**University of
Zurich^{UZH}**

**Zurich Open Repository and
Archive**

University of Zurich
University Library
Strickhofstrasse 39
CH-8057 Zurich
www.zora.uzh.ch

Year: 2021

Investigating the Transdiagnostic Value of Subjective Emptiness

Konjusha, Arta ; Hopwood, Christopher J ; Price, Adrian L ; Masuhr, Oliver ; Zimmermann, Johannes

Abstract: It is common for people with mental health problems to report feelings of emptiness. However, the association of subjective emptiness with specific disorders and its unique role within dimensional taxonomies of personality pathology is not well understood. The present study assesses the transdiagnostic value of subjective emptiness using a recently developed self-report measure in a mixed sample of 157 participants. The authors investigated the associations of emptiness with clinically relevant variables, including borderline personality disorder symptoms, depression, anxiety, suicidal ideation, and suicide attempts. Subjective emptiness showed strong positive relationships with all criteria. Regression models controlling for impairments of personality functioning, maladaptive personality traits, and current symptom distress supported the incremental validity of emptiness for specific disorder constructs and suicidality. These findings indicate that emptiness represents a facet of psychopathology that can be particularly useful for the classification of mental disorders, and in particular internalizing disorders involving self-dysfunction and detachment.

DOI: https://doi.org/10.1521/pedi_2021_35_510

Posted at the Zurich Open Repository and Archive, University of Zurich

ZORA URL: <https://doi.org/10.5167/uzh-213198>

Journal Article

Accepted Version

Originally published at:

Konjusha, Arta; Hopwood, Christopher J; Price, Adrian L; Masuhr, Oliver; Zimmermann, Johannes (2021). Investigating the Transdiagnostic Value of Subjective Emptiness. *Journal of Personality Disorders*, 35(5):788-800.

DOI: https://doi.org/10.1521/pedi_2021_35_510

Investigating the transdiagnostic value of subjective emptiness

Arta Konjusha

University of Kassel, Germany

Christopher J. Hopwood

University of California, Davis, USA

Adrian L. Price

California State University, San Marcos, USA

Oliver Masuhr

Asklepios Fachklinikum Tiefenbrunn, Rosdorf, Germany

Johannes Zimmermann

University of Kassel, Germany

Correspondence concerning this article should be addressed to Johannes Zimmermann,
Department of Psychology, University of Kassel, Holländische Str. 36-38, 34127 Kassel,
Germany, E-mail: jz@uni-kassel.de.

Abstract

It is common for people with mental health problems to report feelings of emptiness. However, the association of subjective emptiness with specific disorders and its unique role within dimensional taxonomies of personality pathology is not well understood. The present study assesses the transdiagnostic value of subjective emptiness using a recently developed self-report measure in a mixed sample of 157 participants. We investigated the associations of emptiness with clinically relevant variables including borderline personality disorder (BPD) symptoms, depression, anxiety, suicidal ideation, and suicide attempts. Subjective emptiness showed strong positive relationships with all criteria. Regression models controlling for impairments of personality functioning, maladaptive personality traits, and current symptom distress supported the incremental validity of emptiness for specific disorder constructs and suicidality. These findings indicate that emptiness represents a facet of psychopathology that can be particularly useful for the classification of mental disorders, and in particular internalizing disorders involving self-dysfunction and detachment.

Keywords: emptiness, personality disorder, borderline, internalizing, detachment

“There’s always something missing – I’m looking for something that’s not there”
(Elsner, Broadbear & Rao, 2018, p. 89).

This verbatim quote attempts to express the experience of emptiness, a subjective and highly unpleasant emotional state (Levy, 1984). Despite its apparent importance for psychopathology, research on emptiness has been limited in part because of challenges related to its assessment (Klonsky, 2008; Peteet, 2011; Zerach, 2016). First, given that it is defined by absence rather than presence, its nature is difficult to express in specific, non-vague terms, posing a challenge for content validity (Hazell, 1984; Klonsky, 2008). Second, emptiness is associated with many other similar states of mind, raising challenges with discriminant validity (Epstein, 1989). Third, the term is delineated differently in the literature (see Peteet, 2011).

A recent attempt to define the construct based on its core features pointed to a unidimensional construct including absence from one’s life, profound aloneness, and chronic unfulfillment (Price, Mahler, & Hopwood, 2020). These core markers of subjective emptiness comprise an omnipresent and profound feeling of detachment at the intrapersonal, interpersonal, and existential levels of experience (Price et al., 2020). The aim of this study was to investigate the relationship of emptiness with the clinical variables borderline personality disorder (BPD), depression, anxiety, suicidal ideation, and suicide attempts, as well as its specificity to BPD, depression, and suicidality with general psychopathology dimensions controlled.

The role of emptiness in psychopathology

Most existing research on emptiness has been in the context of its BPD, given it is listed as a symptom of that disorder (American Psychiatric Association, 2013). Research has suggested stronger connections between emptiness and indices of psychosocial morbidity than other BPD criteria (Ellison, Rosenstein, Chelminski, Dalrymple, & Zimmerman, 2016), and that it was among the most central clinical features of that disorder (Elsner et al., 2018; Miller,

Lewis, Huxley, Townsend, & Grenyer, 2018; Meares, Gerull, Stevenson, & Korner, 2011; Richman & Sokolove, 1992).

Research also showed that emptiness displayed a relationship with depression (Klonsky, 2008), dysthymia (Trull & Widiger, 1991), and depressive affect (Hazell, 1984). Qualitative studies further established that depression encompasses states of emptiness such as disconnection from the world (Karp, 1996; Rhodes, Hackney, & Smith, 2018), being cut off from others (Ridge, 2008), and agoraphobia (Milrod, 2007). A quantitative study confirmed a significant moderate correlation with anxiety, although this association did not survive with depression controlled (Klonsky, 2008). Klonsky (2008) hypothesized that emptiness might have a stronger connection to depression than to anxiety due to its characteristic low positive affect, given that depressive states can be distinguished from anxiety by reduced positive affectivity (Clark & Watson, 1991).

Emptiness may play a particularly important role as a risk factor for suicidality (Blasco-Fontecilla et al., 2012; Delgado-Gomez, Blasco-Fontecilla, Sukno, Ramos-Plasencia, & Baca-Garcia, 2012). In one study, the experience of emptiness distinguished major suicide and non major suicide repeaters (Blasco-Fontecilla, Baca-Garcia, Courtet, Nieto, & De Leon, 2015). Other studies provide evidence that emptiness was predictive of suicidal ideation (Klonsky, 2008) and suicidal behaviour (Lindner, 2010). Further, emptiness has been observed as a common emotional state prior to and after suicide attempts (Chesley & Loring-McNulty, 2003; Schnyder, Valach, Bichsel, & Michel, 1999).

This range of correlates suggests that emptiness transcends BPD as a significant diagnostic marker, and that it would be relevant to assess whether or not patients meet criteria for BPD. However, the general relation of emptiness with a broad range of diagnostic constructs remains poorly understood. Price et al. (2020) found that subjective emptiness was moderately to strongly correlated with BPD (with the emptiness criterion removed), depressivity, anhedonia, withdrawal, identity problems, and low meaning or purpose in life.

When connected to contemporary hierarchical models of psychopathology (Krueger et al., 2018; Zimmermann, Kerber, Rek, Hopwood, & Krueger, 2019) such as the alternative DSM-5 model for personality disorders (AMPD) in DSM-5 Section III (American Psychiatric Association, 2013), this pattern suggests that emptiness is related to personality dysfunction and traits particularly involving internalizing dimensions such as detachment and negative affectivity. These findings coincide with the numerous descriptions of the feeling of emptiness made in recent decades. However, in contrast to the other BPD criteria, emptiness does not appear in the DSM-5 model of maladaptive personality traits (Bach & Sellbom, 2016; Price et al., 2020).

The goals of the current study were to translate the recently developed Subjective Emptiness Scale to German, further explore its associations with specific mental disorders and general dimensions of psychopathology, and evaluate its incremental validity for indicating specific clinical constructs with broad indicators of personality dysfunction and maladaptive traits controlled. In line with prior research, we hypothesized that emptiness would be associated with a wide range of clinical constructs, particularly those involving internalizing problems, and that it would provide unique information about BPD, depression, and suicidality (but not anxiety) beyond dimensions of personality pathology and current symptom distress.

Method

Procedure

An online survey of German-speaking participants was conducted using the “LimeSurvey” platform. No additional inducements to participate were offered. Scales and items were presented in a randomized order. Participants of the non-clinical sample were recruited via personal contacts and social media platforms. As the study involved sensitive issues, contact data of help portals were displayed in the online survey. The recruitment of the clinical sample took place via the Asklepios Fachklinikum Tiefenbrunn. The study was

approved by the Ethics Committee of the Department of Humanities of the University of Kassel. All participants provided written consent before participation.

Participants

We sought to collect a mixed sample to increase variability in subjective emptiness and psychopathology. The data comprised a total of 157 participants that consisted of a non-clinical and a clinical sample. The non-clinical sample comprised 114 participants. Eligible participants were aged 18 years or older. The average age was 27.6 years ($SD = 9$; range = 19-82) and 81 (71%) were female. Six reported being in psychotherapy, of which 5 were in outpatient and 1 in inpatient treatment. In the past, 22 (19%) received outpatient psychotherapy, of which 5 (23%) reported having been treated as inpatients. The clinical sample consisted of 43 participants. Four participants who took less than 5 minutes to finish the survey (Median = 12.4 minutes) were previously excluded. The average age was 34.6 years ($SD = 12.1$; range = 18-58) and 30 (71%) were female. At the time of the survey, all participants in this sample were undergoing inpatient psychological treatment, of whom 11 (26%) stated they were receiving outpatient treatment as well. 38 (91%) of the participants have received psychotherapeutic treatment in the past, 32 (84%) were treated as outpatients and 26 (68%) as inpatients.

Measures

Level of Personality Functioning Scale – Brief Form 2.0 (LPFS-BF 2.0). The LPFS-BF 2.0 (German version: Zimmermann et al., in press) is a 12-item self-report measure of characteristic impairments in self-other personality functions, as set out in DSM-5 Section III and ICD-11. Items are rated on a 4-point Likert-type response scale from 0 = *Very false or often false* to 3 = *Very true or often true*. In one sample, Cronbach's alpha coefficients were $\alpha = .79$ for the self-functioning subscale and $\alpha = .71$ for the interpersonal functioning subscale (Weekers, Hutsebaut, & Kamphuis, 2018).

Personality Inventory for DSM-5, Brief Form Plus (PID5BF+). The PID5BF+ (German version: Kerber et al., 2019) is a 34-item self-report measuring personality pathology. It adopts a hierarchical structure comprising the five maladaptive trait domains Negative Affectivity, Detachment, Antagonism, Disinhibition, and Psychoticism from the AMPD in DSM-5 Section III and the maladaptive trait domain Anankastia from the ICD-11. Items are rated on a 4-point scale from 0 = *Very false or often false* to 3 = *Very true or often true*. Average internal consistency (McDonald's omega ω) of scale scores was satisfactory with $\omega = .81$ for the trait domains, only Anankastia had a $\omega = .58$ (Kerber et al., 2019).

Symptom-Checklist-K-9 (SCL-K-9). The SCL-K-9 is a self-report questionnaire constructed to evaluate global symptom severity (German version: Klaghofer & Brähler, 2001). The respondent is requested to rate each of the nine items on a 5-point scale from 0 = *Not at all* to 4 = *Extremely*. The internal consistency of the total score was $\alpha = .87$ (Klaghofer & Brähler, 2001).

Subjective Emptiness Scale (SES). The SES (Price et al. 2020) was developed as a 5-item self-report tool for assessing feelings of emptiness¹. The respondent is questioned to rate each item on a 4-point Likert scale from 0 = *Not at all true* to 3 = *Very true*. Cronbach's alpha of the total score was $\alpha = .88$ and $\alpha = .89$ (Price et al., 2020). The German version of the SES was translated independently by two authors of this study (AK and JZ) and the backtranslation was approved by one of the original authors (CH).

Borderline Symptom List-23 (BSL-23). The BSL-23 (German version: Bohus et al., 2009) is a self-report tool to assess the symptomatology of BPD. It contains 23 items, which are rated on a 5-point Likert-type response scale from 0 = *Not at all* to 4 = *Very strong*. Since none of the items directly reference emptiness, all of them were included in this study. The

¹ We initially applied an early version of the SES with 7 items, from which two items were excluded in the final report of the original English version. Our final analyses were performed using the 5-item version.

total score of the BSL-23 revealed high internal consistency ($\alpha = .94-.97$) (Bohus et al., 2009).

Patient Health Questionnaire-9 (PHQ-9). The PHQ-9 (German version: Gräfe, Zipfel, Herzog, & Löwe, 2004) is a 9-item self-report questionnaire in which each item scores one of the 9 DSM-IV criteria on major depressive disorder. Items are assessed on a 4-point scale from 0 = *Not at all* to 3 = *Nearly every day*. Scores on the PHQ-9 were found to yield high internal consistency ($\alpha = .88$) (Gräfe et al., 2004).

Cross-Cutting Dimensional Anxiety Scale for DSM-5 (Cross-D). The Cross-D (German version: Knappe et al., 2013) is a dimensional self-report measure constructed to evaluate features that are common across anxiety disorders. The scale includes 10 items, which are scored on a 5-point scale from 0 = *Never* to 4 = *All of the time*. Cronbach's alpha of the total score was $\alpha = .90$ (Knappe et al., 2013).

Beck Scale for Suicide Ideation (BSS). The BSS is a self-report questionnaire used for measuring various facets of suicidal ideation (German version: Kliem, Lohmann, Möble, & Brähler, 2017). Twenty-one statement groups are implied in this scale. Each statement group comprises three sentences outlining different degrees of suicidal thoughts and reflecting 3-point scales. For example, statement group one is rated from 0 = *I have a moderate to strong wish to live* to 2 = *I have no wish to live* (English translation by authors). In this study, only the screening items for suicidal ideation (items 1-5) and the item referring to the frequency of suicide attempts (item 20) were applied. The total score of the BSS-Screen showed satisfactory internal consistency ($\alpha = .97$). Item 20 is not part of the BSS score (Kliem et al., 2017).

Statistical Analyses

To check whether the German version of the SES represents a unidimensional construct, we conducted a confirmatory factor analysis (CFA) based on the polychoric correlation matrix in the combined sample using WLSMV estimation. Model fit was

evaluated by inspecting the comparative fit index ($CFI > .95$), the root mean square error of approximation ($RMSEA < .06$), and the standardized root mean squared residual ($SRMR < .08$; Hu & Bentler, 1999). To analyze the transdiagnostic value of subjective emptiness, hypothesis testing consisted of two stages. First, correlations between emptiness and criterion variables were examined. Second, hierarchical regressions were computed to investigate whether subjective emptiness, which was included in the second step of the models, could provide unique information above and beyond impairments in personality functioning, maladaptive traits, and current symptom distress. All analyses were performed using the statistical environment R 3.6 (R Core Team, 2019).

Results

Results of the CFA in the combined sample suggested that the five SES items indeed represent a unidimensional construct: A tau-congeneric measurement model with uncorrelated residuals fit the data well, $\chi^2(5) = 8.50$, $p = .13$, $CFI = 1.00$, $RMSEA = .07$, 90% CI [0, .14], $SRMR = .03$. Standardized factor loadings ranged from .84 (Item 5) to .94 (Item 1). Table 1 presents the descriptive statistics for all variables, the intercorrelations between subjective emptiness and other variables, and the squared part correlation coefficients of subjective emptiness with specific psychopathology variables controlling for general dimensions of psychopathology. Participants in the clinical sample scored significantly higher on subjective emptiness ($M = 8.19$ ($SD = 4.48$)) than participants in the non-clinical sample ($M = 1.97$ ($SD = 2.59$)) ($t(52.967) = -8.56$, $p < .001$). Most of the variables revealed moderate to strong significant associations with each other (the full Pearson and Spearman correlation matrices are accessible in the Supplement). Correlation analyses showed a strong relationship between emptiness and BPD ($r = .87$, $p < .001$, 95% CI [.82, .90]), depression ($r = .82$, $p < .001$, 95% CI [.76, .87]), anxiety ($r = .77$, $p < .001$, 95% CI [.70, .83]), suicidal ideation ($r = 0.81$, $p < .001$, 95% CI [.74, .86]), and suicide attempts ($r = .60$, $p < .001$, 95% CI [.48, .69]). However, differences in the magnitude of these correlations were also apparent. The correlation of

emptiness with BPD was significantly higher than with depression ($t(154) = 2.85, p < .01$), anxiety ($t(154) = 4.34, p < .001$), suicidal ideation ($t(154) = 2.70, p < .001$), and suicide attempts ($t(154) = 8.23, p < .001$). The relationship between emptiness and depression was higher than that between emptiness and anxiety ($t(154) = 1.92, p = .030$). We also found that the link between emptiness and suicidal ideation was higher than for suicide attempts ($t(154) = 5.65, p < .001$). Moderate to strong associations were found between subjective emptiness and general dimensions of psychopathology, with r s between .46 and .77, all p s $< .001$, with the exception of antagonism, $r = .10, p = .20$. Aside current symptom distress, emptiness showed the strongest correlation with negative affectivity ($r = .67, p < .001$), detachment ($r = .71, p < .001$), and impairments in self-functioning ($r = .76, p < .001$). The relationship between subjective emptiness and impaired self-functioning was significantly higher than that with impaired interpersonal functioning ($t(154) = 3.59, p < .001$).

Hierarchical regression analyses revealed that subjective emptiness provided incremental information, controlling for impairments in personality functioning, maladaptive traits, and current symptom distress, for BPD ($F(1, 146) = 49.50, p < .001, \Delta R^2 = .042$), depression ($F(1, 146) = 20.94, p < .001, \Delta R^2 = .025$), suicidal ideation ($F(1, 146) = 36.43, p < .001, \Delta R^2 = .075$), and suicide attempts ($F(1, 146) = 8.58, p = .004, \Delta R^2 = .032$), but not for anxiety ($F(1, 146) = 2.78, p = .097, \Delta R^2 = .004$). These effects are moderate to small (Cohen, 1988) and notable given the substantial range of psychopathology controlled. These findings suggest a particularly important role for emptiness in indicating a range of clinically important internalizing problems.

Discussion

The goal of this study was to evaluate the transdiagnostic value of subjective emptiness by examining its relationship with a range of specific mental health variables, and its incremental for clinically significant outcomes with major dimensions of mental disorder controlled. In line with our expectations, strong positive correlations were found between

emptiness and BPD, depression, anxiety, suicidal ideation, and suicide attempts. Nevertheless, significant differences in certain coefficients were observed, suggesting that emptiness is particularly related to internalizing constructs involving negative affectivity and detachment. When statistically controlling general dimensions of psychopathology, emptiness made a significant contribution in predicting several clinically important outcomes.

The strongest correlate of emptiness was BPD. These findings matched the results of other studies, stating that emptiness is a distinctive criterion for BPD, with higher intensity than in other disorders (Elsner et al., 2018; Meares et al., 2011; Miller et al., 2018; Richman & Sokolove, 1992). Although emptiness is a diagnostic criterion for BPD and is included in the category of impairments in self-functioning (American Psychiatric Association, 2013), it is absent from the DSM-5 model of maladaptive personality traits (Bach & Sellbom, 2016; Price et al., 2020). Our findings highlight the importance of including emptiness in the diagnostic criteria for personality pathology.

However, the present data also suggest that the clinical value of emptiness is not restricted to personality pathology, but rather support results on the presence of emptiness in depressed (Karp, 1996; Klonsky, 2008; Ratcliffe, 2014; Rhodes et al., 2018; Ridge, 2008) and anxious people (Klonsky, 2008) as well. As in Klonsky (2008), the relationship of emptiness with depression was significantly higher than that with anxiety. Klonsky (2008) hypothesized that a stronger connection of emptiness and depression could be due to the fact that both are characterized by low positive rather than high negative affect like anxiety. We found that emptiness was significantly but not appreciably related to anxiety with other major psychopathology dimensions controlled. In contrast, the incremental effect size was 2.5% for predicting depression. Furthermore, the strong association between emptiness and detachment in this study also supports Klonsky's formulation, given the close correspondence of detachment and low positive affectivity (Watson, Stanton, Khoo, Ellickson-Larew, & Stasik-O'Brien, 2019).

Finally, the present study provides additional evidence for the role of emptiness in suicidal ideation and behavior (Klonsky, 2008). Emptiness explained an addition of 7.5% of the variance in suicidal ideation and 3.2% of the variance in suicidal attempts with major psychopathology dimensions controlled, which illustrates its unique value as a risk factor for suicidal ideation (Blasco-Fontecilla et al., 2012; Delgado-Gomez et al., 2012).

Limitations and Future Directions

This study adds to the evidence base for the diagnostic importance of subjective emptiness, but it also has several limitations that should be addressed in further research. All variables were measured through self-report questionnaires. Although self-report is perhaps the most intuitive way to assess a highly subjective construct like emptiness, it is also true that different methods can offer new insights into this construct and its role in delineating psychopathology. The use of brief measures of psychopathology may have limited precision in estimating individual scores. Moreover, the absence of trait facets constrained our ability to examine the placement of subjective emptiness within the maladaptive trait hierarchy (Krueger et al., 2018). Likewise, we did not measure a number of specific forms of psychopathology, and the connection between subjective emptiness to narcissistic and antisocial personality disorder (Gunderson & Ronningstam, 2001; Zerach, 2016), and schizophrenia spectrum psychopathology (Zanderson & Parnas, 2019), and other diagnoses remains an open question. No sociodemographic or moderating variables were considered, which limits the generalizability of the results. Moreover, mentally ill people were over-represented in our sample compared to the general population. Although this increased the likelihood to detect associations (i.e., power), it limits the generalizability of the effect sizes. Another limiting factor is the variables' deviation from the normal distribution, which is why the correlations were cross-checked using Spearman rho estimates (see Supplement). Finally, no distinction was made in this study between a state and trait based emptiness, although this distinction may be clinically important (Klonsky, 2008; Meares et al., 2011).

Conclusion

In summary, this study expands knowledge on the association of emptiness with psychopathology and suicidal behavior. In this study, emptiness was a very strong and specific correlate of a variety of internalizing constructs, and in particular depression, borderline personality, and suicidality. Associations were specific in that emptiness was not associated with externalizing variables such as antagonism. These findings point to the need for more research on emptiness, and both clinical and empirical consideration of the construct beyond the diagnosis of BPD. This includes the integration of emptiness within emerging dimensional models such as the AMPD or HiTOP (Hierarchical Taxonomy of Psychopathology) (Krueger et al., 2018). This research could connect the large theoretical literature and documented relevance of subjective emptiness to the potential for dimensional models to enable better mental health care and maladaptive personality traits could be valuable in the planning of therapy (Hopwood, 2018; Kerber et al., 2019). Thus situating emptiness within evidence-based models could have significant clinical value, particularly considering the fact that targeted psychotherapeutic interventions for the treatment of emptiness are lacking or do not seem efficacious to date (Elsner et al., 2018).

References

- American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders (DSM-5®)*. American Psychiatric Pub.
- Bach, B., & Sellbom, M. (2016). Continuity between DSM-5 categorical criteria and traits criteria for borderline personality disorder. *The Canadian Journal of Psychiatry*, 61(8), 489-494.
- Blasco-Fontecilla, H., Baca-Garcia, E., Courtet, P., Nieto, R. G., & De Leon, J. (2015). Horror vacui: Emptiness might distinguish between major suicide repeaters and nonmajor suicide repeaters: a pilot study. *Psychotherapy and Psychosomatics*, 84(2), 117-119.
- Blasco-Fontecilla, H., Delgado-Gomez, D., Ruiz-Hernandez, D., Aguado, D., Baca-Garcia, E., & Lopez-Castroman, J. (2012). Combining scales to assess suicide risk. *Journal of Psychiatric Research*, 46(10), 1272-1277.
- Bohus, M., Kleindienst, N., Limberger, M. F., Stieglitz, R.-D., Domsalla, M., Chapman, A. L., . . . Wolf, M. (2009). The short version of the Borderline Symptom List (BSL-23): development and initial data on psychometric properties. *Psychopathology*, 42(1), 32-39.
- Chesley, K., & Loring-McNulty, N. E. (2003). Process of suicide: Perspective of the suicide attempter. *Journal of the American Psychiatric Nurses Association*, 9(2), 41-45.
- Clark, L. A., & Watson, D. (1991). Tripartite model of anxiety and depression: psychometric evidence and taxonomic implications. *Journal of Abnormal Psychology*, 100(3), 316-336.
- Cohen, J. (1988). *Statistical power analysis for behavioral sciences*. Hillsdale, NY: Lawrence Erlbaum Associates.

- Delgado-Gomez, D., Blasco-Fontecilla, H., Sukno, F., Ramos-Plasencia, M. S., & Baca-Garcia, E. (2012). Suicide attempters classification: Toward predictive models of suicidal behavior. *Neurocomputing*, 92, 3-8.
- Ellison, W. D., Rosenstein, L., Chelminski, I., Dalrymple, K., & Zimmerman, M. (2016). The clinical significance of single features of borderline personality disorder: Anger, affective instability, impulsivity, and chronic emptiness in psychiatric outpatients. *Journal of Personality Disorders*, 30(2), 261-270.
- Elsner, D., Broadbear, J. H., & Rao, S. (2018). What is the clinical significance of chronic emptiness in borderline personality disorder? *Australasian Psychiatry*, 26(1), 88-91.
- Epstein, M. (1989). Forms of emptiness: Psychodynamic, meditative and clinical perspectives. *The Journal of Transpersonal Psychology*, 21(1), 61-71.
- Gräfe, K., Zipfel, S., Herzog, W., & Löwe, B. (2004). Screening psychischer Störungen mit dem "Gesundheitsfragebogen für Patienten (PHQ-D)" [Screening for psychiatric disorders with the Patient Health Questionnaire (PHQ). Results from the German validation study]. *Diagnostica*, 50(4), 171-181.
- Gunderson, J. G., & Ronningstam, E. (2001). Differentiating narcissistic and antisocial personality disorders. *Journal of Personality Disorders*, 15(2), 103-109.
- Hazell, C. G. (1984). A scale for measuring experienced levels of emptiness and existential concern. *The Journal of Psychology*, 117(2), 177-182.
- Hopwood, C. J. (2018). A framework for treating DSM-5 alternative model for personality disorder features. *Personality and Mental Health*, 12(2), 107-125.
- Hu, L. T., & Bentler, P. M. (1999): Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55.
- Karp, D. A. (1996). *Speaking of sadness: Depression, disconnection, and the meanings of illness*. Oxford University Press.

Kerber, A., Schultze, M., Müller, S., Wright, A. G., Spitzer, C., Krueger, R., . . .

Zimmermann, J. (2019). Development of a short and reliable measure for DSM-5 and ICD-11 maladaptive personality traits using ant colony optimization algorithms.

Klaghofer, R., & Brähler, E. (2001). Konstruktion und Teststatistische Prüfung einer

Kurzform der SCL-90-R [Construction and test statistical evaluation of a short version of the SCL-90-R]. *Zeitschrift für Klinische Psychologie, Psychiatrie und Psychotherapie*, 49(2), 115-124.

Kliem, S., Lohmann, A., Mößle, T., & Brähler, E. (2017). German Beck scale for suicide ideation (BSS): Psychometric properties from a representative population survey.

BMC psychiatry, 17(1), 389.

Klonsky, E. D. (2008). What is Emptiness? Clarifying the 7th Criterion for Borderline Personality Disorder. *Journal of Personality Disorders*, 22(4), 418-426.

Knappe, S., Klotsche, J., Heyde, F., Hiob, S., Siegert, J., Hoyer, J., . . . Beesdo-Baum, K. (2013). Test-retest reliability and sensitivity to change of the dimensional anxiety scales for DSM-5. *CNS Spectrums*, 19(3), 256-267.

Krueger, R. F., Kotov, R., Watson, D., Forbes, M. K., Eaton, N. R., Ruggero, C. J. . . . Bagby, R. M. (2018). Progress in achieving quantitative classification of psychopathology. *World Psychiatry*, 17(3), 282-293.

Levy, S. T. (1984). Psychoanalytic perspectives on emptiness. *Journal of the American Psychoanalytic Association*, 32(2), 387-404.

Lindner, R. (2010). Psychodynamic hypothesis about suicidality in elderly men.

Psychotherapie, Psychosomatik, medizinische Psychologie, 60(8), 290-297.

Meares, R., Gerull, F., Stevenson, J., & Korner, A. (2011). Is self disturbance the core of borderline personality disorder? An outcome study of borderline personality factors.

Australian & New Zealand Journal of Psychiatry, 45(3), 214-222.

- Miller, C. E., Lewis, K. L., Huxley, E., Townsend, M. L., & Grenyer, B. F. (2018). A 1-year follow-up study of capacity to love and work: What components of borderline personality disorder most impair interpersonal and vocational functioning? *Personality and Mental Health, 12*(4), 334-344.
- Milrod, B. (2007). Emptiness in agoraphobia patients. *Journal of the American Psychoanalytic Association, 55*(3), 1007-1026.
- Peteet, J. R. (2011). Approaching emptiness: Subjective, objective and existential dimensions. *Journal of Religion and Health, 50*(3), 558-563.
- Plener, P. L., Kapusta, N. D., Brunner, R., & Kaess, M. (2014). Nicht-suizidales selbstverletzendes Verhalten (NSSV) und Suizidale Verhaltensstörung (SVS) im DSM-5 [Non-suicidal self-injury (NSSI) and suicidal behavior disorder in the DSM-5]. *Zeitschrift Kinder Jugendpsychiatrie Psychotherapie, 42*(6), 405-413.
- Price, A. L., Mahler, H. I., & C. J. Hopwood. (2020). Subjective Emptiness: A Clinically Significant Trans-diagnostic Psychopathology Construct.
- R Core Team (2019). R: A language and environment for statistical computing. Vienna, Austria: R Foundation for Statistical Computing. Retrieved from <https://www.R-project.org/>
- Ratcliffe, M. (2014). *Experiences of depression: A study in phenomenology*. OUP Oxford.
- Rhodes, J. E., Hackney, S. J., & Smith, J. A. (2018). Emptiness, engulfment, and life struggle: An interpretative phenomenological analysis of chronic depression. *Journal of Constructivist Psychology, 32*(4), 390-407.
- Richman, N. E., & Sokolove, R. L. (1992). The experience of aloneness, object representation, and evocative memory in borderline and neurotic patients. *Psychoanalytic Psychology, 9*(1), 77-91.

- Ridge, D. (2008). *Recovery from depression using the narrative approach: a guide for doctors, complementary therapists and mental health professionals*. Jessica Kingsley Publishers.
- Schnyder, U., Valach, L., Bichsel, K., & Michel, K. (1999). Attempted suicide. Do we understand the patients' reasons? *General Hospital Psychiatry*, 21(1), 62-69.
- Trull, T. J., & Widiger, T. A. (1991). The relationship between borderline personality disorder criteria and dysthymia symptoms. *Journal of Psychopathology and Behavioral Assessment*, 13(2), 91-105.
- Watson, D., Stanton, K., Khoo, S., Ellickson-Larew, S., & Stasik-O'Brien, S. M. (2019). Extraversion and psychopathology: A multilevel hierarchical review. *Journal of Research in Personality*, 81, 1-10.
- Weekers, L. C., Hutsebaut, J., & Kamphuis, J. H. (2018). The Level of Personality Functioning Scale-Brief Form 2.0: Update of a brief instrument for assessing level of personality functioning. *Personality and Mental Health*, 13(1), 3-14.
- Zanderson M., & Parnas, J. (2019). Identity disturbance, feelings of emptiness, and the boundaries of the schizophrenia spectrum. *Schizophrenia Bulletin*, 45(1), 106-113.
- Zerach, G. (2016). The mediating role of emptiness and materialism in the association between pathological narcissism and compulsive buying. *International Journal of Mental Health and Addiction*, 14(4), 424-437.
- Zimmermann, J., Kerber, A., Rek, K., Hopwood, C. J., & Krueger, R. F. (2019). A brief but comprehensive review of research on the Alternative DSM-5 Model for Personality Disorders. *Current Psychiatry Reports*, 21(9), 92.
- Zimmermann, J., Müller, S., Bach, B., Hutsebaut, J., Hummelen, B., & Fischer, F. (in press). A common metric for self-reported severity of personality disorder. *Psychopathology*.

Table 1*Descriptive Statistics, Bivariate and Squared Part Correlations*

Variables	<i>M</i>	<i>Mdn</i>	<i>SD</i>	α	<i>r</i>	ΔR^2
1. Subjective emptiness	3.68	2.00	4.24	.91		
2. Current symptom distress	11.29	9.00	8.38	.89	.77***	
3. Self-functioning	1.26 ^a	1.17 ^a	0.83	.88	.76***	
4. Interpersonal functioning	0.80 ^a	0.67 ^a	0.56	.73	.61***	
5. Negative affectivity	7.60	7.00	4.68	.86	.67***	
6. Detachment	4.22	3.00	3.66	.81	.71***	
7. Disinhibition	5.21	5.00	3.11	.71	.46***	
8. Antagonism	3.80	4.00	2.92	.70	.10	
9. Psychoticism	4.33	3.00	3.56	.78	.60***	
10. Anankastia	4.49	4.00	2.74	.75	.50***	
11. Borderline	0.86 ^a	0.39 ^a	0.96	.97	.87***	.042***
12. Depression	9.08	7.00	6.83	.91	.82***	.025***
13. Anxiety	13.21	11.00	9.72	.93	.77***	.004
14. Suicidal ideation	1.06	0.00	2.05	.89	.81***	.075***
15. Suicide attempts	0.17	0.00	0.50	-	.60***	.032*

Note. $N = 157$. * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. All scales, except of Variables 3, 4, and 11 were formed using sum values. *M* = Mean. *Mdn* = Median. ^a = Mean/Median of the mean value. *SD* = standard deviation. α = Cronbach's Alpha. For suicide attempts, α could not be investigated since the scale consisted of a single item. *r* = Bivariate correlation between subjective emptiness and Variable. ΔR^2 = Squared part correlation coefficient of subjective emptiness and criterium controlling for Variables 2-10.

Appendix

Innere Leere Skala

Anweisungen: Im Folgenden finden Sie eine Liste von Aussagen, die verschiedene Gefühle oder Verhaltensweisen beschreiben. Geben Sie für jede Aussage an, wie sehr sie für Ihre Gefühle und Verhaltensweisen in den letzten zwei Wochen zutrifft. Ihre Antwort sollte sich darauf beziehen, ob Sie das Gefühl oder das Verhalten erlebt haben oder nicht. Es geht nicht darum, wie häufig Sie es erlebt haben. Bitte geben Sie die Antwort an, die Ihnen als erstes in den Sinn kommt.

	Stimmt überhaupt nicht	Stimmt ein wenig	Stimmt weitgehend	Stimmt voll und ganz
1. Ich fühle mich innerlich leer.	0	1	2	3
2. Ich fühle mich in meinem eigenen Leben abwesend.	0	1	2	3
3. Ich fühle mich unerfüllt, egal was ich mache.	0	1	2	3
4. Ich fühle mich, als ob ich zum Leben gezwungen werde.	0	1	2	3
5. Ich fühle mich ganz allein auf der Welt.	0	1	2	3

Supplemental Materials

Table S1

Descriptive Statistics for Non-Clinical and Clinical Sample

Variables	Sample			
	Non-Clinical		Clinical	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1. Subjective emptiness	1.97	2.59	8.19	4.48
2. Borderline	0.54 ^a	0.65	1.72 ^a	1.12
3. Depression	6.85	5.32	15.00	6.90
4. Anxiety	10.17	8.33	21.28	8.54
5. Suicidal ideation	0.36	1.02	2.93	2.81
6. Suicide attempts	0.03	0.21	0.56	0.77
7. Current symptom distress	9.01	6.97	17.33	8.86
8. Self-functioning	0.98 ^a	0.68	2.00 ^a	0.76
9. Interpersonal functioning	0.62 ^a	0.43	1.27 ^a	0.59
10. Negative Affectivity	6.62	4.45	10.19	4.33
11. Detachment	3.00	2.52	7.47	4.23
12. Disinhibition	4.75	2.78	6.42	3.61
13. Antagonism	4.10	2.73	3.02	3.28
14. Psychoticism	3.68	3.13	6.05	4.06
15. Anankastia	3.81	2.41	6.30	2.76

Note. *N* = 157. All scales, except of Variables 2, 8, and 9, were formed using sum values. *M* = Mean of the sum value. ^a = Mean of the mean value. *SD* = standard deviation.

Table S2*Pearson Intercorrelations Between Variables*

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Subjective emptiness															
2. Borderline	.87***														
3. Depression	.82***	.90***													
4. Anxiety	.77***	.83***	.83***												
5. Suicidal ideation	.81***	.83***	.73***	.62***											
6. Suicide attempts	.60***	.68***	.57***	.50***	.70***										
7. Current symptom distress	.77***	.87***	.85***	.85***	.67***	.53***									
8. Self-functioning	.76***	.80***	.78***	.75***	.65***	.48***	.75***								
9. Interpersonal functioning	.61***	.59***	.59***	.54***	.51***	.39***	.54***	.68***							
10. Negative Affectivity	.67***	.69***	.69***	.74***	.51***	.40***	.76***	.71***	.54***						
11. Detachment	.71***	.63***	.60***	.59***	.66***	.46***	.56***	.61***	.60***	.47***					
12. Disinhibition	.46***	.58***	.53***	.57***	.45***	.43***	.58***	.54***	.48***	.53***	.47***				
13. Antagonism	.10	.14	.06	.17*	-.01	-.10	.21**	.20*	.24**	.27***	.19*	.29***			
14. Psychoticism	.60***	.62***	.50***	.62***	.52***	.41***	.59***	.58***	.49***	.55***	.53***	.59***	.37***		
15. Anankastia	.50***	.53***	.46***	.48***	.43***	.34***	.52***	.53***	.49***	.52***	.43***	.41***	.26***	.48***	

Note. $N = 157$. * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

Table S3*Spearman Intercorrelations Between Variables*

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Subjective emptiness															
2. Borderline	.81***														
3. Depression	.78***	.87***													
4. Anxiety	.73***	.85***	.82***												
5. Suicidal ideation	.72***	.67***	.64***	.57***											
6. Suicide attempts	.45***	.44***	.41***	.42***	.48***										
7. Current symptom distress	.70***	.85***	.83***	.82***	.61***	.41***									
8. Self-functioning	.74***	.81***	.76***	.74***	.63***	.43***	.74***								
9. Interpersonal functioning	.59***	.61***	.59***	.54***	.53***	.42***	.55***	.67***							
10. Negative Affectivity	.69***	.71***	.67***	.73***	.54***	.32***	.72***	.69***	.56***						
11. Detachment	.67***	.61***	.54***	.56***	.55***	.38***	.51***	.59***	.55***	.49***					
12. Disinhibition	.42***	.50***	.46***	.50***	.34***	.36***	.50***	.49***	.49***	.49***	.43***				
13. Antagonism	.11	.19*	.08	.14	.10	-.11	.18*	.19*	.23**	.27***	.21**	.33***			
14. Psychoticism	.53***	.54***	.45***	.56***	.50***	.34***	.51***	.52***	.45***	.50***	.51***	.55***	.37***		
15. Anankastia	.48***	.54***	.44***	.49***	.45***	.31***	.54***	.51***	.45***	.53***	.38***	.40***	.24**	.47***	

Note. $N = 157$. * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

Table S4*Predictors in Hierarchical Regression Models on BPD*

Criterion	Model	Predictor	<i>b</i>	<i>SE b</i>	β
BPD	I	Self-functioning	.287***	0.072	.249
		Interpersonal functioning	.02	0.086	.012
		Negative affectivity	-.01	0.012	-.05
		Detachment	.026*	0.012	.1
		Anankastia	.013	0.015	.039
		Antagonism	-.033**	0.012	-.1
		Psychoticism	.026	0.013	.095
		Disinhibition	.012	0.014	.039
		Current symptom distress	.067***	0.007	.584
	R^2	.8242			
	II	Self-functioning	.187**	0.064	.162
		Interpersonal functioning	-.023	0.075	-.014
		Negative affectivity	-.019	0.01	-.094
		Detachment	-.008	0.012	-.031
		Anankastia	.011	0.013	.032
		Antagonism	-.014	0.011	-.044
		Psychoticism	.008	0.012	.031
		Disinhibition	.029*	0.012	.095
		Current symptom distress	.05***	0.007	.438
		Subjective emptiness	.096***	0.014	.425
	R^2	.8678			

Note. $N = 157$. * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. b = Unstandardized regression coefficient. $SE b$ = Standard error of the regression coefficient. β = Standardized regression coefficient. R^2 = Adjusted coefficient of determination.

Table S5*Predictors in Hierarchical Regression Models on Depression*

Criterion	Model	Predictor	<i>b</i>	<i>SE b</i>	β
Depression	I	Self-functioning	2.1***	0.56	.256
		Interpersonal functioning	.942	0.668	.077
		Negative affectivity	.04	0.09	.027
		Detachment	.194*	0.095	.104
		Anankastia	-.082	0.116	-.033
		Antagonism	-.32***	0.094	-.137
		Psychoticism	-.12	0.102	-.062
		Disinhibition	.059	0.11	.027
		Current symptom distress	.493***	0.055	.605
	R^2	.7903			
	II	Self-functioning	1.554**	0.539	.19
		Interpersonal functioning	.701	0.629	.057
		Negative affectivity	-.009	0.085	-.006
		Detachment	.007	0.098	.004
		Anankastia	-.095	0.109	-.038
		Antagonism	-.22*	0.091	-.094
		Psychoticism	-.214*	0.098	-.111
		Disinhibition	.153	0.105	.07
		Current symptom distress	.402***	0.055	.493
		Subjective emptiness	.526***	0.115	.327
	R^2	.8153			

Note. $N = 157$. * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. b = Unstandardized regression coefficient. $SE b$ = Standard error of the regression coefficient. β = Standardized regression coefficient. R^2 = Adjusted coefficient of determination.

Table S6*Predictors in Hierarchical Regression Models on Anxiety*

Criterion	Model	Predictor	<i>b</i>	<i>SE b</i>	β
Anxiety	I	Self-functioning	1.918*	0.834	.164
		Interpersonal functioning	-.803	0.995	-.046
		Negative affectivity	.328*	0.133	.158
		Detachment	.258	0.142	.097
		Anankastia	-.124	0.173	-.035
		Antagonism	-.228	0.141	-.069
		Psychoticism	.349*	0.153	.128
		Disinhibition	.088	0.163	.028
		Current symptom distress	.604***	0.081	.52
	R^2	.7705			
	II	Self-functioning	1.604	0.85	.137
		Interpersonal functioning	-.941	0.992	-.054
		Negative affectivity	.3*	0.134	.144
		Detachment	.151	0.155	.057
		Anankastia	-.132	0.172	-.0371
		Antagonism	-.171	0.144	-.051
		Psychoticism	.294	0.155	.108
		Disinhibition	.142	0.165	.045
		Current symptom distress	.552***	0.087	.475
		Subjective emptiness	.302	0.181	.132
	R^2	.7732			

Note. $N = 157$. * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. b = Unstandardized regression coefficient. $SE b$ = Standard error of the regression coefficient. β = Standardized regression coefficient. R^2 = Adjusted coefficient of determination.

Table S7*Predictors in Hierarchical Regression Models on Suicidal Ideation*

Criterion	Model	Predictor	<i>b</i>	<i>SE b</i>	β
Suicidal ideation	I	Self-functioning	.39	0.232	.158
		Interpersonal functioning	.053	0.276	.014
		Negative affectivity	-.029	0.037	-.067
		Detachment	.191***	0.039	.34
		Anankastia	.029	0.048	.039
		Antagonism	-.16***	0.039	-.228
		Psychoticism	.083	0.042	.144
		Disinhibition	-.007	0.045	-.01
		Current symptom distress	.086***	0.023	.352
	R^2	.6025			
	II	Self-functioning	.105	0.213	.043
		Interpersonal functioning	-.073	0.249	-.02
		Negative affectivity	-.055	0.034	-.125
		Detachment	.093*	0.039	.167
		Anankastia	.022	0.043	.029
		Antagonism	-.108**	0.036	-.154
		Psychoticism	.034	0.039	.058
		Disinhibition	.042	0.042	.064
		Current symptom distress	.039	0.022	.158
		Subjective emptiness	.274***	0.045	.567
	R^2	.6797			

Note. $N = 157$. * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. b = Unstandardized regression coefficient. $SE b$ = Standard error of the regression coefficient. β = Standardized regression coefficient. R^2 = Adjusted coefficient of determination.

Table S8*Predictors in Hierarchical Regression Models on Suicide Attempts*

Criterion	Model	Predictor	<i>b</i>	<i>SE b</i>	β
Suicide attempts	I	Self-functioning	.026	0.07	.044
		Interpersonal functioning	.031	0.083	.035
		Negative affectivity	-.005	0.011	-.05
		Detachment	.023	0.012	.167
		Anankastia	.011	0.014	.059
		Antagonism	-.052***	0.012	-.305
		Psychoticism	.017	0.013	.12
		Disinhibition	.027	0.014	.169
		Current symptom distress	.017*	0.007	.287
	R^2	.3816			
	II	Self-functioning	-.019	0.07	-.032
		Interpersonal functioning	.011	0.081	.013
		Negative affectivity	-.009	0.011	-.088
		Detachment	.007	0.013	.053
		Anankastia	.01	0.014	.053
		Antagonism	-.043***	0.012	-.256
		Psychoticism	.009	0.013	.064
		Disinhibition	.035*	0.014	.218
		Current symptom distress	.009	0.007	.159
		Subjective emptiness	.044**	0.015	.373
	R^2	.4119			

Note. $N = 157$. * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. b = Unstandardized regression coefficient. $SE b$ = Standard error of the regression coefficient. β = Standardized regression coefficient. R^2 = Adjusted coefficient of determination.