EJSIT
European Journal of Science, Innovation and Technology
ISSN: 2786-4936
www.ejsit-journal.com
Volume 3 | Number 5 | 2023

MMPI-2 Use with Transgender Populations

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ABSTRACT

The Minnesota Multiphasic Personality Inventory-2 (MMPI-2) is the most widely researched personality and psychopathology assessment used with transgender populations (Keo-Meier & Fitzgerald, 2017). Since its development, research on the MMPI-2 has demonstrated that inappropriate use of gendered norms with transgender individuals can negatively affect MMPI-2 protocol results and interpretation (Michel et al., 2002). As the MMPI-2 is used in several high-stakes evaluations affecting decisions regarding employment, child custody, and gender reassignment readiness (Keo-Meier & Fitzgerald, 2017), understanding the appropriate use of this instrument for transgender populations is necessary to prevent harmful recommendations and outcomes. While some gender-free assessments are available, the MMPI-2 measures a broad range of personality and psychopathology and has demonstrated sound validity and reliability, causing it to be perceived as a preferred instrument for many clinicians (Butcher et al., 2010; Graham, 2011). This paper provides recommendations regarding the appropriate use of the MMPI-2 with this population.

Keywords: personality, individual differences, gender, transgender, MMPI-2

DESIGN AND PURPOSE OF THE MMPI-2

The Minnesota Multiphasic Personality Inventory 2 (MMPI-2) is a standardized, well-validated, psychometrically reliable, lengthy assessment that includes 567 true/false items. The test includes multiple scales and subscales from which interpretations may be derived to describe individuals' personality dimensions and potentially psychopathological traits (Bonierbale et al., 2016; Butcher et al., 2010; Graham, 2011; Henrich, 2020; Karia et al., 2016; Keo-Meier et al., 2015). Clinical scales investigate several traits and dimensions and are named as follows: Hypochondriasis, Depression, Hysteria, Antisociality, Masculinity-femininity, Paranoia, Psychasthenia, Schizophrenia, Hypomania, and Social Introversion (Butcher et al., 2010).

Raw MMPI-2 scale scores are transformed into T scores to determine score strength relative to normed data, and both gendered and non-gendered scores are available for comparison (Butcher et al., 2010; Graham, 2011; Karia et al., 2016). Generally, high scale T scores (T scores above 65) indicate less favorable functioning, though a limited number of scales also provide interpretations (often negative) of low T scores (Bonierbale et al., 2016; Butcher et al., 2010; Graham, 2011). The MMPI-2 is used for many clinical and nonclinical purposes, as it is designed to assess elements of personality and psychopathology (Graham, 2011; Henrich, 2020; Karia et al., 2016). As this paper explores the use of the MMPI-2 with transgender populations, understanding the validity of the instrument's use with this population is essential. Appropriate treatment decisions made for gender reassignment candidates (Bonierbale et al., 2016) and accurate assessment and treatment planning for psychopathology rests upon a clear understanding of the appropriate use of this measure with transgender populations.

MMPI-2 USE WITH TRANSGENDER POPULATIONS

Psychological distress may occur due to multiple stressors. When considering transgender individuals, and especially those seeking sex reassignment, several potential stressors may include frequent social and familial rejection, employment challenges, economic difficulties, and legal strain (Bonierbale et al., 2016). Remaining sensitive to such unique stressors is essential to obtain a valid personality and psychopathology assessment for this population. Fortunately, the use of the MMPI-2 with this group has received a greater amount of study than any other personality assessment (Keo-Meier & Fitzgerald, 2017; Miach et al., 2000).

Thirty to forty years ago, in early research using the MMPI with transgender populations, individuals' scores on the Masculinity-femininity scale (Mf) were generally commensurate with the scores of their cis-gendered counterparts. As an example of this gender identity domain alignment, in the study by Keo-Meier & Fitzgerald (2017), transgender men differed from both females and males on two scales: Social Introversion and Masculinity-femininity. Remarkably, transgender men differed from cis-gendered males on seven additional scales: Schizophrenia, Psychastenia, Paranoia, Psychopathic Deviate, Hysteria, Depression, and Hypochondriasis. This finding of gender alignment has been replicated and supported (Henrich, 2020) by recent research on the MMPI-2 (Michel et al., 2002; Keo-Meier et al., 2015) suggesting that using inappropriate gendered norms with transgender individuals may significantly alter the outcomes of MMPI-2 results interpretation.

Additionally, decades of early use of the MMPI-2 with transgender populations provided findings that suggested high rates of psychopathology in trans individuals and their partners (Keo-Meier & Fitzgerald, 2017; Miach et al., 2000). However, these studies were heterogeneous in design and participant selection, and the findings were not informed by current, relevant theories that recognize stigma and bias against transgender individuals and the influence of gender minority stress. Additionally, these studies did not examine the MMPI scores of trans individuals at different phases of progress in sex reassignment surgery (Gomez-Gil et al., 2008), a critical line of research that may inform healthy sex reassignment practice. Unfortunately, the limited study of the application of MMPI use in sexual reassignment candidates precludes a robust understanding of the validity of the MMPI-2 for this purpose. Additionally, the historical use of the MMPI before current theories were applied has led to devastating consequences for transgender individuals such as losing child custody cases and desirable employment opportunities (Keo-Meier & Fitzgerald, 2017).

Further research in the useful application of this instrument may offer the transgender community additional insight into valid interpretations of individual personality domains and relevant psychopathological concerns. Keo-Meier and Fitzgerald (2017) explain that prior to hormone treatment, Paranoia scale elevations may result from feeling mistreated, guarded, suspicious, lonely, and upset with family members. Recent research thus suggests that discrimination and rejection by family members may contribute to the inflation of this scale score. This type of score contamination is also likely present in Schizophrenia scale scores, which reflect social alienation, strained relationships, and questions regarding one's identity and self-worth (Keo-Meier & Fitzgerald 2017). Interestingly, earlier in the transition process, trans individuals will likely show greater scale elevations as their identities are in an early state of evolution. Elevations in transgender samples have been observed (as compared to controls) for almost every MMPI-2 scale measuring psychopathology (Keo-Meier & Fitzgerald, 2017), which causes special concern when scores are assessed as clinically significant. Hypochondriasis and Hysteria scales may be affected by gender dysphoria and irritation with body image, and minority stress and gender dysphoria may affect Depression and Anxiety scale scores. Paranoia scores may become inflated due to experiences of rejection and discrimination leading to feeling misunderstood, rejected, guarded and resentful towards others. Finally,

increased Schizophrenia scale scores may reflect social alienation, questioning identity, and strained family relations (Keo-Meier & Fitzgerald, 2017).

While some research shows client self-assessments show less pathological results than do clinician-based assessments (Anzani et al., 2020), studies have demonstrated that transgender men are found to experience psychological functioning in the normative range (Keo-Meier & Fitzgerald, 2017; Miach et al., 2000). Interestingly, after hormone therapies were received by transgender men for three or more months, MMPI-2 scale scores showed significant improvement in a healthy and positive direction (Keo-Meier & Fitzgerald, 2017). MMPI-2 scores had previously been assumed to remain stable over a lifetime. However, the important finding that hormone therapies results surpassed those of long-term intensive psychotherapy lead researchers to conclude that the MMPI-2 does not present an accurate picture of psychological functioning for individuals in early transition stages (Keo-Meier & Fitzgerald, 2017).

Another study presented by Miach and colleagues (2000) examined MMPI-2 profiles from 86 male sex reassignment candidates separated into two groups: transsexuals and those diagnosed with gender identity disorder of adolescence and adulthood, non-transsexual type (GIDAANT). Transexuals were required to meet three criteria: have achieved puberty, feel pervasive discomfort caused by one's sex, and have experienced at least two years' preoccupation with exchanging current sex characteristics for those of the opposite gender. GIDAANT individuals must meet the first two criteria mentioned and experience persistent cross-dressing for reasons excluding sexual excitement. After a six-month waiting period, individuals underwent MMPI-2 testing, not to diagnose transsexualism (this was already done) but to identify additional psychopathology that may create psychological challenges and determine if sexual reassignment surgery was suitable (Miach et al., 2000). The transexual group demonstrated no psychopathology (as indicated by the MMPI-2 results), which is consistent with other study findings including individuals' general discomfort due to familial and social rejection, social alienation, strained relationships, and uncertainty regarding sexual identity. Results indicated that gross psychopathology (especially borderline personality disorder) is not consistently comorbid with transsexualism (Miach et al., 2000).

In a small sample study of those with gender identity disorder (GID) seeking sex reassignment surgery (n=27), the MMPI-2 was used to examine differences in profiles of individuals using the patient's gender assigned at birth (Karia et al., 2016). The protocols were assessed as valid indicating truthful and authentic participant responses. While male-to-female participants showed higher scores o

n the Paranoia and Schizophrenia scales, no clinically significant scale elevations were noted; this was expected as GID individuals often present minimal psychopathology. It was determined that differences between genders were of no concern, and the assessment does not indicate that gender is a likely determinant of GID-related psychopathology. The MMPI-2 has been used in several such studies that investigated GID; thus far, research has demonstrated that GID is likely an isolated disorder and not continuously comorbid with depressive or other psychopathological profiles (Karia et al., 2016).

A cross-sectional study by Bonierbale and colleagues (2016) investigated personality and psychopathological characteristics of transsexual individuals in a large French sample (n = 108; M age = 31 years). Participants had been given a diagnosis of gender dysphoria and were eligible for sex reassignment surgery. Multivariate analyses revealed that hormonal therapy status retained a statistically significant relationship to Psychasthenia and Masculinity-femininity scales. The study also found that those who had begun hormonal therapy had improved psychological functioning, as seen in the Schizophrenia and Masculinity-femininity Scales for female-to-male individuals, and in the Psychasthenia and Hypomania scales in the male-to-female participants. This is presumed to occur as hormonal treatments can assist in

greater comfort, self-confidence, and improved social skills experienced (Bonierbale et al., 2016). Bonierbale and colleagues (2016) also noted that prior literature using the MMPI-2 demonstrated that male-to-female individuals scored in the clinical range more often on the Hypochondriasis, Hysteria, Psychopathic Deviate, and Depression scales. These elevations reflect gender role discomfort that transgender individuals experience, with male-to-female individuals demonstrating greater score effects, likely due to more frequent desires to visually change appearance to alleviate discomfort (Bonierbale et al., 2016).

Another study by de Vries and associates (2011) sought to assess psychopathology in trans individuals seeking sexual reassignment (n = 254) to determine possible differences between those requesting sex reassignment hormonal therapy and those requesting sex reassignment surgery. The study found disorder comorbidity in the transsexual population, indicating that though transsexuals retain overall positive psychological functioning, subgroups may experience increased psychopathology related to age, sex, or sexual orientation. The study authors also found that while effect sizes indicated small or moderate practical importance, female-to-male individuals experienced better psychological functioning when compared to male-to-female participants; this finding mirrored the results interpretation of the study by Bonierbale and colleagues (2016). Of note, the only scale score than reached clinical significance for the trans individuals studied was the Psychopathic Deviate scale; this likely reflects the interpersonal difficulties this population often experiences due to discrimination, social alienation, and strained relationships. Of all the study findings, the most paramount was that adult applicants for gender reassignment surgery experienced poorer psychological functioning when compared to adolescent applicants. The study authors hypothesized that this finding may suggest that individuals who undergo transsexualism pre-puberty (early-onset) may face a less disruptive gender role change, reduced stigma, and lessened harm from gender dysphoria (de Vries et al., 2011).

FUTURE RESEARCH CONSIDERATIONS

Additional research is needed to better understand the nature and degree of various psychopathologies that candidates for gender reassignment may experience (Bonierbale at al., 2016). Current approaches do not provide enough culturally sensitive, accurate assessment results, and refinements in assessment tools and methods are needed. Researchers may provide more sensitive testing with increasingly specific hypotheses for this population in a few ways. They can account for transgender individuals' transition statuses, use male and female control groups, and apply pertinent and appropriate gendered scoring templates (Keo-Meier & Fitzgerald, 2017). Also recommended is a more rigorous diagnosis procedure to differentiate groups within those seeking sex reassignment surgery (Miach et al., 2000) to generate more specific and meaningful results. Interestingly, Han and colleagues (2019) reported developments as cultural researchers have begun offering suggestions to more clearly conceptualize and operationalize group variables (such as gender identification). The authors acknowledged that costs of grouping sex and gender into limited labels are dangerously unknown and may not yield research that is useful for each demographic. Han and associates (2019) suggested that providing research participants multiple ways to conceptualize their gender identity may improve results of such studies. Offering diverse means for research participants to self-identify their gender may be accomplished by including an open-ended gender identity response option, allowing the selection of multiple measures of gender identity (both dynamic and continuous), and waiting until the end of a survey or questionnaire to ask questions regarding gender identity.

CONCLUSION

Existing studies regarding the use of the MMPI-2 with trans populations have demonstrated mixed findings: some show generally normative functioning while others show psychiatric comorbidity (Bonierbale et al., 2016). The unique cultural variables and scant normative data for transgender populations may cause artificial scale inflation, which is problematic as these assessment scores are often considered for decisions of import such as those regarding parental custody, employment, and gender reassignment readiness (Keo-Meier & Fitzgerald, 2017). If clinicians desire to use the MMPI-2 with this population, it is advised they wait until at least three months after hormone therapy initiation. Individuals' scores will likely be more representative of their true baseline result as transgender individuals often score differently depending upon the stage of their hormone therapy (Keo-Meier & Fitzgerald, 2017). Using the MMPI-2 Masculinity-femininity scale interpretation template that best aligns with the individual's gender identity will also provide improved results (Bonierbale et al., 2016; Henrich, 2020). Additionally, gender-free assessments may also be considered; a few that do not include gender norms include the Beck Depression Inventory – 2nd edition and the Symptom Checklist-90-Revised (Keo-Meier & Fitzgerald, 2017). Future research in this field would also benefit from including multiple control groups and considering refinements in assessment tools and methods that consider the state of a participant's transition (Keo-Meier & Fitzgerald, 2017). Reconceptualizing and further operationalizing gender identity could also prove greater utility in the design of new research and in the application of future study results (Han et al., 2019).

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