AN ABSTRACT OF THE THESIS OF

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Title: The Validity of MMPI-2 with Kenyan Students: An Exploratory Study

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MMPI-2 responses of 20 male and 20 female Kenyan college students from three universities were examined. Kenyan students were compared with the US normative college samples (Butcher et al., 1990) on the clinical and validity scales. The results indicated that Kenyan college women responded to the MMPI-2 in a highly similar manner to the MMPI-2 US normative female sample. Significant differences on the mean raw scores on Scales F, 2 (D), 6 (Pa), 7 (Pt), and 8 (Sc) were found between the Kenyan college men and US college men. Mean score differences on the validity and clinical scales were within 1 to 3 T-score points on most scales for women and 2 to 6 T-score points for men and frequency distributions of Kenyan college students were similar to those of MMPI-2 US normative college sample. Elevations on scale F and 8 with Kenyans college students (especially men which are consistent with results in other cultures) were clinically significant. This suggested that new overall norms would be unnecessary if proper adjustments were made for Scales F, 8 (Sc), and 0 (Si). Also of interest was the similarity in endorsement patterns on scales 3 (Hy) and 5 (Mf) between Kenyans and US males. Equally striking was that significant differences between male and female Kenyans occurred on these Scales (3-Hy and 5-Mf); thus suggesting that gender-related factors may be more salient in the men's endorsement patterns on these scales than culture. Conversely, the significant differences between the Kenyans and US normative college sample on all validity and

clinical scales point to more cultural and gender-based differences between the men and women.

An analysis of variance was performed to test whether the variances of the two groups for the two scales were different from one another. Large variances occurred on Scales F and 0 (Si) for both Kenyan men and women versus American men and women. For men $\underline{F}$ (38,5 -) = 7.25, $\underline{p} < .01$ and for Scale 0 (Si), $\underline{F}$ (38,5 -) = 3.49, $\underline{p} < .05$. This indicated that Kenyan men were much more variable on their F and 0 (Si) scores than American men.

Similarly, for the Scales F for women, $\underline{F}$ (38, 5 -) = 8.19, $\underline{p} < .01$ and for Scale 0 (Si), $\underline{F}$ (38,5 -) =3.01, $\underline{p} < .05$. This also indicated that Kenyan women were much more variable on their F and 0 (Si) scores. This suggested that the MMPI-2 inventory might not be useful enough to enhance accuracy of clinical diagnosis, interpretations, and predictions of psychopathology for Kenyans.

In spite of small sample size, the results of this study indicated the MMPI-2 could be used in Kenyan to enhance accuracy of clinical diagnosis, interpretations and predictions of psychopathology, if proper adjustments were made on some of the clinical and validity scales especially Scales F, 2, 6, 8, 7, and 0 for men and Scales F, 8, and 0 for women. However, future researchers may require a larger sample from Kenya for a more conclusive validation of the MMPI-2 with Kenyans.

THE VALIDITY OF THE MMPI-2 WITH KENYAN STUDENTS: AN EXPLORATORY STUDY

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CHAPTER 1

INTRODUCTION

The Minnesota Multiphasic Personality Inventory-2 (MMPI-2) has been adapted and extensively used in Europe, Asia, and the Middle East (Butcher & Clark, 1997; Butcher & Pancheri, 1976). In Africa, however, knowledge of the administration of the MMPI-2 is limited (Butcher & Clark, 1997). This study explored the validity of the MMPI-2 with Kenyans.

Statement of the Problem

Among studies of international students at institutions of higher education in the United States, very few have focused on African students in particular. These studies have difficulties ranging from erroneously in interpreting the data to inconsistencies in the experiences of those studied (Nebedum-Ezeh, 1997). Most of the instruments used in psychological testing are based on Western inventions (Lesser, Fifer, & Clark, 1965). The main argument against using these instruments in Africa is that they are culturally biased and thus inappropriate to indigenous groups. Constructs measured by these tests and the concepts on which they are based (e.g., aptitude, ability, personality, and intelligence) are thus a European American middle-class and inappropriate in the African context (Zindi, 1995). Zindi expresses the African perspective thus:

> In the past, a person who exhibited good hunting skills or knew how to look after his immediate and extended family, was proficient in story telling, was regarded as intelligent in any African society. With the arrival of the white man in Africa and the resultant aspiration by most urban Africans toward Western technology and intellectual fashion, intelligent behavior is now being regarded as the ability

> to solve mathematical problems, exhibiting verbal skills in one of the major European colonial languages and displaying social competence. There is no doubt that these are western values.... western intelligence seems to omit activities that are valued as intelligent or personality behaviors by Africans. In addition any type of assessment including personality assessment remains a hypothesis in the African context until more research studies are carried out. (p. 111)

Although adapting the MMPI-2 to diverse cultural groups has yielded useful results (Butcher & Clark, 1979), only a limited amount or no research is available to demonstrate its reliability with Kenyans.

Statement of Purpose

In a certain sense, psychological tests are the victim of their own success (Most, 1992). Despite the enormous advances made in psychometrics since the beginning of the 20th century, their phenomenal growth in number, variety, and functions and increased usage in decision-making have brought psychological tests under scrutiny and attack. The indiscriminate use of tests has inevitably led to misapplication and the misuse of tests results and certain misconceptions of what can possibly be achieved with tests may have led to inappropriate or unjust criticisms or actions against tests (Jensen, 1981).

Standardized tests have ardent supporters and equally fervent opponents. These conflicting views are captured very aptly by Hopkins and Stanley (1992, p.1019) who, referring to the paradox of testing, wrote, "Many people are opposed to measurements and evaluation, yet at the same time favor excellence, which is facilitated by and can be identified only through measurement and evaluation."

The purpose of this study is to establish whether the MMPI-2 is valid for use with Kenyans. Specifically, will normal male and female Kenyans respond differently to the MMPI-2 than would be predicted from normative data and will the differences be significant enough to suggest renorming of MMPI-2 for use with Kenyan men and women?

Statement of Significance

This study will provide valuable information about the use of MMPI-2 with Kenyans. The data provided by this study will give practitioners a clear picture of what to expect when interpreting the profiles of culturally divergent groups. For this reason clinicians would be expected to have knowledge of the beliefs and values of a particular culture and would consult appropriate norms and relevant research when available. For example, people who are unfamiliar with paper-pencil tests may simply acquiesce in responding to items out of politeness, perhaps to give socially desirable answers or to respond in a careless manner. Clinicians from test-oriented cultures may incorrectly assume that other cultures are equally comfortable with standardized verbal, limited-option format of many Western measures (Draguns, 1984). This research may also provide information to aid clinicians on which items to adapt on the MMPI-2 to enhance accuracy of clinical diagnoses, interpretation and predictions of psychopathology of culturally divergent groups.

Literature Review

The use of psychological testing for clinical assessment has been expanded from its origins within Europe and the USA to numerous other countries around the world (Butcher et al., 1998). The rapidly increasing use of Western-derived clinical tests results

from several factors including the expansion of available mental health services in many countries since the mid-1980's, the growth in the number of assessment-trained psychologists in other countries, an increased recognition that psychological assessment can provide valuable information in the mental health contracts, and increased professional communication through international congresses (Butcher et al., 1998).

The Country and People of Kenya

Kenya extends from the Indian Ocean deep into the interior of Africa. The equator runs through the center of Kenya. Kenya's coastal area is hot and humid, surrounded by beautiful sandy beaches, lagoons, swamps, and patches of rain forest line the coast. Inland, a vast plain stretches over about three-fourths of Kenya. The extremely dry climate and generally poor soil support scattered plant life. The highland in the Southwest receives enough rainfall and has enough fertile soil to support extensive farming.

Kenya has a population of about 28 million. About three-fourths of whom live in the rural areas. Nairobi, capital and the largest city has a population of 1,162,000 people. Most of the people live in rural areas, farm the land, and raise livestock. Each year, many rural people move to Kenya's cities and towns, and so these urban areas are growing rapidly.

Britain ruled Kenya from 1895 until it became an independent nation in 1963. During this period, the British influenced both the economic and cultural life of Kenya. Since independence, the leaders of Kenya have emphasized the African heritage of the nation.

About 99% of Kenya's population is made up of black Africans. Other population groups, in order of size, are Asian Indians; Europeans, chiefly British; and Arabs. Kenya's black Africans belong to about 40 different ethnic groups. The largest group, the Kikuyu (or Gikuyu), make about 20% of Kenya's population. Four other ethnic groups – the Kalenjin, Kamba, Luhya, and Luo – each make up between 10% and 15% of the population.

Kenya's ethnic groups are divided by separate language or dialects, and, in many areas, by differing ways of life. Differences in economic and social development have sometimes led to friction between groups. Since independence, however, the Kenyan government has made progress toward overcoming ethnic divisions and giving the people a sense of national unity.

Most of Kenya's ethnic groups have their own local language or dialect. Some Kenyans know only their local language, but Swahili, Kenya's national language, is widely used for communication between people of different ethnic groups. Most educated Kenyans also know English, the official language.

Kenyans place much value on large families. Many Kenyans' families have six or more children, and so the women are kept busy with childcare. In addition, almost all women of Kenya's farm families take part in the planting and harvesting of crops. Some also work part time on large farm estates. The Kenyan government recognizes the equality of men and women and encourages women to become educated and achieve high-paying jobs. Some women have done so, but the vast majority are too busy with childcare and farm work to advance to high positions.

Kenyan children are not required to attend school by law. But large numbers of Kenyan parents value education as a key to better life for their children. About 81% of the children receive at least an elementary education.

Since independence, Kenya's government has greatly increased the number of schools in response to demands for educational opportunities by the people. Today, the government operates schools in most part of the country. In addition, groups of private citizens have set up schools in many places that have no government schools. These schools are called self-help, or harambee, schools. Harambee is a Swahili word that means pulling together. Education is free for students in government elementary schools. Students in high schools and harambee schools must pay tuition. Kenya has five national schools of higher education. They are the University of Nairobi; Kenyatta University in Nairobi, Moi University in Eldoret, and Maseno University in Kakamega (World Book Encyclopedia, 1995). For the purposes of this study, a Kenyan is a college student who has lived in the US for a period not exceeding three years.

Psychological Testing in Kenya

The use of psychological testing in Kenya especially in educational level has been very scarce. As earlier mentioned, few of those that exist have drawbacks such as funding, difficulties in interpreting the data to inconsistencies in the experiences of those studied. No study has been reported on the use of MMPI-2 with Kenyans, (S. Gatere, personal communication, March 28, 2001)

What is Culture?

Broadly speaking, culture is conceptualized as the particular traditions, values, norms, and practices of any people who share a common ancestry. Assessment,

especially test data, gathered by school psychologists and other practitioners are thus culturally shaped (Valencia & Lopez, 1992). For the purposes of this study, culture will involve patterns of behavior acquired and transmitted by symbols or cognitions, that make up the aggregate achievement of human groups, which are embodied in artifacts or materials passed on to others. The essential elements of culture consist of materials, traditional ideas, and values surviving within a group intergenerationally (Butcher et al., 1998).

Cultural Factors in Mental Health Assessment

Although language and customs, as reflected in familial and social practices vary between countries, there are also many common features such as psychological and physical disorders. Psychological disorders appear to be generally comparable across different cultures, although there have reportedly been some culture specific conditions (Yap, 1951), many commonalities exist with similar symptoms and common manifestations across diverse groups. For example, schizophrenia appears to occur in all known cultures and societies through history although the symptoms may vary somewhat and rates may differ (Butcher, Narikiyo, & Bemis-Vitousek, 1992)

Commonalities across cultures in mental disorder have allowed for the development of international mental disorder (World Health Organization, 1992) referred to as International Code of Mental Disorders-10 (ICD-10). The ICD-10 diagnostic system parallels the diagnostic system developed in the USA, the Diagnostic and Statistical Manual of Mental Disorders (4th ed.; DSM-IV), which is also in wide use in several other countries including, Kenya and other African countries. Many psychiatrists employ DSM-IV instead of ICD-10. The very existence for common language for describing

psychological disorders and their apparent relevance around the world suggests that the elements of mental disorders are stable across cultures.

Application of Psychological Tests Across Cultural Boundaries

The use of clinical personality test has a history dating back to the 1920s (Butcher et al., 1998). Although personality tests were faced with a number of set backs brought about by cultural differences, their use was revived between 1950s and 1960s (Lindzey, 1958). The practice witnessed a number of projects to translate and adapt objective personality instruments across cultures, not for the purposes of anthropological study, but for the emphatically practical aim of making clinical decisions in a more objective manner than was currently available.

One of the most widely employed and internationally adapted inventories used in clinical assessment has been the MMPI, which was subjected to early European translations, including Italian (Reda, 1948), Japanese (Abe, 1955), and Germany (Sundberg, 1956). In the years that followed, over 150 translations of the MMPI were developed and the inventory came to be widely employed in over 46 countries (Chung & Song, 1989; Chung, Song, & Butcher, 1991; Chung, Zhao, & Wu, 1992; Kim, 1988; Risetti, Himmel, Maltes, & Gonzalez, 1989; Strassberg, Clutton, & Korboot, 1991; Strassberg, Tilley, Bristone, & Tian, 1992; Zou & Zhao, 1992) and South Africa is the only African nation using the MMPI-2 (Lison, T & Vander Spuy, 1977). In 1976 Butcher and Pancheri published an international handbook on using the MMPI across cultures that described model translation projects, provided substantial psychometric equivalence data, and illustrated clinical validation efforts in international context.

With the redevelopment of the MMPI and the publication of MMPI-2 in 1989, a new wave of test translation began. A number of recent studies have explored the use of the MMPI-2 in other cultures. Central to using the MMPI-2 in cross-national settings is the establishment of sound translation of the items into target language and culture and the demonstration of test equivalence (Butcher, 1996).

The Translation of the MMPI-2

As the MMPI-2 began to be adapted in different countries (Butcher, 1996b), one important side benefit was the work of test translators and international test publishers became easier for several reasons. For example, the item pool of the revised MMPI-2 did not contain the large number of awkward and inappropriate items that the original MMPI had contained. Second, the revised U.S. norms were more representative of the heterogeneous population of the United States. International normative researchers discovered that normal individuals in other countries usually scored quite close to the US norms. Consequently, in some places, such as Norway and Iceland, the scores were so close to the American norms that new specific norms for those specific countries were regarded unnecessary. In other countries such as France, Belgium, Holland, and Mexico, the nationally derived norms were within the standard error of measurement for American norms, yet separate norms were published in order to facilitate acceptance in the target country.

In addition to the translation, computer test interpretation programs have evolved substantially over the succeeding decades interpreting psychological tests in the U.S.A. (American Psychological Association [APA] 1986; Butcher, 1987; Eyde, Kowal, & Fish burne, 1991). With computerized test interpretation programs for MMPI-2 becoming

widely available for clinical use in the USA (Butcher, 1995), psychologists in other countries also began to explore computer-derived personality assessments (Fowler & Butcher, 1987; Pancheria, Sirigatti, & Biondi, 1996). Computer based MMPI-2 reports provided accurate and useful information when applied with Australian, French, and Norwegian, and America psychiatric patients (Berah, Miach, & Butcher, 1995). The patients were administered the MMPI-2 and computerized Minnesota Reports were generated. Clinicians familiar with the patients rated the reports in terms of adequacy of information and accuracy of descriptions and predictions. Two-thirds (66%) were judged to be 80-100% accurate, and 87% considered to be over 60% accurate in the information provided. The clinical application of computer-based reports was also illustrated through case examples from several countries, including the Netherlands, Italy, Korea, Iran, America, and Israel. These case studies illustrated the generalizability of the MMPI-2 across cultures. The MMPI-2 variables are what one would expect to find if the patients were American patients assessed in the USA. Moreover, these MMPI-2 profiles appear to be close matches with the cases, in spite of the fact that the profiles were generated on US norms. In addition, the computer-derived narratives, which were developed on research conducted in the USA, show close matches when the reports developed in other countries.

How can an instrument developed in one language and culture show such generalizability when applied to patients in other cultures who responded to translated versions of the items? Several factors account for this correspondence of patient descriptions across cultures. Research in cross-cultural psychopathology has shown that mental disorders and diagnostic systems are comprised of similar symptom patterns in

different cultures; a schizophrenic is a schizophrenic regardless of culture. Many similar disorders show common patterns of symptoms across cultural boundaries.

Similarly, the MMPI-2 items sample a broad range of symptoms and problems constituting the abnormal syndromes. Given a well-translated item set resulting in an equivalent form, the symptoms are found to describe well the disorders in each culture. Patients who are depressed, for example, tend to respond to the same types of items in the cultures studied here, producing familiar personality profile patterns. This is not to say that cultural factors are irrelevant to the manifestation of psychopathology. Childrearing patterns in Italy might result in a "dramatization of symptoms" (Butcher & Pancheri, 1976) that is not noted in other cultures. However, such differences do not greatly alter the main symptoms of psychopathology, thereby resulting in some commonality for disorders across cultures.

The above case studies also provide an important example with respect to objective personality assessment. The study on computer-based versus clinically based scores shows that the empirical description of MMPI-2 patterns has broad generalizability whether interpreted by clinicians or by the computer.

The Development of MMPI-2

The MMPI-2 (Minnesota Multiphasic Personality Inventory) is the most widely used objective clinical personality test today (Butcher & Rouse, 1996). Since its conception in the early 1940s, over 6,000 studies have been published about it (Butcher, & Rouse, 1996)

The original MMPI was developed to diagnose specific psychological disorders, such as depression and schizophrenia (a disorder of thinking and emotion) (Hathaway &

McKinley, 1943). The basic purpose of the test was to differentiate among various types of mental patients, as well as to distinguish between mental patients and normal people. The MMPI did indeed do that; certain types of people tend to give certain responses on the test. Thus, the test was used to diagnose problems by first determining who actually had them. However, due to enormous criticism, the MMPI was revised in order to obtain a large normative group that was broadly representative of the United States population (Butcher, Tellegen, Dahlstrom, Graham & Kraemmer, 1989). The criticisms have primarily centered on its growing absolescence, difficulties with original scale construction, inadequacy of its standardization sample, and difficulties with many of the items, which included sexist wording, possible racial bias, archaic phases, and objectionable content (Butcher & Pope, 1989; Helmes & Reddon, 1993). In addition, the original norms had poor presentation of minorities and are in appropriate in making comparison with current test takers. Further problems have related to inconsistent meanings associated with T-score transformation.

In July 1989 the updated and restandardized MMPI-2 was published. Because the original MMPI was so widely used, great care was taken to improve the original while still keeping the revision compatible. The restandardization was based on a representative sample of 2,600 men and women ranging from 18 to 84 years of age. Seven testing sites (Minnesota, Ohio, North Carolina, Washington, Pennsylvania, Virginia, and California) were selected to ensure geographic representation. Racial composition of the sample was as follows: White, 81 %; Black, 12%; Hispanic, 3%; American Indians, 3%; and Asian-Americans, 1%. Other sample characteristics included educational, marital, occupational, and economic status. The original 550 items (with 82 reworded to eliminate sex bias and

outdated topics), along with 154 new items, were included in an experimental form used in testing. Eventually, 567 items were selected for the MMPI-2 (370 items are used for the basic scales and 197 for the supplementary scales).

The MMPI-2 is a "true, false or cannot say" paper and pencil questionnaire that has 567 questions like "I worry about sex matters" or "I believe I am being plotted against." The test is not timed and can take anywhere from one to three hours to complete. The items cover a wide range of topics, including attitudes on religion and sexual practices, perceptions of health, political ideas, information on family, education, and occupation, and displays of symptoms known to be exhibited by certain groups of mentally disturbed people.

The test provides scores on 10 basic clinical scales, hypochondriasis (Scale 1) (exaggerated concern about physical health), depression (Scale 2), hysteria (Scale 3), psychopathic deviance (Scale 4), masculinity-femininity (Scale 5), paranoia (Scale 6), psychasthenia- irrational fears and compulsive actions (Scale 7), schizophrenia, a form of psychosis and social introversion or withdrawal (Scale 8) hypomania-excitability (Scale 9), and social introversion (Scale 0). The MMPI-2 includes 10 supplementary scales that help diagnose such clinical problems as anxiety, repression, ego strength, alcoholism, hostility, dominance, social responsibility, college maladjustment, gender-role, and posttraumatic stress disorder. There are also 15 Content Scales that measure various aspects of personality: anxiety, fears, obsessiveness, depression, health concerns, bizarre mentation, anger, cynicism, antisocial practices, type-A personality, low self-esteem, social discomfort, family problems, work interference, and negative treatment indicators.

In addition four Scales were developed to detect types and magnitude of the different test-taking attitudes most likely to invalidate the other clinical scales. The four Scales were the Cannot say (?), the Lie (L), the Infrequency (F), and the K- Correction (K). The Cannot say Scale (?) is simply the total number of unanswered questions. If a high number of these were present, it would obviously serve to reduce the validity of the overall profile. High scores on the L Scale indicate a naive an unsophisticated effort on the part of the examinee to create an overly favorable impression. The items selected for this Scale were those that indicated reluctance to admit to even minor personal shortcomings. The F scale is composed of those items endorsed by less than 10% of normals. A high number of scorable items on the F scale then reflect that the examinee is endorsing a high number of unusual deviant responses. The Scale K reflects an examinee's degree of psychological defensiveness is perhaps the most sophisticated of the Validity Scales. If some of the Scales were lowered due to a defensive test-taking attitude, then a measure of the degree of defensiveness and could be added into the scale to compensate for this.

The MMPI-2 re-standardization committee has also developed the Variable Response Inconsistency (VRIN) and True Response Inconsistency (TRIN) Scales to help detect invalid profiles caused by inconsistent or contradictory responding. These scales have been specifically designed to detect either response acquiescence or response nonacquiescence and thus should help counter the potential complications due to imbalanced keying.

Reliability reported in the MMPI-2 manual indicates moderate test-retest reliability. However, test-retest reliabilities were calculated for a narrow population over

short-term retesting intervals. Reliabilities for normal males over an average interval of 8.58 days (Mdn-7 days) ranged from a low of .67 for scale 6 to a high of .92 for scale 0 (Butcher et al., 1989) a parallel sample of female's reliabilities ranging from .58 (Scale 6) to .91 (Scale 0). Standard error of measurements for the different scales ranged from 2 to 3 raw score points (Butcher et al., 1989; Munley, 1991). Future studies will no doubt provide a further evaluation of the MMPI-2's reliability over longer intervals and for various population groups.

The MMPI-2 has been validated for a number of clinical and personality applications (Butcher et al., 1989). A number of people solicited for the MMPI-2 normative study were asked to invite their spouses to participate in the study. A total of 822 heterosexual couples were administered the MMPI-2. Each participant also completed a marital adjustment questionnaire (Spanier's Dyadic Adjustment Scale) and a behavioral rating questionnaire on the spouse. The 110 item couple's Rating Form contained a wide range of behaviors, attitudes, and impressions that people would be expected to know about their spouses. These ratings provided an important source of validity data on the MMPI-2 scales.

However, the MMPI has faced many critics. According to Helms and Reddon (1993), the concerns about the MMPI and MMPI-2 included the lack of a consistent measurement model, heterogeneous scale content, and suspect diagnostic criteria. Serious structural problems include the overlap among scales, lack of cross-validation of the scoring keys, inadequacy of measures of response styles, and suspect norms. Although the MMPI-2 is an improvement over the MMPI, both are suboptimal from the perspective of modern psychometric standards for the assessment of psychopathology.

Thus MMPI and MMPI-2 are inefficient instruments (Jackson, 1989; Million, 1987; Morsey, 1991). The use of the Clinical scales on either instrument requires substantial experience and sophistication by the user. Much of that sophistication is necessary only because of the many pervasive conceptual and operational weaknesses that have been eternized. Clinicians who examine the MMPI-2 with regard to their own needs should certainly be cognizant of the difficulties and the hazards in addition to the research base of the MMPI. These authors feel that the examiners should also look at other alternatives to the original MMPI and the MMPI-2, such as the California Psychological Inventory (CPI) and the Million Clinical Multiaxial Inventory (MCMI), because these instruments are more likely to incorporate modern developments and have fewer serious conceptual problems.

Butcher, Graham, Dahistrom, and Bowman (1990) determined that the MMPI-2 was suitable for use with college students. In their study, MMPI-2 responses of 515 male and 797 female college students from four universities were examined. College students were compared with the new MMPI-2 normative sample on the clinical and validity scales. The reliability of MMPI-2 scores of college students was compared with reliabilities of the MMPI-2 normative sample. The result indicated that college students respond to the MMPI-2 in a highly similar manner to that of the normative sample. Mean score differences on the validity and clinical scales were within 1 to 3 T-score points on most scales, and the frequency distributions of college students were highly similar to those of the normative samples. The MMPI-2 norms were shown to be appropriate with use with college students. Test-retest correlation coefficients obtained from college students who were administered the MMPI-2 on two occasions showed reliabilities

comparable to those found for the MMPI-2 normative sample. However, the authors advised the continued use of the original MMPI with individuals younger than 18 because the MMPI-2 was not normed for use with adolescents (Colligan & Offord, 1992) The results of the current study will be compared with the results of the study (Butcher et al., 1990) carried out on US college students.

Validating the MMPI-2 Across Cultures

A number of different research efforts have attempted to study the effects of ethnicity on MMPI-2 performance. Most of this work has centered on differences between African Americans versus European Americans and the use of the MMPI-2 within different cross-cultural contexts. Research on African Americans versus European American's MMPI-2 performance has frequently indicated that African Americans are more likely to score higher on Scales F, 8 and 9 (Green & Kelly, 1988; Smith & Graham, 1981). This has resulted in considerable controversy over whether these differences indicate higher levels of actual pathology or merely reflect differences in perception and values without implying greater maladjustment. If the differences did not reflect actual pathology, then specialized subgroup norms would be required to correct for this source of error. However, reviews by Greene (1991) demonstrated that, although African American versus European American differences could be found for some populations, there was no consistent pattern to these differences across all populations. What seemed of greater significance was the role of moderator variables, such as education, income, age, and type of pathology. When African American and European American psychiatric patients were matched according to level of education and pathology, their MMPI/MMPI-2 performances were the same (Davis, Beck, & Ryan, 1973; Timbrook &

Graham, 1994). The issue of actual behavioral correlates of African American MMPI-2 performances has received little research, and the results generally have not found differences between African Americans and European Americans. Furthermore, predictions based on African American and European American juvenile delinquents' MMPI scores were equally accurate for African American and European Americans (Green & Kelley, 1988; Timbrook & Graham, 1994). Based on the preceding findings, Greene (1991) and Pritchard and Rosenblatt (1980) concluded that it would be premature to develop and use separate norms for African Americans. However, it would still be important for clinicians to continually be aware of the many possible MMPI-2 scores and correct for these factors when appropriate.

Similar to African American versus European American comparison, no consistent patterns have been found across different populations for Native American, Hispanics and Asian Americans. For example, normal Native Americans scored higher than European Americans on most clinical scales but these differences did not occur among psychiatric or substance abusing populations (Greene, 1991). Differences between Hispanics and European Americans have generally been found to be less than African American or European American differences (Greene, 1991; Whitworth & McBlaine, 1993). There is also some indication that Hispanics may score higher than European American on Scale L but lower on K, 3 (Hy), and 4 (Pd) (Whitworth & McBlaine, 1993). In addition, Hispanic workers compensation cases may be more likely to somatize psychological distress as reflected by greater elevations on 1 (Hs), 2 (D), 3 (Hy) than European Americans (Du Alba & Scott, 1993).

A study carried out on Mexican college students (Emelia Lucio & Reyes-Lagunes, 1994) confirmed that the MMPI-2 could be used on Mexican students. Their sample consisted of 929 male and 1245 female Mexican college students. The instrument was evaluated by comparing Mexican students profiles to MMPI-2 college student values from the United States. Results indicated that the two groups were remarkably similar. Small differences were found on Scales L and 2 (D) for men and on Scale 5 (Mf) for women. It was concluded that the instrument was appropriate for use in the college population. Standardized profiles for Mexican male and female college students were also presented.

Among the few reported African studies with the use of MMPI-2, Nzewi (1999) explored whether the MMPI-2 could be used with Nigerian clients. Her study involved 100 male and female Nigerian 1997 University Graduates with no known psychiatric history. These subjects were deemed to have proficiency in English. Their mean age was 25.46 years (SDs =2.28) for women and 26.31 years (SDs = 2.11) for men with no significant age difference. Validity Screening consisted of C (?) > 30; F raw score >23; TRIN raw score > 13 and VRIN >13 for true and > 5 for false.

The results indicated no significant difference between Nigerian men and normative data for US male college students on Scales K, 3 (Hy) and 5 (Mf). Nigerian men obtained significantly higher MMPI-2 mean raw scores on Scales L, F and the rest of the Clinical Scales. Nigerian women obtained significantly higher mean raw scores than US female college students on Scales K, and 3 (Hy) and significantly higher mean raw scores on all other Validity and Clinical Scales. While Nigerian men had mean T-scores within the limits of the general norm (T = 50, SD = 10), on Scales K, 3 (Hy), 5

(Mf) and 0 (Si), their mean T-scores were about 1 SD above the general norm on Scales L, 1 (Hs), 2 (D), 4 (Pd), 6 (Pa), 7 (Pt) and 9 (Ma). The highest elevation of 1.7 and 2 SDs occurred on Scales F (Infrequency) and 8 (Sc), respectively. The mean T- scores of Nigerian women were 1/2 SD below the general norm on Scales K and 3 (Hy); 1/2 SD above the norm on Scales 1 (Hs), 2 (D) and 6 (Pa). Similar to Nigerian males, their highest elevations were on Scales F (Infrequency), 8 (Sc) and 5 (Mf) with 2 SDs, 1.5 SDs and 1.4 SDs respectively above the norm. There were no significant differences between the Nigerians on Scales L, K, F, 4 (Pd), 6 (Pa), 7 (Pt), 8 (Sc), 9 (Ma) and 0 (Si). This has important implications in relation to decisions about gender-based norms in Nigeria.

These findings revealed no major gross deviations in the Nigerian MMPI-2 scores from the general norm. Only elevations on Scales F and 8 (which are consistent with results in other cultures) were clinically significant. This suggested that new norms would be unnecessary and if proper adjustments were made for possible cultural effects on MMPI-2 endorsement patterns of Nigerians, particularly on Scales F and 8, MMPI-2 would not overpathologize for Nigerians, an issue of major clinical concern in the cross-cultural applications of the MMPI-2 (Gynther & Greene, 1980; Dana & Whatley, 1991). Also of interest was the similarity in endorsement patterns on Scales 3 (Hy) and 5 (Mf) between Nigerian and US males. Equally striking is that significant differences between male and female Nigerians occurred on these Scales (3-Hy and 5-Mf); thus suggesting that gender-related factors may be more salient in the men's endorsement patterns on these scales than culture. Conversely, the significant differences between Nigerian and US women on all Validity and Clinical Scales point to more cultural and gender-based differences between the women. In spite of the small sample size, the results of this study

indicated that the MMPI-2 could be used in Nigeria to enhance accuracy of clinical diagnoses, interpretations and predictions of psychopathology.

The MMPI-2 norms are more representative of the normal population, reducing one of the major criticisms of the original MMPI. The revisions strove to eliminate sexist language, cultural bias, and objectionable questions about sex and religion. Because the majority of questions were unchanged, it is possible to compare responses on the old and new forms. At the present time, only limited research studies of the revision to evaluate its effectiveness adequately is available. Preliminary research suggests that the MMPI-2 will continue to be a useful tool in personality assessment.

Definition of Personality

Although the term 'personality' is sometimes employed in a broader sense, Anastasi (1990, p. 523) declares "in conventional psychometric terminology 'personality tests' are instruments for the measurement of emotional, motivational, interpersonal, and attitudinal characteristics, as distinguished from abilities." The psychological concept of personality differs from the popular understanding of the term. To the layperson some people have a strong, a weak or an attractive personality, and some people even have no personality at all. A person with no personality has no charm, for example, or is submissive and plain. To psychologists, personality refers to a relatively stable pattern of thinking, feeling, and behaving that distinguishes one person from another. First, each person's thinking, feeling, and behaving makes him or her distinctive. Secondly, personality is relatively consistent (Palladino & Davis, 2000).

Although personality is defined as including the entirety of human behavior, a distinction appears to have arisen in the course of the development of personality

psychology between the fields of study of the cognitive (or intellectual) and non-cognitive (or non-intellectual) aspects of personality. The study of the non-cognitive aspects became known as personality studies. Most personality tests exclude the measurement of general intelligence and aptitude (intellectual aspects) and concentrate on the dynamic and structural aspects of personality, such as interpersonal relationships, motivation, interest, attitudes and emotions. In time these aspects became synonymous with personality. However, full personality evaluation information on both cognitive and non-cognitive personality traits should be integrated. These can only be achieved by administering a battery of tests on the same individual in order to draw conclusions on a particular diagnosis. The psychologist should know what an individual can do with his intellectual ability for example, whether he will leave it unused owing to lack of motivation, or, conversely, whether he just does not have the intelligence to realize his objectives, despite strong motivation.

Instruments for measuring the non-cognitive aspects of personality can be further divided into two categories, measurement by questionnaire techniques and measurement by projective techniques. For the purposes of this study, the questionnaire technique will be used. A scientifically developed questionnaire consists of a number of questions or items that are tested and selected in such a way that a high degree of reliability, factorial purity and at least construct validity are obtained. However, the actual value of the questionnaire depends to a great extent on the respondent who may realize the aim of a questionnaire and deliberately formulate answers to meet this aim.

The advantage of a questionnaire lies in the fact that its scoring and interpretation are generally more reliable and objective. For example, a questionnaire can be scored

with a stencil. Depending on the purpose for which the test was developed, a personality test measures certain constructs that have usually been identified on a theoretical basis. Through the specific formulation of questions, constructs such as introversion-extraversion and dominance-subjection can be incorporated into a personality questionnaire. The Minnesota Multiphasic Personality Inventory (MMPI-2) focuses on individuals with more severe problems and seeks to diagnose serious mental disorders. In conclusion it should be said that psychology cannot lay claim to the same degree of measurement accuracy as that attained in the physical and biological sciences. The human psyche is much too complex for that.

Analyses based on psychological tests should be regarded as supplementary information with high validity and reliability rather than as the true profile of a person's abilities or personality problems. It should also be kept in mind that validity and reliability are always calculated for groups. The psychologist must therefore act very carefully and responsibly when using tests to give advice or take decisions regarding a specific individual.

Personality Testing

To many psychologists, personality is just as important as interests and abilities for success in learning activities and career development. A shy and withdrawn person will probably derive as little satisfaction from a job as public relation officer in a large business as well as creative and outward going person from a routine and monotonous clerical job. With the aid of personality measurements, mistakes regarding career choices can in many cases be avoided. Although personality is part of career counseling, Seligman (1994, p. 151) points out that "the research on the relationship between

personality and career development gives little clear direction as to how to explore personality and its impact on career development."

Depending on the purpose for which the test was developed, a personality test measures certain constructs that have usually been identified on a theoretical basis. Through the specific formulation of questions, constructs such as introversion-extroversion and dominance-subjection can be incorporated into personality questionnaire.

Generally speaking, structuring is the key concept in personality measurement. Practical situations continually require evaluation of personality characteristics or traits or the prediction of behavior arising from personality traits. Although demonstrations of validity of any personality tests is difficult because of the nature of the variables involved (Kline 1993, p. 127), reasonable conclusions can nevertheless be drawn with regard to human functioning.

Thanks to standardized personality tests, employers, clinical experts, counselors, teachers and others can, in the relatively chaotic pool of behavioral expressions, find the structuring that enables them to categorize people and predict their future behavior. The objectives of such evaluations may include screening, classification, promotion, placement or aid with regard to adjustment problems. These standardized personality tests (e.g. MMPI-2) can be of considerable value for counseling, clinical and research purposes, provided they are administered in a proficient manner and interpretation is done with the necessary care.

Statement of Hypotheses

Although the MMPI-2 has been extensively used in the United States and internationally as an objective clinical personality test, few studies have been reported on its use on Africans. In Kenya no published report exists on the use and reliability of MMPI-2 on Kenyan clients. (Telephone Conversation Professor Gatere Chief Psychiatrist Nairobi University). This study will examine whether the MMPI-2 could be used with Kenyan clients. The dependent variable would be the test scores and the within subjects independent variable would be age, sex, gender, and the test.

The present study will address the following two predictions:

1) It is hypothesized that there will be significant differences in the scales of the MMPI-2 between the Kenyans and the normative data for US college students.

2) It is further hypothesized that there would be significant differences in the scales of the MMPI-2 between Kenyan men and men of the normative US sample and Kenyan women and women of US normative sample.

CHAPTER 2

METHOD

Participants

Participants were the Kenyan female and male university students at Emporia State University, Wichita State University, and the University of Kansas (KU), with no known psychiatric history. Forty students, 20 men and 20 women, participated in the study and were proficiency in English. Their mean age was 26.05 years (SDs = 4.3) for men and 26.8 years (SDs = 3.76) for women. For the purposes of this study, a Kenyan was a college student who had lived in the US for a period not exceeding three years.

Design

The present study was a quasi-experimental design. All comparison involved the male and female participants and the US normative groups from Butcher et al (1990). The scales of the MMPI-2 were the dependent variables.

Procedure

The researcher submitted an application for approval to use human subjects to the Human Subjects Review Committee. Upon approval, the researcher mailed a sign-up sheet to identified Kenyan student representatives of the respective Universities. The sign-up sheet included two dates on which the participants indicated would be available, their names, and telephone numbers. Included in the mail was a cover letter describing the identity of the researcher and a brief explanation of her intend to carry out a study on the Kenyan college students. Prior to mailing the letter the researcher held telephone discussions with the respective Kenyan student representatives. The representatives then mailed back the sign-up sheets to the researcher. Each volunteer was contacted, and a

testing appointment arranged accordingly. The researcher telephoned each volunteers again the day before the testing session to confirm the scheduled appointment.

On the testing day, the researcher, a 42 year old Kenyan female, was present to administer the test at the respective Universities or appropriate venues. Upon arrival, each participant read and signed an informed consent form. After signing, one test booklet, one answer sheet, and a pencil was given to each participant and the following instructions read aloud while the participants read the instructions in the test booklet:

> "You are here to take the MMPI-2. Answer each item either true or false, as it applies to you, and fill in the appropriate circle on your answer sheet. Try to answer every item. Once you have completed the inventory, turn in both the answer sheet and the test booklet."

The participants completed the first 370 of the 567 items; the number required to score the validity and clinical scales. As each participant finished, the researcher assigned a number to that participant and recorded it on a separate sheet of paper, as well as on the participant's MMPI-2 answer sheet.

Each MMPI-2 was scored by the reseacher using the hand scoring templates. A profile sheet was plotted for each participant.

CHAPTER 3

RESULTS

Forty participants completed the testing. The sample t-test was used to compare the mean scores of the Kenyan sample and the US normative sample. Alpha level was at .05 to reduce type I error. If the .05 level of significant was reached then the researcher rejected the null hypothesis and conclude that there was no significant differences between the scales of the MMPI-2 scores of the Kenyan college sample and the normative US sample. The results of this study are presented in two parts. First, the group mean MMPI-2 raw scores for the Kenyan sample are compared with the MMP1-2 raw scores based on the normative US college sample (Butcher et al., 1990). Secondly, the frequency of K-Corrected T scores for the MMPI-2 clinical scales for the Kenyan sample are compared with those of the MMPI-2 normative US college population to evaluate whether the response patterns for the two groups are similar in the college age and normative group.

The mean raw scores and standard deviations for Kenyan male college sample are given in Table 1 along with the mean raw scores and standard deviations of the MMPI-2 US normative sample. The mean raw scores and standard deviations for the female Kenyan sample are shown in Table 2 along with the mean raw scores and standard deviations of the MMPI-2 normative US female sample. Inspection of the mean raw scores and mean profile based on K-Corrected T scores (see Figure 1) for women shows that the MMPI-2 profiles for Kenyan women are quite similar to the subjects in the MMPI-2 normative sample of US college women, in terms of scale elevation and on most validity and clinical scales. Most of the MMPI-2 raw scale values lie close to the mean

(within 1 or 3 raw score points) of the MMPI-2 scores for normative sample for US college students.

The highest elevation differences between Kenyan and US normative subjects for women (about 11/2 standard deviation) occurred on the F and 8 (Sc) scales. Kenyan men obtained significantly higher MMPI-2 mean raw scores (see Figure 2) on scales F, 2 (D), 6 (Pa), 7 (Pt), and 8 (Sc). The rest of the MMPI-2 raw scale value for Kenyan men show significance mean differences (within 2 or 6 raw score points) of the MMPI-2 scores for normative US male sample.

Variance

An analysis of variance was performed to test whether the variances of the two groups for the two scales were different from one another. The largest variances occurred on Scales F and 0 (Si) for both Kenyan men and women versus American men and women (see Table 1 and 2). For men the F (38,5-) = 7.25, $p < .01$ and for Scale 0 (Si), F (38, 5-) = 3.49, $p < .05$. This indicated that Kenyan men were much more variable on their F and 0 (Si) scores than American men

Similarly for the Scale F for women, F (38,5-) = 8.19, $p < .01$ and for Scale 0 (Si) F (38,5-) = 3.01, $p < .05$.This also indicated that Kenyan women were much more variable on their F and 0 (Si) scores than American women. This may indicate that the MMPI-2 inventory may not be useful enough for enhancing accuracy of clinical diagnosis, interpretations and predictions of psychopathology for Kenyans.

Table 1

Comparison of Non-K-Corrected MMPI-2 Mean Raw Scores for Kenyan Men with American Norms

	Kenyan Men (n = 20)		US Men[a] (n = 515)		
Scale	M	SD	M	SD	t
L	5.3	2.2	3.3	2.2	4.01***
F	24.2	10.5	5.3	3.9	8.05***
K	12.5	3.0	14.4	4.7	-2.73**
Hs	12.5	4.6	5.1	4.0	7.14***
D	25.6	5.2	17.0	4.7	7.30***
Hy	21.5	6.6	20.4	4.6	.755
Pd	23.5	4.5	17.8	4.8	5.72***
Mf	25.3	3.8	25.4	5.0	-.18
Pa	17.4	5.4	10.9	3.3	5.42***
Pt	26.5	4.9	14.1	7.7	11.30***
Sc	35.5	10.4	15.0	9.1	8.84***
Ma	23.5	4.4	20.4	4.5	3.09**
Si	33.8	4.6	23.7	8.6	24.46***

Note: *p < .05
**p < .01
***p < .001
[a] From Butcher et al. (1990)

Table 2

Comparison of Non-K-Corrected MMPI-2 Mean Raw Scores for Kenyan Women with American Female Norms

	Kenyan Women (n = 20)		US women[a] (n = 797)		
Scale	M	SD	M	SD	t
L	4.2	2.7	3.6	2.1	2.25*
F	11.4	8.3	3.7	2.9	3.48**
K	10.1	3.6	15.0	4.6	-4.56***
Hs	11.05	6.1	5.9	4.5	3.03**
D	23.8	4.9	20.1	5.0	3.87***
Hy	19.6	5.3	22.1	4.7	-2.08
Pd	21.5	4.8	16.2	4.7	3.39**
Mf	31.4	4.1	35.9	4.1	-3.85**
Pa	13.3	4.7	10.2	3.0	2.03
Pt	21.9	7.0	12.7	7.2	3.45**
Sc	27.4	9.3	11.2	7.6	5.71***
Ma	21.9	3.1	16.1	4.5	4.45***
Si	32.6	5.3	28.0	9.2	4.98***

Note: *p < .05
**p < .01
***p < .001
[a]From Butcher et al. (1990)

While Kenyan men mean T-scores were within the general norm ($\underline{T}$ = 50, SD 10), on scales L, K, 1 (Hs), 3 (Hy), 4(Pd), 5 (Mf), 9 (Ma), and 0 (Si), their mean $\underline{T}$-scores were about 2.5 to 5 SDs above the general norm on scales 2 (D), 6 (Pa), 7 (Pt), 8 (Sc), and F, respectively. There were no significant differences between the mean T-scores of Kenyan men and the US normative male sample on scales L, K, 1 (Hs), 3 (Hy), 4 (Pd), 5 (Mf), and 0 (Is) (see Figure 3).

The mean T-scores of Kenyan women were 2.5 SDs above the general norm on scales F, and 2 SDs above the norm on scale 8 (Sc), and .5 to 1 SDs below the norm on scales 3 (Hy) and K respectively. The rest of the validity scales and clinical scales for Kenyan women were within the normal SD for the US normative female sample (see Figure 4). There are significant differences between the Kenyans on scales F, 6 (Pa), 7 (Pt), and 8 (Sc). This has important implications in relation to decision about gender-based norms in Kenya.

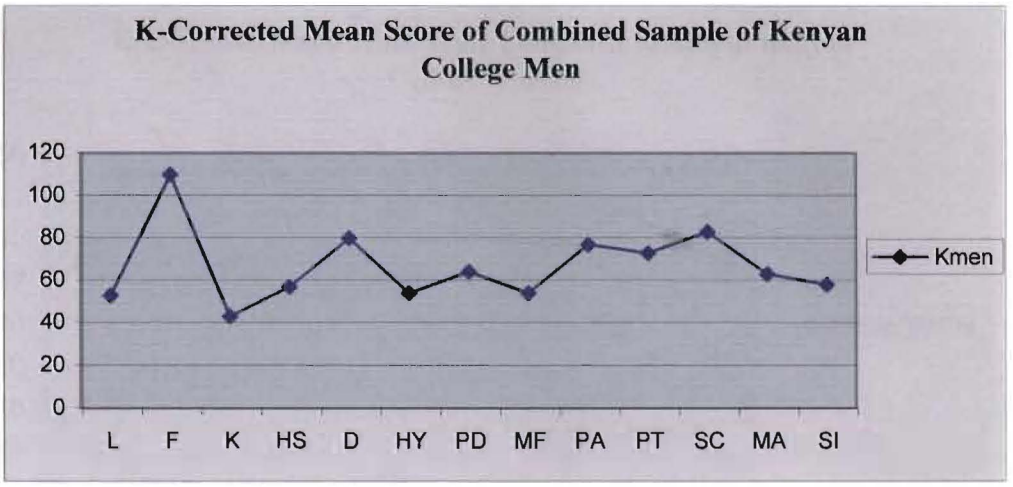

Figure 1. Plot of K-Corrected Mean Score of Combined Sample of Kenyan College Men

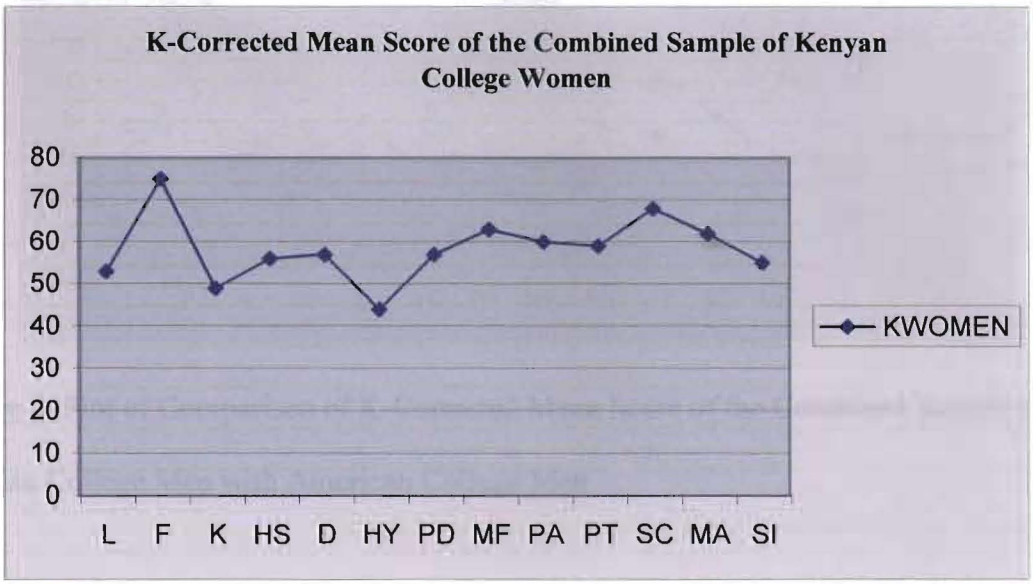

Figure 2. Plot of K-Corrected Mean Score of the Combined Sample of Kenyan College Women

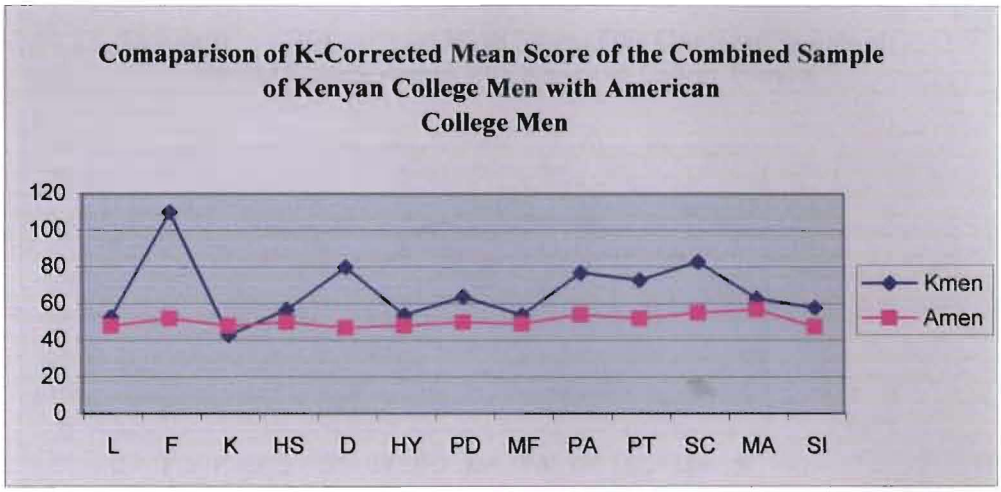

Figure 3. Plot of Comparison of K-Corrected Mean Score of the Combined Sample of Kenyan College Men with American College Men

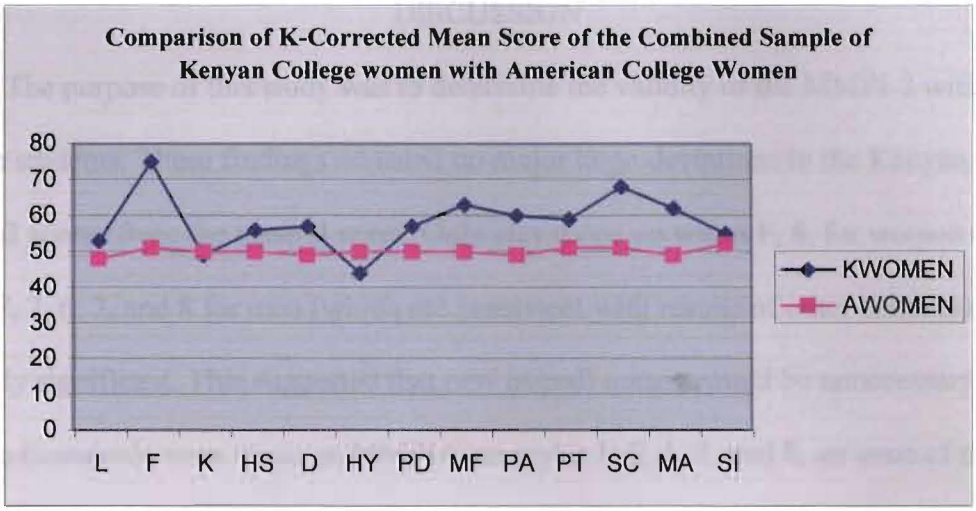

Figure 4. Plot of Comparison of K-Corrected Mean Score of the Combined Sample of Kenyan College women versus American College Women

CHAPTER 4

DISCUSSION

The purpose of this study was to determine the validity of the MMPI-2 with Kenyan students. These findings revealed no major large deviations in the Kenyan MMPI-2 scores from the general norm. Only elevations on scales F, 8, for women and scales F, 2, 6, 7, and 8 for men (which are consistent with results of other cultures) were clinically significant. This suggested that new overall norms would be unnecessary if proper adjustments were made on MMPI-2 on scales F, 2, 6, 7, and 8; an issue of major clinical concern in the cross-cultural applications of the MMPI-2 (Gynther & Greene, 1980; Dana & Whatley, 1991). Non-scientific observation and personal interviews revealed that there might have been cultural differences in the way the Kenyans, especially men, interpreted and responded to some of the items on the MMPI-2 profile. 35% endorsed a true response to items like "I believe I am being plotted", "I believe I am being followed", "My sins are unpardonable", " I believe in life after death", and a false response to "I get angry sometimes" and " I believe in law enforcement". These might have reflected some form of insecurity, guilt or strict religious backgrounds. Also of interest was the similarity in endorsement pattern on scales 3 (Hy), 9 (Ma), and 5 (Mf) between Kenyan and US males. Equally striking was the significant differences between male and female Kenyans that occurred on these scales (3-Hy and 5-Mf); thus suggesting gender-related factors may be more salient in the men's endorsement patterns on these scales than culture.

The significant differences between Kenyan men and women versus US men and women on all validity and clinical scales point to more cultural and gender-based

differences between the men and women. For example, individuals from cultures that are quite different from Western industrial civilization might have little experience or practice with some tasks such as paper-pencil inventories, computer- administered tasks, and so forth (Butcher et al., 1998). Assuring the equivalence of processes and personality variables under study is a basic problem in the study of behavior across cultures. It is important to determine that variables operate the same way in all cultures under study. For example, if one is studying the personality variable of "assertiveness," it is important to evaluate whether the components and the meaning of the trait in each culture are generally equivalent. The clinical disorder of depression is manifested across cultures and comprises different characteristics (Butcher & Pancheri, 1976). Therefore, comparing "depressed" patients from different cultures might result in false generalizations across different cultural groups.

Individuals from different cultural backgrounds might operate under different motivational sets than the ones the clinician-evaluator has adopted. For example, an individual from a different culture or background might view self-disclosure in a clinical situation as inappropriate and would therefore not openly or willingly participate in personality-assessment tasks.

One basic task of the psychopathologist studying cultural factors is to develop working definitions of mental health and illness that will allow for the identification of abnormality in clients from different cultures. The distinction between normal and abnormal behavior is not easily drawn, even within one's own cultural group, and is more complex when standards applicable to many different societies must be established

(Butcher et al., 1998). Abnormality must be defined in social and behavioral terms, and thus it derives much of its meaning from the context in which it occurs.

Different cultures impart somewhat different beliefs and attitudes about interpersonal interaction. For example, shyness in some countries might be considered a "value," whereas in other countries, such as the United States, it might be viewed as somewhat socially backward or, in the extreme, even pathological.

The communication of psychological ideas or materials proves to be even more difficult than straight translation, since the psychological equivalence must be maintained. It is important than the appropriate psychological meaning be included in the stimulus materials and also reflected in the interpretations of results from different culture.

In order for psychological procedures to be effective in the target culture, the equivalence of the procedures needs to be demonstrated. As noted earlier, the constructs underlying the test must be considered equivalent in both cultures. Moreover, the means of assessing these constructs must be shown to be equivalent. Sound psychological tests and therapeutic techniques that have been developed in Western nations are becoming more widely applied in other countries as a result of the increased communication between countries and the great interchange between professionals from different countries.

Conclusion

In spite of the small sample size, the results of this study indicated that MMPI-2 could be used with Kenyans to enhance accuracy of clinical diagnosis, interpretations and predictions of psychopathology. However, to determine the true validity of the MMPI-2

on Kenyans, future researchers may require a larger sample of Kenyans who live in Kenya, and proper adjustments made for possible cultural effects on MMPI-2 endorsement pattern of Kenyans, particularly on scales F, 8 (Sc), and 0 (Si). On the other, the extreme variances on scales F and 0 (Si) for both Kenyan men and women versus the American men and women raised concerns, an area of clinical importance for future studies with Kenyans. This indicated that the Kenyans were much more variable on the scales F and 0 (Si). In addition, most of the participants confirmed they were unfamiliar with paper-pencil tests and therefore, may have simply acquiesced in responding to items out of politeness to give socially desirable answers or responded in a careless manner. Conversely, lack of insight when responding to some items may have contributed to some scale elevation, especially for Kenyan men.

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APPENDICES

Informed Consent Document

The Department of Psychology/Special Education supports the practice of protection of human related activities. The following information is provided so that you can decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw from the study; you will not be reprimanded or reproached.

In order to determine whether the MMPI-2 can be used with Kenyan clients, you are being asked to complete the MMPI-2 questionnaire. It will take one to one and a half hours of your time. It will be completed anonymously.

"I have read the above statement have been fully advised of the procedures to be used in this research. I have been given sufficient opportunity to ask any questions I had concerning the procedures and possible risks involved. I likewise understand that I can withdraw from the study at any time without being subjected to reproach."

_____ _____

Participant's Signature Date

Dear Kamau,

With reference to our earlier telephone discussion, I am writing a letter to assist you in communicating effectively with the Kenyan students. In order to meet my graduation or degree requirements, I am expected to write an academic paper that involves research with human subjects. My study involves finding out whether the Minnesota Multiphasic Personality Inventory – 2 (MMPI-2) can be used with Kenyans

Enclosed is a sign-up sheet where the students will sign their name, date available to answer the questionnaire, and their telephone number, as volunteers to participate in the stùdy. I have already received approval from the Human Subjects Committee.

This will **NOT** be a test. Instead, you will be asked to tell the researcher how you feel. The best answer to each question is one that will fit how you feel. To help us get this information all Kenyan college students in Wichita State University, Emporia State University, and Kansas University, will complete the questionnaire. The result will be used to determine whether the MMPI-2 can be used with Kenyans

All answers will be kept totally secret. You will only be identified by a code number and not by name. The answers they give will never be released, and only general answers for a large group of students will ever be reported. Neither you, your friends, your professors nor anyone else will be able to see the results of your questionnaire. All surveys will be sent to specific professors at Emporia State University who will summarize the results. The professors are **NOT** allowed to give out your name or anything else to identify you to anyone.

A pencil will be provided for you.

Please remember that the more honest your answers are, the more accurately we can summarize and determine the usefulness of the MMPI-2 with Kenyans. Thanks for your help!

I, Florence Namai, hereby submit this thesis to Emporia State University as a partial fulfillment of the requirements for an advanced degree. I agree that the Library of the University may make it available for use in accordance with its regulations governing materials of this type. I further agree that quoting, photocopying, or other reproduction of this document is allowed for private study, scholarship (including teaching) and research purposes of a nonprofit nature. No copying which involves potential financial gain will be allowed without written permission of the author.

Florence Namai
Signature of Author

September 4, 2001
Date

The Validity of the MMPI-2 with Kenyan Students: An Exploratory Study

Dan Cooper
Signature of Graduate Office Staff Member

September 14, 2001
Date Received