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The Beck Depression Inventory

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1. Introduction

There are many assessment and diagnostic tools that either measure intelligence, aptitudes, achievements, and behaviors so it is was no surprise when the Beck Depression Inventory (BDI) was created in 1961 by Aaron T. Beck, a pioneer in cognitive therapy, with the sole purpose of determining the severity and intensity level of the symptoms of depression. The Beck Depression Inventory is defined as a validated measure that has been instrumental in leading to numerous diagnoses of depression due to its most recent revisions that more closely resemble the diagnostic criteria for depression (Gregory,2007). Over the year many studies have questioned the credibility of the BDI but its soundness have been established through documentations of the internal consistency of the scale, its test-retest reliability, and its extensive validation against other measures of depression and independent criteria for depression (Gregory, 2007). The utilization of the Beck Depression Inventory still

continues to expand into a variety of clinical and non-clinical practice sites to identify depressive symptoms that might have otherwise unrecognized and undiagnosed. Similar to many other assessment tools it credibility and usability have come into question but research studies have shown that the Beck Depression Inventory is successful when it comes to producing the outcome that it is intended to measure.

A. Description of the test and its History

The Beck Depression Inventory is a widely utilized 21-item self-report scale in both clinical and research studies (Beck et al.,1996). The scale was originally developed in 1961 as an interviewer-assisted format but has undergone several revisions over the last 35 years from the BDI-1A(1978), to the most recent version The Beck Depression Inventory-II (1996) which is a completely self-administered format. The Beck Depression Inventory-II is a depression rating scale that can be used in individuals that are ages 13 years and older, and rates symptoms of depression in terms of severity on a scale from 0 to 3 based on the 21 specific items. Patients that endorse multiple items on the questionnaire(i.e. sadness, pessimism, past failure, loss of pleasure, guilty feelings, punishment fears, self-dislike, and so forth) typically have higher scores with a maximum score of 63 compared to others. The sum of the BDI generally represents the severity of the depression with the test being scored differently for the general population compared to those individuals with an established clinical diagnosis of depression. For the general population, a score of 21 or greater is associated with depression but for individuals who have been clinically diagnosed, scores from 0 to 9 represent minimal depressive symptoms, scores of 10 to 16 indicate mild depression, scores of 17 to 29 indicate moderate depression, and scores of 30 to 63 indicate severe depression.

Content and use of Beck Depression Inventory

The self-report consists of questionnaires that primarily focus on the cognitive distortions that underlie depression (Beck & Steer,1987). The current version of the inventory was specifically developed to serve as an assessment of symptoms that correspond to the criteria for diagnosing depressive disorders listed in the American Psychiatric Association's publication of the Diagnostic and Statistical Manual for Mental Disorders-Fourth Edition- Text Revision(American Psychiatric Association, 2000). In its attempt to further reflect the current DSM-IV diagnostic criteria for depression not only were new items such as agitation, worthlessness, loss of energy and concentration difficulty included but both increases and decreases in appetite were added in the same item with hypersomnia and hyposomnia in another item. Items related to changes in body image, hypochondria, and difficulty working were replaced but item dealing with thoughts of suicide, interest in sex, and feelings of being punished remained the same. When it comes to analyzing the content of the revised version of the questionnaire, items generally cover the cognitive and affective components of depression. The addition of these components into the assessment process only allow for a more definitive conclusion to be reached when there is the question as to the presence or absence of depression.

B. Benefits of the Beck Depression Inventory

The rating duration for the BDI was changed from a 1-week period to over the past 2 weeks with the revised BDI-II. The revised version represents a significant milestone because of improvements having been made over the original structure which includes revisions to the content, psychometric validity, external validity, and its ability to be utilized in widespread clinical practice sites(Beck et al., 1996). One of the primary characteristics that has lead to the increased popularity of the use of the BDI-II is that the majority of people are able to complete the 21 items of the self-report within a 5-10 minutes time span but in order for this occur the administrator must make it a point to preserve the integrity of the test results such as the testing environment possessing sufficient illumination for reading and being quiet enough to facilitate adequate concentration for the test taker.

C. Description of the test and its history

The conception and ultimate development of the Beck Depression Inventory came from its novel approach towards describing the symptoms of depression which proved to be revolutionary during that time period. The inventory relied on using the combination of patient's subjective depiction of their symptoms along with the structured format of the scale in order to arrive at the intensity or the severity of a given symptom. The inventory has managed to maintain many of the foundations that were vital component of the development of the inventory structure such as the 4-point rating scale format ranging from 0 to 3 with only a few medications being made in the wording of the original response options (Osman et al.,2004). The BDI-II still manages to retain the simplicity and ease of administration (only taking about 10 minutes to complete) which was associated with original BDI, and the direct guidelines that are both understandable and user-friendly.

E. Psychometric Qualities of Beck Depression Inventory

It is widely known from various studies that the psychometric qualities of the BDI are believed to be quite sound (Beck et al., 1996). The self-report manual is well written, and succeeds in providing the reader with information regarding norms, factor analysis, and nonparametic item-option characteristic curves for each item. The BDI manages to retain a high level of standardization by maintaining a consistent practice of uniformity for test administrators and advising examiners about scenarios for potential distortions of test results by keeping in mind that self-reports inventories are subject to a response bias, and ultimately factoring this into the overall interpretation of the test results (Dozois et al., 1998). Additionally, the formulation of the directions allows for a consistent administration process, for example, the statements for each of the 21 items attempt to maintain the same format such as (0= I am upbeat about the future), (1= I feel slightly discourages about the future), (2= I feel the future has little to offer for me), (3=I feel that the future is utterly hopeless). This format of questioning is representative of the format for all of the 21 items with a total raw score serving as the sum of the endorsements of symptoms of depression.

D. Reliability, Validity, and Factor Analysis

The reliability of the Beck Depression Inventory has been based off its use in clinical studies as well as being shown to be exemplary for use in both depressed and nondepressed samples of older individuals as established in other age groups as well(Gallagher et al.,1982). A study that examines that psychometric properties of the Beck Depression Inventory was conducted by Wiebe et al(2005) that focused on a comparison of the psychometric properties of English and Spanish language versions of the Beck Depression Inventory in substantial samples of undergraduate students yielded results that provided evidence of the strong internal consistency of the BDI-II across both languages, and the test-retest reliability of the BDI –II being acceptable for both languages (Wiebe,2005). The reliability of the Spanish translation slightly exceeded the original English version with Spanish translation producing a coefficient of 0.91 and the English version yielding a coefficient of 0.89 leaving little or no variability that could be attributed to language (Wiebe,2005).

An analysis of factor validity using confirmatory factor analysis (CFAs) to find the best fit for the two factor model demonstrated that the English language factor structure showed a good fit with the data from the Spanish instrument. The results of analysis demonstrated that the translation is appropriate for use in both medical and student samples. With the ever increasing need to provide mental health service that are sensitive to any given culture it is recognized that continued research is required to document the validity and reliability of commonly used clinical and research instruments.

F. Psychometric Qualities of Beck Depression Inventory-Youth

Another notable research study conducted by Stapleton et al (2007) sought to identify the

psychometric properties of the Beck Depression Inventory for Youth (BDI-Y) in a sample of 859 girls that were ages 9-13 years by age level and for selected races or ethnic groups. While research on the psychometric properties of the BDI-Y has been scarce the suggestion of its soundness has been made. In term of standardization, the manual provides separate normative information for 7 to 10 year old and 11 to 14 year old girls (Beck et al., 2001). The standardization sample consists of a mean BDI-Y score of 19(SD=9.4) and 16.5(SD=11.0) The BDI-Y demonstrates high internal consistency measured by Cronbach's alpha and reliability was slightly lower for the 9-year old girls as compared to the 10 and 11 year old girls (Stapleton et al., 2007). In terms of the convergent validity, "high correlation of a test with other variables or tests with which it shares an overlap of constructs", the BDI-Y correlation highly with Children's Depression Inventory(CDI) scores for the sample overall, 0.83(Gregory, 2007, pp.134). The correlation was noticeably lower for the 9 year old group, 0.73 as compared with the estimates between 0.84 and 0.86 for the other age groups(z-statistic ranged from -2.4 to -3.8) for the four pairwise comparisons (Stapleton et al., 2007). Overall the study was able to demonstrate the reliability and validity estimates of the BDI-Y across different races and ethnic groups which other prior studies were unable to accomplish this task.

G. Critique of the Beck Depression Inventory

A critique of the strength and weaknesses of the Beck Depression Inventory can produce findings about its psychometric qualities such as the advantage of its uniform standardization procedure which consists of easy and formalized directions for test administration as well as the ability of reader to comprehend the guidelines provided in the instructional manual. On the other hand, there are disadvantages to that the manual does not adequately address such as the potential for clients to alter their presentations based on an incentive or personal agenda associated with being diagnosed with depression. The Beck Depression Inventory manual does not completely address how such an issue can be appropriately handled so as to not interfere with the test results, but rather provides an ambiguous answer for a possible resolution. For the most part, The Beck Depression Inventory reports "correlations of 0.93 and 0.84" between the BDI-II and its predecessors in two samples of 191 and 84 outpatients and the correlations between of 0.68 and 71, respectively, between the BDI-II and two other depression instruments(The Revised Hamilton Psychiatric Rating Scale for Depression and the Beck Hopelessness Scale (Sprinkle et al., 2002,pp.381).

H. Internal Consistency and Test-Retest Reliability

The internal consistency of the Beck Depression Inventory has been validated with substantial evidence reporting coefficient alphas of 0.91 and higher, only about two published reports have consistently validated its test-retest reliability. For instance, Leigh and Anthony Tolbert(2001) reported a non-clinical sample of 53 hearing impaired university students that produced a test-retest correlation of 0.74 when given the BDI-II one week apart. Also, Beck, Steer, and Brown(1996) discovered that on 26 outpatient who were administered the BDI-II during their first and second therapy sessions about 1 week apart, there was a test-retest reliability of 0.93 indicating the test is sensitive to daily changes in mood. In terms of the criterion validity of the test there was some weaknesses in the design such as the majority of the study participants being White to the extent that the applicability of the finding to non-White students was unclear. Only one criterion was utilized in order to determine the presence of absence of depression which was an intake interview a counselor which does not provide enough evidence as to the validity of the study.

I. Ethical Implications

An ethical issue that can potentially arise with the Beck Depression Inventory is whether or not the psychometric properties of the inventory including the content validity, factor structure, reliability estimates, and content validity is

sufficient enough to be used in the adolescent population and if so does this give the clinician the authority to make this information available to the adult guardians of the adolescents (Osman et al., 2004). In most cases, the Beck Inventory class has been synonymous with its utilization in the adult population in the adult population and the study embarked upon by Osman et al was designed to provide the same level of assessment of depression and relevancy when it comes to identifying the distinctive symptoms of major depressive episode. While adolescents may still be viewed minors they are to be viewed as having the same right as adults when it comes to the confidentiality and the protection of their health information. According to the American Psychological Association (APA) Ethics Code (2002) psychologists must "respect the dignity and worth of all people and the rights of individuals, confidentiality, and self-determination" (APA, 2002, pp.4). In order to actively protect patient health information, regardless of the patient's age, a psychologist must be fully aware of the safeguards in place that are necessary to protect the right and security of those individuals whose vulnerabilities may impair autonomous decision-making. While a psychologist may assume that it is in the best interest of the adolescent to make their information available to outside parties including guardians it could be a violation if the consent of the adolescent was not given or under law the adolescent does not pose any harm to him or herself and others but the information is released to the public.

J. Legal Implications

Secondly, a legal issue that can arise with the use of the Beck Depression Inventory is a clinician breaching the agreements that were established within an informed consent contract and deciding to not provide any information about the outcome of the inventory since they are in an inpatient psychiatric facility but instead only provide the information to other members of the health care team and family members of the patients. First and foremost, the rights of the patient receiving the treatment have been violated due to the fact that a decision that affects the well-being of the patient was made without the patient's input. It would be understandable if the patient exhibited some cognitive impairments but since this is not a factor the clinician can be held liable for choosing not to share pertinent information with their patient based off their biases about individuals with mental diagnoses. According to the APA Ethics Code(2002), psychologists are prohibited from practicing unfair discrimination that would deny any individual of their right based on a disability or a bias they might have about that individual.

K. Use of Beck Depression Inventory in clinical practice

As a clinical psychologist, the Beck Depression Inventory can be used during a patient encounter to gauge whether or not a patient endorses feeling of depression. If after multiple encounter the patient exhibits classical symptoms of depression, the inventory could be utilized to confirm or deny this suspicion through self-report. The Beck Depression Inventory can serve as the first tier for the assessment of depression with the DSM-IV-TR coming behind to provide an official diagnosis (American Psychiatric Association,2000). The benefits that can be reaped from using the Beck Depression Inventory come from its ease of administration and understandable questions that allow the user to maneuver through the 21 items of the questionnaire. The simplicity of the questionnaire allows for its use with a wide variety of patients from adolescents to adults which can then lead to an increase of undiagnosed of unrecognized depressive symptoms. Along with the ability to identify those patients that might be exhibiting depressive symptoms, the inventory can produce problems with more patients stating that they are depressed in order to benefit from the receiving the diagnosis, or having a personal agenda the comes with having the label of depression.

L. Disadvantage (Challenges) of the Beck Depression Inventory

As a clinical psychologist, the challenge will come when determining which patients are

exhibiting legitimate signs and symptoms of depression or which patients are pretending in the hopes of reaping some type of benefit. Patients are either capable of hiding their despair or can exaggerate their depression with the Beck Depression Inventory but for those patients who are motivated to accurately display their inner emotions, the inventory represents one of the best instruments for identifying the presence and/or severity of depressive symptoms (Stehouwer, 1987). Also, the results of the Beck Depression Inventory can be used to not only assess and monitor changes in depressive symptoms among people in a mental health care setting but it can be translated to other practice settings whether inpatient and outpatient (Beck et al. 1988). The ubiquitous use of the inventory can potentially allow for a confirmed diagnosis of depression based off aspects of the DSM-IV-TR or assist with producing a list of other mood disorders that might be the culprit if it is not depression.

Summarization of the Beck Depression Inventory

The current status of the Beck Depression Inventory signifies a test that has reached a pinnacle in terms of its level of merit and credibility. Over many years, it has undergone two significant revisions with the most recent (2nd edition revision) displaying the greatest improvements that have ever been made to the instrument. In order for it to become a better representation of the diagnostic criteria that was been established by the American Psychiatric Association for depression it has incorporated key components of the DSM-IV-TR criteria for depression into the 21 items of the inventory. The revised version of the Beck Inventory brings the scale into a better accord with current psychiatric diagnostic criteria (Ward, 2006). An emphasis has been placed on observing cognitive and affects components of depression such as pessimism, guilt, crying, indecision, and self-accusations and eight items focusing on somatic and performance variables such as sleep problems, body image, and work difficulties (Gregory, 2007). The Beck Depression Inventory has established itself to be a reliable instrument for providing a comprehensive assessment of depressive symptoms across genders and a wide age gap. The transition from an interview-based to self-report has brought both advantages and disadvantages for the assessment process. For example, an advantage is the fact that patients are more likely to verbalize their inner feelings if they are in control of the process but a disadvantage is the ability for non-motivated patients to manipulate the process and state what they feel will lead to them receiving a diagnosis of depression and having some type of personal gain.

M. Future Endeavors of the Beck Depression Inventory

In my opinion, the future of the Beck Depression Inventory will focus on moving towards the assessment of other mood disorder such as anxiety and bipolar disorder. The inventory has already branched into assessing the presence of depression in youth to serve as useful screening tool for depression in youths (Stapleton et al.,2007). Additionally, there is the Beck Hopelessness Scale so the ability to translate this into an assessment that can target other mood disorders can only serve to expand the utilization of the inventory within all facets of psychology and possibility beyond the scope of psychology. As the Beck Depression Inventory represented a breakdown in terms of how assessment of depressive symptoms should be performed the same can translate into the assessment process for other disorders such as post-traumatic stress disorder, generalized anxiety disorder, social phobias, specific phobias, and bipolar I disorder and bipolar II disorder in the long run. When it comes to the development of psychological tests, test developers must consider whether the test that is used in one population can apply to another (Sprinkle et al.,2002). It is sometimes difficult to generalize a test used in a sample to an entire population so this is where the Beck Depression Inventory can provide assist by making revisions that include the particular features and characteristics of one group to the next so its use can grow with time.

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