Perceived Need for Treatment and Non-utilization of Outpatient Psychotherapy in Old Age: Two Cohorts of a Nationwide Survey

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Research Article

Keywords: Psychotherapy, Healthcare utilization, Andersen's Model of Health Service Use, Unmet need for treatment, Perceived need for treatment, Old age

Posted Date: January 7th, 2021

DOI: <https://doi.org/10.21203/rs.3.rs-132622/v1>

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Abstract

Objectives: Older adults with mental health problems may benefit from psychotherapy; however, their perceived need for treatment in relation with rates of non-utilization of outpatient psychotherapy as well as predisposing, enabling, and need factors proposed by Andersen's Model of Health Care Utilization that account for these differences warrants further investigation.

Method: We used two separate cohorts (2014 and 2019) of a German weighted nationwide telephone survey of German-speaking adults with N=12,197 participants. Across the two cohorts, 12.9% (weighted) reported perceived need for treatment for mental health problems and were selected for further analyses. Logistic Generalized Estimation Equations (GEE) was applied to model the associations between disposing (age, gender, single habiting, rural residency), enabling (education, general practitioner visit, general health status) non-utilization of psychotherapy (outcome) across cohorts in those with need for treatment (need factor).

Results: In 2014/2019, out of 6,087/6,110 participants, 11.8%/14.0% reported perceived need for treatment due to mental health problems, which reflects a significant increase in prevalence from 2014 to 2019. Of those who reported perceived need for treatment, 36.4%/36.9% did not see a psychotherapist – where rates of non-utilization of psychotherapy were vastly higher in the oldest age (59.3/52.5%; 75+) category, than in the youngest (29.1/10.7%; 18-25 years). Concerning factors associated with non-utilization, multivariate findings indicated participation in the cohort of 2014 (OR 0.94), older age (Age 55-64 OR 1.02, Age 65-74 OR 1.47, Age 75+ OR 4.76), male gender (OR 0.83), lower educational status (OR 0.84), rural residency (OR 1.38), single habiting (OR 1.37), and seeing a GP (OR 1.39) to be related with non-utilization of psychotherapy; general health status was not significantly associated with non-utilization when GP contact was included in the model.

Conclusion: There is a strong age effect in terms of non-utilization of outpatient psychotherapy. Individual characteristics of both healthcare professionals and patients and structural barriers may add to this picture. Effective strategies to increase psychotherapy rates in those older adults with unmet needs for treatment are required.

Introduction

The World Health Organisation (WHO) estimates that more than twenty percent of adults aged sixty and over face mental health problems [1]. While depression is the most common across all age groups, depression in late life poses specific challenges to the individual as well as to the healthcare system [2]. Symptoms of depression in old age may be different compared to younger cohorts, showing more vegetative and somatic, rather than affective symptoms; moreover, comorbidities and associated loss of physical functioning, cognitive impairment and chronic pain may overlap with depressive symptoms [3, 4]. Specific aspects such as loneliness, loss of spouse and loss of physical functioning that may lead to care dependency are risk factors of developing mental health problems in old age [5]. Finally, negative age stereotypes may prevent patients as well as healthcare professionals from detecting depression adequately [6, 7]. However, there seems to be a large discrepancy in the proportion of older adults in need of psychological services and the low proportion that actually receives them. Despite recent investigations are sparse, older adults have been shown to disproportionately underutilize professional mental health services relative to younger adults (e.g., [8–10]). This trend tends to be stable over time, while other studies report an increase (for a recent discussion, see [11]. For example, Byers et al. found that approximately seventy percent of older adults with mood and anxiety disorders did not use mental health services [12]. Yet, determinants of the mental health treatment gap among older adults remain unclear, especially for German older adults. A recently published systematic review on barriers preventing older adults from seeking and accessing mental health care in the United States [13] found intrinsic hurdles, such as negative attitudes toward mental health care and lack of perceived need for treatment as main barriers.

The utilization of health services is where patients' needs meet the professional health care system. According to Andersen's Model of Health Service Use [14], the utilization of health services is determined by three major components: *predisposing*, *enabling*, and *need factors*. *Individual predisposing factors* associated with non-utilization of mental health services among older adults include male gender and lower educational status [15] as well as age [8, 9]. *Contextual predisposing factors* associated with the treatment gap among older adults include age stereotypes EM Kessler, S Agines and CE Bowen [16] as well as ageism on the part of mental healthcare providers (e.g., [17]). Despite clear evidence that older adults respond to psychological treatment of mental health disorders including depression (e.g., [18]), attitudes of psychotherapists towards treating older adults are less favourable compared to the treatment of younger adults (e.g., [7, 19]). Contrariwise, US insurance claims data for instance showed that therapy use was positively associated with being older [20]. With regard to *enabling factors*, the role of financial, marital or cohabiting status as well as region of origin in the underutilization of mental health services among older adults remains inconsistent [12, 21] and needs to be further investigated. Structural factors such as costs [22] as well as access to care [14] may be related to non-utilization of outpatient mental health services among older adults. For example, in Germany, general practitioners (GPs) are often the first point of contact for and play a key role in the referral of patients with depressive symptoms, in particular older adults, to psychotherapeutic treatment [23]. However, previous empirical work has reported on deficient outpatient care for depressed individuals in Germany, as well as on diagnostic and treatment-related challenges of depression in old age in the primary care setting [6]. The clinician's decision to refer a patient with depression to a mental health specialist is described as complex and involves a variety of aspects on a clinician, patient, and practice level [24]. It is of great interest to gain a better understanding of the role of GPs in the utilization of mental health services among older adults. With regard to *need factors*, perceived need for treatment reflects the extend individuals are aware their mental health problems would require professional help, which may facilitate the utilization of mental health

services [25]. Further, individual's views and experience of their own general health as well as their functional state were found to be associated with mental health care utilization [12]. The present study aims to examine factors contributing to the gap between perceived need for treatment and non-utilization of psychotherapy in Germany.

Aim of the Study

Examining data from two separate cohorts in 2014 and 2019, the aim of the present study was to examine predisposing, enabling, and need factors of mental health service utilization across age groups. Based on the literature review and Andersen's Model of Health Services Use, the following hypotheses are proposed: The relative proportion of people with perceived need for treatment due a mental health problem, who do not consult a psychotherapist is higher in older age groups than in younger ones (Hypothesis 1); beyond older age, male gender, low educational status, single habiting, rural residency and poor general health status will be negatively associated with non-utilization of psychotherapy (Hypothesis 2); and, the association of psychotherapy non-utilization with GP visits proposed to be positive (i.e. acting as a facilitator); yet previous evidence is mixed (Hypothesis 3). Finally, we expected a positive trend of perceived need for treatment from 2014 to 2019 (Hypothesis 4).

Methods

Sample and Procedure

We made use of two separate cohorts from 2014 and 2019 of the survey of the National Association of Statutory Health Insurance Physicians (Kassenärztliche Bundesvereinigung; KBV), which was planned and implemented in cooperation with the Charité – Universitätsmedizin Berlin and the research company Forschungsgruppe Wahlen Telefonfeld GmbH (FGW). The aim of the surveys in 2014 and 2019 was to record the current outpatient care situation in Germany. From April to May 2014 (March to April 2019, respectively), N = 6,087 (N = 6,110 in 2019) randomly selected citizens in Germany were interviewed by telephone. The sample was drawn from the German-speaking resident population aged 18 and over. For the sample, a regional stratified, two-step random sample was used. The data was weighted for gender, age and education according to their nominal distributions across the adult population in Germany [26]. As there are no official statistics for gender, age and education for German-speaking foreigners, they were assigned the weight 1. Taking into account the probabilistic foundations of random samples, the weighted survey can be considered as representative of the resident population of Germany aged 18 and over [26]. Informed consent and consent to publish was obtained from all participants of the study. According to the local ethics committee of the Medical Faculty Charité – Universitätsmedizin Berlin, nonexperimental secondary data (which we received fully anonymized) analyses do not require ethical approval according to national guidelines (2016/679 EU General Data Protection Regulation and Amtsblatt 230/2019, § 2 Abs. 1. 2019). The commissioner for data protection of the KBV confirmed that all data protection standards have been strictly met. In total, n = 804 persons in 2014 and n = 862 in 2019 (N = 1,666 unweighted; subsequently, results were reported for weighted analyses) reported distressing mental health problems and constitute the final sample.

Measures

Psychotherapy non-utilization (outcome)

Those individuals who reported having had a distressing mental health problem that needed medical or psychological help were then asked if they have actually consulted a psychotherapist to address the problem.

Perceived need for treatment (need factor): In order to define the number of people who reported perceived need for treatment for mental health problems, the following question was formulated: 'In the past three years, have you had such a stressful emotional problem that you needed medical or psychological help?' This item is adapted from the Perceived Need for Care Questionnaire [22].

Age and gender (predisposing factor)

Age was asked in categories of 5 years (last category was 80 years and older with 7.3% across cohorts fell into this category) and was re-categorised into 18–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75+. Gender was coded 1 = women, 0 = men.

Single habiting (predisposing factor)

'How many people live in your household in total?' Those replied 'none' were categorized as single habiting.

Rural residency (predisposing factor)

Participants have been asked the question 'Approximately how many inhabitants does your town have?' Answers under 5,000 citizens was coded as living in a rural area.

Educational level (enabling factor)

Education has been operationalised according to the ISCED (International Classification of Education) category using a 3-step educational concept. In Germany, after four years of primary education, students are selected into one of the three secondary school tracks corresponding to 9th Grade (low); 10th Grade (middle); or 12th Grade (high). For post-school education, we dummy coded educational attainment into university degree yes/no.

General health status (enabling factor)

Participants were asked 'How would you describe your state of health in the last four weeks?' This item has been adapted from the general health single-item of the SF-36 scale [27], but a four-week time interval has been added. Answers have been given on a 5-point scale 'excellent', 'very good', 'good', 'not good', and 'poor.' For analyses, 'not good' and 'poor' health were considered poor health status.

GP visit (enabling factor)

GP visit have been assessed by asking 'Have you been to a doctor's office in the last 12 months?' If participants indicated 'yes', it was then asked 'Was this a general practitioner?'.

Statistical Analysis

Our dependent variable was non-utilization of psychotherapy in those who perceived need for treatment due to a mental health problem. For univariate comparisons between cohorts, chi-square tests have been used. The hypotheses were tested applying generalized estimating equations (GEE). GEE represent an extension of the generalized linear models for correlated data (i.e., cohort cluster structure) and were specified for the binary dependent variable (i.e., not using psychotherapy = 1). Generalized Estimation Equation (GEE) models were specified (weighting factor was used; distribution = binomial; link function = logit; repeated = cohort; type of covariance = exchangeable; robust estimator was used). The weighting procedure used reference values of gender, age and education according to their nominal distributions across the adult population in Germany [26]. In a first step of analysis, age (categorical: 18–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75+) and cohort (2014 = 0, 2019 = 1; referring to Hypothesis 4) were included in the model as an independent variable to model the association of age and non-utilization of psychotherapy (Hypothesis 1). In the second model, additional determinants (Hypotheses 2), i.e., education (categorical), single habiting (1 = yes; 0 = no), rural residency (1 = yes; 0 = no), poor health status (1 = yes; 0 = no), and GP visits (Hypothesis 3; 1 = yes; 0 = no) were included to analyse the associations with non-use of psychotherapy. The statistical analyses were performed using the statistical software SPSS v25 and the significance level was set at 5% ($p < .05$).

Results

In total, $N = 12,197$ participants ($n = 6,087$ in 2014; $n = 6,110$ in 2019) were included in the cohorts of the survey (Table 1). Of those, 52.6% (weighted percentages; thus no N is provided) were women and 7.6% were between 18–24, 11.8% 25–34, 14.1% 35–44, 19.7% 45–54, 18.4% 55–64, 14.6% 65–74, and 13.8% 75+ years of age. Concerning educational attainment, 34.8% had low education, while 16.7% had a university degree. Furthermore, 17.9% were single habiting and 31.9% were living in a rural area. There were some differences across cohorts; there were more older adults (65–74 years 14.0% in 2014, 15.5% in 2019; 75+ years 13.0% in 2014, 14.5% in 2019; $p < .05$), more participants with a degree (15.6% in 2014, 17.8% in 2019; $p < .05$) and more participants were single habiting (17.2% in 2014, 18.4% in 2019; $p < .05$) and less of those with a rural residency (34.6% in 2014, 29.1% in 2019; $p < .05$) in the 2019 sample as compared to 2014 (see Table 1). Regarding general health status, 21.3% considered their health as poor, while 12.9% reported having a mental health problem. Finally, 72.1% had a GP visit within the last 12 months.

Table 1
Sample characteristics of N = 12,197 participants across two cohorts

Sample characteristics of N = 12,197 participants across two cohorts									
2014 and 2019, %				2014, %			2019, %		
	Total (N = 12,197)	Perceived need for treatment	Mental health problem and no psychotherapy	Total (N = 6,087)	Mental health problem	Mental health problem and no psychotherapy	Total (N = 6,110)	Mental health problem	Mental health problem and no psychotherapy
Mental health problem	12.9	100.0	100.0	11.8 ^a	100.0	100.0	14.0 ^a	100.0	100.0
Psychotherapy use									
Psychotherapy	c	62.7		c	62.8		c	62.6	
No psychotherapy	c	36.7	100.0	c	36.4		c	36.9	100.0
No answer	c	0.6		c	0.8		c	0.5	
GP visit	72.1	82.2	84.4	71.4	83.5	85.9	72.8	81.1	83.2
Age, in years									
18–24	7.6	7.1	3.8	8.4 ^a	7.7	6.1 ^d	6.8 ^a	6.6	1.9 ^d
25–34	11.8	12.6	11.6	12.2	11.3	8.0	11.4	13.7	14.6
35–44	14.1	15.1	15.5	14.6	14.5	11.9 ^d	13.6	15.7	18.4 ^d
45–54	19.7	24.0	22.0	20.5 ^a	26.6 ^b	24.5	18.9 ^a	21.8 ^b	20.0
55–64	18.4	23.7	24.0	17.2	23.2	24.9	19.6	24.2	23.2
65–74	14.6	8.6	9.7	14.0 ^a	8.5	11.1	15.5 ^a	8.7	8.6
75+	13.8	8.8	13.4	13.0 ^a	8.2	13.4	14.5 ^a	9.4	13.3
Gender, women	52.6	64.2	61.6	52.8	65.6	63.6	52.3	63.0	60.0
Education									
School, low	34.8	33.3	37.7	34.0	30.5 ^b	35.2	35.6	35.6 ^b	39.7
School, middle	32.4	34.9	35.3	33.6	37.5	37.2	31.1	32.8	33.8
School, high	31.9	31.3	26.6	31.7	31.6	27.5	32.1	31.0	25.8
Degree	16.7	14.6	12.5	15.6 ^a	14.3	13.0	17.8 ^a	14.8	12.1
Single habiting	17.9	23.4	27.9	17.2 ^a	23.0	28.6	18.6 ^a	23.7	27.3
Health, poor	21.3	40.1	38.1	20.7	40.4	44.7 ^d	22.0	39.9	32.7 ^d
Rural residency	31.9	28.1	31.9	34.6 ^a	29.4	31.7	29.1 ^a	27.0	32.1
<i>Note.</i> Weighted percentages (thus, N for percentages is not provided). ^a row values of the total sample with the same superscript are significantly different between cohorts at p < .05. ^b row values of the subsample of those who reported mental health problems with the same superscript are significantly different between cohorts at p < .05. ^c FILTER Psychotherapy was asked only in those who reported a mental health problem.									

The rate of those reporting perceived need for treatment was significantly higher in 2014 (11.8%) than in 2019 (14.0%; $p < .05$). For both cohorts, percentages of need for treatment were lowest with 10.8% and 13.5% in 2014 and 2019 in those aged 18–24, and were highest in those aged 55–64 (15.9% in 2014 and 17.3% in 2019, respectively). However, in those aged 65–74 (7.1% in 2014, 8.0% in 2019) and 75+ (7.4% in 2014, 9.0% in 2019), the rates of perceived need for treatment were substantially lower than in all younger age groups (see Fig. 1 and Appendix 1).

In those participants, who reported perceived need for treatment, 62.7% saw a psychotherapist, 36.7% did not receive psychotherapy and 0.6% did not answer to this question. Although the absolute number of individuals with perceived need for treatment increased across cohorts, the proportion of therapy use did not change significantly from 2014 (62.8%) to 2019 (62.6%). Across cohorts, by age group the rate of not seeing a

psychotherapist (in those with mental health problem) increased from 19.8% in the 18–24 years olds to 37.4% in the 35–44 years old cohort. Among those aged 65–74 years old this figure was 41.5% while among the 75+ years old 55.4% did not see a psychotherapist (see Fig. 1 and Appendix 1).

In order to test the hypothesis of age differences in not receiving or using psychotherapy, the subsample of those who reported a mental health problem that would need assistance have been selected for multivariate analyses. In an adjusted model that accounted for the cluster structure of the cohorts and included cohort as a fixed effect (see Table 2), compared to the age group of 18–24 years (reference group), those aged 25–34 years had an increased probability of OR 2.25 (CI 0.60, 8.43), those aged 35–44 years an OR 2.59 (CI 0.71, 9.42), and those aged 45–54 years an OR 2.12 (CI 0.82, 5.46) of not receiving psychotherapy. In old age, compared to the age group of 18–24 years, not receiving or using psychotherapy was increased with OR 2.72 (CI 1.47, 5.05) in the cohort of 65–74 years old and OR 4.76 (CI 2.09, 10.87) in the 75+ years old. The associations of psychotherapy use and age were comparable in a model with and without further confounders (see Table 2).

Table 2
Multiple associations with not using psychotherapy in those reporting a mental health problem that would need help

	Unadjusted model				Adjusted model			
	<i>OR</i>	<i>LL CI</i>	<i>UL CI</i>	<i>p</i>	<i>OR</i>	<i>LL CI</i>	<i>UL CI</i>	<i>p</i>
Cohort, 2019	0.93	0.92	0.94	< .001	0.94	0.94	0.94	< .001
Age 18–24 (Ref.)	-	-	-	-	-	-	-	-
Age 25–34	2.09	0.60	7.24	.247	2.25	0.60	8.43	.228
Age 35–44	2.42	0.71	8.20	.156	2.59	0.71	9.42	.148
Age 45–54	2.04	0.87	4.76	.100	2.12	0.82	5.46	.122
Age 55–64	2.34	1.15	4.77	.019	2.36	1.02	5.50	.046
Age 65–74	2.80	1.69	4.64	< .001	2.72	1.47	5.05	.001
Age 75+	4.97	2.55	9.69	< .001	4.76	2.09	10.87	< .001
Gender, women					0.83	0.78	0.88	< .001
Education								
School, low (Ref.)					-	-	-	-
School, middle					0.97	0.91	1.04	.363
School, high					0.84	0.76	0.94	.001
Degree					0.86	0.69	1.08	.198
Single habiting					1.37	1.35	1.38	< .001
Health, low					0.75	0.44	1.27	.278
Rural residency					1.38	1.22	1.56	< .001
GP visit					1.39	1.37	1.41	< .001
<i>Note.</i> <i>N</i> unweighted = 1,666. Weighted coefficients presented. OR = odds ratio. LL CI and UL CI = lower and upper limit 95% confidence interval of the odds ratio coefficient. Logistic Generalized Estimation Equation (GEE) models were specified (weighting factor was used; distribution = binomial; link function = logit; repeated = cohort; type of covariance = exchangeable; robust estimator was used).								

In the adjusted model, not using psychotherapy was associated with single habiting OR 1.37 (1.35, 1.38) and rural residency (OR 1.38; CI 1.22, 1.56). Educational attainment was not associated with the use of psychotherapy (although high school education was related with lower probability of not receiving psychotherapy). Women were more likely to receive psychotherapy (OR 0.83; 0.78, 0.88). In this model, those who reported GP visits were more likely not to use psychotherapy (OR 1.39; 1.37, 1.41), which was independently of the overall health status which was accounted for (OR 0.75; 0.44, 1.27).

Discussion

We provide rare evidence on psychotherapy non-utilization across age groups across two separate nationwide cohorts of German community-dwelling adults with a focus on the development in old age. In those with perceived need for treatment due to mental health problems (i.e., need factor according to Anderson's Model of Health Care Use), we hypothesized elevated levels of non-utilization of psychotherapy in older age groups (i.e., predisposing factor) compared with the younger ones. We further assumed the disposing factors gender, living in rural areas and poor general health status and the enabling factors educational status, single habiting, and general health status to be associated with non-utilization of

psychotherapy. Moreover, the association with GP visits (i.e., enabling factor) was investigated. Finally, we expected, on average, perceived need for treatment to be increasing over the five years across cohorts.

The rate of perceived need for treatment was significantly elevated from about twelve percent in 2014 to fourteen percent in 2019. Although this effect may be due to an increased awareness of mental health problems in older adults, our results echo recent findings from Germany showing an increase in administrative prevalence of depressive disorders in the outpatient care setting from almost thirteen percent in 2009 to almost sixteen percent in 2017; although this effect was largely due to an relative increase in younger cohorts under 24 years of age [11]. This indicated not directly an increased prevalence of mental health problems over time, but an increase in diagnostics and potentially in mental health service use. Further, we found that in those participants, who reported perceived need for treatment, almost two third of the population saw a psychotherapist. Conversely, one third did not receive treatment by a psychotherapist. In the literature on unmet need for treatment, Nadeem et al. [28] reported a rate perceived need for treatment of 54.7% in a US sample of depressed low-income women; while only 8.2% received mental health treatment. Seeking for treatment was 62.4% of those having a major depression in a study by Mojtabai et al. [22]; 31.9% reported an unmet need for treatment. In a study of subclinical depressed participants, 27% received treatment, 33% reported an unmet need, while 40% had no perceived need and the authors conclude that not subclinical depressed individuals may need help for their depressive symptoms [29].

Regarding the relation of increased age with non-utilization of psychotherapy, there was an increased probability for middle-aged cohorts of not receiving psychotherapy compared with those adults under 26 years of age. In old age, not receiving or using psychotherapy was strongly elevated in the cohort of 65–74 years old and dramatically in those 75+ years of age. This finding is much in line with previous evidence on mental health service research of studies that were conducted 10 years or more in the past [8, 9, 30, 31]. More recent studies support our findings of higher rates of non-utilization of psychotherapy and lower referral rates in older adults than working age adults [10, 32]. In addition, Crabb and Hunsley [9], for instance, found that compared to depressive individuals aged 45–64 years, those people over 65 years of age with depression were less likely to report a mental health consultation in the past year. This held especially true for psychotherapist, as most consultations were with a GP.

In spite of general awareness about an age-related gap in the non-utilization of mental health services, less is known about its underlying causes. However, past research has identified some relevant factors in the underutilization of mental health services among older adults, such as patients negative stigma and beliefs associated with mental health and mental health care [12, 23], negative self-perceptions of aging [16], personal beliefs of older adults [15], unmet needs [33], lack of professional training and knowledge in geriatrics and aging [34], and lack of organizational structures such as interdisciplinary approaches and collaborative care models [6, 35, 36]. The vastly lower levels of psychotherapy utilization in older adults relative to the younger cohorts are especially concerning as there are – in principal – plentiful of psychotherapy resources and no additional charges for the patients with the statutory health insurance system in Germany.

With regard to the role of gender in the utilization of psychotherapy, past research has reported mixed results: while Wei et al. [37] found no gender differences in psychotherapy non-utilization, others reported higher rates in women than in men [15]. Our result endorses gender differences in the utilization of mental health services. Further, the finding is in line with past research acknowledging a series of gender-related barriers in seeking mental health support [38]. Our finding on single habiting may be related to fewer resources of instrumental and emotional spousal and social support, that foster help-seeking behaviour for psychotherapy. In line with previous research, the present study underlines higher non-utilization of mental health services in rural areas [39]. Structural barriers such as availability of and geographic distance from mental health services may be related to a lower utilization of mental health services in rural areas. However, our finding may also reflect differences in attitudes towards seeking mental health services among people living in rural and non-rural areas [16]. Further, we found some evidence of the relation of higher education and psychotherapy, although the picture was not clear. Using Medicare claims data, Wei et al. found in a sample of older adults with depression, older age, high educational attainment, and the structural unavailability of psychotherapy providers to be related with non-utilization of psychotherapy [37].

Those who reported GP visits were more likely not to use psychotherapy, which was independently of the overall health status. This finding is in line with previous research on both, the key role of GPs in the treatment of mental health problems [36, 40, 41] and findings on a distinct mental health under-treatment by mean of psychotherapy in the primary care setting [35, 42], especially among older adults [43]. Some research found GPs treat patients with depression comprehensively as they are able to take into account the complex comorbidity history of their older patients [44]. Nonetheless, previous findings also proposed a lack of skills and knowledge in mental health among GPs [42, 45, 46]. However, a systematic review and meta-analysis examining the role of GP trainings in depression care and found no improvement in care. Instead, collaborative care models are suggested as a more promising strategy in the improvement of depression care [47]. Strengthening collaborations between GPs and psychotherapists, increasing rates of referrals and improving diagnostics skills and reimbursement would potentially improve rates of psychotherapy utilization in older adults. Finally, our finding of high rates of psychotherapy non-utilization in older adults is especially unsatisfactory as meta-analytical evidence supports the effectiveness of psychotherapy in older adults, although effectiveness varies largely across studies and samples [5]. To sum up, results remain inconclusive and further research is needed in order to examine promising approaches to improve diagnostics and treatment of mental health in primary care, especially for older adults.

Strength And Limitations

This study has substantial strengths including two cohorts of a large and nationwide weighted sample as well as a sample of old and oldest old individuals. Utilizing this sample, we provide needed evidence of the distribution of psychotherapy use across age groups. Firstly, limitations of this study include perceived need for treatment is a subjective measure and, thus, was self-reported. Self-evaluated need for treatment, per definition differs from clinical diagnoses. For instance, Grobe et al [48] found administrative diagnoses within the healthcare system showed higher rates compared with survey self-reported depressive symptoms, which, in turn, may be different from perceived need for treatment [22, 28]. Despite these differences self-perceptions of mental health problems and need for treatment have their own right as they are close to mental components of subjective well-being.

Secondly, we used single items only. However, GP visits and therapy use are suitable for single items. Further, single items to measure mental health have been shown to be correlated with multi-item scales. Thus, future studies should use elaborated scales such as PHQ-9 or HADS to validate our findings [49]. Thirdly, we did not assess comorbidities, but used a measure for subjective health status only. Although this measure has advantages such as the feasibility across the whole age range, future studies should look into the outpatient treatment of depression in combination with multimorbidity or specific comorbidities such as dementia [50, 51]. Finally, the non-use of psychotherapeutic services in the case of an existing mental health problem could result from several effects: psychotherapy was advised but not sought out; psychotherapy was not advised; psychotherapy itself was not wanted (for various reasons); psychotherapy was desired but could not be achieved (for a variety of reasons). As our study did not differentiate between these variants, future research should elaborate on factors of non-utilization in more depth. This should be noted, especially when it comes to the point that patients with a GP visit are less likely to use psychotherapy. We do not know whether the psychotherapy would have been indicated, whether it was advised, whether it was desired, whether it was not achieved.

Practical Implications

Practical implications of this research include the underpinning of the lack of psychotherapeutic treatment in older cohorts, especially when taking into account that demographic change will increase this problem. Large proportions of older adults may benefit from effective treatment of psychotherapy [5], yet are likely undertreated. Referring these individuals to psychotherapy – if adequate – could improve mental health and wellbeing of older adults without potential complications that have been shown to be associated with pharmacotherapy [52]. Diagnostic and treatment pathways across healthcare sectors and professions must be optimised to face this challenge. Structural improvements, such as better access to mental health services in rural areas need to be implemented. Close cooperation between GPs and psychotherapists could also encourage possible psychotherapy use [40], especially collaborative care models may be promising [24, 47]. Beside structural improvements, interdisciplinary training of skills and abilities with regard to diagnosis and therapy of age-related depression should be made available. Building on gender differences in the prevalence of mental health problems as well as in the utilization of mental health services, access to mental health services needs to be organized in a more specific manner, especially targeting older and male individuals. Further, universities should consider increasing their emphasis on mental health, especially among older adults, in their core and advanced curricula for general practice. We have to acknowledge that most treatment of depression occurs in primary care. Our findings suggest an increased ratio of treatment in primary care rather than psychotherapy as people are older. Treatment of mentally ill patients in primary care may be adequate in individuals with complex multimorbidity patterns. Nonetheless, age stereotypes and inadequate undertreatment related with ageism that further expand this ratio need to be challenged [7, 18, 19].

Our study showed that in Germany, psychotherapy non-utilization in those with perceived need for treatment due to mental health problems was stronger in older adults than in younger ones. Further, non-utilization was associated with GP visits. More research is needed that disentangles the specific mechanisms and patterns between patients, GPs and psychotherapists that allow for optimal care and care pathways in the treatment of mental health problems for all ages.

Declarations

Ethics approval and consent to participate

Informed consent and consent to publish was obtained from all participants of the study. According to the local ethics committee of the Medical Faculty Charité – Universitätsmedizin Berlin, nonexperimental secondary data (received fully anonymized) analyses do not require ethical approval according to national guidelines (2016/679 EU General Data Protection Regulation and Amtsblatt 230/2019, §2 Abs. 1. 2019). The commissioner for data protection of the KBV confirmed that all data protection standards have been strictly met.

Consent for publication

Informed consent and consent to publish was obtained from all participants of the study. **Availability of data and materials**

The datasets generated during and analyzed during the current study will be stored in a non-publicly available repository. The access information is available from the PI and the corresponding author on reasonable request. To ensure confidentiality, data dispersed to project team members will be blinded of any identifying participant information.

Competing interests

The authors certify that they have no conflict of interest to declare.

Funding

The survey was funded by the National Association of Statutory Health Insurance Physicians (Kassenärztliche Bundesvereinigung; KBV). The authors received no funding. KB is employee at the KBV.

Authors' contributions

PG, SL, EMK, WH, SD, KB, MO, AK, SS made substantial contributions to the concept and design of the research question. PG and MO analyzed the data. PG, SL, EMK, WH, SD, KB, MO, AK, SS were involved in reviewing the data. PG and SL wrote the manuscript. PG, SL, EMK, WH, SD, KB, MO, AK, SS reviewed and revised the current manuscript for submission. PG, SL, EMK, WH, SD, KB, MO, AK, SS read and approved the final manuscript.

Acknowledgements

Not applicable

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Figures

Figure 1

Mean percentages of individuals who reported having a mental health problem, which would be needed to be treated (Panel A) and mean percentage of not seeing a psychotherapist in those individuals who reported having a mental health problem (Panel B) stratified by age group and by cohort. Weighted cases presented. Confidence intervals 95%. Figure values are provided in Appendix 1.

Supplementary Files

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