Perceived Need for Care and Health Care Utilization Among Depressed and Anxious Patients With and Without Suicidal Ideation

STRINGER, BARBARA[1,2]; VAN MEIJEL, BERNO[2,3]; EIKELENBOOM, MERIJN[1]; KOEKKOEK, BAUKE[4,5]; VERHAAK, PETER F.[6,7]; KERKHOF, AD J.[8]; PENNINX, BRENDA W.[1,9,10]; BEEKMAN, AARTJAN T.[1]

[1]Department of Psychiatry and the EMGO Institute for Health and Care Research, VU University Medical Center Amsterdam/GGZ inGeest, Amsterdam, The Netherlands
[2]Research Group Mental Health Nursing, Inholland University of Applied Sciences, Amsterdam, The Netherlands
[3]Parnassia Bavo Psychiatric Institute, The Hague, The Netherlands
[4]ProPersona, Center for Education and Science, Wolfheze, The Netherlands
[5]Research Group Social Psychiatry & Mental Health Nursing, HAN University of Applied Science, Nijmegen, The Netherlands
[6]NIVEL, Netherlands Institute for Health Services Research, Utrecht, The Netherlands
[7]Department of General Practice, University Medical Center Groningen, The Netherlands
[8]Department of Clinical Psychology and the EMGO Institute for Health and Care Research, VU University, Amsterdam, The Netherlands
[9]Department of Psychiatry, University Medical Center Groningen, The Netherlands
[10]Department of Psychiatry, Leiden University Medical Center, The Netherlands
Barbara Stringer GGZ in Geest Department of Psychiatry

ABSTRACT

Background: Information is scarce concerning the perceived needs and the amount of health-care utilization of persons with suicidal ideation (SI) compared to those without SI. *Aims:* To describe the needs and health care use of persons with and without SI and to investigate whether these differences are associated with the severity of the axis-I symptomatology. *Method:* Data were obtained from 1,699 respondents with a depressive and/or anxiety disorder who participated in the Netherlands Study of Depression and Anxiety. Persons with and without SI were distinguished. Outcome variables were perceived needs and health-care utilization. We used multivariate regression in two models: (1) adjusted only for sociodemographic variables and (2) adjusted additionally for severity of axis-I symptomatology. *Results:* Persons with SI had higher odds for both unmet and met needs in almost all domains and made more intensive use of mental-health care. Differences in needs and health-care utilization of persons with and without SI were strongly associated with severity of axis I symptomatology. *Conclusions:* Our results validate previous findings about

> perceived needs and health-care use of persons with SI. The results also suggest that suicidal persons are more seriously ill, and that they need more professional care, dedication, and specialized expertise than anxious and depressed persons without SI, especially in the domains of information and referral.

Worldwide approximately one million people die from suicide each year, which makes suicide an important public health issue in many countries (Bertelote & Fleischmann, 2009). Suicidal ideation is a necessary, yet no unique, predictor for future suicidal behavior (ten Have et al., 2009; ten Have et al., 2011). Several studies reveal that anxiety and depressive disorders increase the risk for suicidal ideation, suicide attempts, and completed suicide (Angst, Angst, & Stassen, 1999; Sareen, Cox et al., 2005; ten Have et al., 2009). Previous work also suggests that patients with suicidal ideation are likely to experience more needs, both unmet and met, than those without suicidal ideation, whether or not they have actually contacted mental-health care services (Brook, Klap, Liao, & Wells, 2006; Pagura, Fotti, Katz, & Sareen, 2009; Pirkis, Burgess, Meadows, & Dunt, 2001a,2001b; Sareen, Stein, Campbell, Hassard, & Menec, 2005). However, the quantity of mental-health-care contacts is not taken into account, while there may be differences in nonconsumers, moderate consumers, and high consumers of mental-health care. And although some studies have thoroughly investigated the specific type of perceived needs among depressed and anxious persons, few studies provide detailed information about the needs of suicidal persons in particular (Pagura et al., 2009; Pirkis et al., 2001a). Perceived needs are defined as the patient's perception of need for a kind of professional help. Perceived needs can be subdivided in no needs, unmet needs, or met needs (Meadows, Harvey, Fossey, & Burgess, 2000). Unmet needs are a strong predictor of low quality of life, negative health perceptions, and health expenses (Slade et al., 2004;Wiersma, 2006). Health care is more likely to be effective if it meets the perceived needs of patients.

In the case of suicidal persons, however, it seems difficult to meet their needs, despite their frequent contacts with (mental) health-care providers. There might be several explanations for this situation. Studies have shown that suicidality in patients is associated with a perceived lack of knowledge, understanding of, and empathy with suicidal behavior among (mental) health-care professionals (Taylor, Hawton, Fortune, & Kapur, 2009). Their fear of a suicide may provoke feelings of powerlessness or excessive responsibility, each of which may have negative consequences for the therapeutic relationship (Goldblatt & Waltsberger, 2009; Hendin, Haas, Maltsberger, Koestner, & Szanto, 2006; Jobes, 2006). These cognitions or interaction problems may have an influence on help-seeking or perceived needs. Additionally, suicidal persons experience attitudinal barriers to seeking help, such as shame, hopelessness, trying to solve problems alone, fear of stigma, etc. (Bruffaerts et al., 2012). Yet another possible explanation is that the driver for unmet needs is not the suicidal ideation itself, but the severity of the axis-I symptomatology. For clinical practice it is important to have an answer to this matter because of its implications for treatment. If the latter explanation is true, effective treatment should focus more strongly on the severity of the anxiety and depressive disorders.

The objective of the present study is two-fold. First, we describe the perceived needs of care and health-care utilization of persons with and without suicidal ideation.

Second, we examine whether the severity of the axis-I symptomatology explains the differences in perceived needs and health-care utilization between persons with and without suicidal ideation.

METHOD

Study Sample

The Netherlands Study on Depression and Anxiety (NESDA) (Penninx et al., 2008) is designed as a longitudinal cohort study to investigate the long-term course of depression and anxiety disorders. The baseline data of the NESDA study provide the opportunity to study a large cohort of depressed and/or anxious respondents with and without suicidal ideation. This baseline assessment was conducted in 2004–2007. A total of 2,981 respondents were recruited, including healthy controls. Participants (age 18–65) were recruited from the community (19%), primary care (54%), and specialized outpatient mental-health-care facilities (27%). This was deliberately chosen in order to represent depression and anxiety at different levels of severity and development. In the Netherlands financial barriers regarding access to health-care services are limited because each citizen has a compulsory insurance. The community-based participants had previously been identified in a population-based study. Primary-care participants were identified by a screening procedure conducted among a random sample of patients of 65 general practitioners. This screening procedure was conducted irrespective of the reason for consultation. In the Netherlands, the general practitioner serves as the gatekeeper, and referrals are necessary to access specialized mental-health care. The mental-health-care participants were recruited consecutively upon enrollment at one of the 17 participating mental-health organization locations.

All respondents took part in a 4-hour assessment including, among other things, psychopathology, demographic and personal characteristics, and psychosocial functioning. Persons with an insufficient command of the Dutch language or a primary clinical diagnosis of bipolar disorder, obsessive-compulsive disorder, severe substance-use disorder, psychotic disorder or organic psychiatric disorder, as reported by them or their mental-health practitioner, were excluded. The research protocol was approved by the Ethical Committee of the participating universities, and all respondents provided written informed consent. A more detailed description of the NESDA study is provided elsewhere (Penninx et al., 2008).

For the present study we included the 1,701 respondents at baseline with a current (last 6 months) depressive (MDD or dysthymia) or anxiety disorder (panic disorder, generalized anxiety disorder, agoraphobia, or social phobia). Healthy controls were excluded. Approximately 45% were derived from primary health care, another 45% from specialized mental-health care, and 10% were derived from the community. Depressive and anxiety disorders were assessed with the Composite International Diagnostic Interview (CIDI), which classifies diagnoses according to DSM-IV criteria (APA, 2001; WHO, 1998). The CIDI is used worldwide and has acceptable reliability and validity (Wittchen, 1994). Specially trained clinical staff conducted the CIDI interviews. Two respondents were excluded because of missing items on the Scale for Suicidal Ideation (SSI) (Beck, Kovacs, & Weissman, 1979). Thus, a total of 1,699 respondents remained in the sample.

MEASURES

Suicidal Ideation

Suicidal ideation, the predictor variable, was assessed at baseline with the first five items of the Beck Scale for Suicidal Ideation (SSI) making use of a semistructured interview (Beck et al., 1979). The following five statements were assessed: wish to (1) live or (2) die, (3) reasons for living or dying, (4) desire for an active suicide attempt, (5) passive suicide behavior. This fifth statement asked whether or not someone would save their own life when faced with a life-threatening event. Items were scored with zero, one, or two, higher scores indicating more severe suicidal ideation. Reverse scored items were recoded. To distinguish between respondents without and with suicidal ideation, we made use of a binary variable, derived from the SSI. If any of the five items was scored as one or two, then respondents were assessed as having suicidal thoughts the week before assessment.

Needs

The Perceived Need for Care Questionnaire (PNCQ) was used as one of the two outcome variables. The PNCQ collects information about the past 6 months. It addresses five types of perceived needs: (1) information about mental illness, its treatment, and available services; (2) medication; (3) counseling or therapy to get insight in causes of the illness and to learn to cope with the illness; (4) practical support or help to sort out housing or financial problems; (5) skills training (Meadows et al., 2000). In addition to the original version of the PNCQ, referral was added because of the Dutch health-care organization where the general practitioner functions as a gatekeeper for specialized mental-health care (Prins, Verhaak, van der Meer, Penninx, & Bensing, 2009; Prins et al., 2011). Three levels of needs were distinguished with the PNCQ: (1) no need, (2) unmet needs, and (3) met needs (see Table 1).

[TABLE 1]

Health-Care Use

Health-care use was the second outcome variable. It was measured with the Trimbos/iMTA Questionnaire for Costs Associated with Psychiatric Illness (TiC-P) (Hakkaart-van Roijen, 2002). On the TiC-P respondents were asked which health-care providers they had visited during the last 6 months and how often they had visited them. All contacts with a general practitioner were assessed in which contacts because of a mental problem (binary variable yes/no) were examined separately. Contact with mental-health-care providers included primary mental-health-care providers (psychologist, social worker, or community mental-health nurse, independent psychiatrist, or psychotherapist) and/or a (community) mental-health center. These contacts were first described with a binary variable (yes/no). Additionally, to assess the quantity of health-care utilization of both primary and specialized mental-health-care providers, a categorical variable was computed with three groups: (1) no contact with one of these mental-health-care providers; (2) one to six contacts during the last 6 months; and (3) more than six contacts during the last 6 months. The rationale for distinguishing these three categories is based on the fact

that contact with mental-health-care providers with a frequency of up to once a month is a relatively standard frequency for patients with a depressive or anxiety disorder (Fernandez et al., 2007; Wang et al., 2007).

Covariates

The analyses were adjusted for potentially confounding sociodemographic characteristics, which include age, sex, years of education, and living with a partner (yes/no). To adjust for severity of the axis-I symptomatology, the Inventory of Depressive Symptomatology (IDS) was used as a measure of severity of depression (Rush, Gullion, Basco, Jarrett, & Trivedi, 1996). The IDS includes an anxiety symptom subset and is highly correlated with the Beck Anxiety Inventory ($r = .78$) (Beck, Epstein, Brown, & Steer, 1988). The IDS is a 28-item self-report scale, from which we used the IDS sum score as a measure of severity of depressive symptoms. On the IDS the one item that refers explicitly to suicidal ideation was deleted to prevent overcorrection for suicidal ideation. The remaining 27 items have a range from 0–81. Analyses were also adjusted for comorbidity (both depression and anxiety disorder in last 6 months), which is an additional measure of the severity of axis-I symptomatology.

STATISTICAL ANALYSES

Descriptive and inferential statistics ([chi]² tests or t tests) were used to compare characteristics of respondents without (nonsuicidal ideation group – NSI group) and with suicidal thoughts (suicidal ideation group – SI group). To answer our research question, we tested each multinomial or logistic regression analysis with two models: Model 1 was adjusted only for sociodemographic variables and Model 2 was additionally adjusted for severity of axis-I symptomatology with the IDS sum score and for comorbidity (both a depressive and anxiety disorder).
To examine the association between suicidal ideation and perceived needs, we used multinomial regression analyses with the group "no needs" as the reference group. Next, the association between suicidal ideation and contact with different mental-health-care providers was examined with logistic regression models. Additionally, a multinomial regression analysis was performed to describe the association between suicidal ideation and the amount of health-care use with odds ratios for 1–6 contacts and more than 6 contacts, with "no contact" as reference group. All analyses were performed using SPSS version 15.0.

RESULTS

Sociodemographic and Clinical Characteristics

The mean age of our total sample was 41.3 years (*SD* 12.35), and about two thirds were women (Table 2). Those with SI were less likely to be diagnosed with a single anxiety disorder and more likely to have comorbid depression and anxiety disorders (66.2% versus 39.7%; [chi]² [2, $n = 1699$] = 92.81, $p < .001$). This probably reflects severity, as the SI group also had a significantly higher mean IDS score (38.3 versus 26.4; $t = -17.11$, $p < .001$).

[TABLE 2]

Perceived Needs

Respondents with suicidal ideation had significantly higher odds for any unmet and met needs (OR_{unmet} 5.81; 95% CI 3.19–10.58 and OR_{met} 2.86; 95% CI 1.49–5.47) as can be seen in Table 3 . This was however largely explained by the severity of the axis-I symptomatology. The adjusted risks for unmet and met needs were no longer significant when adjusted for severity, whereas looking at specific needs suicidal respondents did have higher odds for all unmet needs (OR's between 3.51 and 1.72). The OR's of met needs were elevated for respondents with suicidal ideation in the domains of information, medication, referral, and counseling. After being adjusted for sociodemographics and severity of the axis-I symptomatology, the differences in both unmet and met needs disappeared, except the unmet needs in the domains information and a referral (AOR_{info} 1.68; 95% CI 1.51–2.47 and AOR_{ref} 1.73; 95% CI 1.19–2.50).

[TABLE 3]

Health-Care Use

Table 4 shows that about 90% of the respondents had contact with their general practitioner. When GP contact was considered specifically for a mental-health problem, suicidal ideation was associated with more GP consultation (73.4% versus 64.2%; [chi]² [1, n = 1525] = 8.93, p = .003). However, taking account of severity of axis-I symptomatology, the odds ratio for suicidal respondents to contact their GP because of a mental-health problem was no longer significant (AOR .90; 95% CI .65–1.24).

[TABLE 4]

If we look at the intensity of health-care use in more detail, among suicidal respondents 24.6% had no contact and 40.6% had contact more than once a month with mental-health-care providers, versus 38.5% and 26.6% of the nonsuicidal respondents, respectively. The odds for suicidal respondents compared to nonsuicidal respondents to have had contact with any mental-health-care provider more than once a month were clearly elevated (OR 2.34; 95% CI 1.71–3.20). However, this again was explained largely by the severity of the axis-I symptomatology as the adjusted OR was no longer significant (AOR: 1.30; 95% CI .91–1.84).

DISCUSSION

The results confirm previous findings that persons with suicidal ideation were more at risk to perceive unmet and met needs than persons without suicidal ideation. Persons with suicidal ideation reported more unmet needs in all domains of needs. With regard to met needs, the risk for persons with and without SI did not differ in the domains of practical support and skills training, while all other met needs showed an increased risk for persons with SI.

We also found that persons with suicidal ideation had more intensive contact with mental-health-care providers than persons without suicidal ideation.

The increased risk of unmet needs for information and referral among respondents with suicidal ideation, even after adjusting for severity of axis-I psychopathology, raises questions with important clinical implications: What information do suicidal persons expect and why do they perceive their need for information as not being met by care providers, despite their frequent contacts? In addition, to whom do suicidal respondents want to be referred, since most of them are already receiving mental-health care? A possible explanation may be that the suicidal patient has the wish to be informed better about their illness, the course, and prognosis of their illness as well as alternatives for more effective treatment than they are currently receiving. This might be an expression of a perceived mismatch between available services and the need for care of suicidal persons.

However, our data also clearly showed that differences in perceived needs and health-care utilization were largely explained by the severity of the axis-I symptomatology. It appears that having suicidal thoughts correlates strongly with severity of depression or anxiety, which drives perceived patient needs. Part of this more severe psychopathology may be reflected in the entrapped mindset and feelings of hopelessness of suicidal persons, which may result in fixed ideas that nothing can or will help (Williams, Crane, Barnhofer, & Duggan, 2005). This may explain why suicidal patients are not easily satisfied with the care they received or why they did not seek help in advance. In this respect suicidal persons demonstrate their core belief that make them suicidal by engaging in prototypical cognitions of being untreatable, being too worthless to be treated, being incapable of profiting from any help, fear of stigma, etc. (Bruffaerts et al., 2012). These convictions should be explicitly targeted, since they reflect the basis of the suicidal despair, while at the same time reflecting the higher levels of severity of the axis-I disorders.

In our study, in contrast to Pagura et al. (2009), almost all associations found were explained by severity of the axis-I symptomatology. Pagura et al. included respondents with or without a mental disorder and adjusted for the amount of disorders, including alcohol and drug dependence. Other studies also adjust for the presence or amount of mental disorders (Brook et al., 2006; Pirkis et al., 2001b). In our study we were able to control for severity using an established symptom severity measure. This may explain why controlling for severity had a greater effect in our study, overruling almost all effects of suicidal ideation alone on perceived needs and health-care use.

Compared to several other studies, we found a low percentage of persons with suicidal ideation who did not have contact with any mental-health-care provider. Brook et al. (2006), Pirkis et al. (2001b) and Pagura et al. (2009) found higher percentages. Although this might be caused by the use of a broader definition of service use, it could also be explained by the low financial barriers and easy access to specialized mental-health care in the Netherlands.

The clinical implications of our findings are important and hopeful, because an encouraging message can be given to suicidal persons: The suffering due to suicidality is a largely changeable feature alleviated by treating the comorbid psychopathology. Suicidal persons have more needs for care and are more seriously ill. To obtain effective treatment they therefore need more care, dedication, and specialized expertise.

Some comments should be made with regard to this statement. In some cases the suicidality will still be present even after the depression or anxiety disorder has been dissolved. Clinicians should therefore regularly assess suicidality even when there is no current axis-I psychopathology present. And obviously there are other features that influence suicidality such as trauma, chronicity, or personality characteristics. So a profound exploration of the suicidality is always needed to optimize treatment (APA, 2003).

Strengths and Limitations

The methodological strengths of our study were that we had access to a large sample of well-diagnosed persons with depressive and/or anxiety disorders ($n = 1,699$) with participants from the community, and primary as well as specialized mental-health-care settings. Furthermore, we had access to detailed information about both perceived needs and actual use of mental-health care. In the Netherlands there are few financial barriers to the use of mental-health-care use. Disparity in access to care, a strong potential confounder in this type of study, is therefore limited. However, one limitation must be recognized: Our measure of suicidal ideation is based on a single assessment. Suicidal thoughts, however, may fluctuate over time (ten Have et al., 2009). This may have caused misclassification of the suicidal/nonsuicidal persons, in turn leading to a weakening of the associations under study.

CONCLUSION

Although persons with suicidal ideation made more intensive use of mental-health services, they also report more unmet needs. Both findings were driven by the higher levels of severity of their axis-I symptomatology. For clinical practice this implies that, to realize effective treatment for suicidal persons, they need more of our care, dedication, and specialized expertise, especially in the domains of information and referral.

Acknowledgments

REFERENCES

1. American Psychiatric Association. (2001). Diagnostic and statistical manual of mental disorders DSM-IV-TR (4th ed., text revision). Washington, DC:
2. American Psychiatric Association. (2003). Practice guideline for the assessment and treatment of patients with suicidal behavior. Washington, DC:

3. Angst, J., Angst, F., & Stassen, H. H. (1999). Suicide risk in patients with major depressive disorder. Journal of Clinical Psychiatry, 60(Suppl. 2), 57–62.

4. Beck, A. T., Epstein, N., Brown, G., & Steer, R. A. (1988). An inventory for measuring clinical anxiety: Psychometric properties. Journal of Consulting and Clinical Psychology, 56, 893–897.

5. Beck, A. T., Kovacs, M., & Weissman, A. (1979). Assessment of suicidal intention: The Scale for Suicide Ideation. Journal of Consulting and Clinical Psychology, 47, 343–352. Ovid Full Text

6. Bertolote, J. M., & Fleischmann, A. (2009). A global perspective on the magnitude of suicide mortality. In D. Wasserman & C. Wasserman (), Oxford textbook of suicidology and suicide prevention: A global perspective (pp. 91–98). Oxford: Oxford University Press.

7. Brook, R., Klap, R., Liao, D., & Wells, K. B. (2006). Mental health care for adults with suicide ideation. General Hospital Psychiatry, 28, 271–277.

8. Bruffaaerts, R., Demyttenaere, K., Hwang, I., Chiu, W.-T., Sampson, N., Kessler, R. C., ... Nock, M. K. (2012). Treatment of suicidal people around the world. British Journal of Psychiatry, 199, 64–70.

9. Fernandez, A., Haro, J. M., Martinez-Alonso, M., Demyttenaere, K., Brugha, T. S., Autonell, J., ... Alonso, J. (2007). Treatment adequacy for anxiety and depressive disorders in six European countries. British Journal of Psychiatry, 190, 172–173.

10. Goldblatt, M. J., & Waltsberger, J. T. (2009). Countertransference in the treatment of suicidal patients. In D. Wasserman & C. Wasserman (), Oxford textbook of suicidology and suicide prevention: A global perspective (pp. 389–393). Oxford, UK: Oxford University Press.

11. Hakkaart-van Roijen, L. (2002). Manual Trimbos/iMTA questionnaire for costs associated with psychiatric illness (in Dutch). Rotterdam, The Netherlands: Institute for Medical Technology Assessment.

12. Hendin, H., Haas, A. P., Maltsberger, J. T., Koestner, B., & Szanto, K. (2006). Problems in psychotherapy with suicidal patients. American Journal of Psychiatry, 163, 67–72.

13. Jobes, D. A. (2006). Managing suicidal risk. A collaborative approach. New York, NY: Guilford.

14. Meadows, G., Harvey, C., Fossey, E., & Burgess, P. (2000). Assessing perceived need for mental health care in a community survey: Development of the Perceived Need for Care Questionnaire (PNCQ). Social Psychiatry and Psychiatric Epidemiology, 35, 427–435.

15. Pagura, J., Fotti, S., Katz, L. Y., & Sareen, J. (2009). Help seeking and perceived need for mental health care among individuals in Canada with suicidal behaviors. Psychiatric Services, 60, 943–949.

16. Penninx, B. W., Beekman, A. T., Smit, J. H., Zitman, F. G., Nolen, W. A., Spinhoven, P., ... van Dijk, D. R. (2008). The Netherlands Study of Depression and Anxiety (NESDA): Rationale, objectives, and methods. International Journal of Methods in Psychiatric Research, 17, 121–140.

17. Pirkis, J., Burgess, P., Meadows, G., & Dunt, D. (2001a). Self-reported needs for care among persons who have suicidal ideation or who have attempted suicide. Psychiatric Services, 52, 381–383.

18. Pirkis, J. E., Burgess, P. M., Meadows, G. N., & Dunt, D. R. (2001b). Suicidal ideation and suicide attempts as predictors of mental health service use. Medical Journal of Australia, 175, 542–545.

19. Prins, M., Meadows, G., Bobevski, I., Graham, A., Verhaak, P., van der Meer, K., ... Bensing, J. (2011). Perceived need for mental health care and barriers to care in the Netherlands and Australia. 'Social Psychiatry and Psychiatric Epidemiology, 46, 1033–1044.

20. Prins, M. A., Verhaak, P. F., van der Meer, K., Penninx, B. W., & Bensing, J. M. (2009). Primary care patients with anxiety and depression: Need for care from the patient's perspective. Journal of Affective Disorders, 119, 163–171.

21. Rush, A. J., Gullion, C. M., Basco, M. R., Jarrett, R. B., & Trivedi, M. H. (1996). The Inventory of Depressive Symptomatology (IDS): Psychometric properties. Psychological Medicine, 26, 477–486.

22. Sareen, J., Cox, B. J., Afifi, T. O., de Graaf, G. R., Asmundson, G. J., ten Have, H. M., & Stein, M. B. (2005). Anxiety disorders and risk for suicidal ideation and suicide attempts: A population-based longitudinal study of adults. Archives of General Psychiatry, 62, 1249–1257.

23. Sareen, J., Stein, M. B., Campbell, D. W., Hassard, T., & Menec, V. (2005). The relation between perceived need for mental health treatment, DSM diagnosis, and quality of life: A Canadian population-based survey. Canadian Journal of Psychiatry, 50, 87–94.

24. Slade, M., Leese, M., Ruggeri, M., Kuipers, E., Tansella, M., & Thornicroft, G. (2004). Does meeting needs improve quality of life? Psychotherapy and Psychosomatics, 73, 183–189.

25. Taylor, T. L., Hawton, K., Fortune, S., & Kapur, N. (2009). Attitudes toward clinical services among people who self-harm: Systematic review. British Journal of Psychiatry, 194, 104–110.

26. ten Have, M., de Graaf, R., Ormel, J., Vilagut, G., Kovess, V., & Alonso, J. (2011). Are attitudes toward mental health help-seeking associated with service use? Results from the European Study of Epidemiology of Mental Disorders. Social Psychiatry and Psychiatric Epidemiology, 45, 153–163.

27. ten Have, M., de Graaf, G. R., van Dorselaer, D. S., Verdurmen, J., van't Land, L. H., Vollebergh, W., & Beekman, A. (2009). Incidence and course of suicidal ideation and suicide attempts in the general population. Canadian Journal of Psychiatry, 54, 824–833.

28. Wang, P. S., Aguilar-Gaxiola, S., Alonso, J., Angermeyer, M. C., Borges, G., Bromet, E. J., ... Wells, J. E. (2007). Use of mental health services for anxiety, mood, and substance disorders in 17 countries in the WHO world mental health surveys. The Lancet, 380, 841–850.

29. Wiersma, D. (2006). Needs of people with severe mental illness. Acta Psychiatrica Scandinavia, 429(Suppl.), 115–119.

30. Williams, J. M. G., Crane, C., Barnhofer, T., & Duggan, D. (2005). In H. Hawton (), Prevention and treatment of suicidal behavior. From science to practice (pp. 71–88). Oxford: Oxford University Press.

31. Wittchen, H. U. (1994). Reliability and validity studies of the WHO – Composite International Diagnostic Interview (CIDI): A critical review. Journal of Psychiatric Research, 28, 57–84.

32. World Health Organization. (1998). Composite International Diagnostic Interview (CIDI) (Version 2.1.). Geneva.

TABLES

Table 1. Levels of perceived need and questionnaire phrasing

Level of perceived need	Questionnaire phrasing
No need	Has a mental health problem but did not perceive that they needed this type of help and received no service of this type.
Unmet need	Perceived that they needed this type of help but received no service or not as much as they perceived they needed.
Met need	Received this type of help and received as much as they perceived they needed.

Table 2. Sociodemographic and clinical characteristics

	NSI group	SI group	p^*
Characteristics	($n = 1,374$)	($n = 325$)	
Age (years, $\pm SD$)	41.43 (12.41)	40.63 (12.08)	.30
Female (%)	937 (68.2)	203 (62.5)	.06
Education level attained (years, $\pm SD$)	11,84 (3,26)	11,53 (3,28)	.13
Partner status (% no partner)	855 (62,2)	209 (64,3)	.49
Psychiatric disorders (%)			**<.001**
Current depressive disorder only	323 (23.5)	72 (22.2)	
Current anxiety disorder only	505 (36.8)	38 (11.7)	
Current depressive and anxiety	546 (39.7)	215 (66.2)	
IDS (mean, SD)	26.4 (11.4)	38.3 (10.6)	**<.001**

Note. **Bolded** figures are significant. $p \leq .05$. NSI = No Suicidal Ideation; SI = Suicidal Ideation; IDS = Inventory of Depressive Symptomatology.

Table 3. The association between suicidal ideation and perceived needs

Needs[1]	NSI *N* (%)	SI *N* (%)	OR[2]	95% CI	AOR[3]	95% CI
Any need						
No need	221 (16.1)	12 (3.7)	REF		REF	
Unmet need	808 (58.5)	259 (79.7)	**5.81**	**3.19–10.58**	1.79	.94–3.41
Met need	345 (25.1)	54 (16.6)	**2.86**	**1.49–5.47**	1.32	.66–2.64
Information						
No need	451 (32.8)	53 (16.3)	REF		REF	
Unmet need	341 (24.8)	143 (44.0)	**3.44**	**2.43–4.88**	**1.68**	**1.51–2.47**
Met need	582 (42.4)	129 (39.7)	**1.84**	**1.92–2.61**	1.15	.79–1.68
Medication						
No need	684 (49.8)	109 (33.5)	REF		REF	
Unmet need	157 (11.4)	64 (19.7)	**2.53**	**1.77–3.60**	1.13	.76–1.69
Met need	533 (38.8)	152 (46.8)	**1.77**	**1.35–2.33**	.99	.73–1.35
Referral						
No need	551 (40.1)	65 (20.0)	REF		REF	
Unmet need	286 (20.8)	122 (37.5)	**3.51**	**2.51–4.91**	**1.73**	**1.19–2.50**
Met need	537 (39.1)	138 (42.5)	**2.14**	**1.55–2.95**	1.24	.88–1.77
Counseling						
No need	464 (33.8)	62 (19.1)	REF		REF	
Unmet need	511 (37.2)	180 (55.4)	**2.58**	**1.88–3.54**	1.33	.94–1.89
Met need	399 (29.0)	83 (25.5)	**1.55**	**1.08–2.21**	.97	.65–1.43
Practical support						
No need	1200 (87.3)	247 (76.0)	REF		REF	
Unmet need	125 (9.1)	61 (18.8)	**2.35**	**1.68–3.31**	1.29	.88–1.89
Met need	49 (3.6)	17 (5.2)	1.65	.93–2.93	.89	.48–1.68
Skills training						
No need	1078 (78.5)	224 (68.9)	REF		REF	
Unmet need	233 (17.0)	83 (25.5)	**1.72**	**1.28–2.31**	1.02	.73–1.42
Met need	63 (4.6)	18 (5.5)	1.36	.79–2.35	.90	.50–1.62

Note. **Bolded** figures are significant. $p \leq .05$. [1]Multinomial regression analyses with needs as the dependent and suicidal ideation as the independent variable ("no need" as reference group). [2]Model 1: Odds Ratio (OR) adjusted for age, sex, education, marital status. [3]Model 2: Adjusted Odds Ratio (AOR) adjusted for age, sex, education, marital status and IDS sum score and comorbidity. NSI = No Suicidal Ideation; SI = Suicidal Ideation; IDS = Inventory of Depressive Symptomatology.

Table 4. The association between suicidal ideation and health care use

	NSI N (%)	SI N (%)	OR[2]	95% CI	AOR[3]	95% CI
Health care use[1]						
General practitioner	1235 (89.9)	290 (89.2)	.95	.64–1.40	**.62**	**.40–.96**
General practitioner because of mental problem	793 (64.2)	213 (73.4)	**1.49**	**1.12–1.99**	.90	.65–1.24
Primary mental health care provider	506 (36.8)	142 (43.7)	**1.33**	**1.04–1.71**	.91	.69–1.20
(Community) Mental health care service	627 (45.6)	199 (61.2)	**1.84**	**1.42–2.37**	1.11	.84–1.48
Contact with a mental health care provider						
No contact	528 (38.5)	80 (24.6)	REF		REF	
1–6 contacts	479 (34.9)	113 (34.8)	**1.54**	**1.12–2.11**	.96	.68–1.36
> 6 contacts	366 (26.6)	132 (40.6)	**2.34**	**1.71–3.20**	1.30	.91–1.84

Note. **Bolded** figures are significant. $p \leq .05$. [1]Logistic and multinomial regression analyses with health care use as dependent and suicidal ideation as independent variable. In the multinomial regression analysis "no contact" is set as reference group. [2]Model 1: Odds Ratio (OR) adjusted for age, sex, education, marital status. [3]Model 2: Adjusted Odds Ratio (AOR) adjusted for age, sex, education, marital status and IDS sum score and comorbidity. NSI = No Suicidal Ideation; SI = Suicidal Ideation; IDS = Inventory of Depressive Symptomatology.