



Research paper



## Prevalence of suicidal ideation in German psychotherapy outpatients: A large multicenter assessment

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## ABSTRACT

**Background:** Suicidal ideation is a major concern in clinical practice. Yet, little is known about prevalence rates of suicidal ideation in patients undergoing outpatient psychotherapeutic treatment. Therefore, the aim of the current study is to assess the prevalence of suicidal ideation in a large sample of psychotherapy outpatients in Germany. The data analyzed in this study is taken from the KODAP-project on the coordination of data collection and analysis at German university-based research and training outpatient clinics for psychotherapy.

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**Methods:** A total of  $N = 10,357$  adult outpatients (64.4 % female; age:  $M(SD) = 35.94 (13.54)$ , range: 18–92 years of age) starting cognitive-behavioral therapy at one of 27 outpatient clinics in Germany were included in the current study. Prevalence of suicidal ideation was assessed with the Suicide Item (Item 9) of the Beck-Depression Inventory II.

**Results:** Suicidal ideation was reported by 36.7 % ( $n = 3795$ ) of the participants. Borderline Personality Disorder, Posttraumatic Stress Disorder, and recurrent Major Depression were the diagnoses most strongly associated with the presence and severity of suicidal ideation.

**Limitation:** Suicide ideation was assessed only with the respective item of the Beck Depression Inventory II.

**Conclusion:** Suicidal ideation is very common among adult patients who start psychotherapy in Germany. A well-founded knowledge of risk assessment in suicidal patients and suicide-specific treatment options is therefore highly relevant.

## 1. Introduction

Suicide is one of the leading causes of death worldwide: Every year, >700,000 people die by suicide (WHO, 2019). In Germany, 10,119 people died by suicide in 2022 ([www.destatis.de](http://www.destatis.de)). The rate of suicide attempts is many times higher than the suicide rate. For example, the lifetime prevalence of suicide attempts in Germany is reported to be 1.7 % in adults (Nock et al., 2012) and 7.6 % in adolescents (Donath et al., 2019). Suicidal ideation is one of the strongest risk factors for suicide attempts and suicide (Franklin et al., 2017) and both passive suicidal ideation (“I want to be dead”) as well as active suicidal ideation (“I want to kill myself”) seem to be associated with a comparable risk of suicidal behavior (Liu et al., 2020). At the same time most people who think about suicide will not attempt suicide or die by suicide (Carter et al., 2017; Ribeiro et al., 2016) and many people who die by suicide will not disclose suicidal ideation (Hallford et al., 2023). In consequence, suicidal ideation is a statistically significant risk factor for suicidal behavior, but knowledge of suicidal ideation does not necessarily help to identify people who are particularly at risk of showing imminent suicidal behavior (Bryan, 2021). This is all the more true since the process leading to suicidal behavior is rarely a uniform and continuous development, but rather a highly dynamic and complex process that eludes valid predictability (Bryan et al., 2023; Spangenberg et al., 2022; Washtler et al., 2022). Nonetheless, suicidal ideation in itself is deeply distressing (Jobes and Joiner, 2019), it is associated with a risk of chronification (Teismann and Koban, 2022), does not seem to respond well to non-specific treatments (Meerwijk et al., 2016; Torok et al., 2020), is associated with poorer treatment outcomes (Lopez-Castroman et al., 2016; Nobile et al., 2022; von Brachel et al., 2019) and therefore requires specific clinical attention. Precise knowledge of the epidemiology of suicidal ideation may provide necessary information for implementing and integrating suicide-specific treatment modules in clinical practice.

Previous research has estimated the lifetime prevalence of suicidal ideation to range from 2.6 % to 15.9 % in the general population worldwide (9.7 % in Germany; Nock et al., 2012). In a European study of the general population, lifetime suicidal ideation ranged between 4.4 % in Spain to 12.4 % in France (9.8 % in Germany; Bernal et al., 2007) and was especially prevalent in individuals suffering from mental disorders like Posttraumatic Stress Disorder (PTSD; 32.9 %), Generalized Anxiety Disorder (31.9 %), Alcohol dependence (27.8 %), Major Depression (26.2 %), Panic Disorder (23.7 %), or Social Phobia (23 %). Even higher lifetime rates have been reported for patients suffering from Schizophrenia (34.5 %; Bai et al., 2021).

Point prevalence rates, i.e., suicidal ideation during the past two weeks, has been shown to range between 5.3 % (Ladwig et al., 2010) and 8 % (Forkmann et al., 2012) in representative studies in Germany. Yet, study results are inconsistent with regard to whether adult men or women suffer more often from suicidal ideation (Forkmann et al., 2012; Ladwig et al., 2010; Nock et al., 2012). However, differing age ranges, wordings of questions, and samples across previous studies make direct comparisons difficult. Furthermore, discrepancies between self- and

clinician-rated suicidal ideation are well documented, with suicidal ideation being more often reported in self- compared to clinician-administered assessments (Nobile et al., 2023). Epidemiological analyses of large-scale German outpatient treatment samples have not been published at all. However, precise knowledge about the prevalence of suicidal ideation routine care is crucial to inform psychotherapists and to implement risk assessment methods and treatment services of an appropriate type and scope.

Therefore, the aim of the current study is to assess the prevalence of suicidal ideation in a large sample of adult German psychotherapy outpatients. The data analyzed in this study is taken from a project on the coordination of data collection and analysis at research and training outpatient clinics for psychotherapy (KODAP; Margraf et al., 2021; Velten et al., 2017), which is a nationwide German research collaboration including a large number of university outpatient clinics. The most frequently treated diagnostic groups in the KODAP clinics for adults are neurotic, stress and somatoform disorders (ICD-10, F4: 30 %–44 %) as well as affective disorders (ICD-10, F3: 39 %–47 %; Velten et al., 2018). Analysis regarding age and gender show that the patient population in KODAP clinics is largely comparable to other German outpatient clinics and routine care by fully licensed behavior therapists (Margraf et al., 2021).

## 2. Methods

### 2.1. Participants and procedure

The sample comprises  $N = 10,357$  outpatients (64.4 % female; age:  $M(SD) = 35.94 (13.54)$ , range: 18–92 years of age), who started cognitive-behavioral therapy at one of 27 outpatient clinics for adults in Germany between April 2014 and November 2022. Data from  $n = 460$  patients could not be taken into account because the Beck Depression Inventory I was used instead of the Beck Depression Inventory II. Twenty patients did not respond to the BDI-II suicide item, though they answered every other BDI-II item, and  $n = 33$  patients were younger than 18 years of age, although being treated in an adult outpatient clinic. Assessments were conducted prior to treatment. The most frequent mental disorders were Major Depression Episodes (single/recurrent) and Adjustment Disorders (see Table 1). In 36.51 % of the patients, there was at least one comorbid disorder. Further characteristics of the adult sample are shown in Table 1.

All patients were informed that the participating clinic regularly conducts research and provided informed consent prior to participation. In order to assure a standard of quality, all patients seeking help at the participating clinics are required to fill out a demographic data sheet as well as various questionnaires prior to their intake. Furthermore, in all participating clinics diagnoses are based on structured clinical interviews – i.e. the Structured Clinical Interview for DSM-IV (SCID, Wittchen et al., 1997) or the Diagnostic Interview for Mental Disorders (DIPS; Schneider and Margraf, 2011) – and/or a diagnostic checklist (International Diagnostic Checklist, IDCL, Hiller et al., 1997), conducted by trained clinical psychologists (Margraf et al., 2021). Study

**Table 1**  
Sociodemographic characteristics, mental disorders, and current suicidal ideation.

Construct	N	%	Suicidal ideation (%)
All participants	10,357	100	36.7
Age			
18–24	2415	23.3	43.9
25–34	3382	32.7	37.0
35–49	2414	23.3	30.4
50–64	1784	17.2	34.9
> 64	295	2.8	32.9
No data	67	0.6	–
Gender			
Male	3666	35.4	36.3
Female	6605	63.8	36.8
No data	86	0.8	–
Marital status			
Single	5403	55.3	38.9
Married	2328	22.5	29.3
Divorced	638	6.2	36.5
Living separated	223	2.2	34.1
Widowed	134	1.3	31.3
Other	1038	10	42.3
No data	573	5.5	–
Work status			
Working	5790	55.9	35.3
Sick leave (temporary)	1412	13.6	38.9
Disability pension	205	2.0	46.3
Retired	267	2.6	33.0
Other	276	2.7	45.7
No data	2393	23.1	–
Mental disorder			
Substance use disorder <sup>a</sup>	157	1.5	38.2
Schizophrenia	125	1.2	29.5
Major Depression (single)	1217	13.1	43.8
Major Depression (recurrent)	2201	21.3	48.6
Major Depression (remitted)	151	1.5	22.7
Dysthymia	343	3.3	37.9
Agoraphobia/Panic Disorder	691	6.7	25.3
Social Phobia	634	6.1	36.9
Specific Phobia	241	2.3	21.6
GAD	220	2.1	27.7
OCD	351	3.4	31.1
Adjustment disorder	812	7.8	19.8
PTSD	392	3.8	49.5
Somatoform disorder	409	3.9	26.7
Eating disorder	299	2.9	35.5
Psychological/behavioral factors associated with disorders/diseases classified elsewhere	100	1.0	16.0
Borderline Personality Disorder	200	1.9	67.5
No data	1814	17.5	–

Note. GAD = Generalized Anxiety Disorder; PTSD = Posttraumatic Stress Disorder; OCD = Obsessive Compulsive Disorder.

<sup>a</sup> Including alcohol use disorder.

procedures of the KODAP network have been reviewed and approved by the Ethics Committee of the Faculty of Psychology, Ruhr University Bochum.

## 2.2. Measures

### 2.2.1. Beck depression inventory II – Suicide item (BDI-II-SI; Hautzinger et al., 2009)

Suicidal ideation was measured using the respective self-report item (Item 9) from the German version of the BDI-II. The BDI-II-SI includes four response options: 0 = I don't have any thoughts of killing myself; 1 = I have thoughts of killing myself but have not carried them out; 2 = I would like to kill myself; 3 = I would kill myself if I had the chance. Participants are asked to answer the question in relation to the last seven days. A higher score indicates greater severity of suicidal ideation. Furthermore, BDI-II-SI scores >0 serve as an indicator of the presence of (passive/active) suicidal ideation. Single item assessments of suicidal

ideation are standard in large scaled studies (e.g., Rossom et al., 2017; Simon et al., 2013), and various studies have used the BDI-II-SI for this purpose (Campos et al., 2023). The BDI-II-SI has been shown to significantly correlate with more comprehensive measures of suicidal ideation (Campos et al., 2023) and to be associated with both risk of repeated suicide attempts and death by suicide (Green et al., 2015).

## 2.3. Statistical analysis

Statistical analyses were conducted using the Statistical Package for the Social Sciences (SPSS 28). Frequencies of suicidal ideation (BDI-II-SI > 0) are reported with regard to different socio-demographic markers (age, gender, marital status, employment status) as well as main diagnoses of mental disorders. Only mental disorders with a prevalence rate  $\geq 1\%$  within the current sample are going to be reported. A Chi-square tests was used to investigate sex differences in frequencies of suicidal ideation. A multiple logistic regression analysis was used to examine the variables' relative contribution to the prediction of the presence of suicidal ideation. A hierarchical linear regression analyses was used to examine the variables' relative contribution to the prediction of the severity of suicidal ideation. The latter model was not threatened by multicollinearity (all values of tolerance >0.25; all variance inflation factor values <5; Urban and Mayerl, 2006). Statistical significance was approved at  $p < .05$  for all analyses.

## 3. Results

Suicidal ideation (BDI-II-SI > 0) was reported by 36.7 % ( $n = 3795$ ) of the participants (see Table 1): 32.9 % ( $n = 3407$ ) affirmed the BDI-II-SI response option "I have thoughts of killing myself but have not carried them out"; 2.9 % ( $n = 298$ ) affirmed the BDI-II-SI response option "I would like to kill myself"; 0.9 % ( $n = 90$ ) affirmed the BDI-II-SI response option "I would kill myself if I had the chance". Suicidal ideation (BDI-II-SI > 0) was reported by 36.3 % ( $n = 1332$ ) of the male and 36.8 % ( $n = 2425$ ) of the female participants. Male and female participants did not differ regarding frequency of suicidal ideation,  $X^2(1) = 0.147, p = .701$ . On a descriptive level, suicidal ideation was most prevalent among young adults (aged 18–24 years), singles, those receiving disability pension as well as individuals suffering from Borderline Personality Disorder, PTSD, and recurrent Major Depression.

In a multiple logistic regression model (Nagelkerkes  $R^2 = 0.082$ ) with all predictor variables, Borderline Personality Disorder, PTSD and recurrent Major Depression were most strongly associated with the presence of suicidal ideation (OR  $\geq 2$ ; see Table 2). In a hierarchical linear regression analyses,  $F(28,10,240) = 24.54, p < .001$ , younger age, not being married, receiving disability pension, Major Depression (single and recurrent), PTSD, and Borderline Personality Disorder were most strongly associated with greater severity of suicidal ideation (see Table 3).

## 4. Discussion

The aim of the present study was to determine the prevalence of suicidal ideation in patients starting outpatient psychotherapy in Germany. The study revealed high point prevalence for suicidal ideation: 36.7 %. Men and women did not differ regarding prevalence and severity of suicidal ideation. On a descriptive level, suicidal ideation was most prevalent among young adults (aged 18–24 years), singles and those receiving disability pension. Furthermore, adults suffering from Borderline Personality Disorder, PTSD, or recurrent Major Depression suffered from suicidal ideation most often. The significance of these variables for both the presence and severity of suicidal ideation was confirmed in a logistic and a hierarchical regression analysis.

Prevalence rates in the current sample are many times higher than in the German general adult population (Forkmann et al., 2012; Ladwig et al., 2010; Nock et al., 2012) and they are also higher than those being

**Table 2**  
Results from a multiple logistic regression analyses predicting presence of suicidal ideation ( $n = 10,269$ ).

Construct	OR	(95 % CI)	<i>p</i>
Gender	0.96	0.88–1.05	0.386
Age	0.99	0.98–0.99	0.000
Single	0.95	0.80–1.02	0.106
Married	0.68	0.58–0.78	0.000
Divorced	0.84	0.68–0.1.03	0.105
Living separated	0.81	0.59–1.10	0.186
Widowed	0.74	0.49–1.17	0.152
Working	0.88	0.80–0.98	0.019
Sick leave (temporary)	1.05	0.91–1.20	0.495
Disability pension	1.67	1.23–2.27	0.001
Retired	1.38	1.02–1.86	0.035
Substance use disorder	1.32	0.94–1.86	0.101
Schizophrenia	0.76	0.50–1.14	0.194
Major Depression (single)	1.74	1.49–2.02	0.000
Major Depression (recurrent)	2.12	1.85–2.42	0.000
Major Depression (remitted)	0.65	0.43–0.96	0.032
Dysthymia	1.33	1.04–1.70	0.019
Agoraphobia/Panic Disorder	0.73	0.63–0.90	0.003
Social Phobia	1.17	0.96–1.41	0.109
Specific Phobia	0.59	0.42–0.82	0.002
GAD	0.90	0.65–1.23	0.523
OCD	0.91	0.71–1.13	0.481
Adjustment disorder	0.55	0.45–0.67	0.000
PTSD	2.05	1.64–2.57	0.000
Somatiform disorder	0.84	0.66–1.07	0.176
Eating disorder	1.13	0.87–1.47	0.327
Psychological/behavioral factors associated with disorders/diseases classified elsewhere	0.47	0.27–0.81	0.007
Borderline Personality Disorder	4.09	2.98–5.61	0.000

Note. GAD = Generalized Anxiety Disorder; PTSD = Posttraumatic Stress Disorder; OCD = Obsessive Compulsive Disorder.

**Table 3**  
Results from a multiple hierarchical regression analyses predicting severity of suicidal ideation ( $n = 10,269$ ).

Construct	B	$\beta$	t	<i>p</i>
Gender	-0.010	-0.008	-0.81	0.413
Age	-0.002	-0.050	-3.74	0.000
Single	-0.040	-0.033	-2.35	0.018
Married	-0.104	-0.073	-5.13	0.000
Divorced	-0.048	-0.019	-1.68	0.093
Living separated	-0.065	-0.016	-1.55	0.120
Widowed	-0.113	-0.022	-2.08	0.037
Working	-0.010	-0.009	-0.76	0.447
Sick leave (temporary)	0.032	0.019	1.67	0.095
Disability pension	0.175	0.041	4.03	0.000
Retired	0.088	0.024	2.18	0.029
Substance use disorder	0.088	0.18	1.18	0.069
Schizophrenia	-0.092	-0.017	-1.69	0.090
Major Depression (single)	0.143	0.078	6.63	0.000
Major Depression (recurrent)	0.196	0.135	10.59	0.000
Major Depression (remitted)	-0.118	-0.024	-2.41	0.016
Dysthymia	0.078	0.024	2.29	0.022
Agoraphobia/Panic Disorder	-0.081	-0.034	-3.13	0.002
Social Phobia	0.034	0.014	1.26	0.205
Specific Phobia	-0.131	-0.033	-3.30	0.001
GAD	-0.054	-0.013	-1.29	0.194
OCD	-0.021	-0.007	-0.63	0.527
Adjustment disorder	-0.137	-0.062	-5.59	0.001
PTSD	0.238	0.077	7.37	0.000
Somatiform disorder	-0.068	-0.022	-2.15	0.031
Eating disorder	0.029	0.008	0.79	0.428
Psychological/behavioral factors associated with disorders/diseases classified elsewhere	-0.143	-0.024	-2.40	0.016
Borderline Personality Disorder	0.527	0.123	12.19	0.000

Note. GAD = Generalized Anxiety Disorder; PTSD = Posttraumatic Stress Disorder; OCD = Obsessive Compulsive Disorder.

reported for patients with various mental disorders in an older study across several European countries (Bernal et al., 2007) – even though in that study lifetime prevalence rates were assessed, whereas in the present study point prevalence, i.e. suicidal ideation within the last seven days, was investigated. As such, it has to be stressed, that a significant proportion of German adult patients entering psychotherapy suffer from current suicidal ideation.

In most cases a rather low intensity of suicidal thoughts was found; only about 1 % of the sample affirmed the item response “I would kill myself if I had the chance”. Nonetheless, suicidal ideation has always to be taken seriously, especially since passive suicide ideation is comparatively predictive of suicidal behavior as active suicidal ideation (Liu et al., 2020) and since suicidal ideation shows a highly fluctuating course (Hallensleben et al., 2018), with the possibility of sudden escalations into suicidal behavior (Bryan et al., 2023; Paashaus et al., 2021). Unfortunately, (lifetime) suicide attempts are not routinely assessed in the KODAP dataset. Accordingly, it is neither possible to provide information on the prevalence of suicide attempts in the present study, nor is it possible to examine associations between suicidal ideation and suicide attempts. In the case of Major Depression and BPD, the high prevalence of suicidal ideation is in line with a significantly increased risk of suicide within these disorders (Scheerer et al., 2021). In the case of Schizophrenia and Substance Use Disorders, the comparatively lower prevalence rates found in the present study are in contrast to the fact that both disorders are associated with a higher risk of suicide than many other disorders (Scheerer et al., 2021). This highlights the only moderate association between suicidal ideation and suicidal behavior.

From a clinical perspective, the study results point to the necessity to routinely assess suicidal ideation and behavior at the beginning and across the course of psychotherapy. As a screening tool, the BDI-II-suicide item can give rise to a more comprehensive risk assessment (see also Uhl et al., 2023). However, it should be noted that the BDI-II-suicide item only captures suicidal ideation in the last seven days; yet, for treatment planning it is equally important to gather information on lifetime suicidal ideation and suicidal behavior. It might therefore be appropriate to use somewhat more comprehensive questionnaires to assess suicidal ideation and suicidal behavior, such as the Suicide Behaviors Questionnaire-Revised (Glaesmer et al., 2018) or the Suicide Ideation and Behavior Scale (Teismann et al., 2021), for screening purposes. In the case of less pronounced suicidal ideation, a brief therapeutic focus on this and the preparation of a safety plan (Stanley and Brown, 2012) may be sufficient; in the case of more pronounced suicidal ideation or in the aftermath of a suicide attempt, the use of suicide-specific therapy programs or modules (Teismann and Gysin-Maillart, 2022) is recommended. Treatments that do not specifically focus on suicidal ideation and behavior appear to have little suicide prevention effect (Cuijpers et al., 2013; Meerwijk et al., 2016).

There are several limitations to the present study. First, although a large number of the clinics in question have already joined the KODAP project, it is unclear to what extent the clinics included in this study are representative of all German university outpatient clinics for psychotherapy, non-university outpatient clinics as well as private practices (cf. Margraf et al., 2021). This is all the more true as all KODAP clinics have a cognitive-behavioral focus. Furthermore, causes for missing variables in the data sets are not systematically documented. Second, some disorders are underrepresented in the outpatient clinics involved. Therefore, the reported suicidal ideation rates of these disorders (e.g., schizophrenia) should be viewed with caution. In addition, it must be taken into account that a large proportion of patients suffer from more than one disorder, but the prevalence data is only reported with respect to the respective main diagnosis. Third, the information about suicidal ideation was self-reported and, thus, subject to potential recall bias and denial. However, self-reported data have been used in most studies on the epidemiology of suicidal ideation and behavior (e.g., Donath et al., 2019; Forkmann et al., 2012) and there are indications that self-reported suicidality has a stronger predictive importance for suicidal behavior



than interviewer-based assessments of suicidality (Joiner et al., 1999). Fourth, diagnoses were made using standardized or structured diagnostic interviews. However, there is no information on the inter-rater reliability at the different treatment sites.

Regardless of the various limitations, it can be stated that suicidal ideation is very common among adult patients who enter outpatient psychotherapy in Germany. Suicidal thoughts must therefore always be considered in treatment. Standard screening for suicidal ideation over the course of treatment can help to remain vigilant for this. Many therapists experience anxiety when dealing with suicidal patients (Conrad et al., 2020), so good training on how to deal with suicidal patients is necessary, and at best, a standard procedure for dealing with suicidal patients in the respective outpatient clinics. Finally, it should be emphasized that suicidal ideation can be treated well in an outpatient setting (Teismann and Gysin-Maillart, 2022) and that only in rare cases a referral to an inpatient setting is needed (BÄK et al., 2022).

### CRedit authorship contribution statement

**T. Teismann:** Conceptualization, Formal analysis, Methodology, Writing – original draft, Writing – review & editing. **T. Forkmann:** Conceptualization, Formal analysis, Methodology, Writing – review & editing. **H. Glaesmer:** Conceptualization, Formal analysis, Methodology, Writing – review & editing. **G.W. Alpers:** Investigation, Writing – review & editing. **E.L. Brakemeier:** Investigation, Writing – review & editing. **T. Brockmeyer:** Investigation, Writing – review & editing. **H. Christiansen:** Investigation, Writing – review & editing. **L. Fehm:** Investigation, Writing – review & editing. **J. Glombiewski:** Investigation, Writing – review & editing. **J. Heider:** Investigation, Writing – review & editing. **A. Hermann:** Investigation, Writing – review & editing. **J. Hoyer:** Investigation, Project administration, Writing – review & editing. **T. Kaiser:** Investigation, Writing – review & editing. **T. Klucken:** Investigation, Writing – review & editing. **T.M. Lincoln:** Investigation, Writing – review & editing. **W. Lutz:** Investigation, Writing – review & editing. **J. Margraf:** Investigation, Project administration, Writing – review & editing. **A. Pedersen:** Investigation, Writing – review & editing. **B. Renneberg:** Investigation, Writing – review & editing. **J. Rubel:** Investigation, Writing – review & editing. **A. Rudolph:** Investigation, Writing – review & editing. **H. Schöttke:** Investigation, Writing – review & editing. **B. Schwartz:** Investigation, Writing – review & editing. **R. Stark:** Investigation, Writing – review & editing. **J. Velten:** Data curation, Investigation, Project administration, Writing – review & editing. **U. Willutzki:** Investigation, Writing – review & editing. **G. Wilz:** Investigation, Writing – review & editing. **T. In-Albon:** Conceptualization, Formal analysis, Investigation, Writing – original draft, Writing – review & editing.

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### Declaration of competing interest

None.

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