Self-perceived need for mental health care and successful treatment of depressive symptoms in the elderly; findings from an implementation study

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ABSTRACT
Objective: To unravel whether and how self-perceived need for mental-health-care predicts treatment outcomes for (sub)clinical depression.
Design: Combining quantitative and qualitative methods in a large scale implementation study
Setting: Eighteen general practices.
Participants: After screening (n=9660), we recruited 256 persons of 65 years and older with (sub)clinical depression.
Main outcome measures: The Perceived need for Care Questionnaire determined mental-health-care needs in 256 subjects. In qualitative interviews (n=26), we explored motivations for receiving treatment and perspectives and ambiguities on needs for care.
Results: Treatment reduced depressive symptoms in those with a mental-health-care need (Wald=21.95, df=8, p=0.01), but not in those without (Wald=12.293, df=8, p=0.139; standardized mean difference 0.67). The qualitative interviews showed that persons with need for mental-health-care; 1) experienced their depressive symptoms more often as burdensome; 2) perceived more loneliness and were more intrinsically motivated to participate in treatment than those without a need, and were less ambiguous about needs. 3) Finally, all persons participating in the qualitative interviews expressed a need for contact with others.
Conclusion: Self-perceived need for health care determines outcome after treatment in (sub)clinical depression. Our findings help explain why although treatment for (sub)clinical depression in primary care is effective, it frequently remains untreated. Accounting for self-perceived need for health care needs can improve implementation.
BACKGROUND
Depression ranks second amongst the most important conditions of the 21st century in terms of morbidity, mortality and use of healthcare [1-2]. We distinguish sub-clinical depression (those persons who have an increased number of depressive symptoms, but do not fulfill diagnostic criteria), and clinical depression (older persons with a fully developed depressive disorder). Both contribute considerably to a reduced quality of life and impaired functioning [1-3] and have considerable economic ramifications [4,5]. The prevalence of clinical depression is approximately 5% in older persons seen in primary care settings [6], whilst estimates of the prevalence of subclinical depression are even higher at an estimated 13.5% [6]. Despite the high prevalence, most depressed older persons currently remain undiagnosed and therefore untreated even though (sub)clinical depression is eminently treatable. Successful short psychotherapeutic treatments such as problem-solving treatment [7-9], life review therapy [10,11] and antidepressant medication are available, at low costs [,12,13]. Screening, combined with treatment in primary care has been advocated as a solution to solve this problem [6]. Primary care physicians, after screening, do indeed diagnose more people with major depressive disorder [14], but this has not resulted into better outcomes when care as usual was compared to specialized psychiatric care as shown by a recent implementation trial [15,16]. The finding from this implementation trial conflicts with data from randomized controlled trials in primary care showing that evidence based interventions aimed at reducing depressive symptoms are effective [17-22]. However, even in these randomized controlled trials not all persons receiving evidence based treatments benefit.

A possible explanation for these conflicting findings could be that a substantial proportion of persons screened out in a systematic screening campaign may not themselves perceive a need for mental health treatment. This lack of perceived need for treatment may, through various pathways, predict lack of effect of such treatment. As measuring perceived need for treatment is relatively easy, and brief instruments are available [23], this may improve the precision of efforts to improve mental health through systematic screening and subsequent treatment of (sub)clinical depression.

We wanted to gain a deeper insight whether a self-perceived need for mental health care predicts outcome of treatment in older subjects with (sub)clinical depression. We therefore describe the effect of self-perceived need for mental health care on treatment outcome in a large implementation trial aimed at reducing depressive symptoms in older persons, combining two approaches in a mixed methods study. We determined the effect of self-perceived need for mental health care on outcome of treatment quantitatively using the Perceived Need for Care Questionnaire [24]. In a qualitative approach, older persons’ self-perceived needs for care were explored to gain a deeper insight into this relationship.
METHODS

Design
This study was conducted as part of the ‘Lust for Life’-trial, aimed at reducing depressive symptoms in older persons by implementing a preference-led, stepped care treatment program. We conducted a pragmatic randomized controlled trial, using a stepped-wedge randomized-cluster design [25]. Implementation was done in four steps: directly, 3, 6, and 12 months after baseline. Family practices and subjects recruited by the home care organization were randomly assigned to each of these four implementation groups after which they started receiving the interventions. Individuals enrolled were followed over two years with outcomes measured every three months. Persons served as a control group at time-points at which they had not yet received the intervention. A stepped-wedge design was considered advantageous compared to a conventional randomized controlled trial design for two reasons: 1) the offered clinical interventions were evidence-based and it might therefore be unethical to withhold them from a considerable number of subjects; and 2) phased implementation allowed for the evaluation, refinement and application of the (renewed) implementation strategy along the way [26].

A mixed-methods approach was used to provide a more comprehensive view on why the treatment program was effective for some, but not for others [15]. Quantitative methods are appropriate to relate objective determinants to eventual acceptance of the treatment offer. Qualitative methods allow a more in-depth understanding of older adults' perceptions of emotional distress and how these translate into perceived needs for care and support. In the present study, we aimed to integrate both methods to verify, enrich and corroborate findings from different approaches about these phenomena, distress and need (triangulation) and to elaborate or clarify the results from one method by the other (complementarity). In accordance with Dutch law the VU University Medical Center Ethical Review Board considered ethics approval not required (No. 2010/084). The Ethical Review Board argued that no approval was required, since all subjects participating in our study would receive proven evidence based treatment during the trial.

Sample
Participants were recruited from 18 participating general practices with 45 general practitioners and a home care facility in the Netherlands (Figure 1). All enlisted persons of 65 years and older (N=9,661) were informed about the treatment program and requested by their general practitioner to fill in a screener for depressive symptoms, the self-report Patient Health Questionnaire-9 (PHQ-9) [27]. The questionnaire was returned by 5,492 persons (56.8%), of whom 758 (13.8%) scored above the predefined cut-off score of 5, which means that these subjects had at least a sub-clinical depression [28]. 495 individuals were unwilling or unable to participate. Since the ‘Lust for Life’-trial is an implementation trial, aimed to suit procedures to normal practice as much as possible, we only excluded individuals with severe cognitive disability (defined as a
score of 21 or lower on the Telephone Interview Cognitive Status – Modified (TICS-m)) [29] and those with insufficient mastery of the Dutch language. 321 persons provided data on reasons for refusal, including perceiving no need for care (27.4%), simply not being interested (23.7%) or perceiving no depressive symptoms (21.5). Leading to a final sample of 256 persons for the current study who were willing to participate and met inclusion criteria (figure 1), analyses. Of those, 166 individuals attended the intake session (65.0%); 78 individuals changed their mind and declined the intake session. 137 older adults (82.5%) completed the treatment program. We analyzed whether self-perceived need for care modified the effect of the treatment program on depressive symptoms compared to usual care in the sample of 256 persons.

Figure 1: Recruitment of subjects

* 29 subjects were excluded for reasons of insufficient mastery of the Dutch language (n=9), deceased/could not be reached (n=18) or moving outside the research area (n=2).
Treatment program

After three months of watchful waiting, i.e. monitored care-as usual, participants were invited for an intake session with a mental health/home care nurse when depressive symptoms persisted (PHQ ≥5 points). The stepped care program consisted of evidence-based interventions administered by the nurse in three steps, if necessary: step 1: choice of a guided self-help course based on Lewinsohn’s ‘Coping with Depression Course’[30] or an exercise program [31]; step 2: choice of individual Life Review [32] or Problem Solving Treatment (PST) [33]; and step 3: referral to a general practitioner to discuss further treatment options. During the intake session, individuals were advised to follow treatment according to the stepped care principle, but—in order to meet individual preferences—participants could also choose to start immediately with step 2 treatment. Except for the exercise program, interventions could be administered at the participant’s home.

Data collection

Quantitative data collection

After screening assessment and obtainment of written informed consent, subjects were invited to complete a baseline telephone interview and written questionnaire.

Qualitative data collection

The treatment program was implemented in four waves with three-month intervals. A convenience sample of all wave three subjects eligible for intake (n=38) were invited by telephone to take part in the interviews, irrespective of their decision to accept or refuse the treatments offered during the intake session. Purposive sampling was not considered suitable due to the time frame of the study. 26 subjects were willing to take part in the interviews: six subjects refused participation, five could not be interviewed within the time frame of this study, and one person could not be reached. Of these 26 subjects, 20 accepted the treatment program and 6 refused (5 without a need for care according to the PNCQ). Interviews were conducted at the subjects’ homes by two researchers (MH or IvB) within five weeks after the intake session took place, and lasted between 31 and 92 minutes.

Measurements

Quantitative measurements

Background characteristics, such as age, gender and household composition were gathered by means of a written questionnaire. Self-perceived need care for mental health was addressed at baseline by means of the Perceived Need for Care Questionnaire (PNCQ) [25] during a telephone interview conducted by trained research staff. The PNCQ is a fully structured interview that assesses the subject’s perception of the presence of a mental problem, the utilization of (mental) health care services in the past three months and the perceived need for five types of care: 1)
information (about mental illness, its treatments, or available services), 2) medication, 3) counseling (psychotherapy, cognitive-behavioral therapy, or counseling), 4) practical support (help with housing or money problems), 5) and skills training. For this study, referral to a mental health care specialist was added. Subjects who received care for a mental problem were asked if their needs were (fully) met. Results were transformed into one dichotomous variable that indicated whether persons had a self-perceived unmet need (i.e. when a current unmet need existed for one or more types of care) or no self-perceived need for care (i.e. when no current needs existed or all current needs were met).

During the same telephone interview, diagnoses of major depressive disorder and dysthymia were assessed by the Mini International Neuropsychiatric Interview (MINI) [34] a short structured diagnostic interview. For symptom severity, scores on the Patient Health Questionnaire-9 (PHQ-9) [35] during screening were reported. The Loneliness Scale [34] measured the amount of loneliness a subject experiences by citing 11 statements such as 'I miss having people around me,' that can be rated on a 3-point rating scale. Cut-off scores of 9 and 11 respectively indicated severe and extreme feelings of loneliness [37]. Physical functioning was assessed by the Modified Katz Activities of Daily Living (KATZ ADL)[38].

Qualitative measurements
For the qualitative interviews a topic guide was used that was derived from a previous qualitative study on responses of older persons to an unsolicited intervention offer [39]. This topic guide was adjusted to the intervention program of the present study. Topics included most important reason(s) for accepting or declining the treatment program, reasons for initially returning the screening questionnaire, perceived emotional symptoms, personal coping style, self-perceived need for care and influences of others on the decision made and other reasons for declining or accepting the treatment offer.

Data analysis
Quantitative data analysis
Background characteristics were calculated by using chi-squared tests and independent t-tests, comparing those with a self-perceived need for mental health care with those without. PHQ-scores were divided into quartiles given their non-linear relationship with the self-perceived need for care variable (PNCQ).

Second we analyzed whether self-perceived need for care modified the effect of the treatment program on depressive symptoms compared to usual care (n=256). Clinical effectiveness analyses of the treatment program, on which the subgroup analysis was based, are described in detail elsewhere [25]. In short, data was analyzed according to the intention to treat principle using Generalized Estimating Equations with an autoregressive correlation structure to take into account repeated measurements within individuals. Time trend was corrected for by
including the time since the start of the first implementation (in units of three-months intervals) as a categorical variable in all models. The start of implementation was individually defined for each subject as the date of his or her intake session with the nurse. Third, self-perceived need for care was separately added as an interaction term to the model, corrected for confounders (age, educational level, dwelling place and daily functioning). Finally, we calculated the Cohen’s d, i.e. effect size, by comparing the reduction of depressive symptoms in those with and without a self-perceived need for mental health care. We calculated Cohen’s d, after stratification for presence or absence of self-perceived need for mental health care.

Qualitative data analysis
Interviews were digitally recorded and transcribed verbatim. Transcripts were read and re-read. Thematic analysis was done in Atlas.ti 5.2 software both deductively using predefined codes deriving from literature and inductively using open coding. With constant comparison within transcripts and between transcripts a coding tree was constructed consisting of key themes such as ‘perception of current emotional distress’ and different levels of codes (e.g. ‘type of emotional distress’), each consisting of several sub-codes (e.g. ‘mood-related problems’ or ‘feelings of loneliness’). Interviews were independently coded by two researchers (MH and IvB), and discussed until consensus was achieved. Data saturation was reached after the 23rd interview since no new themes emerged from the data.

To minimize subject burden in validation procedures subjects checked and –if applicable- added to an oral summary of the discussed themes provided by the interviewer at the end of the interview. Peer debriefing took place by regular team meetings in which (sub)codes, original data and results were presented and discussed.

RESULTS
Sample
Quantitative results are based on data from all included subjects (n=256); qualitative results on semi-structured interviews with a subsample (n=26). Their demographic and clinical characteristics are shown in Table 1. Persons who confirmed having a need for care at baseline according to the PNCQ were significantly younger were more often female, had a major depressive disorder, perceived more feelings of loneliness and decided more often to take part in the treatment program compared to individuals without a self-perceived need for care.
### Table 1: Demographic and clinical characteristics

<table>
<thead>
<tr>
<th></th>
<th>Need for care (N=131)</th>
<th>No need for care (N=125)</th>
<th>Total (N=256)</th>
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</thead>
<tbody>
<tr>
<td><strong>Demographics</strong></td>
<td></td>
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</tr>
<tr>
<td>Age (SD)</td>
<td>73.9 (6.3)</td>
<td>76.5 (6.8)</td>
<td>75.2** (6.7)</td>
</tr>
<tr>
<td>Female (%)</td>
<td>100 (76.3)</td>
<td>81 (64.8)</td>
<td>181* (70.7)</td>
</tr>
<tr>
<td>Urban region (%)</td>
<td>102 (77.9)</td>
<td>96 (76.8)</td>
<td>198 (77.3)</td>
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<tr>
<td>Living alone (%)</td>
<td>87 (66.4)</td>
<td>80 (64)</td>
<td>167 (65.2)</td>
</tr>
<tr>
<td><strong>Clinical characteristics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHQ (SD)</td>
<td>12.1 (4.8)</td>
<td>10.5 (3.5)</td>
<td>11.3** (4.3)</td>
</tr>
<tr>
<td>PHQ score &lt;=7 (%)</td>
<td>20 (15.3)</td>
<td>29 (23.2)</td>
<td>49 (19.2)</td>
</tr>
<tr>
<td>Current MDD (%)</td>
<td>37 (28.2)</td>
<td>10 (8.0)</td>
<td>47*** (18.4)</td>
</tr>
<tr>
<td>Past MDD (%)</td>
<td>30 (22.9)</td>
<td>27 (21.6)</td>
<td>57 (22.3)</td>
</tr>
<tr>
<td>Loneliness (SD; 0-11)</td>
<td>7.9 (3.2)</td>
<td>6.5 (3.7)</td>
<td>7.4** (3.5)</td>
</tr>
<tr>
<td><strong>Outcome</strong></td>
<td></td>
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<tr>
<td>Participated in treatment (%)</td>
<td>78 (59.5)</td>
<td>55 (44.0)</td>
<td>133* (53.5)</td>
</tr>
<tr>
<td>Completed &gt; 1 treatment (%)</td>
<td>50 (38.2)</td>
<td>35 (28.0)</td>
<td>85 (33.2)</td>
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*p<.05  **p<.01  ***p<.001

**Self-perceived need for care and clinical effectiveness of the ‘Lust for Life’ program**

The treatment program had a favorable overall impact on depression severity: the course of depressive symptoms significantly differed after the program was implemented compared to their course before implementation (Wald=19.636, df=8, p=0.012), a reduction of 1.5 points on the PHQ.

Stratification for self-perceived need for care was a significant modifier of the effect of the ‘Lust for Life’ program on the reduction of depressive symptoms (Wald for the interaction term=18.91, df=8, p=0.015). Persons with a self-perceived need for care who participated in the program improved with regard to their depressive symptoms (Wald=21.95, df=8, p=0.01), but symptoms remained stable among those without a self-perceived need for care at baseline (Wald=12.293, df=8, p=0.139; Figure 2). Post-hoc comparisons revealed a significant decline in severity scores only among persons with a baseline need for care in the first three months after implementation (Bonferroni p<0.001), with estimated means decrementing with 2.71 points on the PHQ from 10.67 to 7.96. The standardized mean difference (Cohen’s d) was 0.67. An additional analysis showed that the estimated means decremented further (3.66 points) when we restricted the sample to 166 individuals that attended the intake session. Further restriction of the sample to 137 older adults, that completed at least one intervention, was associated with an estimated means decrement of 4.30 points (all p<0.001).
Reduced depressive symptoms in older persons without a self-perceived need for care (p=0.14) vs p=0.01 in those with a self-perceived need for care at baseline.

**Understanding why self-perceived need for care modifies treatment effect**

Data from the qualitative interviews provided a deeper understanding of the modifying effect of self-perceived need for care on the clinical effectiveness of the treatment program. Interviewed individuals were divided into a group of persons with (n=11) and without (n=15) a self-perceived need for care at baseline according to the PNCQ and perspectives on depression and care needs were compared between these two groups. To facilitate understanding, we refer to these groups as persons with and without a PNCQ-need for care, since self-perceived needs for care were also explored during the in-depth interviews and could contradict PNCQ-findings.

Three major themes emerged from the qualitative data: 1) older persons’ motivation for the treatment program, 2) perspectives on self-perceived needs for care; and 3) ambiguity about self-perceived needs.
Motivation for the treatment program
Considerable differences in elders’ motivation to sign up for the treatment program emerged from the in-depth interviews: participants who expressed a PNCQ-need for care seemed more strongly and more intrinsically motivated than persons without this PNCQ-need. People’s illness perceptions and the perceived burden of their emotional distress differed. Even though the majorities in both groups were motivated to receive treatment in order to reduce their emotional distress, and almost all interviewed elders expressed having mood problems. The majority of persons who expressed a PNCQ-need for care described their mood problems as having the blues or having depressive symptoms, and perceived their distress as burdensome in contrast to half of the persons without a PNCQ-need for care who did not (see quotation box 1)

Another interesting finding was that almost all persons with a PNCQ-need for care disclosed feeling lonely or having insufficient social contacts, which was only mentioned by a minority of the persons without a PNCQ-need.

Quotation box 1: self-perceived hindrance of depressive symptoms

| “When I have that, I can lay in bed all day long” (a 74 year-old female, resp#22). |
| “Well okay, we all have a gloomy mood once in a while. [...] I think that every human being is troubled by that sometime. So that is nothing new” (an 81 year-old female, resp#20). |

Also, the outreaching approach to offer a treatment program to elders with depressive symptoms who had not (yet) asked for help, had different effects in both groups. For one-third of the people with a PNCQ-need for care, it made the step to accept help much easier, as intended. For half of the persons without a PNCQ-need however, the outreaching approach made an appeal on their altruism: they participated since their general practitioner requested this or because they could do something meaningful for others by participating in the research. This phenomenon was not observed in persons with a PNCQ-need for care.

Perspectives on perceived need for care
Interestingly, the in-depth interviews showed that the distinction between persons with and without a self-perceived need for care according to the PNCQ was more complex; all persons without a PNCQ-need expressed one or more needs for help during the in-depth interview, although not all needs were related to medical or psychiatric care. To be more specific, most needs concerned contact with other people to talk to, individually or in a group, which were similarly described in both groups. Only one respondent explicitly expressed the need to talk to a health care professional, all others wished for someone they felt comfortable with, irrespective of their profession (see quotation box 2).
**DISCUSSION**

Our study shows that self-perceived need for mental health care is associated with outcome of treatment in a large implementation study. Persons with a self-perceived need for mental health care have significantly more reduced depressive symptoms after treatment, whereas those without such a self-perceived need for care did not. We showed that subjects with the highest number of depressive symptoms, loneliness, and those with a current major depression had a higher perceived need for mental health care. These findings are in line with findings from population-based studies showing that those with more recent mental disorders and those with more impairment have the highest perceived need for care [40,41]. Our in-depth interviews also showed that persons with a self-perceived need for mental health care as assessed with the PNCQ were more strongly and intrinsically motivated to accept help. In other words, they perceived their symptoms as more burdensome, and they were less ambiguous about their needs compared to those without a self-perceived need for care.

In addition, both groups, i.e. those with a self-perceived need for care and those without, stated in the in-depth interviews that they mainly perceived a need for contact with other people. Especially those with a self-perceived need for care needed more help to reduce feelings of loneliness.
Our findings fit with a trans theoretical model of behavioral change as described by Prochaska [42], aimed to gain more insight into why interventions are effective for some people but not for others. This model distinguishes five stages of behavioral change: at first, people are yet unaware of their problem (pre-contemplation phase). Later on, awareness of this problem increases and people consider seeking for a solution (contemplative phase), which is followed by the willingness to undertake action at short notice (preparation phase), leading to the action phase when actual behavioral changes are made. In the last phase (maintenance), this new behavior is maintained and relapse is prevented. Prochaska [40] found that the effectiveness of an intervention to treat addictive behavior was a function of participants’ stage of change before treatment started. The same conclusion can be drawn from our data: participants without a self-perceived need for care found themselves mostly in the pre-contemplation or contemplative phase since they did not perceive burdensome depressive symptoms or were ambiguous about treatment. They were therefore not yet ready to take part and benefit from an intervention program that was action-oriented.

Effect size
Depression scores changed overall with 1.51 points, which would be considered as a small effect in regular RTCs (i.e. comparable to a standardized mean difference of 0.25). When we stratified for presence or absence of a self-perceived need for mental health care, it was possible to calculate a standardized mean difference. We found a reduction in depression score of 2.71 points in those with a self-perceived need for care versus no reduction in those without. This reduction is comparable to a standardized mean difference of 0.67, i.e. a medium to large effect. This effect is comparable to the effects found in meta-analyses of both psychotherapy and antidepressant medication for major depressive disorder [43,44]. The reduction in depression scores increased further when we restricted the sample to those taking part in an intake session and those completing at least one intervention. This shows that those with a perceived need for care were more likely to successfully receive treatment and thus improve their depressed mood.

Limitations
To our knowledge, this is the first study of the impact of older persons’ self-perceived needs for care on treatment outcome, using both quantitative and qualitative methods. This mixed method allowed for a thorough examination of this subject from different perspectives.

Our study also has limitations. For practical reasons, the qualitative interviews were conducted approximately nine months after the assessment of the PNCQ-questionnaire. However, all of these interviewed persons had not yet started with the treatment program and interviewers checked whether self-perceived needs had changed since the assessment of the PNCQ-questionnaire.
Also, due to time constraints, purposive sampling for the in-depth interviews was less feasible, leading for instance to a limited number of male subjects who were interviewed since depression occurs less frequently in males. We argue that from a clinicians’ and patients’ point of view it may be somewhat obvious that a lack in self-perceived need for care contributes to poor outcome after treatment. However, this has not been demonstrated before as far as we are aware. Our study does have important implications for policymakers and those who want to implement large-scale mental health programs, to account for needs and preferences.

Drop-out rates were substantial, but by performing intention-to-treat analyses we aimed to reduce the effects of dropout [45]. Moreover, as those who refused and accepted the interventions were comparable in gender, dwelling place and socio-economic status, we are confident about the robustness of our findings. Also, since the interventions were implemented in daily practice and therefore mimic reality, results are likely to be generalizable to the target group of older persons with depressive symptoms who will take part in such a program. Second, the stepped-wedge randomized-cluster design caused a substantial waiting period and frequent measurements that were perceived as burdensome by many elders and could have induced dropout. On the other hand, no association was found between randomization status (i.e. duration of waiting period) and dropout [25]. Finally, one could argue that self-perceived need for care is absent in those who did not complete the treatment program thus explaining the effect that no effect of treatment was found in those without a self-perceived need for care versus a significant treatment effect in those with a self-perceived need for care.

Implications
The implications of the present study concern health care professionals, researchers and policymakers. Our findings suggest that the first focus in practice should be to counsel older persons with depressive symptoms about their self-perceived need for mental health care, for instance by using motivational interviewing techniques. Our findings imply that in the majority of elderly with a (sub)clinical depression, treatment should not be initiated when a self-perceived need for care is absent. Since therapy is bound to be unsuccessful in these subjects. On the other hand, we feel that in those with a severe clinical depression, lack of a self-perceived need for mental health care should not be a reason to withhold effective treatment. Since one of the core symptoms of severe depression is a lack of interest.

From a clinical perspective, the implication that assessment of self-perceived need for mental health care is to some extend stating the obvious. However, it confirms clinical intuition that in day-to-day clinical work, assessment of motivation and a self-perceived need for care are important factors contributing to successful therapy [43,44]. The clinical perspective that it is essential to take self-perceived need for care into account has to our knowledge not been described in randomized controlled trials, implementation studies or international guidelines on prevention and treatment of depression.
Our findings strongly suggest that for successful treatment, it is crucial to discuss older persons’ experience of emotional distress and self-perceived needs for care in a personal context, for instance in a consultation with a primary care physician or practice nurse. A screening procedure that only focuses on detecting depressive symptoms is not effective in recruiting eligible older persons who have not (yet) asked for help. Implementation programs using mass screening and treatment of depression in primary care should focus on a self-perceived need for care. Since our findings suggest that is it is a predictor of successful treatment. Second, only treating those with a self-perceived need for care reduces over-consumption of medical care and possible associated harm. Third, costs of large implementation programs and screening programs can be significantly reduced, by targeting only those elderly with a self-perceived need for mental health care. Forth, measuring perceived need for treatment is relatively easy, and it is likely that this may improve the precision of efforts to improve mental health through systematic screening and subsequent treatment of (sub)clinical depression.

Based on the abovementioned series of reasons we argue that it is essential to take into account self-perceived need for mental health care, in both trials using psychotherapy as well as in trials using medication.
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