimal severity, mild, moderate, to severe, or very severe. In accordance with other studies, people were considered chronically depressed if their symptoms had been at least mildly severe and when the duration of symptoms was reported for 24 months or longer [45,46]. The remaining people were considered as having a non-chronic depression. Research has shown high validity and reliability for the LCI [47].

Perceived need for care

Perceived need for care was determined with the Perceived Need for Care Questionnaire (PNCQ) [33]. In the PNCQ, perceived need of care is defined as patients' perception that a type of mental health intervention was needed from a health professional. The PNCQ was originally designed for the Australian National Survey of Mental Health and Well-being [33]. The PNCQ consist of a four-stage design and included the following sections. First, people were asked whether they experienced psychological problems in the past six months. Second, people were asked if they had any contact with different health caregivers for psychological problems in the past six months. Third, people were asked what kind of services they had received from those caregivers. Finally, they were asked if they thought they received enough services, and if they did not receive it, if they perceived a need for that service [33]. The categories of services types were: 1) Information

(e.g. about mental illness, treatment and available services); 2) Medication; 3) Counselling or psychotherapy; 4) Practical support (e.g. help with housing, money problems or domestic tasks); 5) Skills training (e.g. training to improve one's ability to work or look after themselves). For this study, a sixth category: 6) Referral to a specialist, was added as extra service type [14]. Perceived need is assigned to one of four levels:

- no need: people with mental health problems, who did not perceive that they needed this type of help and did not receive this type of help.
- unmet need: people that perceived they needed this type of help but did not receive it.
- partially met need: people who received this type of help, but not as much as they needed.
- fully met need: people who received this type of help and received as much as they needed.

Research has shown acceptable feasibility and reliability for the PNCQ [33].

Severity of depressive symptoms & comorbid anxiety

Research has shown that symptom severity is associated with perceived need for care [14,20,21]. For this reason, we decided to use symptom severity and comorbid anxiety in the analyses as a covariate. To determine severity of symptoms, the Inventory of Depressive Symptoms (IDS) [48] was used. The IDS assesses all DSM-IV criterion symptoms for major depressive disorder, and commonly associated symptoms (e.g. anxiety and irritability) [48]. This self-report questionnaire contains 30 questions, with 4 answering options to each question (coded from 0 to 3). Research has shown acceptable to good psychometric properties for the IDS [48].

Comorbidity of four current (6-month recency) anxiety disorders (social anxiety disorder, panic disorder with or without agoraphobia, agoraphobia, generalized anxiety disorder) was determined with the CIDI 2.1 interview.

Mental health care use

Mental health care use was assessed with the Trimbos and iMTA questionnaire on Costs associated with Psychiatric illness (TIC-P) [49]. In the first part of this questionnaire, people were asked if they received help for mental health problems from the following caregivers in the past six months: general practitioner, company physician, medical specialist, first line psychologist, a social worker or a social psychiatric nurse, a mental health institute, independent psychiatrist or psychotherapist, center for alcohol and drug or self-help group.

Data-analysis

Data analyses were performed in SPSS 21.0, a significance level of $p<.05$ was used in all analyses. There were twelve respondents who had missing values on the LCI questionnaire. Consequently, we could not decide whether these people had chronic symptoms. Therefore, we excluded these people from the analyses (N_{total}=1146). Since perceived need for care may be associated with received mental health care [15] we divided the total group into two categories: people who received mental health care in the past six months and people who did not. All analyses were performed on the two groups separately.

First, descriptive statistics were used to examine population characteristics. Second, differences between people with chronic and non-chronic depression were examined regarding perceived need of care (no need, fully met need, partially met need, unmet need) and service type (information, medication, counselling, practical support, skills training, referral) with chi-square statistics (χ^2).

Third, a logistic regression analysis was used to examine perceived need. Perceived need was categorized into: no need (0) and any need (1). First, univariable analyses were performed for each predictor separately (unadjusted Odds Ratio (OR)) (chronic depression, gender, education, partner status, severity of symptoms, comorbid anxiety). Second, we performed a multivariable analysis (adjusted OR). The forced enter method was used for the multivariable regression analyses due to the relative large sample and small number of variables. We performed the analyses for each service type (information, medication, counselling, practical support, skills training, and referral) separately. Assumptions for logistic regression analyses were tested. In the analyses, there were some extreme outliers (>2.99). For all outliers, we examined Cook's distance, DFBeta values and leverage values. These values were within acceptable boundaries, for this reason we decided to include them in the analyses.

RESULTS

Characteristics of the study sample

The majority of the 1146 respondents with a current major depression were female (67%). Respondents were, on average, 41 years old (range 18-64). About one third of the respondents with a major depression were classified as chronic (*n*=393, 34%) (e.g. more than 24 month duration of depressive symptoms) and more than half (66%) reported a comorbid anxiety disorder. The responders completed on average 12 years of education (SD=3.27). Compared to non-chronic depression, people with chronic depression reported more comorbid anxiety (respectively 75% and 61%) and more severe depressive symptoms (respectively M=38, SD=11.11; M=30, SD=11.85; $p<.001$) (Table 1).

Need for care

Need for care among people with chronic depression who received no mental health care in the past six months

Among the people who received no mental health care in the past six months people with chronic depression report more often an unmet need for counselling (chronic depression 56%; non-chronic depression 32%) referral (chronic depression 36%; non-chronic depression 23%) and information (chronic depression 56%; non-chronic depression 35%) (Table 2).

Table 1 | Population characteristics (*N*=1146)

	Overall population (*N*=1146)	**No chronic depression (*n*=753, 66%)**	**Chronic depression (*n*=393, 34%)**	χ^2	**p**
	***N* (%)**	***N* (%)**	***N* (%)**		
Demographics					
Female	769 (67)	517 (69)	252 (64)	2.41	.12
Age in years, mean (SD)	41 (12.12)	40 (12.22)	43 (11.71)	14.04	**<.001**
Education in years, mean (SD)	12 (3.27)	12 (3.25)	11 (3.25)	9.88	**.002**
Clinical characteristics					
Comorbid anxiety disorder	753 (66)	458 (61)	295 (75)	23.24	**<.001**
Severity of symptoms, mean (SD)	33 (12.17)*	30 (11.85)**	38 (11.11)***	110.18	**<.001**
Mental health care in past 6 months				4.26	.23
Received no help	171 (15)	116 (15)	55 (14)		
General health care	286 (25)	193 (26)	93 (24)		
Specialized mental health care	79 (7)	44 (6)	35 (9)		
General health care + specialized mental health care	610 (53)	400 (53)	210 (54)		
Perceived need for care					
Any need at all (yes)	1072 (94)	691 (92)	381 (97)	11.47	**.001**
Unmet need total				24.01	**<.001**
no need at all	74 (7)	62 (8)	12 (3)		
all need fully met	285 (25)	208 (28)	77 (20)		
need partially met	654 (57)	402 (53)	252 (64)		
need is not met	133 (12)	81 (11)	52 (13)		
Need for information, yes	843 (73)	540 (72)	294 (75)	1.25	.26
Need for medication, yes	704 (61)	429(57)	275 (70)	18.43	**<.001**
Need for counselling, yes	871 (76)	557 (74)	314 (80)	4.98	.03
Need for practical support, yes	202 (18)	110 (15)	92 (23)	13.78	**<.001**
Need for skills training, yes	321 (28)	201(27)	120 (31)	1.88	.17
Need for referral, yes	834 (73)	540 (72)	294 (75)	1.25	.26

*Missing *n*=22, *n*=19 Q1 not returned, *n*=3 too many missings; **Missing *n*=16, *n*=13 Q1 not returned, *n*=2 too many missings; *** missing *n*=6, Q1 not returned

Table 2 | Patients' perceived need for mental health services among people who received no help for their problems in the past six months (*N*=171, non-chronic depression *n*=116, chronic depression *n*=55)

	Information [a]		Medication [b]		Counselling [c]		Practical support [d]		Skills training e		Referral [f]	
	Not chronic *N* (%)	Chronic *N* (%)	Not Chronic *N* (%)	Chronic *N* (%)	Not chronic *N* (%)	Chronic *N* (%)	Not chronic *N* (%)	Chronic *N* (%)	Not chronic *N* (%)	Chronic *N* (%)	Not chronic *N* (%)	Chronic *N* (%)
No need	75 (65)	24 (44)	101 (87)	40 (73)	79 (68)	24 (44)	100 (86)	47 (85)	103 (89)	45 (82)	89 (77)	35 (64)
Fully met need	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Partially met need	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Unmet need	41 (35)	31 (56)	15 (13)	15 (27)	37 (32)	31 (56)	16 (14)	8 (15)	13 (11)	10 (18)	27 (23)	20 (36)

[a] χ^2=6.67, *p*=.009; [b] χ^2=5.31, *p*=.02; [c] χ^2=9.33, *p*=.002; [d] χ^2=.02, *p*=.89; [e] χ^2=1.56, *p*=.21; [f] χ^2=3.21, *p*=.07

The univariate logistic regression analyses (dependent variable: no need vs. any need) (*N*=171) showed that people with chronic depression were more likely to report a need for medication (OR=2.52; 95 % CI=1.13–5.64; *p*=<.05) and counselling (OR=2.76; 95 % CI=1.43–5.34; *p*=<.01) compared to people without chronic depression at baseline (Table 3). When controlling for demographic characteristics and severity of symptoms in the multivariate logistic regression analyses, these effects disappeared. (Table 3).

Other determinants associated with need for care among people who received no mental health care in the past six months

Univariate and multivariate regression analyses showed that other determinants than chronicity of depression were associated with need for care. The univariate logistics regression analyses showed that severity of depressive symptoms was associated with all types of services (information, medication, counselling, practical support, skills training, referral). People with more severe symptoms (compared to people with mild symptoms) were more likely to report a need for care (Table 4). Comorbid anxiety was also associated with a higher need for information, medication, counselling and referral (Table 3).

In the multivariate logistic regression analyses the effects for severity of symptoms remained for the need for information, medication, practical support and referral. The effect for comorbid anxiety remained for information, counselling and referral. Being men was associated with a higher need for information and referral (Table 3).

Need for care among people with chronic depression who received mental health care in the past six months

About 50%-60% of the people with chronic and without chronic depression at baseline, received some form of information, medication, counselling or a referral. The majority of people with chronic and non-chronic depression did not receive practical support (respectively 88% and 94%) and skills training (respectively 90% and 91%). An unmet need for care was reported the most for counselling (chronic depression 28%; non-chronic depression 22%) (Table 4).

People with chronic depression reported more often an unmet need for information and practical support, while people without chronic depression reported more no need regarding these types of care. For medication, people with chronic depression more often reported a fully met need. The differences between both groups regarding skills training and the need for referral were minimal (Table 4).

The univariate logistic regression analyses (dependent variable: no need vs. any need) (*N*=975) showed that people with chronic depression were more likely to report a need for medication (OR=1.80; 95 % CI=1.33–2.43; *p*=<.001) and practical support (OR=1.91; 95 % CI=1.37–2.66; *p*=<.001) compared to people without chronic depression at baseline (Table 5). When controlling for demographic characteristics and severity of symptoms in the multivariate logistic regression analyses, only the effect of practical support remained (Table 5).

Table 3 | Univariate and multivariate logistic regression analyses among people who received no help for their problems in the past six months, enter method (reference category dependent variable: no need)

	Information		Medication		Counselling		Practical Support		Skills training		Referral	
	Univariate	Multivariate	Univariate	Multivariate	Univariate	Multivariate	Univariate	Multivariate	Univariate	Multivariate	Univariate	Multivariate
	OR [a] (95% CI [b])	OR [a] (95% CI [b])	OR [a] (95% CI [b])	OR [a] (95% CI [b])	OR [a] (95% CI [b])	OR [a] (95% CI [b])	OR [a] (95% CI [b])	OR [a] (95% CI [b])	OR [a] (95% CI [b])	OR [a] (95% CI [b])	OR [a] (95% CI [b])	OR [a] (95% CI [b])
Chronic depression	1.88 (.94-3.79)	–	2.52 * (1.13-5.64)	–	2.76** (1.43-5.34)	–	1.06 (.43.2.66)	–	1.76 (.72–4.31)	–	1.88 (.94–3.79)	–
Gender, female	.59 (.29-1.19)	.40 * (.18-.90)	.66 (.29-1.50)	–	.93 (.48-1.81)	–	1.36 (.51-3.62)	–	1.19 (.44–3.21)	–	.59 (.29–1.19)	40 * (.18–.90)
Age (in years)	1.01 (.98-1.03)	–	1.03 (.99-1.06)	–	1.00 (.98-1.03)	–	.99 (.96-1.02)	–	.99 (.96–1.03)	–	1.01 (.98–1.03)	–
Education (in years)	.95 (.85-1.06)	–	.96 (.85-1.09)	–	1.00 (.92-1.11)	–	1.05 (.92-1.20)	–	.99 (.87–1.14)	–	.95 (.85–1.06)	–
Comorbid anxiety	3.76 ** (1.68-8.40)	2.92 * (1.17-7.27)	3.84 ** (1.39-10.60)	–	2.94 ** (1.51-5.74)	2.24* (1.06-4.75)	1.76 (.69-4.48)	–	1.95 (.73–5.23)	–	3.76 ** (1.68–8.40)	2.92 * (1.17–7.27)
Symptom severity	1.07 ** (1.03-1.11)	1.05 * (1.01-1.09)	1.08 *** (1.04-1.12)	1.08 ** (1.03-1.13)	1.05 ** (1.02-1.08)		1.06* (1.02-1.10)	1.06* (1.01–1.11)	1.03 (.99–1.07)	–	1.07*** (1.03–1.11)	1.05* (1.01–1.09)

*p<.05, **p<.01, *** p<.001; A OR=Odds Ratio; [b] CI=Confidence Interval

Table 4 | Patients' perceived need for mental health services among people who received help for their problems in the past six months (*N*=975, non-chronic depression *n*=637, chronic depression *n*=338)

	Information [a]		Medication [b]		Counselling [c]		Practical support [d]		Skills training [e]		Referral [f]	
	Not chronic *N* (%)	Chronic *N* (%)	Not Chronic *N* (%)	Chronic *N* (%)	Not chronic *N* (%)	Chronic *N* (%)	Not chronic *N* (%)	Chronic *N* (%)	Not chronic *N* (%)	Chronic N (%)	Not chronic N (%)	Chronic N (%)
No need	108 (17)	48 (15)	223 (35)	78 (23)	117 (18)	55 (16)	543 (85)	254 (75)	449 (71)	228 (67)	124 (20)	64 (19)
Fully met need	377 (59)	160 (47)	343 (54)	343 (58)	247 (39)	115 (34)	26 (4)	29 (9)	41(6)	27 (8)	358 (56)	171 (50)
Partially met need	85 (13)	78 (23)	45 (7)	36 (11)	131 (21)	75 (22)	14 (2)	11(3)	21 (3)	9 (3)	90 (14)	60 (18)
Unmet need	67 (11)	52 (15)	26 (4)	26 (8)	142 (22)	93 (28)	54 (9)	44 (13)	126 (20)	74 (22)	65 (10)	43 (13)

[a] χ^2= 23.47, p<.001; [b] χ^2= 19.89, p<.001; [c] χ^2=4.67, p<.0.20; [d] χ^2=16.17, p=.001; [e] χ^2=1.82, p=.61; [f] χ^2=4.46, p=.22

Table 5 | Univariate and multivariate logistic regression analyses among people who received help for their problems in the past six months, enter method (reference category dependent variable: no need)

	Information		Medication		Counselling		Practical Support		Skills training		Referral	
	Univariate	Multivariate	Univariate	Multivariate	Univariate	Multivariate	Univariate	Multivariate	Univariate	Multivariate	Univariate	Multivariate
	OR [a] (95% CI b)	OR [a] (95% CI b)	OR [a] (95% CI b)	OR [a] (95% CI b)	OR [a] (95% CI b)	OR [a] (95% CI b)	OR [a] (95% CI b)	OR [a] (95% CI b)	OR [a] (95% CI b)	OR [a] (95% CI b)	OR [a] (95% CI b)	OR [a] (95% CI b)
Chronic depression	1.04 (.74–1.45)	–	1.80*** (1.33–2.43)	–	1.16 (.82–1.64)	–	1.91*** (1.37–2.66)	1.45* (1.01–2.08)	1.15 (.87–1.53)	–	1.04 (.74–1.45)	
Gender, female	.66* (.47–.95)	.61** (.43–.88)	.92 (.69–1.23)	–	.96 (.68–1.36)	–	1.37 (.96–1.95)	–	.86 (.64–1.14)	–	.66* (.47–.95)	.61** (.43–.88)
Age (in years)	.98** (.96–.99)	.98** (.96–.99)	1.03*** (1.01–1.04)	1.02** (1.01–1.04)	.98* (.96–.99)	.98 * (.96–.99)	.99 (.98–1.01)	.98* (.97–.99)	.98*** (.97–.99)	.98*** (.96–.99)	.98** (.96–.99)	.98** (.96–.99)
Education (in years)	.99 (.94–1.04)	–	.92*** (.89–.96)	–	.98 (.93–1.04)	–	.88*** (.84–.93)	.92* (.87–.97)	1.05* (1.01–1.10)	1.08** (1.03–1.13)	.99 (.94–1.04)	–
Comorbid anxiety	1.42* (1.02–1.98)	–	2.22*** (1.67–2.94)	1.67** (1.23–2.26)	1.54* (1.10–2.16)	1.43 * (1.01–2.06)	1.90** (1.31–2.77)	–	1.21 (.90–1.62)	–	1.42* (1.02–1.98)	–
Symptom severity	1.02** (1.01–1.06)	1.03 (1.01–1.04)**	1.04*** (1.03–1.06)	1.03** (1.01–1.05)	1.02* (1.01–1.04)	–	1.05*** (1.02–1.06)	1.04** (1.02–1.06)	1.01* (1.02–1.03)	1.02** (1.01–1.03)	1.02** (1.01–1.06)	1.03** (1.01–1.04)

*p<.05, **p<.01, *** p<.001; [a] OR=Odds Ratio; [b] CI=Confidence Interval

Other determinants associated with need for care among people who received mental health care in the past six months

Univariate and multivariate regression analyses showed that other determinants than chronic depression were associated with need for care. The univariate logistics regression analyses showed that females were less likely to perceive a need for information or referral. Furthermore, older people were less likely to perceive any need for information, counselling, skills training or referral. Older people were more likely to perceive a need for medication. Higher level of education was associated with a lower need for medication and practical support. People with more education were more likely to report a need for skills training. Higher severity of depressive symptoms was associated with a need for all types of services (information, medication, counselling, practical support, skills training, referral). People with a comorbid anxiety reported a higher need for information, medication, counselling, practical support and referral (Table 5).

In the multivariate logistic regression analyses the effects for severity of symptoms remained for the need for information, medication, practical support, skills training and referral. The effect for comorbid anxiety remained for medication and counselling (Table 5). From all demographic variables the effects for gender remained for information and referral. Older age was in the multivariate analyses associated with all service types. Higher years of education was associated with a higher need for practical support (Table 5).

DISCUSSION

The aim of this paper was to examine if people with chronic depression reported other needs than people with shorter episodes of depression. Respondents were divided into two groups: people who received mental health care in the past six months and people who did not.

Among people who received no mental health care in the past six months, univariate analyses showed that people with chronic depression had a higher need for medication and counselling. For the people who received mental health care, a higher need for medication, counselling and practical support was found. These findings may be expected since earlier research findings showed that people with chronic depression have more severe and persistent symptoms [35-37]. The data from the present study showed a similar pattern; people with chronic depression reported more comorbid anxiety (e.g. 75% compared to 61%, $p<.001$) and more severe symptoms (respectively M=38, SD=11.11 versus M=30, SD=11.77, $p<.001$). Intuitively, it makes sense that people with more severe symptoms have a higher need for medication, counselling and practical support. When controlling for other variables, the effects for chronic depression disappeared in the multivariate analyses, except for the effect of practical support among people with chronic depression who received mental health care in the past six months.

Instead of the duration of depression, the results suggested that severity and comorbid anxiety were associated with higher needs. Among people who did not receive mental health care in the past six months, more severe symptoms were associated with a higher need for information,

medication, practical support and referral. Comorbid anxiety was associated with a higher need for information, counselling and referral.

Among people who did receive mental health care in the past six months, severity of symptoms was associated with a higher need for information, medication practical support, skills training and referral. Comorbid anxiety was associated with a higher need for medication. Moreover, several demographic variables were associated with a higher need for services types in the group who received mental health care. For example, men reported a higher need for information and referral, which is in line with research findings in primary care [14]. Furthermore, older people were less likely to report a need for information, skills training or referral. This contrasts with previous findings that showed that older people were more likely to express a need for skills training or referral [14]. Finally, the data showed that people with more education were more likely to report a need for skills training.

The result that chronicity may be less influential in determining perceived need for care (except for practical support among people who received mental health care) is in contrast with our hypothesis that people with chronic depression may differ in their needs for care. On the other hand, the result that severity of symptoms and comorbid anxiety are associated with higher needs is in line with previous research findings [14,20,21]. For people with more severe symptoms it may be important to examine their perceived need for care more thoroughly, especially since the data in our study showed that for the majority of people their perceived need is only partially met (Table 1).

However, when we examined unmet and partially met need within people with chronic depression (e.g. people wanted this type of service but did not receive it, or did not receive it enough), the highest percentages were reported for information (40%), counselling (52%) and referral (41%). This finding suggest that mental health care, at least from the patients' perspective, may be improved for this group. A recent guideline for treatment among people with chronic depression recommended Cognitive Behavioural Analysis System of Psychotherapy (CBSAP) for this specific group, instead of more traditional psychotherapy like Cognitive Behavioural Therapy (CBT) [32]. Possibly, by applying these kinds of treatments the unmet need for this specific group may be improved. However, perceived need of care is a personal view of need, and may differ from a professional point of view. This may indicate that for treatment to be helpful, not all needs from patients' perspective need to be satisfied. More research is needed to examine these hypothesis, since some indication have been found that adapting patients' preferences in treatment may lead to better outcomes in primary care [23,24].

There are some limitations of this study that need to be considered. First, the data is cross-sectional meaning that it is not possible to draw causal relationships. Furthermore, we selected people between 18-65 years old and people were recruited from three large cities in the Netherlands. Therefore, we have no information on the perceived needs of older people (>65 years old) and people from urban parts were overrepresented. Furthermore, we considered people as having a shorter episode of depression if they did not report an episode duration of 24 months or longer. However, it is possible that these people had a chronic course of depression in the past. Regarding perceived need for care, we had only information on the need of patients in the past

six months. There is no information available on previous perceived needs for care, especially in relationship to previous treatment use. This information may be important to determine more specific needs and examine if history of treatment seeking influence actual perceived need for care. There are some indications that better experiences with mental health care and feeling comfortable with professional help, influence treatment use [15,50] and consequently may influence peoples' perceived need for care. Moreover, people only expressed a need for care, more specific information was not available. For example, people with chronic depression reported a higher unmet need for counselling, but we do not know the frequency, intensity and time-frame of the received treatment.

CONCLUSION

The data of the present study suggest that the patients' perceived need for care is driven more by the severity of affective disorders than by their duration. The highest unmet and partially met need (e.g. people wanted this type of service but did not receive it, or did not receive it enough) was reported for information, counselling and referral. This suggest that these service types, at least from patients' perspective, may be improved.

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