

Unmet need for mental health care within the Dutch population: exploring the role of GP

Citation for published version (APA):

Wix, E. R., & Spigt, M. (2023). Unmet need for mental health care within the Dutch population: exploring the role of GP. *Journal of Public Health, 31*(8), 1185-1192. <https://doi.org/10.1007/s10389-021-01687-8>

Document status and date:

Published: 01/08/2023

DOI:

[10.1007/s10389-021-01687-8](https://doi.org/10.1007/s10389-021-01687-8)

Document Version:

Publisher's PDF, also known as Version of record

Document license:

Taverne

Please check the document version of this publication:

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
- The final author version and the galley proof are versions of the publication after peer review.
- The final published version features the final layout of the paper including the volume, issue and page numbers.

[Link to publication](#)

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal.

If the publication is distributed under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license above, please follow below link for the End User Agreement:

www.umlib.nl/taverne-license

Take down policy

If you believe that this document breaches copyright please contact us at:

repository@maastrichtuniversity.nl

providing details and we will investigate your claim.



Unmet need for mental health care within the Dutch population: exploring the role of GP

Eduard R. Wix¹ · Mark Spigt^{2,3}

Received: 1 September 2021 / Accepted: 30 November 2021

© The Author(s), under exclusive licence to Springer-Verlag GmbH Germany, part of Springer Nature 2021

Abstract

Aim General practitioners (GPs) play a crucial role in mental health care. Not only are they tasked with the recognition, but they also play a role in the treatment of mental health problems. The levels of unmet need for mental health are high worldwide. However, there is very little information on unmet needs for mental health in general practices. In this study we assess the prevalence of unmet needs subjectively and objectively and explore the role of the GP.

Subject and methods A cross-sectional online survey was conducted with questions regarding the patient's perspective on mental health treatment, obtainment of treatment and the role of the GP, and the General Health Questionnaire-12 (GHQ-12).

Results When combining the results of the GHQ-12 with the personal perspective, a total of 21% of the participants (n=538) were found to be in need of mental care. Forty-four percent of the participants with a need for mental care did not receive any form of treatment in the past year. Half of the patients with a need for care had recently visited their GP. Both participants with and without an unmet need would appreciate the GP briefly asking about their mental health (69% vs. 63%, p=0.258) during regular consultations.

Conclusion A significant proportion of patients in need of mental health care do not receive treatment. The GP is in a good position to ask about mental issues, as people with unmet needs regularly visit the GP.

Keywords Mental health · Mental services · Public health · Screening · Unmet need · Primary care

Introduction

Mental disorders are the single largest contributor to disease burden worldwide, accounting for a third of the years lived with disability (Vigo et al. 2016). It is estimated that one in every four people will experience some form of mental health disorder in their life (Alonso et al. 2004). The path to treatment is not always optimal, as it is often significantly delayed (Bruffaerts et al. 2007; Bunting et al. 2012; Raven

et al. 2017; Wang et al. 2007b). The delay of treatment is not without risks, as studies have shown that longer periods of untreated symptoms have a negative impact on the treatment outcome (Drake et al. 2020; Ghio et al. 2015; Kisely et al. 2006).

General practitioners (GPs) play a crucial role in mental health. Not only are GPs tasked with recognition of mental problems, but they also play a role in the treatment (Verhaak et al. 2012; Wang et al. 2007a). The majority of patients with mental disorders are treated in primary care (Verhaak et al. 2012; Wang et al. 2007a). However, studies have shown that not all mental health patients are recognized by the GP (Olsson et al. 2006; Sinnema et al. 2018). At the same time, patients do regard their GP as an independent and key resource in their search for help with their psychological problems, but they often find it difficult to talk to their GP about psychosocial issues (Kadam et al. 2001).

Studies have shown that the worldwide levels of unmet need for mental health are high (Alonso et al. 2007; Wang et al. 2007a). In developed countries, about half of patients with severe disorders do not receive any form of treatment

✉ Eduard R. Wix
e.wix@maastrichtuniversity.nl

Mark Spigt
m.spigt@maastrichtuniversity.nl

¹ Department of Family Medicine, Maastricht University, Peter Debyeplein 1, Maastricht 6229, HA, The Netherlands

² Department of Family Medicine, CAPHRI School for Public Health and Primary Care, Maastricht University, Peter Debyeplein 1, Maastricht 6229, HA, The Netherlands

³ General Practice Research Unit, Department of Community Medicine, The Arctic University of Tromsø, Tromsø, Norway

and the situation seems to be worse in less-developed countries (Alonso et al. 2007; Wang et al. 2007a). Studies regarding unmet need often defined unmet need as cases of mental health that did not receive any treatment in a specific period. Although this gives a very clear picture of the magnitude of the problem, more information is needed for the GP. GPs are expected to make joint decisions with patients, making the patients' perspective of great importance for the GP. Would the patient appreciate it if the GP started the conversation about mental health, and to what extent is the patient with an unmet need willing to receive treatment? Finding a way to support the recognition of mental health in primary care could help to lower the amount of unmet need and treatment delay.

In the Netherlands, mental health care is accessible to everyone through primary care (Kroneman et al. 2016). As a gatekeeper, the GP determines if a patient's referral to specialized care is necessary. If the patient is not referred, he will be treated in primary care. The costs of treatment are covered by mandatory basic health insurance. However, even with the broad availability of care, the Netherlands is not an exception when it comes to unmet need for mental health (Alonso et al. 2004). Suggesting that it takes more than mental health care availability to close the gap for unmet needs. A clear strategy to tackle this problem is currently missing.

Most studies measure unmet needs objectively by measuring disease severity in relation to (not) receiving treatment. However, to be able to know more about the broader picture of treatment indication, it is important to know whether patients actually have a perceived need for treatment. In this study we measured the levels of unmet need through an anonymous cross-sectional survey that included the General Health Questionnaire-12 (GHQ-12), perceived need for care questions, and questions having received treatment. Furthermore, we investigated the patients' opinion on a more proactive role of the GP in screening for mental health complaints.

Methods

Design

Participants took part in this study through an anonymous online questionnaire. Several methods were used to distribute the survey. First, participants were invited to participate in the study through posters in waiting rooms of ten GPs practices. Second, in one general practice, patients were invited to participate after consulting a GP. For two weeks, all patients that visited the GP were invited to participate after the consultation, this was done regardless of the reason for consultations. Finally, the questionnaire was distributed through social media by the researchers.

In the social media post, people were asked to fill in the questionnaire and share the post. Distribution took place between September 2020 and December 2021. All participants 16 years and older were included. Participants were not included in the analysis if data was missing on gender or items of the GHQ-12.

Measurements

Information about age, gender, and educational level were obtained. The presence of psychological distress was assessed using the GHQ-12 (Goldberg et al. 1997; Tait et al. 2003). Answers to the 12 questions were scored on a 4-point scale (0-1-2-3). Higher numbers correspond to worse mental health. To identify participants with a high level of distress (these participants are referred to as cases), a cut-off point of 13 was used for males and for females the cut-off point was 18 (Tait et al. 2003). Additionally, participants were asked if they had had any contact with their GP in the past month.

Classification

In addition to the GHQ-12, participants were asked whether they perceived themselves as requiring mental care and whether they had received treatment in the past 12 months. Cases that also had a perceived need for treatment were considered to have an unmet need.

Combining the results of the GHQ-12 with the two additional questions led to four possible subgroups. Cases that answered "yes" to the question of requiring care and having received treatment were classified as having a "partially met need" (subgroup 1). When participants answered "no" to the question of having received treatment and "yes" to needing treatment, they were classified as having a "wholly unmet need" (subgroup 2). Cases that did not express a need for treatment were classified as "fully met needs" if treatment was obtained in the past 12 months. Cases that answered "no" to both questions were classified as "no unmet needs".

History mental health

Participants were asked about their history with mental health symptoms. If a participant had a history of mental complaints, they were asked the age of onset and whether they believed that if treatment was started earlier, they would have been better off now. Participants were also asked whether they experienced suicidal thoughts in the past 12 months.

Brief Mental Advice (BMA)

In the last part of the questionnaire, participants were asked about their perspective on receiving brief mental advice (BMA) from the GP. This method is based on the evidence-based approach originally intended to help patients quit smoking (Aveyard et al. 2012; Stead et al. 2013). In its original form, it implies inquiring on the smoking status followed by a short advice session. If the patient is interested in receiving care, he or she can make an appointment for further information or treatment. We asked the participants their views on this approach by asking three questions that are based on this methodology. First, participants were asked whether they would appreciate the GP briefly asking about their mental status, even if this was not the reason for the consultation. Secondly, we asked participants whether they would want to receive more information about mental health therapies, and thirdly, whether they would be interested in an easily accessible coaching session for supporting their mental health.

Statistical analysis

SPSS version 25 was used to analyze the data. Descriptive statistics were used to determine the number of unmet needs among participants. In addition, sub-analyses were conducted to compare treatment delay, suicidal thoughts, and perceptions toward BMA among participants. Not all participants completed all items of the survey. As a result, in some analyses, not all responders could be included. In addition to descriptive statistics, we compared results among groups using Pearson's chi-square test ($p < 0.05$). To investigate the association between groups, the effect size was calculated using odds ratios with a 95% confidence interval.

Results

Population baseline characteristics

The study population consisted of 538 participants. Table 1 shows the baseline characteristics of the study population. The majority of the participants had a high educational level, meaning a college or university degree, or are currently following such an education. Low educational level was defined as preparatory secondary vocational education or elementary school. Intermediate educational level was defined as having or following an intermediate vocational study. Of participants, 57% expressed having a history of mental health complaints at least at one point in their life.

Table 1 Baseline characteristics of the study population

	Total	Male	Female
Participants	538 (100%)	182 (34%)	356 (66%)
Age	41.7 (SD 14.9)	42.7 (SD 15.3)	41.1 (SD 14.7)
Educational level	537	181	356
-Low	67 (13%)	16 (9%)	51 (14%)
-Intermediate	81 (15%)	23 (13%)	58 (16%)
-High	389 (72%)	142 (79%)	247 (69%)
Current or a history of psychological complaints	308 (57%)	90 (50%)	218 (62%)

Unmet need for mental health

Figure 1 shows the classification of the participants. From the total population, 34% ($n = 183$, 107 females and 76 males) were identified as having high psychological distress, according to the GHQ-12 questionnaire (cases). Of the cases, 61% ($n = 111$) also expressed a perceived need for treatment, thus meeting the criteria for unmet need.

A total of 44% of those with an unmet need did not receive any treatment in the past year. Interestingly, among the participants without high psychological distress, 22% expressed a need for treatment (not shown in the figure). Within the unmet need group, 51% has had contact with their GP recently (this includes somatic consultations). Of the cases with an unmet need who recently had contacted their GP, 36% did not receive any treatment for mental health in the past 12 months. Suicidal thoughts were far more prevalent among the cases (23% vs 5%). Participants with high psychological distress were more than five times as likely to have suicidal thoughts compared to participants without high psychological distress (odds-ratio 5.7, 95% CI 3.1-10.3, $p < 0.001$).

Gender differences

Gender differences were found regarding the perception of the need for mental health care. A total of 27.4% of the men expressed a subjective need for care, while 40.5% of the females expressed a subjective need for mental health care. In comparison, 40.1% of the men had a high psychological distress level according to the GHQ-12. For the female participants this was 30.1%. These results suggest that men are less likely to express a need for care.

Table 2 shows the results of the age of onset of mental health complaints and perceived treatment delay. The mean age of onset among the patients that had a history of mental complaints ($n = 308$) was 24.9 years (SD 12.6). The majority of participants ($n = 160$ (60%)) indicated that complaints had started during adolescence. Of the participants with an

onset during adolescence, 54% believed that the treatment delay had impacted the outcome negatively, compared to 33% of the participants with onset during adulthood (OR 2.4, 95% CI 1.4-3.9, $p = 0.001$).

BMA by the GP

Table 3 shows the results of the questions regarding the BMA. We compared results between cases and non-cases.

The majority of participants of both groups would appreciate the GP asking about their mental health (69% vs. 63%, $p = 0.258$). However, regarding the follow-up questions, there was a clear difference between the two groups. Fifty-six percent of the cases wanted more information about treatment versus 29% of non-cases ($p < 0.001$), and 66% of the cases would make use of easily accessible coaching for mental health versus 27% of non-cases ($p < 0.001$).

Fig. 1 Onset of mental complaints and perceived treatment delay

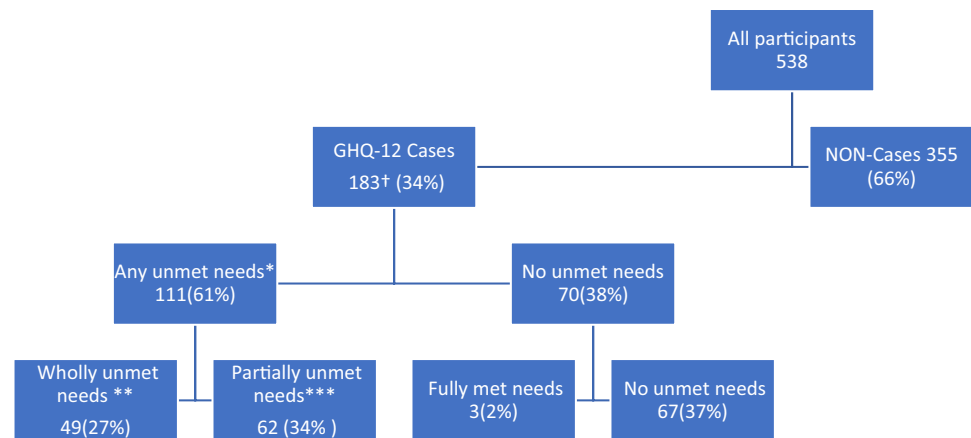


Table 2 The onset of mental health complaints by age group and perceived treatment delay

Age of onset	N	Believe that if treatment was started earlier they would be better off now		Odds ratio comparing age groups
		Yes	No	
Adolescent <i>age ≤24 years</i>	160	86 (54%)	74 (46%)	2,4 (95% confidence interval 1,4-3,9, $p = 0.001$)
Adult <i>age ≥25 years</i>	109	36 (33%)	73 (67%)	
Total	269	122	148	

Table 3 Perception of BMA between participants with and without psychological distress based on GHQ-12 responses

		1. Would appreciate the GP briefly asking about their mental health	2. Would like more information about treatment for mental health	3. Would make use of easily accessible coaching for mental health
Cases	Yes	121 (69%)	98 (56%)	116 (66%)
	No	35 (20%)	77 (44%)	59(34%)
	No opinion	19 (11%)	*	*
		175	175	175
Non-cases	Yes	207 (63%)	94 (29%)	88 (27%)
	No	73 (22%)	235 (71%)	243 (73%)
	No Opinion	51 (15%)	*	*
		331	329	331

For question 1 there were three possible answers yes/no/no opinion. Questions 2 and 3 had two possible answers; yes/no.

There was no difference between the groups for question 1 ($P = 0.258$). For question 1 and 2 the differences were statistically significant ($p < 0.001$)

Discussion

The primary goal of this study was to assess the unmet need for mental health among participants. We found that one in five participants had a need for mental care. This was defined by both the presence of high psychological distress and perceived need for treatment. A large proportion of those in need did not receive any form of treatment in the past year. Participants with high psychological distress were more than five times as likely to have suicidal thoughts compared to participants without high psychological distress. Of the participants that had a history of mental health problems, the majority experienced the onset during adolescence. Those that had an onset during adolescence were more likely to experience that the treatment delay has had a negative impact on the treatment outcome. The majority of participants would appreciate the GP briefly inquiring about their mental health. There was no difference in this finding for people with and without psychological complaints.

Unmet need

The prevalence of unmet needs for mental health care was high in our study sample. Unmet need has been investigated in previous studies (Alonso et al. 2007; Meadows and Burgess 2009; Olsson et al. 2020; Prins et al. 2011; Wang et al. 2007a). However, the definition of unmet need differs between studies. In our study, we considered a patient to be in need of care, if the participants had high levels of psychological distress according to the GHQ-12 (objectively) and perceived themselves as in need of treatment (subjectively). In a large European study, Alonso et al. defined unmet need for mental health as the presence of a mental disorder established by the Composite International Diagnostic Interview 3.0 based on the DSM IV or care usage in the past 12 months (Alonso et al. 2007). In their study, a differentiation was made based on the severity of the disorder. Whether the patient with an unmet need also wanted treatment was not studied. In our study, one in five participants would be eligible for treatment according to our definition. The majority, 56%, did receive some treatment in the past year. Still, these participants perceived a need for treatment and had high levels of psychological distress. Based on our data, it cannot be said whether the patients were still undergoing treatment, or received insufficient treatment. It may well be that in some cases their needs eventually were met. In addition to those who received some form of treatment are those with a complete lack of treatment (44%). Alonso et al. found unmet needs for mental health in 7% of the study

population, about half of which did not receive any treatment (Alonso et al. 2007). One possible reason for our higher prevalence compared to Alonso et al. is that we used a non-probability sample in our study. Another reason may be the different definitions of an unmet need that were used. Focusing on psychiatric disorders leads to exclusion of participants that have subthreshold psychiatric complaints, and to exclusion of participants with psychological distress that is not classified in the DSM IV, for example, a burn-out. These groups can also have a high burden due to their complaints and be in need of treatment (Grenier et al. 2011). Our definition of an unmet need included all participants with high psychological distress and not only the participants that fulfilled the DSM IV. In contrast, it should be noted that the percentage of lack of treatment among those with an established need in our study was very similar compared to the study by Alonso et al., 44% vs. 48% (Alonso et al. 2007).

Unperceived unmet need

Interestingly, in our study, 37% of the participants that had a high level of psychosocial distress did not have a perceived need for treatment. These results are in line with previous findings that an objectively assessed need for treatment does not always mean that there is also a perceived need for treatment (Forsell 2006; Meadows and Burgess 2009; Prins et al. 2011). Part of the discrepancy in our study can be attributed to the diagnostic instrument we used to establish the objective need. Tait et al. found an overall specificity of 88.8% and sensitivity of 87.3%, with 13% of the cases being misclassified (Tait et al. 2003). It is thus possible that a part of the cases of psychological distress in our study are false positives. Another possible explanation is that the concerning participant is already receiving treatment and support somewhere else. In the Netherlands, for example, work-related mental complaints support is sometimes provided by the employer. And lastly, there is the possibility of someone not acknowledging they need treatment. Low perceived need and attitudinal barriers have been identified as the major barriers to seeking treatment for mental disorders (Andrade et al. 2014). In our study male participants were less likely to express a need for mental health care. However, our study showed that asking about mental help by the GP is broadly accepted. Therefore, while a patient may not be ready to start treatment, asking about mental health could still be of value as a way of starting a conversation with the patient. In providing a safe environment, the GP could initiate a discussion with the patient, which can help the patient's perception about mental illness in the long run. The results showed the importance of combining a subjective and objective measurement when establishing unmet need with the aim of treatment initiation by the GP. The subjective

measurement helps to determine the proportion of patients with an unmet need that wants treatment. At the same time, it gives a perspective on the patient with an unperceived need for treatment.

Onset of complaints

The majority of participants with a history of mental health experienced the onset during adolescence. Those with an onset during adolescence were more than twice as likely to experience treatment delay. These participants believe that they would be better off now if the treatment had started earlier. These results are in line with the findings of Sheppard and all who found unmet need to be highly prevalent among adolescences (Sheppard et al. 2018). This while having mental health issues during adolescence increases the risk for mental problems later in life (Pine et al. 1998; Reef et al. 2010). Among barriers that have been identified in adolescence for seeking help are lack of knowledge on how and where to find help and perceived social stigma (Radez et al. 2020; Sheppard et al. 2018). At the same time, exploration of psychological issues does not always take place in GP consultations with adolescents, even when the doctor feels that these are present (Martinez et al. 2006). Our findings underscore the importance of GPs discussing psychological symptoms with adolescents. By taking a proactive role, the GP can help allocate patients to available care and possibly shorten the time to treatment and improve the prognosis.

GP and Unmet Need

According to our findings, the majority of patients would appreciate it when the GP would briefly inquire about mental health, even if the consultation has a different topic. We called this brief mental advice (BMA). Based on our findings, BMA could be considered in general practice. The second part of the BMA, which focuses on giving information about treatment, should only be applied when a patient has indicated to have psychological complaints. The advantage of using such an approach is that it takes relatively little time and can be carried out easily (Aveyard et al. 2012; Stead et al. 2013). If the patient proves to be in need of help, this can be scheduled in a new appointment, thus saving the GP time during the consultation. In our study, half of the patients with an unmet need had recently visited their GP. These results are consistent with the findings of Meadows et al., that many people with mental health problems visit the GP without presenting their mental complaints to the GP (Meadows et al. 2001). In our study 22% of the participants without high psychological distress expressed a need for treatment. It is possible that this is partly due to false negatives, considering we used relatively high cut-off values. However, by applying BMA these patients will still receive

an opportunity to discuss potential mental complaints and if necessary, get a chance to start treatment. A national study conducted in the Netherlands found that more than three-quarters of the registered patients visit their GP each year (Meijer et al. 2019). These results indicate that people with unmet need for mental health care regularly visit the GP. This represents an opportunity to improve the recognition of patients with an unmet need for care. This could be done for example with the BMA. The wide variation of the population seen by the GP would make it possible to screen all age groups, including adolescents. A possible next step in research could be to investigate the effects of BMA by the GP. This could be done through a clinical trial over a longer period. This study can help to determine who would benefit the most from this approach and if BMA leads to early recognition and treatment of the mental problems.

Limitations

The results of our study should be interpreted with the following four limitations. First, our study attracted a large population of patients with a history of mental health. Because of this, our prevalence of participants with unmet needs in the study population was high, namely 21%. Therefore, our estimate is probably not representative of the general population and is likely to be an overestimation when compared to the general population. Second, while high levels of unmet needs have also been found in adolescents (Sheppard et al. 2018), our study attracted mainly adults and much fewer adolescents and elderly. Therefore, our findings apply mainly to this age group. Third, because this study was conducted with an anonymous questionnaire, no information was provided on how the participants learned about the study. Therefore, it is not possible to make an estimate on which proportion of the participants were reached through each distribution method. Fourth, our study was conducted among a Dutch population. In the Netherlands, there is a gatekeeper system with mental health care that is accessible to everyone. As a result, our findings should be interpreted in the context of such a health care system. In countries where mental health care is less accessible, another approach may be needed. At the same time, primary care plays an important role worldwide in treating mental health problems (Wang et al. 2007a). Therefore, it can still be of value to see if our findings can help and support GPs in other health care systems.

Conclusion

In line with previous research, our study shows that a significant proportion of those in need of mental health care do not receive any treatment. The GP is in a good position to screen for mental issues, as people with unmet needs regularly visit the GP. The majority of individuals, with and without mental

complaints, would appreciate receiving BMA from the GP. A proactive role of the GP can lead to a conversation about mental health with the patient. This could be the first step in identifying patients with a need for mental care.

Acknowledgments The authors would like to acknowledge the GP practices that helped to distribute the questionnaire. In particular, they would like to thank Reinoud Medical Centre for their help.

Authors' contributions Both authors contributed to the study conception and design. Data collection and analysis were performed by E. Wix. The first draft of the manuscript was written by E. Wix and both authors commented on previous versions of the manuscript. Both authors read and approved the final manuscript.

Funding This research received no funding from any agency in the public, commercial, or not-for-profit sectors.

Availability of data and material Available from the corresponding author on reasonable request.

Declarations

Ethical statement This study was carried out by the School for Public Health and Prim Care of the Faculty of Health, Medicine and Life Sciences at the University of Maastricht under the supervision of associate professor M. Spigt. This research received no additional fundings from any agency in the public, commercial, or not-for-profit sectors. Informed consent was obtained from all individuals who participated in the study. This study was approved by the Ethical Committee of Maastricht University; dossiernr: FHML-REC/2019/069. The authors declare they have no conflicts of interest.

Conflicts of interest The authors have no relevant financial or non-financial interests to disclose.

Ethics approval This study was approved by the Ethical Committee of Maastricht University; dossiernr: FHML-REC/2019/069.

Consent to participate Informed consent was obtained from all individual participants included in the study.

References

- Alonso J et al (2004) Prevalence of mental disorders in Europe: results from the European Study of the Epidemiology of Mental Disorders (ESEMeD) project. *Acta Psychiatr Scand Suppl* 420:21–27. <https://doi.org/10.1111/j.1600-0047.2004.00327.x>
- Alonso J et al (2007) Population level of unmet need for mental health care in Europe. *Br J Psychiatry* 190:299–306. <https://doi.org/10.1192/bjp.bp.106.022004>
- Andrade LH et al (2014) Barriers to mental health treatment: results from the WHO World Mental Health surveys. *Psychol Med* 44:1303–1317. <https://doi.org/10.1017/S0033291713001943>
- Aveyard P, Begh R, Parsons A, West R (2012) Brief opportunistic smoking cessation interventions: a systematic review and meta-analysis to compare advice to quit and offer of assistance. *Addiction* 107:1066–1073. <https://doi.org/10.1111/j.1360-0443.2011.03770.x>
- Bruffaerts R, Bonnewyn A, Demyttenaere K (2007) Delays in seeking treatment for mental disorders in the Belgian general population. *Soc Psychiatr Psychiatr Epidemiol* 42:937–944. <https://doi.org/10.1007/s00127-007-0239-3>
- Bunting BP, Murphy SD, O'Neill SM, Ferry FR (2012) Lifetime prevalence of mental health disorders and delay in treatment following initial onset: evidence from the Northern Ireland Study of Health and Stress. *Psychol Med* 42:1727–1739. <https://doi.org/10.1017/S0033291711002510>
- Drake RJ et al (2020) Effect of delaying treatment of first-episode psychosis on symptoms and social outcomes: a longitudinal analysis and modelling study *Lancet. Psychiatry* 7:602–610. [https://doi.org/10.1016/S2215-0366\(20\)30147-4](https://doi.org/10.1016/S2215-0366(20)30147-4)
- Forsell Y (2006) The pathway to meeting need for mental health services in Sweden. *Psychiatr Serv* 57:114–119. <https://doi.org/10.1176/appi.ps.57.1.114>
- Ghio L et al (2015) Duration of untreated depression influences clinical outcomes and disability. *J Affect Disord* 175:224–228. <https://doi.org/10.1016/j.jad.2015.01.014>
- Goldberg DP, Gater R, Sartorius N, Ustun TB, Piccinelli M, Gureje O, Rutter C (1997) The validity of two versions of the GHQ in the WHO study of mental illness in general health care. *Psychol Med* 27:191–197. <https://doi.org/10.1017/s0033291796004242>
- Grenier S et al (2011) The impact of DSM-IV symptom and clinical significance criteria on the prevalence estimates of subthreshold and threshold anxiety in the older adult population. *Am J Geriatr Psychiatry* 19:316–326. <https://doi.org/10.1097/JGP.0b013e318ff416c>
- Kadam UT, Croft P, McLeod J, Hutchinson M (2001) A qualitative study of patients' views on anxiety and depression. *Br J Gen Pract* 51:375–380
- Kisely S, Scott A, Denney J, Simon G (2006) Duration of untreated symptoms in common mental disorders: association with outcomes: international study. *Br J Psychiatry* 189:79–80. <https://doi.org/10.1192/bjp.bp.105.019869>
- Kroneman M, Boerma W, van den Berg M, Groenewegen P, de Jong J, van Ginneken E (2016) Netherlands: Health System Review *Health Syst. Transit* 18:1–240
- Martinez R, Reynolds S, Howe A (2006) Factors that influence the detection of psychological problems in adolescents attending general practices. *Br J Gen Pract* 56:594–599
- Meadows G, Liaw T, Burgess P, Bobevski I, Fossey E (2001) Australian general practice and the meeting of needs for mental health care. *Soc Psychiatr Psychiatr Epidemiol* 36:595–603. <https://doi.org/10.1007/s127-001-8199-7>
- Meadows GN, Burgess PM (2009) Perceived need for mental health care: findings from the 2007. *Australian Surv Mental Health Well-being Aust N Z J Psychiatry* 43:624–634. <https://doi.org/10.1080/00048670902970866>
- Meijer W et al (2019) Zorg door de huisarts: Nivel Zorgregistraties Eerste Lijn: Jaarcijfers 2018 en trendcijfers 2014–2018
- Olsson I, Mykletun A, Dahl AA (2006) General practitioners' self-perceived ability to recognize severity of common mental disorders: an underestimated factor in case identification? *Clin Pract Epidemiol Ment Health* 2:21. <https://doi.org/10.1186/1745-0179-2-21>
- Olsson S, Hensing G, Burstrom B, Love J (2020) Unmet need for mental healthcare in a population sample in Sweden: a cross-sectional study of inequalities based on gender. *Ed Country Birth Commun Ment Health J.* <https://doi.org/10.1007/s10597-020-00668-7>
- Pine DS, Cohen P, Gurley D, Brook J, Ma Y (1998) The risk for early-adulthood anxiety and depressive disorders in adolescents with anxiety and depressive disorders. *Arch Gen Psychiatry* 55:56–64. <https://doi.org/10.1001/archpsyc.55.1.56>
- Prins M et al (2011) Perceived need for mental health care and barriers to care in the Netherlands and Australia. *Soc Psychiatry*

- Psychiatr Epidemiol 46:1033–1044. <https://doi.org/10.1007/s00127-010-0266-3>
- Radez J, Reardon T, Creswell C, Lawrence PJ, Evdoka-Burton G, Waite P (2020) Why do children and adolescents (not) seek and access professional help for their mental health problems? A systematic review of quantitative and qualitative studies. *Eur Child Adolesc Psychiatry*. <https://doi.org/10.1007/s00787-019-01469-4>
- Raven D, Jorg F, Visser E, Oldehinkel AJ, Schoevers RA (2017) Time-to-treatment of mental disorders in a community sample of Dutch adolescents. A TRAILS study *Epidemiol Psychiatr Sci* 26:177–188. <https://doi.org/10.1017/S2045796016000226>
- Reef J, van Meurs I, Verhulst FC, van der Ende J (2010) Children's problems predict adults' DSM-IV disorders across 24 years. *J Am Acad Child Adolesc Psychiatry* 49:1117–1124. <https://doi.org/10.1016/j.jaac.2010.08.002>
- Sheppard R, Deane FP, Ciarrochi J (2018) Unmet need for professional mental health care among adolescents with high psychological distress. *Aust N Z J Psychiatry* 52:59–67. <https://doi.org/10.1177/0004867417707818>
- Sinnema H, Terluin B, Volker D, Wensing M, van Balkom A (2018) Factors contributing to the recognition of anxiety and depression in general practice. *BMC Fam Pract* 19:99. <https://doi.org/10.1186/s12875-018-0784-8>
- Stead LF, Buitrago D, Preciado N, Sanchez G, Hartmann-Boyce J, Lancaster T (2013) Physician advice for smoking cessation. *Cochrane Database Syst Rev* CD000165. <https://doi.org/10.1002/14651858.CD000165.pub4>
- Tait RJ, French DJ, Hulse GK (2003) Validity and psychometric properties of the General Health Questionnaire-12 in young Australian adolescents. *Aust N Z J Psychiatry* 37:374–381. <https://doi.org/10.1046/j.1440-1614.2003.01133.x>
- Verhaak PF, van Dijk CE, Nuijen J, Verheij RA, Schellevis FG (2012) Mental health care as delivered by Dutch general practitioners between 2004 and 2008. *Scand J Prim Health Care* 30:156–162. <https://doi.org/10.3109/02813432.2012.688707>
- Vigo D, Thornicroft G, Atun R (2016) Estimating the true global burden of mental illness *Lancet. Psychiatry* 3:171–178. [https://doi.org/10.1016/S2215-0366\(15\)00505-2](https://doi.org/10.1016/S2215-0366(15)00505-2)
- Wang PS et al (2007a) Use of mental health services for anxiety, mood, and substance disorders in 17 countries in the WHO world mental health surveys. *Lancet* 370:841–850. [https://doi.org/10.1016/S0140-6736\(07\)61414-7](https://doi.org/10.1016/S0140-6736(07)61414-7)
- Wang PS et al (2007b) Delay and failure in treatment seeking after first onset of mental disorders in the World Health Organization's World Mental Health Survey Initiative. *World Psychiatry* 6:177–185

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.