

*Borderline Personality Disorder in Saudi Arabia:  
The Psychometric Properties of the Arabic Version of  
the Mclean Screening Instrument for Borderline  
Personality Disorder (MSI-BPD)*

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**Abstract:**

**B**orderline Personality Disorder (BPD) is described as an unstable sense of self, emotions, and relationships. The need for BPD Arabic assessment has emerged to bridge the gap of the Arab population with BPD. The Mclean Screening Instrument for BPD (MSI-BPD) has been translated into several languages; however, the psychometric qualities of the MSI-BPD were not investigated among Arabs. This paper mainly aims to report the validity and reliability of the Arabic version of MSI-BPD. Method: the Arabic version of the MSI-BPD was back-translated. The sample was  $n= 829$  aged from 18 to 24. This study conducted Confirmatory Factor Analysis,  $t$ -test, and Cronbach's Alpha Reliability Coefficient, descriptive statistic, using SPSS. Result: the overall analysis indicated good validity and reliability ( $CFI = .97$ ,  $\alpha = .88$ ). 11% of the participants have met the criteria of BPD, however they have never been diagnosed. Also, women reported a higher rate of BPD symptoms, and the diagnosed populations scored higher compared to the non-diagnosed. Conclusion: results suggested that MSI-BPD could be utilized to screen the population in clinical settings, urgent care centers, and hospitals in Saudi Arabia.

**Keywords:** *psychological assessment, psychological disorders, personality disorders, Arabic screening, psychometric.*

## **Introduction**

### **Borderline Personality Disorder (BPD)**

thousands of people worldwide experience the complicated and frequently misdiagnosed mental health illness known as borderline personality disorder (BPD). The expression "borderline" was primarily initiated in the United States by Adolph Stern in 1938 (Linehan, 2018). Stern (1938) proposed this designation for a category of patients who did not clearly fit into either the psychotic or psychoneurotic categories, but rather, they appeared to be on the threshold between these two classifications.

The Diagnostic and Statistical Manual of Mental Disorders (DSM5-RT) states that this disorder is characterized by pervasive instability in emotions, self-identity, interpersonal relationships, and impulse control. People living with BPD often experience intense and unstable relationships, fear of abandonment, unstable self-image, impulsive behaviors, self-harm and suicidality, extreme mood swing, chronic feeling of emptiness, and dissociation (APA, 2022).

It is important to highlight that BPD is linked to several physical health problems. Previous studies have demonstrated a correlation between borderline personality disorder (BPD) and detrimental physiological outcomes, such as heightened vulnerability to severe, chronic illnesses like diabetes, arthritis, and heart disease. (Sigrist,et.al., 2021). Moreover, recent empirical findings have established connections between the existence of BPD and increased occurrences of cardiovascular diseases, liver

conditions, high blood pressure, sexually transmitted infections, and gastrointestinal disorders (Virani,et.al., 2020; Cavicchioli,et.al., 2021). Thus, the impact of BPD on the individual's mental and physical health is vast and the screening is important.

BPD is one of the personality disorders that don't suddenly manifest in adulthood. In fact, early maladaptive patterns and processes that predispose individuals to later personality issues are already evident at a young age, frequently during adolescence (Stepp & Lazarus, 2018). Among youths, epidemiological data has revealed a point prevalence of approximately 0.9% (Johnson, Cohen, Kasen, Skodol, & Oldham, 2008). However, research in this age group remains limited (Bozzatello, Bellino, Bosia, & Rocca, 2019). The cumulative prevalence rates for BPD in young individuals are reported to be 1.4% at 16 years and 3.2% at 22 years. In mental health care settings, the diagnosis of BPD in adolescents reaches a prevalence of 11% among psychiatric outpatients and rises significantly to up to 50% among inpatients. Investigations have indicated that early borderline pathology, occurring before the age of 19, predict long-term functional deficits (Kaess, Brunner, & Chanen, 2014). Moreover, a significant percentage of these patients maintain BPD symptoms for up to 20 years. (Zanarini, 2018). Accordingly, detecting BPD among the youths in Saudi Arabia is important.

Identifying BPD in its early stages allows for prompt intervention and treatment. Early treatment can prevent the disorder from becoming more severe and debilitating (Zanarini, Frankenburg, Khera, & Bleichmar, 2001). Also,

BPD is associated with a higher risk of self-harm and suicidal behaviors. Early detection and intervention can help individuals receive the necessary support and coping strategies to reduce the risk of self-destructive behaviors (Bozzatello, Bellino, Bosia, & Rocca, 2019). Therefore, early intervention can potentially reduce the burden on healthcare systems by preventing crisis situations and minimizing the need for costly emergency services and hospitalizations (Paris & Black, 2015).

### **Challenges in BPD screening**

The time interval from the initial treatment seeking to the receipt of an accurate diagnosis often exceeds a decade (Magnavita et al., 2010). Despite the significant prevalence of BPD, estimated to affect around 1-2% of the general population (APA, 2013), clinicians and mental health professionals encounter various challenges during the diagnostic process. The high rate of comorbidity with other mental health conditions, such as depression, substance abuse, and anxiety underscores the need for effective assessment and treatment approaches (Shenoy & Praharaj, 2019). For instance, BPD is usually misdiagnosed as bipolar disorder which leads to maltreatment (Marchetti et al., 2021).

Moreover, BPD can present differently in different individuals. Some may exhibit primarily impulsive behaviors, while others may have more prominent mood disturbances or identity issues. Also, certain symptoms are downplayed, and clinicians may hesitate to diagnose BPD in younger individuals. This reluctance is primarily attributed to stigma, the incomplete development of personality in this age group, and the resemblance between

typical physiological adolescent challenges and BPD symptoms (Fonagy, et al., 2015).

Furthermore, the enduring stigmatization of BPD has impeded advancements in research and therapeutic interventions. Individuals with BPD are often perceived as having negative, intricate, and challenging-to-treat characteristics (Cleary, Siegfried, & Walter, 2002).

Finally, the Saudi National Mental Health Survey conducted a study to explore mental health issues, but it did not encompass BPD in the national survey (Al-Subaie, Al-Habeeb, Altwajri, 2020). As a result, our knowledge about the prevalence of BPD in Saudi Arabia is limited when compared to the data available for conditions like depression and anxiety (Aljohani, et al., 2022; Altwajri, Al-Subaie, Al-Habeeb, 2020). Consequently, it becomes crucial to actively challenge these misconceptions and foster a more empathetic comprehension of the disorder within the context of Saudi Arabia.

### **Mclean Screening Instrument for Borderline Personality Disorder (MSI-BPD):**

The MSI-BPD represents the first screening instrument for BPD, built upon the criteria of both DSM-4th edition and DSM-5th edition. The Mclean's was designed with the intention of providing a valid and dependable tool for an initial BPD assessment that is easy to administer (Zanarini et al., 2003).

The MSI-BPD consists of a ten-item screening questionnaire with binary "yes" or "no" responses and has exhibited appropriate psychometric properties when used with both adolescents and adults. Various studies involving clinical and non-clinical populations have employed the

MSI-BPD as a screening instrument for BPD, consistently demonstrating its strong validity and reliability.

The MSI-BPD has been studied among clinical and non-clinical populations and presented significant validity and reliability, such as inpatient adolescents (Noblin, Venta, & Sharp, 2014) and women (Patel, Sharp, & Fonagy, 2011). It also has been adjusted and standardized in several languages such as Spanish (Soler, et.al., 2016); French (Mirkovic, et.al. 2020); Dutch (André, Verschuere, & Lobbestael, 2015); German (Kröger, Vonau, Kliem, & Kosfelder, 2010); Finnish (Melartin, et.al., 2009); Persian (Mousavi, Dabaghi, & Taghva, 2020); Singaporean (Keng, et.al., 2019); Chinese (Leung & Leung, 2009). and Urdu (Munawar, et.al., 2021). Therefore, there is a need for a reliable BPD evaluation instrument because of the high prevalence of BPD, its associated consequences, and the lack of a valid and reliable tool available in Arabic.

Saudi Arabia's official language is Arabic, which is spoken by an estimated 420 million people in 25 different Middle Eastern and North African countries (UN, 2022). The primary objective of this study is to address this gap by examining the psychometric characteristics of the Arabic adaptation of the MSI-BPD within a sample of Saudi Arabian youths. This research investigated the question of “Are there people who fit the description of BPD symptoms but are not diagnosed? What differences exist between BPD sufferers who are men and women?”

## **Methodology**

### **Research Design**

The present study was divided into two steps: the initial phase and the core study phase. In the initial phase, the

standard back-translation strategy, following the approach outlined by Anderson and Brislin (1976), was applied to calculate cross-language validation of the MSI-BPD in Saudi Arabian youths. Using a cross-sectional approach, both the initial and the core study employed purposive sampling techniques to recruit participants. On the other hand, the primary study used the CFA to evaluate the MSI-BPD's validity and Cronbach alpha reliability.

## **Participants**

### **First: the pilot phase**

The primary objective behind selecting an initial sample of the participants was to assess the cross-language reliability and validity of the MSI-BPD among emerging adults in Saudi Arabia. The pilot phase aimed at cross-language validation, a total of twenty participants, comprising both ten males and ten females, within the age range of 18 to 23 years were recruited. These participants were bilingual (Arabic-English) undergraduate students at the Department of Psychology and the Department of Clinical Psychology at King Abdulaziz University, Saudi Arabia.

### **Second: the core study phase**

Convenience sampling methods were used in the selection of the sample, specifically employing a snowball sampling approach. In the main phase of this research, a sample of  $n = 829$  participants including  $n = 624$  (75.3%) females and  $n = 205$  (24.7%) males. Every participant stated that they were aware of the informed consent that was given prior to the scale and that they agreed to it by

signing the consent form. The age range of the participants was between 18 to 42 years. The sample size was considered suitable as recommended by previous validation studies to include five to ten individuals per scale item (Choudhry et al., 2018; Barki et al., 2020; Shuja et al., 2020).

### **The participants' sociodemographic characteristics**

In the present study, a total of  $n = 699$  participants (84.3%) reported that they have not been diagnosed with BPD, while  $n = 130$  participants (15.7%) indicated a BPD diagnosis. Among those diagnosed,  $n = 70$  (8.4%) received their diagnosis from psychiatric professionals,  $n = 43$  (5.2%) from psychologists/counselors, and  $n = 111$  (13.4%) self-reported that they believe they meet the diagnostic criteria for BPD. The inclusion standards for the contributors in the present analysis were Arabic speakers, living in Saudi Arabia, and the age range that falls between 18 and 42. Table 1 illustrate the Sociodemographic characteristics of the participants.

### **Instruments**

The ten items of the Mclean's are designed to screen for BPD. (Zanarini, et.al., 2003; Melartin, et.al., 2009). It covers eight items for the DSM-IV and DSM5 criteria of BPD, and two items of the tool evaluate dissociation and paranoid thinking (Melartin, et.al., 2009; Soler, 2016). There is a binary scale for each item, with 1 referring to "present" and 0 referring to "absent." Higher scores indicate the presence of BPD. The total score can vary from 0 to 10. (Zanarini, et.al., 2003). The original MSI-BPD demonstrated a high level of sensitivity (0.81) and specificity (0.85), with a cutoff score of 7. Moreover, the



test-retest reliability was documented to attain a substantial level of reliability, with Spearman's rho at 0.72 ( $P < 0.0001$ ).

**Table 1. Demographic Characteristics (N=829)**

Variable	Groups	N	%
<b>Gender</b>	<b>Males</b>	<b>205</b>	<b>24.7</b>
	<b>Females</b>	<b>624</b>	<b>75.3</b>
<b>Age</b>	<b>From 18 to 23 years old</b>	<b>320</b>	<b>38.6</b>
	<b>From 24 to 29 years old</b>	<b>226</b>	<b>27.26</b>
	<b>From 30 to 35 years old</b>	<b>89</b>	<b>10.74</b>
	<b>From 36 to 41 years old</b>	<b>75</b>	<b>9.05</b>
	<b>42 and older</b>	<b>114</b>	<b>13.75</b>
	<b>Missing</b>	<b>5</b>	<b>0.60</b>
<b>Marital Status</b>	<b>Single</b>	<b>522</b>	<b>62.9</b>
	<b>Married</b>	<b>258</b>	<b>31.1</b>
	<b>Divorced</b>	<b>42</b>	<b>5.1</b>
	<b>Widower</b>	<b>7</b>	<b>0.9</b>
<b>Diagnosis status (with BPD)</b>			
	<b>Yes</b>	<b>130</b>	<b>15.7</b>
	<b>No</b>	<b>699</b>	<b>84.3</b>

### **The MSI-BPD translation**

The English original version of the MSI-BPD has been translated to Arabic through established guidelines and a series of translation processes (Anderson & Brislin, 1976). The use of the Brislin model was intended to ensure the translation's theoretical, cultural, and linguistic accuracy. The following are the translation phases:

#### **Phase 1: Forward Translation**

The purpose of this stage is to ensure the quality of translation. Three Ph.D. psychologists independently

translated the MSI-BPD into Arabic. psychologists, who were chosen, considering specific criteria: (a) proficiency in both languages (Arabic and English), (b) familiarity with both cultures, (c) expertise in the subject matter, and (d) a confirmed ability in creating items. The translators' proficiency in both languages was confirmed, and the instrument was subsequently provided to them (Shuja, Aqeel, & Khan, 2020).

### **Phase 2: Back Translation**

The purpose of this step is to verify that the Arabic translation of the instrument is accurate and effective. The MSI-BPD was translated back to English by two bilingual translators who were proficient in both languages. Achieving theoretical and cultural alignment was prioritized over linguistic correspondence during the back translation process. Furthermore, a group of subject matter experts reached a consensus to address any discrepancies that were discovered following the back translation. Next, the cultural correspondence was compared with the instrument items. Lastly, the Arabic items that had been translated were arranged to match the original measure's format.

### **Phase 3: Committee Approach**

The subject matter experts' team, comprising two Ph.D. psychologists, two psychiatrists, and two clinical psychology students, evaluated the content validity of the translated items. This phase aimed to review the translation and identify any inconsistencies that may have arisen following the forward translation. The committee accurately assessed each translated item and selected the most suitable ones for the final scale.

### **Phase 4: cross-language validation**

Not all languages have the same number of developed instruments and linguistic resources. English was therefore chosen as the appropriate language for this situation. Manuscript assessment tools are easily accessible, and English is a language with a wealth of resources. Cross-language validation was done to ensure that the Arabic MSI-BPD was effective and to further validate the translated version in any language.

### **Procedure**

To enhance involvement, participants were enlisted primarily through a Google sheet link, guiding them to the informed consent form and the Arabic MSI-BPD directly. Recruitment also occurred via emails disseminated by psychology department faculty, social media platforms, colleges, mental health professionals, and university student groups. The informed consent document provided the researcher's email, encouraging participants to reach out in case of emergencies. The data collected from participants was ensured to be confidential and anonymous. Data collection concluded on November 30th, 2023, with the data securely stored on the researcher's university Cloud server.

### **Result**

#### **Descriptive statistics**

Statistical analysis was conducted utilizing IBM SPSS Statistics. This study conducted Confirmatory Factor Analysis, Cronbach's Alpha Reliability Coefficient, descriptive statistic, and t-test as the following.

### Confirmatory Factor Analysis

CFA was conducted on the ten-item of the Mclean Screening Instrument for Borderline Personality Disorder (N=829). The measurement model of one factor provided a good fit for the data,  $\chi^2(31) = 127.362, p < .001; CFI = .97, AGFI = .95, IFI = .97, TLI = .96, RMSEA = .061$  [90% CI = .050, .073]. Figure 1 displays the measurement model for the MSI-BPD with standardized parameter estimates.

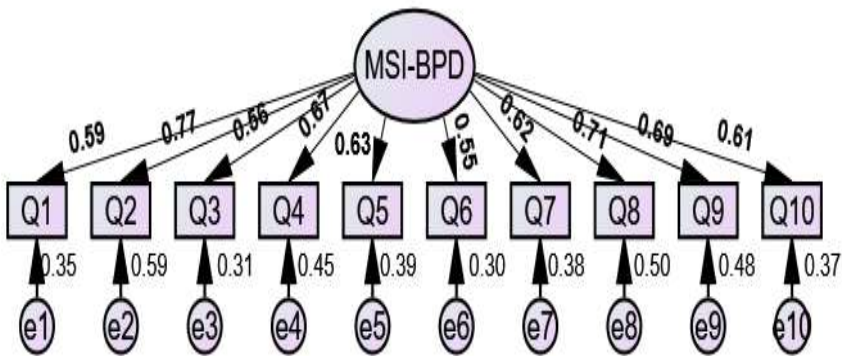


Figure 1: The measurement model for the MSI-BPD with standardized parameter estimates

### Cronbach's Alpha Reliability Coefficient

Cronbach's coefficient alphas were calculated (N= 892) for the Mclean Screening Instrument for Borderline Personality Disorder ( $\alpha = .88$ ).

The MSI-BPD has demonstrated reliable validity and reliability (Zanarini,et.al., 2003). In the current investigation, the Cronbach alphas were  $\alpha = 0.88$  for BPD. Previous empirical indication has proposed that a score of  $\geq 7$  is a valuable clinical threshold for predicting BPD in

adults in Saudi Arabia. (Zanarini, et.al., 2003; Chanen,et.al., 2008; Patel,et.al., 2011).

Result of comparing between females and males score on the MSI-BPS results of t tests indicated that females (n= 624, M = 3.96, SD = 3.31) have higher score compared to males (n= 205, M = 2.93, SD = 2.89),  $t(394.01) = 4.25, p = .001; d = 0.32$ ). moreover, Results of t tests indicated that participants who report being diagnosed previously with BPD (n= 130, M = 7.96, SD = 2.17) have significantly higher scores on the Mclean’s for borderline compared to participants who were not diagnosed previously with BPD (n= 699, M = 2.91, SD = 2.76),  $t(214.95) = 23.30, p = .001; d = 1.89$ ).

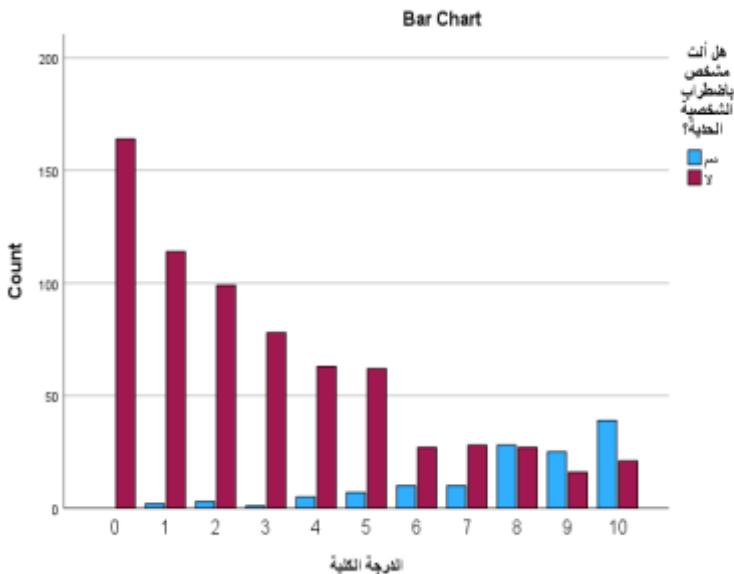


Figure 2: Score of diagnosed and undiagnosed individuals on MSI-BPD

## Discussion

Borderline personality is a DSM-5 mental health disorder that is characterized by a pattern of instable self-image, emotions, and relationships. Extreme mood swings, a persistent sense of emptiness, dissociation, fear of abandonment, impulsive behaviors, self-harm and suicidality, and intense and unstable relationships are some of the symptoms. BPD impacted approximately 0.7 to 6% of the population (Lenzenweger, et.al., 2007). BPD has been misdiagnosed with several disorders which make the treatment plan in the clinical settings are not productive. A major method to develop the detection of BPD is the utilization of assessment instrument (Zimmerman, 2017).

Thus, the primary goal of the current study is to assess the reliability and validity of the MSI-BPD's Arabic version among Saudi Arabia's population. The psychometric properties if this instrument was satisfactory. The CFA validated the instrument to be used among Arab populations in Saudi Arabia. This finding is in harmony with the findings of previous research that translated MSI-BPD to other languages including Chinese (Leung & Leung, 2009), Persian (Mousavi, Dabaghi, & Taghva, 2020), Dutch (Andre, et.al., 2015), Spanish (Soler, et.al., 2016), Hindu (Choudhary, 2017), Singaporean (Keng, et.al., 2019), French (Mirkovic, et.al., 2020). And Urdu (Munawar, et.al., 2021).

The Arabis version of the MSI-BPD is a valid and reliable screening tool to be used in triage as a primary screening of BPD in clinical settings, ER centers, and hospitals that could misdiagnose BPD due to a lack of valid tools in Arabic. Moreover, this research found out that there are more than 11% of the participants (n=829) met

the criteria of BPD, however, they have been never diagnosed. This observation could suggest the stigma, lack of awareness, and misinterpretation of BPD within the Arab culture, such as being “nervous” or “sensitive”.

In addition, this research found that female participants showed a higher tendency to experience BDP. The findings that BPD is more common in females are supported by the third, fourth, and fifth editions of the Diagnostic and Statistical Manual of Mental Disorders (DSM) (Sansone & Sansone, 2011). Also, the present finding is in alliance with a previous study that found women are more likely to experience emotional dysregulation, fear of abandonment, impulsivity, and self-harm (Martin, Tarantino, & Levy, 2023). Similarly, the cultural influence of men’s reluctance to share emotions and the societal expectations that discourage emotional expressions to appear masculine. Furthermore, the result indicated that participants who report being diagnosed previously with BPD have significantly higher scores on the MSI-BPD compared to participants who were not diagnosed previously with BPD. This finding is considered an indication of the accuracy of the instrument to detect BPD symptoms.

Overall, this finding highlighted the significance of adapting diagnostic and therapeutic approaches, such as MSI-BPD, to be culturally sensitive in order to promote accurate identification and treatment plans.

### **Conclusion**

The present research intended to provide psychometric evidence of the MSI-BPD Arabic version. Screening BPD can be challenging due to several problems and considerations. BPD symptoms can overlap with other mental health conditions, such as mood disorders, eating

disorders, anxiety disorders, and substance use disorders. This overlap can lead to misdiagnosis or confusion, making it difficult to distinguish BPD from other conditions. The data presented the psychometric properties to be utilized among the population in Saudi Arabia and among all Arabic speakers. The current research has three limitations. First, the nature of the clinical population and the indecisive perspective of the symptoms. Second, the community awareness of the BPD in Saudi Arabia is developing due to the past social stigma. Third, self-harm among people with BPD varies, which may create some difficulties for clinicians in determining the purpose of the self-harm. The present study recommends conducting a clinical interview along with the MSI-BPD in the clinical practice to assess clinicians to make an accurate diagnosis.

### **Acknowledgments:**

I extend my sincere gratitude to the dedicated faculty and students at the Psychology Department, King Abdulaziz University. Their invaluable contributions in translating and meticulously reviewing the scale items significantly enhanced the quality of this research. Their commitment to scholarly excellence played a pivotal role in the successful execution of this study.

### **Availability of data and materials**

The corresponding author can provide access to the datasets utilized or examined in the present study upon a reasonable request.

### **Conflicts of interest**

The author declare that the current study was conducted without any commercial or financial relationship that might influence the research and could be perceived as a potential conflict of interest.



## Appendix

### The Arabic version of the Mclean Screening Instrument for Borderline Personality Disorder (MSI-BPD)

	MSI-BPD	العبارات باللغة العربية	
1	Have any of your closest relationships been trouble by a lot of arguments or repeated breakups?	هل تأثرت علاقاتك المقربة سلبياً بسبب كثرة الخصام والجدال أو الانفصال المتكرر	١
2	Have you deliberately hurt yourself physically (e.g. punched yourself, cut yourself, burned yourself)? How about made a suicide attempt?	هل تعمدت إيذاء نفسك جسدياً (مثل: اللكم أو التجريح أو الحرق للذات)؟ أو حاولت الانتحار؟	٢
3	Have you had at least two other problems with impulsivity (e.g. eating binges and spending sprees, drinking too much and verbal outbursts)?	هل تعاني من مشاكل الاندفاعية (على الأقل مشكلتين) مثل: الإفراط في تناول الطعام الإسراف في الإنفاق، و الإفراط في شرب الكحول و الاعتداء اللفظي؟	٣
4	Have you been extremely moody?	هل أنت متقلب المزاج بشدة؟	٤
5	Have you felt very angry a lot of the time? How about often acted in an angry or sarcastic manner?	هل تشعر بالغضب الشديد في أكثر الأحيان؟ هل تتصرف بطريقة غاضبة أو ساخرة في أكثر الأحيان؟	٥
6	Have you often been distrustful of other people?	هل تشعر في كثير من الأحيان بأنك لا تثق في الآخرين؟	٦
7	Have you frequently felt unreal or as if things around you were unreal?	هل تشعر في كثير من الأحيان بأنك غير واقعي أو أن الأشياء من حولك غير حقيقية؟	٧
8	Have you chronically felt empty?	هل تشعر بالفراغ بشكل مزمن؟	٨
9	Have you often felt that you had no idea of who you are or that you have no identity?	هل تشعر في أكثر الأحيان أنك لا تعرف نفسك أو أنه ليس لديك هوية؟	٩
10	Have you made desperate efforts to avoid feeling abandoned or being abandoned (e.g., repeatedly called someone to reassure yourself that he or she still cared, begged them not to leave you, clung to them physically)	هل تبذل جهوداً مستميتة لتجنب الشعور بالتخلي عنك أو التخلي عنك (على سبيل المثال، الاتصال بشخص ما بشكل متكرر للتأكد من أنه لا يزال يهتم بك، أو التوسل إليه ألا يتركك، أو التشبث به جسدياً)	١٠

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