

# Utility of the BDI-II in the Detection of Concealed Depression

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## Abstract

The Beck Depression Inventory-II (BDI-II) is one of the most commonly administered tests in the assessment of depression. Previous research has demonstrated the BDI-II is susceptible to intentional response distortion (i.e., malingering or faking-bad); however, there is a noted absence of research on the BDI-II's ability to detect the underreporting or the concealment of depression (i.e., faking-good). In the present study, the BDI-II was able to accurately classify 57.8% of participants attempting to conceal severe depression.

## Keywords

Beck Depression Inventory, Faking-Good, Malingering, Concealment, Forensic

## 1. Introduction

The Fifth Edition of the *Diagnostic and Statistical Manual of Mental Disorders* defines malingering as “the intentional production of false or grossly exaggerated physical or psychological symptoms, motivated by external incentives such as avoiding military duty, avoiding work, obtaining financial compensation, evading criminal prosecution, or obtaining drugs” [1]. Malingering may also represent adaptive behavior in some circumstances. Most of the research on malingering has a focus on the simulation of illness or faking bad, such as a defendant attempting to simulate auditory hallucinations as an explanation for a criminal act.

The dissimulation of illness or faking-good, such as an individual attempting to conceal psychopathology to appear well-adjusted, receives much less attention in the research literature [2-4]. It should be noted that throughout the literature, the underreporting of symptoms or the concealment of psychopathology may also be referred to as dissimulation, defensiveness, minimization, [5, 6], symptom suppression, reverse malingering, [6], faking-good, defensive responding [5-7], socially desirable responding, and positive impression

management [7]. Some authors have even suggested that dissimulation may be more common than simulation [5, 6, 8-13], may be overlooked during forensic evaluations [2, 14], and is perhaps more difficult to detect [14-16] because many individuals, even in non-forensic populations, may underreport or distort prior functioning [17].

## 2. The Minnesota Multiphasic Personality Inventory-2 (MMPI-2)

Most of the research on detecting the concealment of psychopathology or defensiveness has been conducted using the Minnesota Multiphasic Personality Inventory (MMPI) [18] and the revised MMPI-2 [19]. The most common MMPI indices used to assess the underreporting of symptoms include the traditional Lie (L), Correction (K), and Superlative (S) scales [15, 16], non-standard validity scales including the Edwards Social Desirability Scale (Esd) [20], the Wiggins Social Desirability Scale (Wsd) [21], the Other Deception Scale (Od) [22], the Positive Mental Health Scale (PMH4) [23], and the F-K index [24]. Meta-analyses of the underreporting of symptoms on the MMPI [16] and MMPI-2 [15] validity scales reported average effect sizes of 1.05 and

1.25 respectively.

A factor analysis by Bagby and Marshall [7] suggested a two-factor solution based on MMPI-2 validity indices. Factor 1, labeled Self-Deception, included the K, S, Esd, and PMH4 scales. Factor 2, labeled Impression Management, included the L, Od, and Wsd scales. In cases of extreme defensiveness, MMPI-2 profiles are no longer interpretable due to an invalid response set [25].

### 3. The Beck Depression Inventory, Second Edition (BDI-II)

The BDI-II is a 21-item, self-report measure of depression. Examinees rate their feelings over the past 2 weeks on a scale ranging from 0–3 [26]. The BDI-II is one of the most commonly administered tests in the assessment of depression [27], and it has been shown to be a valid and reliable indicator in measuring the severity, intensity, and depth of depression [28, 29]. Beck et al. recommend the following cutoff scores to indicate various levels of depression: 0–13 = minimal, 14–19 = mild, 20–28 = moderate, and 29–63 = severe. However, Groth-Marnat [30] suggested that scores ranging from 0–4 indicate possible faking-good or the intentional concealment of depression.

Since malingering and deception is of less concern to clinicians in therapeutic settings, assessment instruments such as the BDI-2 were developed without validity scales or other indices to measure symptom reporting [31].

One study using the MMPI-2 validity scales (L, F, and K) and the revised BDI [32] on adolescent mothers found that 48% of participants with low BDI Scores had fake-good MMPI-2 profiles compared to 20% of non-depressed participants [33]. The authors concluded that 90% of fake-good profiles could be detected based on BDI and K scale scores. Another study found that mothers with zero BDI scores exhibited depressive behavior when rated by clinicians during observation with their infants [34].

Lees-Haley [35] administered the BDI to 52 untrained participants (26 women, 26 men) who were instructed to fake their responses to appear depressed as if they were involved in litigation in order to deceive the psychologist and the judge. Overall, 96% of participants were able to successfully fake depression on the BDI, and 58% were able to fake severe depression. Using the recommended cut-off scores for depression in the BDI manual, only 2 participants (1 female, 1 male) would have been classified as normal, and 16 (62%) of female participants and 13 (50%) of male participants would have been classified as having severe depression.

In a study designed to minimize response bias on the BDI (i.e., selecting a response of zero for each question) Dahlstrom et al. [36] administered the BDI to undergraduate women in three formats: original item order, backwards order of items in each group, and random order. Participants also completed the Depression scale from the MMPI and the Burks-Martin questionnaire on recent life changes. No significant differences were found among the three groups on the MMPI

Depression scale. However, the group presented the BDI items in random order differed significantly from the groups administered the BDI in the original and backwards order. The authors recommend using the random format to ensure examinees give attention to the entire list of descriptors in each BDI set.

Previous research [35] has demonstrated that the BDI is susceptible to intentional response distortion in the reporting of depressive symptoms (i.e., malingering or faking-bad). However, there is a noted absence of research on the BDI's ability to detect the underreporting or the concealment of depressive symptoms. The present study seeks to fill this void by examining the susceptibility of the BDI-II in concealing depressive symptoms in untrained participants.

## 4. Methodology

### 4.1. Participants

Participants in this study were 232 undergraduate students (179 female, 53 male) with a mean age of 23.7 ( $SD = 6.4$ ). All participants were treated in accordance with the *Ethical Principles of Psychologists and Code of Conduct* [37], and the study was approved by the University Institutional Review Board (IRB). Please see Table 1 for participant demographics.

Table 1. Participant Demographics.

Sex	n (%)
Female	179 (77.2)
Male	53 (22.8)
Age in years	
Range	18-57
18-24 years	180 (77.6)
25-34 years	36 (15.5)
35-44 years	11 (4.7)
45-57 years	5 (2.2)
Mean age (SD)	23.7 (6.4)
Race	
White/European	127 (54.7)
Black/African	49 (21.1)
Hispanic	37 (16.0)
Asian	9 (3.9)
Native American	3 (1.3)
Other	7 (3.0)
Marital Status	
Single	191 (82.3)
Married	11 (4.7)
Living together	28 (12.0)
Divorced/Separated	2 (.86)

### 4.2. Procedure

Participants were administered the BDI-II and were given instructions to conceal severe depression as if they were being evaluated for release from an institution. Their goal was to “fool” the examiner into thinking that they were no longer depressed and could return home immediately following the results of the BDI-II. A cutoff score of  $\leq 4$  was used to suggest the concealment of depression or faking-good [30].

## 5. Results

BDI-II Scores ranged from 0 to 28 ( $M = 5.03$ ,  $SD = 5.1$ ,  $Mdn = 4.0$ ,  $Mo = 0$ ). A total of 57.8% ( $n = 134$ ) of participants scored  $\leq 4$  or within the recommended cutoff range for detecting concealed depression (see Figure 1). No significant gender differences were found in overall scores ( $t(230) = -1.64$ ,  $p = .103$ ). Participant age was unrelated to overall scores ( $r = .004$ ,  $p = .954$ ). Based on these findings, the BDI-II is able to detect concealed depression slightly higher than chance. The 42% of participants in this study with BDI-II scores of 5 and above would have gone undetected, successfully able to conceal depression and being released from an institution.

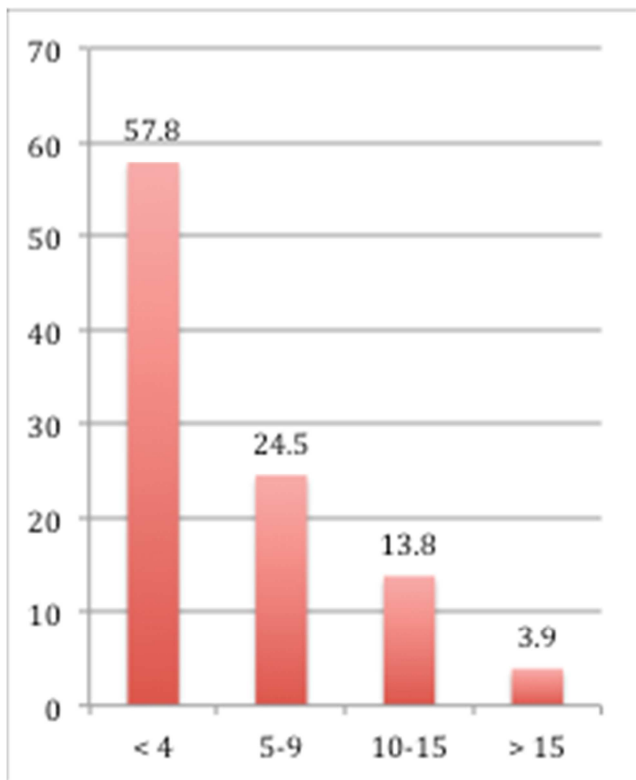


Fig. 1. BDI-II Scores (% of sample).

## 6. Conclusion

Results of the present study suggest that the BDI-II is more useful in detecting concealed depression rather than malingered depression based on previous research [35]. However, caution is warranted in relying solely on the BDI-II in the diagnosis of depression in clinical and forensic populations.

Specific measures have been developed for the assessment of malingered depression such as the malingered depression scale (Md) of the MMPI-2 [38]. The Md scale has shown promise in detecting malingered depression; however, research has suggested that the MMPI F scales are more useful overall [39]. As mentioned previously, dissimulation or the concealment of psychology is difficult to detect [14-16] and to date there is no research using the Md scale in the detection of concealed depression.

Further research is needed in the use of the BDI-II and other

psychometric instruments such as the MMPI-2 in the detection of concealed depression.

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