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Unmet care needs, care provision and patient satisfaction in patients with a late life depression: a cross-sectional study

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ABSTRACT

Background: Research has shown that some 30% of total care needs in people with late-life depression (LLD) are unmet. It is not known to what extent patients actually don't receive any care for these needs or consider the care to be insufficient and their satisfaction with the provided care.

Aim: The aim of this study is to obtain insight into the care provided in relation to the reported unmet care needs and satisfaction with the total care provided is examined.

Method: A cross-sectional study of 99 people with LLD in an ambulatory setting.

Results: In 67% of patients, at least one unmet need was ascertained. In most cases (80%) care was actually provided for those needs by professionals and/or informal caregivers. Patients were satisfied with the care delivered for 81% of the reported care needs. Satisfaction was lowest for social care needs (67%). For six specific care needs it was demonstrated that dissatisfied patients were significantly more depressed than satisfied patients.

Conclusion: Even though patients might receive care for certain needs, this does not mean that their needs are met. A substantial proportion of patients with LDD feel that they need additional help for unmet needs.

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Introduction

The prevalence of severe depression in later life is estimated at 1%–5%, while some 15% of older adults experience less severe, but clinically significant depressive symptoms (Fiske, Wetherell, & Gatz, 2009). Late-life depression (LLD) has major consequences for daily functioning and quality of life of the older person (Beekman et al., 2002; Doraiswamy, Khan, Donahue, & Richard, 2002). The prognosis for LLD is poor when it is not or inadequately treated (Licht-Strunk, Beekman, de Haan, & van Marwijk, 2009; Licht-Strunk, van Marwijk, et al., 2009).

The diagnosis and treatment of depression in older adults have been set out in various guidelines (Kok, 2008; National Institute for Health and Clinical Excellence (NICE), 2009; Spijker et al., 2013). In these guidelines, the emphasis is mainly on psychological and pharmacological treatment. The guidelines contain limited attention for the care needs that accompany the depressive disorder, such as social problems, or difficulties with self-care. However, it is important to give due consideration to these, because such problems may have a negative influence on the course of the depression and the quality of life (Slade et al., 2004). Moreover, it has been shown that unmet care needs can have a detrimental effect on treatment motivation (Stobbe et al., 2015).

Within the context of our research, a care need may be defined as: 'A physical, psychological, social or environment-related demand for help, care or a service, with the goal of solving or reducing a problem that is experienced or expressed by an older person in relation to an underlying psychiatric condition' (Houtjes, 2015). A distinction can be made between met and unmet care needs (Hancock, Woods, Challis,

& Orrell, 2006). A care need is met when a person receives adequate help, or found an otherwise suitable solution for a problem. A care need is unmet when a problem exists for which no adequate solution has been found (Houtjes, Van Meijel, Deeg, & Beekman, 2010). The Camberwell Assessment of the Needs for the Elderly (CANE; Reynolds et al., 2000) is a useful instrument for needs assessment in the four domains as described in the definition of Houtjes(2015): *physical, psychological, social or environment-related domain*. The CANE contains 24 items, each representing one of the four domains (Field, Walker, & Orrell, 2004).

In recent decades, there has been increased research on care needs for various psychiatric disorders, including depression, schizophrenia, bipolar disorder and dementia (Cummings & McClure, 2008; Dautzenberg et al., 2016; Futeran & Draper, 2012; Houtjes et al., 2010; Meesters et al., 2013; Orrell et al. 2008; Passos, Sequeira, & Fernandes, 2012). Regarding LLD, it has been shown that nearly 30% of reported care needs remain unmet (Houtjes et al., 2010). Particularly in the psychological domain (psychological distress, according to the CANE) and social domain (daytime activities and intimate relationships, according to the CANE), many unmet care needs are reported. It has been empirically demonstrated, that there is a significant positive relationship between the number of care needs and the severity of the depression (Houtjes et al., 2010), and that the presence of a depression is a significant predictor of an increase in both met and unmet care needs (Cummings & McClure, 2008). Moreover, depressed patients evaluate a care need as unmet significantly more often than their professional caregivers (Houtjes,

Van Meijel, Deeg, & Beekman, 2012). This discrepancy may be explained by the possibility that the professional caregiver does not recognise the care need, or that there is a difference in interpretation as to whether a care need actually exists or not. Depression is known to have a negative influence on cognitive functioning. Cognitive functioning in the areas of attention, memory, executive and psychomotor functions are impaired, as is information processing. This means that depressed patients are more likely than others to view events in their lives more negatively (Gonda et al., 2015; Lam, Kennedy, McIntyre, & Khullar, 2014). This may result in a distorted picture of the actual care that depressed patients receive for their reported unmet needs, as well as the perceived outcomes. At the same time, explicitly taking account of the patient's perceptions of the care provided might constitute an important means to improve the quality of care (Barg et al., 2010). At the same time, perceived quality of life strongly determines the patient's perception of the quality of care and the patient's satisfaction with the care provided (Al-Abri & Al-Balushi, 2014; Cohen, Myckatyn, & Brandt, 2017).

Despite the increasing focus on care needs in psychiatric disorders, including those of patients with LLD, little is known about the actual care provided for the reported unmet care needs. This is remarkable, as insight into this area is important for systematic attention to these unmet care needs and the need to tailor the care accordingly (Cummings & McClure, 2008; Houtjes et al., 2010). Moreover, we know little about the extent of satisfaction among depressed elderly about the care provided or whether satisfaction is associated with severity of depression. As Cohen and colleagues state, research into patient satisfaction is crucial, since it is an essential indicator for quality of care (Cohen et al., 2017). Insight in the relation between depression severity and satisfaction with care helps healthcare providers to understand patient satisfaction in these patients better and adjust the provided care to the actual needs of the patients and improve the quality of care.

In this study, we provide answers for the following research questions: (1) what care do patients with late-life depression receive for their experienced unmet care needs? (2) Are patients with late-life depression satisfied with the formal and informal care that they receive for their care needs? (3) Are patients who are satisfied with the care provided less depressed than patients who are dissatisfied?

Method

Design

This cross-sectional research was conducted within the context of a larger cross-sectional study on care needs among older outpatients with a depressive disorder (Houtjes et al., 2010, 2012). The study was carried out according to the STROBE-guidelines on the reporting of observational studies (von Elm et al., 2007). The study was reviewed by the medical-ethics committee of the University of Utrecht, and by the local review boards of the participating institutions. The data were collected between December 2006 and January 2008.

Setting and procedure

The patients were recruited from ambulatory care units for Geriatric Psychiatry in six psychiatric care organisations in the centre and east of the Netherlands. Inclusion criteria for the

patients were: (a) aged over 55 years, (b) a minimum of six months in ambulatory care; (c) a primary diagnosis of depressive disorder, according to the Diagnostic and Statistical Manual of Mental Disorders (Diagnostic and Statistical Manual for psychiatric disorders fourth revised edition, American Psychiatric Association, 2000), as ascertained by a primary treating clinician (psychiatrist or clinical psychologist) at the start of treatment, and d) signed informed consent.

Clinicians from the participating organisations requested the consent of those patients who met the inclusion criteria to be approached by researchers with a view to participating in the study. After consent was given, these patients were telephoned by one of the researchers, who provided them with information about the study. Patients who verbally agreed to participate then forwarded the informed consent, and an appointment was made for an interview at their home address. The interviews were conducted by skilled research nurses with experience in geriatric psychiatry, who had been trained in the application of the measuring instruments used. The entire interview took some 30 min.

Instruments

Two instruments were used for the data collection: The Camberwell Assessment of Needs for the Elderly (CANE) and the Montgomery-Åsberg Depression Rating Scale (MADRS).

The purpose of the CANE is to provide a detailed assessment of the care needs of older people and their satisfaction with the care provided, focussing on 24 aspects of functioning (Dröes, van Hout, & van der Ploeg, 2004; Hancock et al., 2006; Reynolds et al., 2000). For each of the 24 items, it is first ascertained whether an individual has a problem in the relevant aspect of functioning. If this is so, then it is established that a care need exists. In the case of an existing care need, the question is asked whether the person is receiving care for this specific need. A distinction is made between informal care (partner, family, friends) and formal care (professionals). Then the patient is asked whether he/she is satisfied with the care provided for that care need and whether it is adequate. If the patient finds the care adequate, then his/her care need is considered to be met. Conversely, if no care is offered, or if the care is experienced as inadequate, the care need is considered to be unmet. The results for care received for unmet needs are clustered on the basis of the following categories: environmental, physical, psychological and social care needs (Field et al., 2004; Houtjes et al., 2010). The CANE has a good reliability and validity (Reynolds et al., 2000). The Dutch version has been subjected to psychometric testing, which has shown acceptable construct validity, criteria validity and test-retest reliability (van der Roest, Meiland, van Hout, Jonker, & Droes, 2008).

The MADRS scale was used in this study to establish the severity of the depression (Hartong & Goedkoop, 1985). It consists of 10 items: mood, inner tension, sleeping pattern, appetite, concentration, sluggishness, absence of feelings, pessimism and suicidal ideation. Each item is scored on a scale of 0–6, with the total score ranging from 0 to 60. The following cut-off scores were used to rate the severity of the depression: 0–10 no depression, 11–20 mild depression, 21–30 moderate depression, 31–60 severe depression. The psychometric properties of the MADRS have been rated as good (Hartong & Goedkoop, 1985; Iannuzzo, Jaeger, Goldberg, Kafantaris, & Sublette, 2006).

We also registered the following demographic data: gender, age, geographical living environment (rural, urban), education (only primary education, secondary education, and bachelor's degree and higher), marital status (married/ single/ widow), number of admissions to a psychiatric hospital and if an informal carer (non-professional care provider).

Data analyses

To answer the first research question on care received for unmet care needs, we used descriptive statistics. The following categories were used: (1) no care offered, (2) only formal care, (3) only informal care, and (4) both formal and informal care are offered.

Descriptive statistics were likewise used to answer the second research question about the degree of satisfaction with the care provided. The results are presented in a table, showing the percentages at both item and category level. The satisfaction scores are shown for both met and unmet care needs.

Differences in patient characteristics between satisfied and dissatisfied patients were measured using Chi-square or Fisher's exact tests in categorical data (gender, geographical environment, education and marital status) and the Mann-Whitney *U* test on age. We also used the Mann-Whitney *U* test to measure whether there were significant differences in the depression score between the satisfied and dissatisfied patients. The level of satisfaction for each item was used as group variable (satisfied/dissatisfied) and the MADRS-score as test variable. If a score was $p \leq .05$, it was considered to be significant. All statistical analyses were conducted with SPSS 23.

Results

Demographic data

Of the total group of patients ($n = 99$), 66% were female. The average age was 72.7 years ($sd = 7.7$). Slightly more than half of all patients (52.5%) were living alone (widow or single), and had only primary education (56.6%). The majority lived in an urban environment (62.7%). A large majority (84%) had an informal carer. The average MADRS-score of the patients was 19.46 (range = 0–43; $sd = 10.64$). This means that, on average, the severity of depression was mild to moderate. Over half (58.2%) of the patients had been admitted to inpatient care at least once in the past for psychiatric problems. Table 1 contains an overview of patient characteristics.

Care received for unmet needs

Altogether, the 99 patients reported 232 unmet needs. The average number of unmet needs per person is 2.3 ($sd = 6.7$; range 0–12). Two-thirds (67%) of all patients reported one or more unmet need. No care was provided for 49 (21%) of the 232 reported unmet needs. Formal care was provided for 45 unmet needs (19.4%); informal care for 44 unmet needs (18.9%); and both formal and informal care for the remaining 94 unmet needs (40.5%).

Most of the care was provided for the unmet 'psychological care needs.' Four of the 71 patients with unmet needs did not receive any care in this domain, while 67 received formal

Table 1. Patient characteristics.

Demographic characteristics		
Total sample		$N = 99$
Gender	Male	33.3%
	Female	66.7%
Age	Mean (SD)	72.2 (7.7)
	Mean age Male (SD)	71.2 (8.2)
	Mean age Female (SD)	73.4 (7.4)
Geographical environment	Rural	37.3%
	Urban	62.7%
Education	Only primary education	56.6%
	Secondary education	26.2%
	Bachelor's degree and higher	17.2%
Marital status	Married	47.5%
	Single	14.1%
	Widow	38.4
MADRS score	Mean (SD)	19.46 (10.64)
	Mean Male (SD)	18.34 (10.86)
	Mean Female (SD)	20.02 (10.58)

care ($n = 16$; 22.5%), informal care ($n = 10$; 14.1%) or a combination of both ($n = 41$; 57.7%). Furthermore, on the items 'memory', 'behaviour', 'deliberate self-harm' and 'psychotic symptoms' formal and/or informal care was provided on all reported unmet needs.

The least amount of care was provided with respect to 'environmental care needs': 26 patients out of the 39 expressed unmet needs (67.7%) even though some form of care was given. Within this category care is offered more commonly by informal caregivers, i.e. for 41% ($n = 16$) of the unmet care needs versus 15.4% ($n = 6$) by formal caregivers. At item level, 50% of the patients received no care on their reported unmet care needs on the items 'food ($n = 5$)' and 'financial benefits' ($n = 3$).

A total of 44 unmet needs were reported within the category 'physical health.' In 22.7% of the reported unmet needs, no care was provided ($n = 10$).

A total of 78 unmet needs were reported for the category 'social needs.' In 22 of those cases (28.2%) care was provided. The least amount of care was offered for the item 'information', i.e. for 6 of the 11 (55%) reported unmet needs. Table 2 contains an overview of the care provided for unmet care needs.

Degree of satisfaction with the amount of care

There were no significant differences between the satisfied and dissatisfied patients on the patient characteristics. The patients reported their level of satisfaction about the care provided in relation to 876 met and unmet needs (Table 3). The patients were satisfied with the care they received for 718 out of the 876 needs (82%). The highest level of satisfaction was expressed for help with environmental and physical needs (both 88%). Satisfaction concerning psychological needs also scored almost 82%. The patients were the least satisfied with the care offered for their social needs (67.3%). This low score is chiefly attributable to the relatively high level of dissatisfaction with the care for daytime activities (39%) and loneliness/intimate relationships (36%).

Relation between degree of satisfaction and severity of depression

For 18 of the CANE items no statistically significant differences were found in depression scores among the patients who

Table 2. Overview of the care provided for unmet care needs.

Item on the CANE	Unmet Needs		Unmet needs and received no care	Unmet needs with only formal care		Unmet needs with only informal care		Unmet needs with both types of care	
	N	n		N	%	n	%	n	%
<i>Environmental needs (total)</i>	39	13	33.3	6	15.4	16	41	4	10.3
Accommodation	7	0		2		4		1	
Household skills	5	2		0		3		0	
Food	10	5		2		3		0	
Money/budgeting	3	0		0		2		1	
Financial benefits	6	3		0		2		1	
Caring for someone else	8	3		2		1		1	
<i>Physical needs (total)</i>	44	10	22.7	10	22.7	6	13.6	18	40.9
Physical health	9	1		1		1		6	
Medication	4	1		1		1		1	
Eyesight/hearing/communication	16	5		3		2		6	
Mobility/falls	9	2		2		1		4	
Self-care	4	1		2		1		0	
Continence	2	0		1		0		1	
<i>Psychological needs (total)</i>	71	4	5.6	16	22.5	10	14.1	41	57.7
Psychological distress	31	1		8		2		20	
Memory	13	0		3		6		4	
Disruptive behavior	7	0		1		1		5	
Alcohol	5	2		1		1		1	
Deliberate self-harm	3	0		0		0		3	
Inadvertent self-harm	5	1		2		0		2	
Psychotic symptoms	7	0		1		0		6	
<i>Social needs (total)</i>	78	22	28.2	13	16.7	12	15.4	31	39.7
Company	15	1		3		1		10	
Intimate relationships	24	7		4		4		9	
Daytime activities	27	7		2		6		12	
Information	11	6		4		1		0	
Abuse/neglect	1	1		0		0		0	

were satisfied (S) compared to those who were dissatisfied (Ds) about the care provided. However, for six items significant differences were found. These are the items 'household skills' (S(Mdn = 21) vs. Ds (Mdn = 27), $U = 92.5$, $p = 0.04$), 'financial benefits' (S(Mdn = 19) vs. Ds(Mdn = 38.5), $U = 8$, $p = 0.02$), 'memory' (S(Mdn = 20.5) vs. Ds(Mdn = 29), $U = 54.5$, $p = 0.02$), 'disruptive behaviour' (S(Mdn = 22) vs. Ds(Mdn = 36),

$U = 11.00$, $p = 0.05$), 'alcohol' (S(Mdn = 11) vs. Ds(= 36), $U = 4.00$, $p = 0.004$) and 'daytime activities' (S(Mdn = 18) vs. Ds (Mdn = 27), $U = 234.50$, $p = 0.00$). For these items, the dissatisfied patients are significantly more depressed than those who are satisfied with the care provided. These items are spread across all four categories of care needs. Table 3 contains an overview of the results.

Table 3. Satisfaction with received care and differences with MADRS score.

Item on the CANE	Satisfied with provided care		Not satisfied with provided care		Difference MADRS scores and satisfied/not satisfied	
	n	%	n	%	Differences	P ^a (2-tailed)
<i>Environmental needs</i>		88		12		
Accommodation	24	87.5	3	12.5	7.14 ^b	0.15
Household skills	58	87.9	7	12.1	9.04	0.04
Food	36	80.6	7	19.4	7.42	0.11
Money/budgeting	34	100	0	0	–	–
Financial benefits	22	81.8	4	18.2	17.22	0.02
Caring for someone else	17	88.2	2	11.8	0.70	0.94
<i>Physical needs</i>		88		12		
Physical health	68	94.1	4	5.9	3.52	0.54
Medication	43	88.4	5	11.6	6.64	0.09
Eyesight/hearing/communication	54	77.8	12	22.2	6.38	0.052
Mobility/falls	45	88.9	5	11.1	4.08	0.44
Self-care	20	85	3	15	14.77	0.06
Continence	22	95.5	1	4.5	–1.48	0.75
<i>Psychological needs</i>		81.7		18.3		
Psychological distress	77	81.6	14	18.2	4.52	0.14
Memory	45	84.4	7	15.6	10.93	0.01
Behavior	20	80	4	20	13.38	0.05
Alcohol	11	54.5	5	45.5	18.17	0.04
Deliberate self-harm	34	88.2	4	11.8	4.65	0.47
Inadvertent self-harm	17	76.5	4	23.5	5.56	0.34
Psychotic symptoms	30	86.7	4	13.3	12.60	0.06
<i>Social needs</i>		67.3		32.7		
Company	32	75	8	25	4.63	0.34
Intimate relationships/loneliness	44	63.6	16	36.4	4.50	0.14
Daytime activities	64	60.9	25	39.1	9.27	0.00
Information	48	75	12	25	–0.50	0.84
Abuse/neglect	11	81.2	2	18.8	2.83	0.81

^a Calculated with a Mann–Witney U test.

^b A positive score means that patients who are not satisfied have a higher score on the MADRS.

Discussion

To our knowledge this is the first study, which examines the provided care on the unmet needs of patients with LLD in an ambulatory mental health care setting. The results show that most of the patients received care for their unmet needs (82%). Although it is well established that LLD has a major impact on all aspects in daily life (Areán & Reynolds, 2005; Beekman et al., 2002) the results show that most care is delivered in the domain of psychological needs (94.5%). The results reflect a strong focus on the treatment of psychiatric symptoms and less on symptoms that might trigger or maintain LLD, such as poor housing (environmental domain) and lack of daily activities (social domain). Most of the care, provided by informal carers, is in the environmental domain (41%). This indicates that the need for professional health care provision in this domain is less dominant for this group of patients. From the results of this study, we have some concerns about the provided care in the social domain. From other studies (Dautzenberg et al., 2016; Houtjes et al., 2010) we know that most of the unmet needs are found in the social domain. The results of this study show that in about 30% of the unmet needs remain undetected (e.g. no care is provided). And this is striking because in an ambulatory health care setting one should expect that the ambulatory health-care professionals also address the needs in the social domain. This is also discussed in another study on bipolar patients in a similar setting (Dautzenberg et al., 2016). We agree with Dautzenberg et al. (2016) that it is probably a demarcation problem in which ambulatory health care professionals do not regard these problems within their scope of attention and address care needs in the social domain to other health care facilities (e.g. community centres) or informal carers, as they are already involved in care provision in this domain. As noted, the results articulate the large involvement of the informal caregivers. The involvement of informal carers is equal to the healthcare professionals. Involvement of informal carers is found throughout all the four healthcare domains and in 40.5% of the reported unmet needs. This implies that the informal caregiver is an important partner in the treatment and care for patients with late-life depression. These conclusions concur with those of Lin and Wu (2011), who asserted that a large share of the care for patients with late-life depression is provided by informal caregivers. However, the risk is that these (older) informal caregivers become overburdened. It is therefore important that professional caregivers also pay attention to the care burden and capacity of the informal caregivers, particularly if the treatment is of long duration (Ho, Chan, Woo, Chong, & Sham, 2009; Lin & Wu, 2011; Zegwaard, Aartsen, Grypdonck, & Cuijpers, 2015).

Although health care was delivered on most of the needs of the patients they were still regarded as unmet. An explanation could be that the patients were still in the process of receiving treatment, and finding a solution to the care need indicated takes time. It can therefore be expected that as the treatment progresses or is completed, the unmet care needs will be met. A second possible explanation may be found in the negative/pessimistic perceptions of the patient: depressed patients have the tendency to focus disproportionately on negative details, and pay less attention to positive aspects (Gonda et al. 2015; Lam et al., 2014). Accordingly, improvements in meeting care needs may not be recognised as such by the patients, and the needs continue to be seen as

'unmet'. Moreover, depression is in itself a risk factor for evading care, due to lack of confidence in the solutions offered by professionals and informal carers and/or a sense of being considered troublesome (Cummings & McClure 2008; Martino et al., 2011; Papageorgiou et al. 2015; Walters, Iliffe, & Orrell, 2001). We support the recommendation of Hancock, Reynolds, Woods, Thornicroft, and Orrell (2003) that in the treatment and care for this target group, considerable weight should be given to the patient's perspective, in order to gain a sound understanding of the problems experienced, the care needs, the care provided, and satisfaction with care. This would expose any discrepancies in experience and evaluation between patients, professionals and informal carers, and allow these to be adequately addressed. The implication is that caregivers should more readily question whether the care provided sufficiently matches the care needs as experienced by the patient. Sometimes, the solution can be to step up the care when the patient finds it inadequate. As an alternative, or in addition, the topics for discussion could include the thinking and experience of patients regarding their life situation and how they perceive their illness symptoms and care requirements.

The results of Table 3 show that most patients are satisfied with the care they received and that there are no significant differences between dissatisfied and satisfied patients with respect to depression severity on most of the CANE items. This implies that dissatisfied patients are not more depressed than satisfied patients on most on the provided care in most of the CANE items. However, we note the low satisfaction score for social care needs, particularly in the areas of 'intimate relationships' and 'daytime activities.' Apparently, the patients have a major need for meaningful daily occupation, which would also provide opportunities for friendships and intimacy. The care needs expressed in this area are in line with the conclusion of Dautzenberg et al. (2016) that care for this target group should not only be limited to the psychological domain, but that also account should be taken of social care needs within the services provided. This is all the more true, as it is known that both social and causal factors can exert a significant influence on the course of a depression (Areán & Reynolds, 2005).

On a number of points, satisfaction with the provided care is related to the severity of the depression. In the case of six care items, dissatisfied patients are significantly more depressed than satisfied patients. Five of these items ('memory', 'behaviour', 'alcohol', 'daytime activities' and 'household skills') are related to a greater or lesser extent to the depressive disorder. The above-cited negative perceptions that belong to depression may play a role here in determining the patient's evaluation of the care provided. It may be expected that the dissatisfied patients will become more satisfied according as the depression diminishes (Hamaker, Nesselroade, & Molenaar, 2007). An additional explanation could be that these patients were too severely depressed to be appropriately helped by ambulatory care, and the care provided was therefore inadequate for the needs related to these items. The sixth item for which a relation was found between satisfaction with care and the severity of depression concerned 'financial benefits.' As such, this variable is not directly related to the severity of the depression. The question whether someone is eligible for financial benefits depends on various kinds of legislation and regulations. However, it is known that older people with limited financial resources are

known to incur a greater risk of depression (Fiske et al., 2009). It may therefore be assumed that when a patient's financial situation improves (through adequate care provision), the severity of the depression lessens.

Strengths and limitations

This study has the following strengths. Firstly, in this study we have explored the care that patients with LLD received on their unmet care needs, as well as the care they received and their satisfaction with the care. To our knowledge, this study is the first to establish which formal and informal care is actually provided for reported unmet care needs in patients with LLD.

Secondly, patients were included at various stages of their treatment course. Consequently, there is a wide range of depressive symptoms (MADRS-scores between 0–43), which enabled us to measure the extent to which satisfaction with the care received was correlated with depressive symptoms. Some patients were already in symptomatic remission, but were nonetheless still receiving care, on account of the existence of care needs in various areas.

Besides these strengths, the study has a number of limitations. Firstly, there are some care items, as measured with the CANE, for which few care needs are reported (≤ 5). Consequently, for these aspects it is not possible to make a reliable distinction between met and unmet care needs (e.g. the item 'alcohol'). Secondly, due to the cross-sectional design it was not possible to perform analysis on level of depression at the entry of the ambulatory facility and the time in which the patient received care. As these variables might influence the relationship between patient satisfaction and severity of the depression, the results of this study should be interpreted cautiously. A further limitation concerns the generalizability of the results. The research was conducted in the Netherlands where access to psychiatric care services is generally good. The findings cannot be automatically generalised to other countries with different health care systems.

Conclusion

We may conclude that a large percentage of patients (67%) have unmet care needs, but that in the vast majority of these cases (80%), care is in fact provided. Satisfaction with the care given is predominantly high. For six of the items on the CANE scale, the level of satisfaction is significantly correlated to the severity of the depressive symptoms. Importantly, the role of informal carers is at least as large as that of formal caregivers. This means that professional caregivers need to be conscious of maximising effective support of these informal carers, while at the same time realising that the possibility of (older) informal carers becoming overburdened deserves attention. Our study makes it clear that not only a systematic assessment of care needs is important (see Houtjes et al., 2010), but that a systematic analysis is also required of the extent to which the care given constitutes an adequate response to these needs, and whether the care meets with the satisfaction of the patient. The CANE scale is an excellent instrument for identifying any deficiencies in the care provided.

Practice implications and future research

This study shows that providing care to the needs of patients with LLD does not automatically mean that these needs are

met. An important implication for practice is therefore is that healthcare professionals should systematically evaluate with the patient (and informal caregivers) the care needs, the care provision, the outcomes and patient's satisfaction. It is hereby important to take into account the negative/pessimistic perceptions of the patient concerning himself and his environment as one of the symptoms of LLD. Healthcare professionals should tailor the interventions to the patient's care needs and preferences, and clearly inform them why certain care is provided and what the realistic expectations are. Furthermore, the results of the study also articulate the large involvement of the informal carers. This implies that systematic involvement of informal carers by healthcare professionals is required in the total provision of care throughout all the patients' care needs. The results on client satisfaction implies that it could be a viable resource in the improvement of the quality of care, however healthcare professionals should keep in mind that satisfaction of some (disorder related) care needs could be influenced by the disorder itself and not only by the care provided.

Since this is the first study to explore the care provided to the unmet needs of patients with LLD, there is a need for further research. In the first place, we proposed that the negative cognitions that go along with LLD could be of influence but further research on this association is necessary to confirm this proposition. Furthermore, this study gives an overview of care provided to unmet needs but there is not clear how these unmet are related to each other. We suggest to repeat our study in a larger population and examine how the unmet needs relate to each other. This is important for a better alignment of the care that is needed and the development of a solid theoretical background

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