Description of the minnesota multiphasic personality inventory

The Minnesota Multiphasic Personality Inventory (MMPI) is a standardized questionnaire designed to bring forth a wide variety of self-descriptions scored to give a quantitative dimension of an individual’s level of emotional adjustment and approach toward test taking. The MMPI has been known as the leading personality inventory, most psychologists who conduct assessments as part of their clinical and consulting practice utilize this test. The widespread use of this test is accredited to several features ranging from its straightforwardness in scoring and administration, a straightforward response format that is essential for research design, a large item pool, many useful purposes and functions, and many practically established correlates.

Psychologists make diagnostic and treatment decisions, through MMPI, it has been employed in inpatient and outpatient mental health facilities. It has been used by psychologists in clinical setting to evaluate the existence of psychological components in physical issues and to aid in predicting responses to a variety of therapy and treatment.

Starke R. Hathaway and J. Charnley McKinley developed the MMPI in 1939 at the university of Minnesota. It was developed initially because of their vision of an instrument that could assist in evaluating patients during routine psychiatric case workups and could precisely determine the severity of their disorders.

Hathaway believed the MMPI might aid researchers in assessing the usefulness of new treatment interventions by allowing methodical matching and evaluation of the participants.

The MMPI was constructed using the criterion keying method also known as the empirical method of inventory construction. (Archer, 1997) The criterion keying method is utilized by testing with two or more groups of participants. One group serves as the criterion group, this group has evidence of the defining trait, diagnosis or characteristic that test is intended to evaluate, and the other group/groups serve as a comparison group, where there is no evidence of the characteristics or diagnosis under evaluation. “ Responses of the criterion and comparison group are compared, and items are then selected for inventory membership that empirically demonstrate significant differences in response frequency.” (Archer, 1997)

Hathaway and McKinley began their construction of the MMPI by creating an extensive item pool from which various scales could be constructed, the item pool consisted of a variety of statements from different sources, ranging from previously established scales of “ personal and social attitudes, clinical reports, case histories, psychiatric interviewing manuals and personal clinical experience.” (Groth-Marnat, 1997) the result of extensive exclusion and amendment were 504 statements, these statements were balanced between positive and negative wording, and were developed to tap into a broad area of an individual’s life. The 504 items were divided into twenty-five content areas. These included items related to general medical and neurological symptoms, the clinical scales ranged from hypochondriasis, depression, hysteria psychopathic deviate, paranoia, schizophrenia, etc to scales to social introversion etc.

An additional “ 55 items thought to be related to masculinity-femininity were later added, and 9 items were subsequently deleted to achieve the final pool of

550 items.” (Nichols, 2001)

The format of the inventory was first person declarative statements, composed of basic phrasing based on contemporary word-frequency tables. The responses were limited to true, false or cannot say. (Nichols, 2001)

The population consisted of “ normals”(Nichols) who were selected to contrast with the pathological criterion groups (N= 724) ranging from the age of 16 to 65 referred also as the “ Minnesota normals”(Groth-Marnat, 1997), the sample was closely representative of a typical group of individuals from the Minnesota population, as indicated through the 1930 census.

The scales were cross-validated by selecting a different group of normals and contrasting their responses with a new group of clinical patients; so that the items and scales would be valid for differential analysis in clinical setting.

Hathaway and McKinley were interested in the fact that participants amend the impression they made on the test due to different test taking positions and opinions; hence the created several scales that could identify the different types and magnitudes of various test-taking attitudes which could invalidate the clinical scales. They developed four scales: the cannot say scale (?) was simply the total number of unanswered statements; If amount of questions was high it would reduce the overall validity of the MMPI profile. The lie scale (L) was developed to indicates the examinees efforts to place

himself/herself morally and culturally under an favorable light a create an favorable impression. The infrequency scale (F) is used to assess the inclination of individuals to claim highly unusual attitudes, opinions, and behaviors that are classified as an component of psychopathology. The correction scale (k) assesses the “ examinee’s degree of psychological defensiveness” (Groth-Marnat, 1997) this is considered the most important validity scale.

Practical evaluation of the MMPI

The MMPI can be administered to an individual who is above the age of 16, with an average sixth-grade reading level. As mentioned above an individual above the age of 16 is permitted to take the test, but adolescent norms needs to be addresses. Standard instruction are given prior to the test, test instruction are given regarding the nature and purpose of the test, and what it is designed to evaluate, and how the results will be used. Administering of the MMPI can be viewed as a relatively easy undertaking, and hence many practitioners tend to overlook vital elements that influence the participants test-taking attitude and would eventually lead to invalid results. Prior to the administration, scoring, and interpretation of results, the administrator should highlight the importance and consequences of the test in a serious manner to the test-taker, often the administrators do not high light the importance of the test to decrease performance anxiety. A clear elucidation oh how the results are significant and how it is going to be used will increase cooperation.

Interpretation of data is an important and vital part of the MMPI; the collected is useful in supplying information about “ attitudes toward

assessment, cooperation, cognitive/ideation, mood and affect, conflict areas, coping styles, diagnostic consideration and treatment recommendation”

The interpretation of the scores was based on the principle that a participant attains a raw score on each scale based on the number of items that they identified in the scored direction. The raw scores are then later converted to T scores, with a mean of 50 and a standard deviation of 10.

The interpretation of the test can be done in three ways, first using the validity indicators, this is the first step in interpreting any personality profile; which is establishing the validity to assure the subject’s cooperativeness in taking the test. MMPI has been established as having the most “ comprehensive validity indicators” (Goldstein, 2000) among all established personality inventories and assessments. Secondly interpreting results involve Configural Interpretation (code type), this is due to the intercorrelations amongst scales and also the overlap amongst the similarities of clinical syndromes, evidence has been attained indicating several MMPI scales tend to increase together, therefore, interpretations of scales should depend on the elevations of other scales in the personality profile. Third and final approach to interpreting the results is content bases interpretation. The principal followed in the content interpretation relies on the assumption that the participant when answering test items is reacting and responding with honesty and sincerity to the MMPI. Accordingly the content of the MMPI may represent a vital source of information that cannot be accessible through empirical test-interpretation.

Technical evaluation

The reliability analysis of the MMPI indicate that its has “ moderate levels of temporal stability and internal consistency… all MMPI scales are quite reliable, with values that range from a low of . 71 to a high of . 84.” (Groth-Marnat, 1997) many studies have reported inconsistency in some of the scales; many argue that the scales of the MMPI show instability in the test scores that are to be anticipated. This is mainly due to the psychiatric population since the “ effects of treatment or stabilization in a temporary crisis situation is likely to be reflected in a patient’s test performance.” (Groth-Marnat, 1997)

To cross-validate the scales, participants of the criterion and the control groups were administered the items. To qualify as cross-validated, a scale had to distinguish the criterion group from the control group at a 0. 5 alpha level significance.

Another issue that has surface about the MMPI is about the construction of the scales. The intercorrelations between most of the scales are relatively high, which is primarily due to the extensive amount of item overlap. Occasionally, the same item will be concurrently used for the scoring of a few other scales, and hence most of the scales have a relatively high percentage of items similar to other scales

The problems associated with the reliability and scale construction have led to hurdles and speculation on the validity of the MMPI. MMPI has been commended about its strict psychometric properties that present

complications, but it has been adequately compensated by its intensive validity studies

Development of the MMPI-2 and MMPI-A

Problems concerning the MMPI were mainly about the growing issues related to scale construction, insufficiency of a standardized sample and problems with the item pool. The original norm had inadequate representation of the minorities and hence was redundant in making conclusions about and with current test-takers. In 1982, the university of Minnesota instigated a major research in effort to revise, update, improve, and restandardize the MMPI. Its main goals were to delete the redundant, questionable, and problematic items. Maintain the efficacy of existing validity; clinical and different widely utilized scales of the test. Develop a representative sample, Develop new, revised norms for the MMPI and the development of new scales.

The MMPI was updated and restandardized and the new version was released in 1989; 46 years after the original MMPI was published. The revised MMPI-2 differs from the older MMPI in various ways; the T scores that the subject obtains are usually not as deviant as those from the previous version. In addition, the T scores designed to produce the same range and distribution right through the established clinical scales. The practical result is that T scores of 65 or greater are considered to be in clinical scale range; also the percentile distributions are consistent throughout the different type of scales. The test booklet itself contains 567 items, but the pattern has been changed so that the previously established scales (the 10 clinical and 3 validity scales) can be derived from the first 370 items. The proceeding 197 items provide different content, supplementary scales. A number of new and

revised scales have been included along with new, revised, adjunctive procedures of test validity, separate measure of masculinity and femininity and 15 other additional content scales measuring unambiguous and specific personality traits and factors. (Groth-Marnat, 1997)

The MMPI-2 shares a lot of psychometric property with the original MMPI. The median split-half reliability coefficients for the MMPI and the MMPI-2 are in the . 70's with some coefficients as high as . 96 but others much lower. Median of the test-retest coefficients range from a low . 50 to . 90; when one observes the basic higher-order factor structure; the MMPI and the MMPI-2 are extremely reliable, with coefficients running as high as . 90.

The MMPI and the MMPI have been criticized due to the item overlap and this issue was not confronted in the revision of the original MMPI, as the goal was to retain all the original scales. Another criticism associated with the MMPI and MMPI-2 is the " imbalance in the way the items are keyed"(Kaplan & Saccuzzo, 2009). the MMPI and the MMPI-2 strongly emphasize the importance of taking the participant's demographics into account when interpreting profiles.

The MMPI-A was published for the sole interest of creating an instrument for adolescents, with a normative sample depicting the broad teenage population. This occurred because MMPI produced different scale elevations for adolescence than for adults. This resulted in the construction of different sets of recommended norms for use with adolescent populations. To counter argue that the MMPI is too long, especially for adolescent, the MMPI-A

contains 478 items, there by shortening the administration. (Groth-Marnat, 1997)

Significant features of the MMPI include descriptive and diagnostic information about the personality profiles, flexible administration and scoring. The most important feature of the MMPI is its validity scales; and it has been translated and published into over 20 languages

The most needed amendment of the MMPI apparently has been a major accomplishment; the majority of psychologist, researchers, and clinicians have supported its utility and practical value resulting in its rising popularity among them. The MMPI serves to assist in distinguishing the normal from abnormal groups; specifically the test was designed to help aid in diagnosis and evaluation of major psychiatric or psychological disorders.