

Trends in non-help-seeking for mental disorders in Germany between 1997–1999 and 2009–2012: a repeated cross-sectional study

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Abstract

Purpose This study sought to examine trends in non-help-seeking for mental disorders among persons with a prevalent mental disorder (12-month prevalence) in Germany between 1997–1999 and 2009–2012.

Methods We examined data from 1909 persons aged 18–65 years who participated in two independent, repeated cross-sectional surveys (German National Interview and Examination Study 1997–1999, German Health Interview and Examination Survey for Adults 2009–2012) conducted 12 years apart. Prevalent mental disorders (12-month prevalence) were determined using the Composite International Diagnostic Interview, which included information on lifetime help-seeking for mental health problems. Correlates of self-reported help-seeking were analyzed according to Andersen's Behavioral Model. Multivariable Poisson regression models were used to assess time trends in the directly standardized and model-adjusted prevalence

of non-help-seeking across strata of socio-economic and clinical variables.

Results The proportion of people with a prevalent mental disorder who have never sought help in their lifetime decreased significantly from 62% (95% CI 58.7–64.7) to 57% (95% CI 52.2–60.9) between 1997–1999 and 2009–2012 in adults aged 18–65 years in Germany. Downward trends in non-help-seeking occurred in all investigated strata and reached statistical significance in women, in people who were living alone, people with medium educational level, people living in middle-sized communities, people with non-statutory health insurance, smokers, and people with co-existing somatic conditions.

Conclusion Despite a downward trend over the course of 12 years, a large proportion of people suffering from mental disorders are still not seeking treatment in Germany. Further efforts to increase uptake of help-seeking for mental disorders in hard-to-reach groups are warranted to continue this trend.

Keywords Trends · Mental health · Mental disorders · Help-seeking

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Introduction

Many mental disorders can be treated effectively, if people who are affected seek help and therapies are delivered adequately. However, the number of people with unmet need for treatment is substantial [1, 2] and contributes to both individual suffering and detrimental consequences on a societal level [3]. In Germany, population-based data suggest that only about 40% of persons who fulfilled the criteria for a mental disorder during the last 12 months had ever sought professional help for their mental health problems [4]. Moreover, studies from other European

countries indicate that up to 50% of those with mental disorders are not receiving adequate treatment [1, 5, 6]. However, if timely diagnosis and treatment initiation are delayed, the likelihood of chronification or a more severe disease course increases [7].

Barriers for seeking treatment include lack of awareness among those with mental health problems, lack of knowledge about psychiatric disorders and about options of effective treatment and negative attitudes towards mental health care [8–10]. These cognitions and beliefs can be subsumed as mental health literacy [11]. Furthermore, the absence of perceived need for treatment [12] and the anticipation of stigmatization [13] were found to impede help-seeking.

Sociodemographic, psychosocial and medical correlates of unmet need for treatment of mental disorders have been studied extensively [8, 14, 15]. However, due to specifics of national health care systems and their inherent systemic barriers to help-seeking, the comparability of these findings is limited. For instance, the German mental health care system is characterized by a wide coverage of services by insurance plans, a division in an ambulatory and an inpatient sector, a gate keeping role of general practitioners, a split of mental health care services between different professions and providers and remarkable regional differences in the provision of services [16–18].

Several policies in Germany have sought to raise awareness for mental health problems among the general public and health professionals since the 1990s (examples include “gesundheitsziele.de” [19], “Aktionsbündnis Seelische Gesundheit” [20]). More recent developments include the increasing availability of internet/social media based mental health or counseling services [21] and the strengthening of the role of ambulatory psychiatrists in Germany [17]. Given these changes, there is a dearth of information regarding time trends of characteristics of persons not seeking help for mental health problems despite these efforts to increase availability of treatment.

Therefore, the objective of this study was to (1) examine trends in non-help-seeking among adults with prevalent mental disorder between 1998 and 2010 in Germany and to (2) investigate trends in correlates of non-help-seeking using Andersen’s Behavioral Model of Health Services Utilization [22].

Methods

Samples

To meet the requirements of trend analyses, this study used two independent cross-sectional samples derived from two nationally representative surveys (“German National Interview and Examination Study 1998”: GHS, “German Health

Interview and Examination Survey for Adults”: DEGS1) conducted by the Robert Koch Institute in Germany.

Design and methods of both surveys and their associated mental health modules (GHS-MHS; DEGS1-MH) are described in detail elsewhere [23–25]. Briefly, sampling for GHS was carried out from 1997 to 1999, included people from 113 communities throughout Germany and resulted in 7124 participants between the ages of 18 and 65 (response rate: 61%). A subsample of 4181 subjects (sub-response: 88%) participated in the mental health module of the GHS (GHS-MHS). DEGS1 was conducted between 2008 and 2011 in 180 German communities among 7116 participants aged 18–79. This sample was composed of former participants of GHS (not considered for the present trend analyses) (response rate: 62%) and newly recruited persons (response rate: 42%). Again, a subsample was selected for participation in the mental health module (DEGS1-MH; 2009–2012). The response rate was 88%, resulting in 4483 participants.

The selection process of study participants for the present trend study is displayed in a flow diagram (see Fig. 1). The present study was based on a sample of participants who (1) were newly recruited (all GHS-MHS participants and all DEGS1-MH participants who had not previously participated in GHS), (2) were younger than 66 years of age in the DEGS1-MH examination (because GHS-MHS was limited to those younger than 66) and (3) fulfilled DSM-IV criteria for occurrence of a mental disorder during the past 12 months. After exclusion of cases with missing values on the analytical variables, 1909 subjects (1324 from GHS-MHS and 585 from DEGS1-MH) were included in the analyses.

Survey weights and design elements were taken into account to adjust for design effects. Using a Lasso (least absolute subset selection and shrinkage operator)-logistic model, we additionally estimated probabilities of taking part in the analytical subsamples of GHS-MHS and DEGS1-MH using a set of predictive sociodemographic, behavioral and health-related variables [26]. We weighted samples by the product of these inverse probabilities with post-stratification and sampling weights [27].

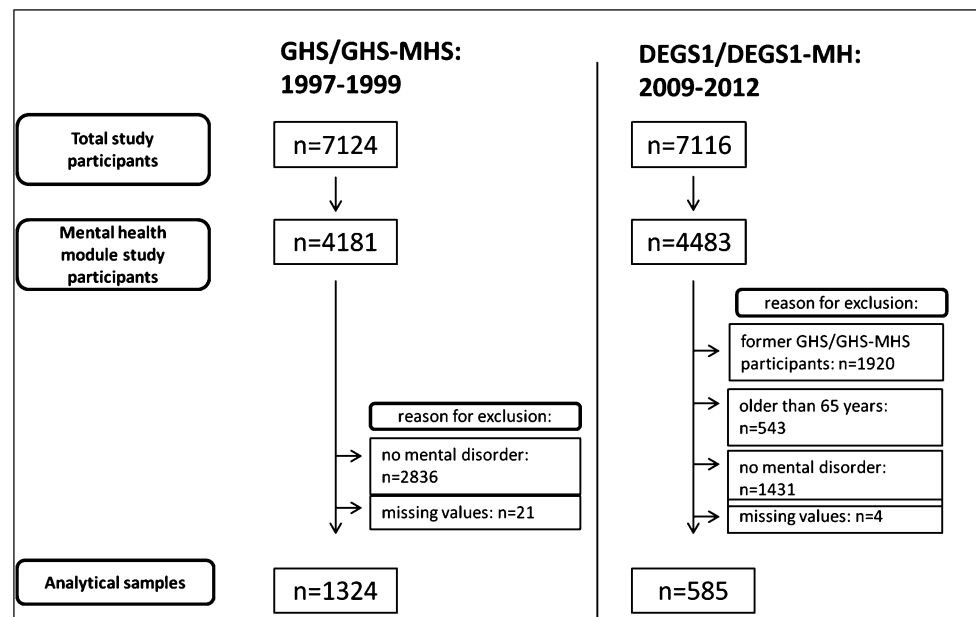
Both surveys included a computer-assisted personal interview (CAPI), a modified version (DIA-X/M-CIDI) of the Composite International Diagnostic Interview [28] and questionnaires to be completed by the participants. All participants were asked to provide written informed consent.

Measurements

Mental disorders

Prevalent mental disorders were defined as 12-month diagnoses according to DSM-IV criteria and assessed using a modified version of the Composite International Diagnostic Interview (DIA-X/M-CIDI) [28, 29].

Fig. 1 Flow diagram of study participants in GHS-MHS and DEGS1-MH



Mental disorders comprised disorders due to general medical condition, alcohol abuse and dependency, possible psychotic disorder, any mood disorder (major depression, dysthymia, bipolar I disorder, bipolar II disorder), any anxiety disorder (generalized anxiety disorder, agoraphobia, panic disorder with/without agoraphobia, social phobia, any simple phobia, obsessive–compulsive disorder), somatization disorders (including subthreshold SSI-4/6), pain disorder, anorexia nervosa and bulimia nervosa.

Due to alterations in assessment methods between 1998 and 2010, the diagnoses of illicit substance abuse/dependency and medication abuse/dependency needed to be excluded. Mental disorders that were only recently adopted in the M-CIDI (e.g., post-traumatic stress disorder (PTSD)) and not assessed in the survey at 1998 were also not considered [30].

Non-help-seeking for mental disorders

People were asked if they had ever sought help from a health care provider (including inpatient, outpatient and complementary institutions such as counseling centers) because of psychological distress, psychosomatic or substance use problems, either by themselves, or by advice of others, e.g., medical doctors, relatives, or their partner. A non-affirmative answer to this question in participants with a 12-month diagnosis was considered as non-help-seeking.

Theoretical framework for correlates of non-help-seeking for mental disorders

Andersen's Behavioral Model of Health Services Utilization was used to identify correlates of trends of non-help-

seeking for mental disorders [22]. This framework has been widely used for analyzing and predicting health services utilization in various contexts [31], also including mental health care [32–34]. The framework relates the individual's help-seeking to their predisposition to use mental health services, factors enabling or impeding help-seeking and services use on a contextual and individual level, and their perceived and evaluated need for service.

Predisposing characteristics that were considered in the present analyses were sex, age group (18–34, 35–49, 50–65 years), living situation (married and living together; married and living apart/unmarried/divorced/widowed), number of adult persons living in the household (one, more than one), educational attainment (less than 10 years, 10 years, more than 10 years of schooling), and current employment (yes, no).

Enabling factors included monthly income (categorized into study-specific tertiles), health insurance (statutory health plan, other), and size of municipality (<5000 inhabitants; 5000–20,000 inhabitants; >20,000 inhabitants). Household income was “equalized” by dividing the household income by the square root of the number of household members [35].

Need factors comprised health-related quality of life (as assessed by the physical (PCS) and mental component summary scores (MCS) of the Short Form-36 Health Questionnaire (SF-36) [36, 37]) and somatic comorbidity. Higher scores on the PCS and MCS indicated better quality of life; both scores were categorized into tertiles. Following the suggestion of Maske and colleagues [38] somatic comorbidity was defined as the number (grouped into 0, 1, >1) of self-reported physician-diagnosed disorders including coronary heart disease, myocardial infarction,

stroke, heart insufficiency, cirrhosis of the liver, cancer, osteoarthritis, osteoporosis, Parkinson's disease, hypertension, diabetes, dyslipidaemia, epilepsy, gout, asthma, hepatitis and gastric ulcer. In the DEGS1 survey, coronary heart disease, myocardial infarction and stroke were assessed only for participants being 40 years or older, osteoporosis and Parkinson's disease only for people being 50 years or above. Therefore, we applied these age restrictions also for the diagnoses assessed in the 1998 survey. Behavioral risk factors included smoking status (never, previously, currently), alcohol consumption (g/day derived from a beverage-specific quantity-frequency index [39], categorized into ≤ 20 vs. > 20 g/day for women and ≤ 30 vs. > 30 g/day for men), and physical activity (1 h of sports or less per week vs. more than 1 h per week).

Statistical analyses

Procedures for complex surveys in Stata 14.1 (Stata Corp.) were used. Weighting corrected for sampling probabilities and non-participation and ensured comparability of the two samples.

First, we examined the prevalence of non-help-seeking for mental disorders in strata of predisposing, enabling and need variables in GHS-MHS and DEGS1-MH among participants with a prevalent mental disorder. In both surveys, the associations between predisposing, enabling and need factors with non-utilization were examined using multivariable logistic regression analyses adjusted for sex, age, educational attainment, income, and employment.

Second, prevalence trends of non-help-seeking for mental health problems were examined. Relative risks (RR) and corresponding 95% confidence intervals (95% CI) for change in non-help-seeking over time were estimated using Poisson regression models with robust standard errors [40] (adjusted for age, sex, educational attainment, income, and employment) estimated on the pooled GHS-MHS and DEGS1-MH data. Prevalence estimates were standardized by running a logistic regression model that included age, sex, educational attainment, income and employment on the pooled GHS-MHS and DEGS1-MH data, and by estimating predictive margins. This way, directly standardized estimators can be obtained without the need of poststratifying the sample weights to the reference population [27]. Multiplicative interaction terms of covariates with the time variable (GHS-MHS = 0, DEGS1-MH = 1) were tested in Poisson models and time interaction relative risks (TRR) were derived from the linear combination of $\exp[\text{coef}(\text{covariable}) + (\text{coef}(\text{covariable}) \times \text{coef}(\text{time}))]$. TRR below one indicates a downward trend and TRR above one suggests a rise in non-help-seeking over time.

Results

The prevalence of non-help-seeking for mental disorders decreased significantly from 62% (95% CI 58.7–64.7) in 1998 to 57% (95% CI 52.2–60.9) in 2010 (adjusted RR = 0.92, 95% CI 0.83–0.99). This overall downward trend in non-help-seeking was also reflected in all analyzed strata of predisposing, enabling and need factors. However, it reached statistical significance only in some strata.

Table 1 displays the prevalences of non-help-seeking for mental disorders between the strata of predisposing and enabling variables. At both time points, men and persons living with at least one other adult were significantly more likely to not seek help. In 1998, non-help-seeking was significantly more common among younger people and people with lower levels of educational attainment, whereas in 2010 it was more common among people who were married and living together.

Between 1998 and 2010, stronger decreases in rates of non-help-seeking were found in women (TRR = 0.87, 95% CI 0.76–0.99), people not married and living together (TRR = 0.87, 95% CI 0.77–0.99), people with medium educational level (TRR = 0.83, 95% CI 0.73–0.96), people living in cities with a population from 5000 to 20,000 inhabitants (TRR = 0.80, 95% CI 0.64–0.98) and persons with non-statutory health insurance (TRR = 0.70, 95% CI 0.50–0.97). In all other investigated strata, the proportions of non-help-seeking also decreased, but time trends were not statistically significant.

Point prevalences and trends of non-help-seeking for mental disorders by levels of need factors are shown in Table 2. In 1998 and 2010, prevalences of non-help-seeking decreased in participants with lower mental and physical health-related quality of life. In 1998, participants suffering from two and more somatic conditions reported less help-seeking for mental disorders than those with one or no somatic comorbidity. None of the lifestyle variables was significantly correlated with non-help-seeking at either of the two time points.

A significant downward trend of non-help-seeking between 1998 and 2010 was seen among persons with one somatic comorbidity (TRR = 0.75, 95% CI 0.62–0.95) and among current smokers (TRR = 0.83, 95% CI 0.71–0.97). There were no significant trends in any other strata of need factors which were investigated.

Discussion

This study examined trends in non-help-seeking among people with a prevalent mental disorder in Germany between 1998 and 2010. The main finding was an overall

Table 1 Non-help-seeking for mental problems among people with mental disorder (12-month prevalence) in GHS-MHS (1997–1999) and DEGS1-MH (2009–2012): trends in predisposing and enabling factors

	GHS-MHS: 1997–1999 (<i>N</i> = 1324)		DEGS1-MH: 2009–2012 (<i>N</i> = 585)		TRR (95% CI) ^c
	Non-help-seeking		Non-help-seeking		
	% ^a	^b	% ^a	^b	
Total	61.7		56.5		0.92 (0.83–0.99)
Gender					
Male	70.9		66.0		0.97 (0.86–1.09)
Female	55.6	**	50.0	**	0.87 (0.76–0.99)
Age, years					
18–34	68.7		63.2		0.93 (0.82–1.04)
35–49	59.3	**	53.3		0.91 (0.77–1.09)
50–65	57.8	**	51.8		0.88 (0.73–1.06)
Household size					
1 adult	48.0		43.6		0.85 (0.65–1.11)
>1 adult	64.1	**	59.9	**	0.94 (0.86–1.03)
Marital status					
Married and living together	62.2		57.7		0.97 (0.85–1.10)
Married and living apart, unmarried, divorced, widowed	60.4		55.9	*	0.87 (0.77–0.99)
Educational attainment					
<10 years of schooling	60.2		54.8		0.91 (0.75–1.09)
10 years of schooling	64.0		58.8		0.83 (0.73–0.96)
>10 years of schooling	60.5	*	55.1		1.04 (0.89–1.23)
Current employment					
Yes	63.4		58.1		0.94 (0.85–1.04)
No	58.1		52.6		0.85 (0.71–1.03)
Income per month					
1st tertile	59.1		54.2		0.93 (0.80–1.09)
2nd tertile	63.0		58.2		0.94 (0.81–1.09)
3rd tertile	63.1		58.3		0.88 (0.74–1.04)
Size of municipality					
<5000 inhabitants	63.7		58.6		0.91 (0.74–1.12)
5000–20,000 inhabitants	61.2		55.9		0.80 (0.64–0.98)
>20,000 inhabitants	61.3		56.0		0.96 (0.86–1.08)
Insurance status					
Statutory health plan	62.2		56.7		0.93 (0.84–1.02)
Other	60.2		54.8		0.70 (0.50–0.97)

^a Weighted and adjusted (age, sex, educational attainment, income, employment) prevalence

^b * $p < 0.05$; ** $p < 0.01$ for significant association between predisposing/enabling factors and non-help-seeking as resulting from logistic regression analysis (weighted; adjusted for sex, age, educational attainment, income, employment); the first category was set as reference category

^c TRR time interaction relative risk from Poisson regression, CI confidence interval, TRR in bold: statistically significant

downward trend (around five percentage points) in non-help-seeking. This downward trend was also reflected in the presence of some downward and the absence of any upward trends in the strata of predisposing, enabling, and need variables. This suggests that there was no group in

which the rates of non-help-seeking for mental disorders increased over the period of 12 years.

To the best of our knowledge, previous research in Germany did not investigate help-seeking for mental disorders using both population-based trend studies and a

Table 2 Non-help-seeking for mental problems among people with mental disorder (12-month prevalence) in BGS-MHS (1997–1999) and DEGS1-MH (2009–2012): trends in need factors

	GHS-MHS: 1997–1999 (<i>N</i> = 1324)		DEGS1- MH: 2009–2012 (<i>N</i> = 585)		TRR (95% CI) ^c
	Non-help-seeking		Non-help-seeking		
	% ^a	b	% ^a	b	
SF-36 mental component summary score					
1st tertile	50.5		47.4		0.90 (0.78–1.03)
2nd tertile	70.8	**	68.1	**	1.09 (0.94–1.25)
3rd tertile	78.4	**	76.2	**	0.96 (0.81–1.13)
SF-36 physical component summary score					
1st tertile	55.1		49.5		0.89 (0.74–1.08)
2nd tertile	63.5		58.1		0.90 (0.77–1.05)
3rd tertile	68.3	*	63.2		0.94 (0.82–1.08)
Number of somatic comorbidities ^d					
0	65.7		60.0		0.90 (0.81–1.01)
1	56.7		50.7		0.75 (0.60–0.94)
>1	59.8	*	53.8		1.11 (0.90–1.38)
Smoking status					
Never	60.5		54.9		0.90 (0.78–1.04)
Former	63.3		57.8		1.06 (0.78–1.28)
Current	62.6		57.1		0.83 (0.71–0.97)
High alcohol consumption ^e					
No	61.3		56.1		0.91 (0.81–1.01)
Yes	65.2		60.2		0.93 (0.77–1.13)
Physical activity ^f					
No	61.3		55.8		0.89 (0.82–1.17)
Yes	62.7		57.3		0.88 (0.71–1.09)

^a Weighted and adjusted (age, sex, educational attainment, income, employment) prevalences

^b * $p < 0.05$; ** $p < 0.01$ for significant association between need factors and non-help-seeking as resulting from logistic regression analysis (weighted; adjusted for sex, age, educational attainment, income, employment); the first category was set as reference category

^c TRR time interaction relative risk from Poisson regression, CI confidence interval, TRR in bold: statistically significant

^d According to Maske (2006)

^e High alcohol consumption: >20 g/day (women), >30 g/day (men)

^f Physical activity: no: <1 h sports/week

gold-standard psychiatric interview to diagnose mental disorders. Our study revealed a downward trend in the proportion of non-help-seeking. Nonetheless, the

proportion of more than half of the people with a prevalent mental disorder who have never sought help for mental problems in their lifetime is still substantial. Because help-seeking for psychological distress does not necessarily reflect whether treatment was initiated and carried out as indicated, the number of persons who do not receive adequate mental health care is likely to be even higher. In line with this, a significant treatment gap has been described for populations from different European countries [1, 5, 6].

With regard to the downward trend in the proportion of non-help-seeking, data from German sickness funds indicate strong increases in health care utilization due to mental health problems during the last years: Kowitz et al. report that the number of inpatient treatments due to a psychiatric disorder has increased by 31% from 2000 to 2011 and that the number of ambulatory treatments has doubled between 1994 and 2004 [41]. Obviously, the comparison is somewhat limited as people who have not sought medical treatment and never been diagnosed were not considered in these analyses.

When comparing our finding of a downward trend in the proportion of non-help-seeking with studies from other countries, the results are inconclusive: A Norwegian study demonstrated a decrease in help-seeking for psychological distress (as assessed by a screening questionnaire) from 1990 to 2001 [42], while an Australian study reported an increase in help-seeking rates between 1995 and 2011 in participants who reported psychological problems [43]. Unfortunately, the majority of trend studies on help-seeking for mental health problems or mental health care utilization were limited to data from sickness funds and, therefore, are missing persons with mental health problems who did not seek help [44] or survey data that used screening instruments to diagnose mental health problems [45]. This makes it difficult to compare their findings with ours.

While the magnitude of the downward trend in non-help-seeking for mental disorders was similar in the analyzed subgroups, we observed statistically significant downward trends only in some specific groups of the general population: women, people living alone, people with medium educational level, people living in communities between 5000 and 20,000 inhabitants, people with non-statutory health insurance, current smokers, and people with a co-existing somatic condition. These are predominantly groups of people who were characterized by lower rates of non-help-seeking already in the first survey in 1998 and who now might have even better access to mental health services. The observed trends in non-help-seeking for mental disorders for men and women illustrate this interpretation. Men reported more often than women that they had never sought mental health care due to their mental problems. This is a recurrent finding [46–48].

However, our study showed that inequality in help-seeking for mental disorders between genders might have even increased in Germany over the period of 12 years: While there was a significant decrease of the proportion of non-help-seekers among women, no significant change has occurred in men. This widening of the gender gap needs consideration and calls for action: An Australian study has demonstrated that the gender gap can be narrowed [49]. A range of mental health initiatives which specifically addressed men succeeded in increasing the uptake of mental health care among men. Similar measures tailored to other specific groups at risk for non-utilization of mental health services might be promising initiatives.

Strengths and limitations

Our study used primary data on mental disorders as assessed by the M-CIDI in two large population-based samples and was not restricted to claims data or to diagnoses based on screening instruments that are less valid. Correlates of non-help-seeking and their trends were comprehensively investigated, including variables which represent predisposing characteristics, enabling resources and need factors according to Andersen's Behavioral Model.

The group "mental disorders" comprised a wide range of heterogeneous psychiatric diagnoses. Thus, factors which might be associated with help-seeking only in specific conditions might have been overlooked in our study. Nevertheless, considering that mental health care provision is not specifically targeted to specific diagnostic groups but should provide care to people suffering from different mental health conditions, our approach seemed to be reasonable and externally valid.

When discussing the high numbers of people with mental disorders who do not seek help it has to be acknowledged that not all individuals meeting the diagnostic criteria for mental disorders may perceive a need for professional health care to the same degree. People might not suffer from their (mild) mental disorder or they might have developed strategies that allow for successful coping with the disease. Accordingly, in our study the rates of non-help-seekers were relatively high among persons with high mental health-related quality of life (as compared to persons with low mental health-related quality of life and assumably more severe limitations). It has also been argued that patients' priorities regarding treatment goals are not adequately considered [50]. This might impede both initial help-seeking and continuation of treatment, particularly among people with mild mental disorders.

The broad assessment of help-seeking on a lifetime basis could be of further concern. Within the group of people classified as lifetime help-seekers there might be people

who had previously sought professional help but did not seek help for the present mental health problem, people who did not correctly recall past help-seeking, and people who have sought help but did not utilize the proposed therapeutic measures. This suggests that our analyses might have underestimated the amount of people who did not seek mental health care despite of present mental disorders. Further research should combine primary data on psychiatric illness with claims data on health service utilization to overcome this limitation.

An inherent problem of trend analyses is that they are restricted to the data available at the time of the first assessment. This implies that recently established diagnostic criteria (e.g., PTSD, binge eating disorder) or changes in diagnostic criteria cannot be considered. There were also alterations in assessment methods which limited the degree of comparability across the two surveys and resulted in the exclusion of specific diagnoses: In GHS-MHS, illicit substances were subsumed under substance and medication abuse/dependency, but were not assessed at all in DEGS1-MH [30].

Conclusion

A downward trend in the proportion of non-help-seeking was observed over the period of 12 years in Germany. Overall, the proportion of persons not seeking help for mental disorders remains high. Gaining access to people with mental health problems and promoting early and effective treatment is a significant challenge for the German public health care systems. Efforts to increase help-seeking for mental health problems in hard-to-reach groups are particularly warranted.

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Compliance with ethical standards

Ethical statement All participants gave informed consent prior to their inclusion in the studies. GHS-MHS: The study was approved by the responsible Institutional Review Board and Ethics Committee. DEGS1 and DEGS1-MH: the study was approved by the Medical

Ethics Review Committees responsible for DEGS1 (Charité, Berlin) and for DEGS1-MH by the Ethics Board of the Technische Universität Dresden, respectively.

Conflict of interest The authors declare that they have no conflict of interest.

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