

Contextualizing psychological testing in Ghana

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Abstract

Psychology has many applications including psychological testing. In this paper, an attempt is made to identify the types of tests used in Ghana and discuss the problems associated with the current state of psychological testing in Ghana. It was concluded that the current state of psychological testing has been too Eurocentric and Westernized. As a result, it limits the applicability and usefulness of the tests in the Ghanaian setting. After this critical evaluation, suggestions were then made for the improving psychological testing in terms of construction of Ghana-centric tests and validation of imported tests. Though this paper focuses on Ghana, it is expected that the discussions and recommendations would equally be relevant for other non-European and non-American populations of world.

Keywords: Indigenous Psychology, Psychological Testing, Ghana

Introduction

Psychological testing is considered part of psychological assessment. Indeed, Butcher (2004, p.742) defined psychological assessment as a process in which “the practitioner uses observation, interviews, and psychological tests to gain information about the client’s personality characteristics, symptoms, and problems in order to arrive at practical decisions about their behaviour”. Kaplan and Saccuzzo (2009) have also described a test as a measurement technique or device for quantifying behaviour and conceptualized a psychological test as “a set of items that are designed to measure characteristics of human beings that pertain to behaviour” (p.6). In addition, Kaplan and Saccuzzo (2009, p.9) defined psychological testing as comprising “all the possible uses, applications, and understanding of the underlying concepts of psychological and educational tests”. Thus, psychological testing refers to the processes and body of knowledge associated with the construction, standardization, administration and scoring of tests as well as the interpretation and decision-making about people’s behaviour on the basis of test scores.

Psychological testing is fast becoming popular in Ghana. There is a surge in the use of psychological tests in not only the traditional domains of education but in non-traditional areas (in the context of Ghana) such as employment (Oppong, 2016). For instance, it has been reported

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that the influx of Nigerian and South African banks into Ghana in the early part of 2000s created the need to screen large numbers of graduate applicants on general cognitive ability (Oppong, 2016; 2011). The use of aptitude tests on such a large scale made aptitude testing (or psychometric testing) popular in Ghana (Oppong, 2016; 2013a, 2011). However, the validity, reliability and Ghanaian norms for many of these tests have remained largely unknown or unexamined; similarly, psychological testing is also misunderstood by many of the end-users (Oppong, 2016; 2011). For instance, in a discussion with a managing director (MD) of one of the numerous recruitment agencies in Ghana, it came to light that the MD misunderstood aptitude tests are tests that look difficult (Oppong, 2016; 2011). Psychological testing is not only applied as part of the recruitment and selection process but also has other applications in the workplace such as when applied during job analysis, talent management, performance management, employee assistance programmes, customer satisfaction surveys, and employee surveys (Gregory, 2007; Oppong, 2016, 2011).

Though a review of psychological testing in Ghana has been conducted (see Asumeng & Opoku, 2014), a more critical review of the practice of psychological testing in Ghana is, at this point in the history and practice of psychology in Ghana, required. Ghana is a lower middle income country located along the west coast of Africa (Oppong, 2013a; Oppong, Arora, Sachs, & Seidu, 2016). For a detailed account of the history of psychology in Ghana refer to Mate-Kole (2013), Oppong (2017; 2016, 2013a), Oppong Asante and Oppong (2012) and Oppong, Oppong Asante, & Kumaku (2014). This stock-taking or self-appraisal exercise is essential in order to advance the practice.

The purpose of this paper, therefore, is (1) to identify the types of psychological tests in use in Ghana, (2) to determine whether or not validation studies have been conducted for the test, (3) to point out some key problems associated with psychological testing in Ghana and (4) to make recommendations for improving psychological testing in Ghana. To facilitate a comprehensive review of the literature on tests used in Ghana, Gregory's (2007) classification of tests was adapted. He categorized psychological tests and/settings for testing into cognitive ability tests, tests for special population, personality tests, neuropsychological tests, industrial-organizational assessment tools, and forensic assessment tools. This paper adopts a triachic classificatory scheme consisting of school/educational, mental health and industrial & organisational settings.

This three-pronged classificatory approach was chosen mainly because most Ghanaian psychologists specialize in educational, clinical, and industrial-organizational psychology (Oppong, 2016, 2013a; Oppong Asante & Oppong, 2012). Besides, the psychology programmes at Ghanaian universities tend to produce professionals in disproportionate numbers in these three areas as well. This is not to say there are no Ghanaian psychologists trained in the other areas such as social psychology, sports or human development. For instance, Ghana's Health Professions Regulatory Bodies Act, 2013 (ACT 857) recognizes the following as fields of psychology in Ghana: Clinical, Cognitive, Community, Counselling (Guidance and General), Consumer, Developmental, Educational, Environmental, Experimental, Health, Industrial and Organizational, Measurement and Evaluation, Neuropsychology, psychometrics, School, Social, Special Education and Sports (Republic of Ghana, 2013). There are fewer professionals in these additional areas. Besides, neuropsychological assessment was placed under mental health. It is expected that the Ghana Psychological Association (GPA) and/or Ghana Psychological Council (GPC) will, in the future, commission a taskforce to create a database of the various tests in use in Ghana in order to assist practitioners and scholars conducting research on psychological testing in Ghana and Africa.

School or educational use of test has already been established to be commonplace in Ghana (Oduro-Okyireh, 2008; Bello & Tijani, 2013; Nabie, Akayuure, and Sofu). However, these tests tend to be teacher-made and their objective is always the assessment of their respective students in their classrooms. Thus, teacher-constructed achievement tests are in use in Ghana; Colman (2006) defines an achievement test as any test of acquired skills or abilities. In addition, examination boards such as West African Examination Council (WAEC), Chartered Institutes of Accountants (Ghana), Institute of Human Resource Management Practitioners (Ghana), Chartered Institute of Bankers, Chartered Institute of Administrators & Management Consultants (Ghana), and a host of others provide 'standardized' achievement tests. Similarly, foreign-based boards such as Association of Chartered Certified Accountants (ACCA) also conduct achievement testing.

Besides, the various universities and university colleges organize mature entrance examinations. Usually, these entrance examinations comprise English (Essay, Comprehension, Grammar and Usage) and General Paper (Quantitative Methods, Critical Thinking and Current Affairs) (Bonney, 2012; Pentecost University College, 2011). These entrance examinations have been described as aptitude tests by the institutional users; however, calling such tests aptitude tests may be a misnomer. For instance, Colman (2006, p.52) defines aptitude as suitability, natural ability or capacity to learn as well as "potential rather than existing capacity to perform some function". Aptitude tests, therefore, are tests of potentials and not mastery over educational content; aptitude is used here to refer generally to ability which is narrower than intelligence (or its facets) but broader than the ability to perform a particular task. Thus, the so-called aptitude tests are in reality achievement test. Similarly, WAEC (2012) also reports, among other functions, that it administers customized aptitude tests for purposes such as admission into training institutions and award of scholarships.

It is important at this point to understand that these teacher-made tests and achievement tests developed by the various examination bodies do not qualify to be classified as psychological tests per se. However, they are considered to be of importance in educational testing. This is because professional teachers and the examination bodies are expected to apply the principles of psychological testing in the construction, administration, scoring and interpretation of the results. The most relevant educational testing in Ghana is the National Education Assessment (NEA) that is carried out by Ghana Education Service (GES). This NEA is "a biennial nationally and regionally representative measure of student competency in mathematics and English in primary grades 3 and 6 (P3 and P6)" (GES, 2014, p.ix). The technical report on NEA supplies information on reliability coefficient and item analysis (GES, 2014). In addition, Self Search Limited, a private organization, has developed and administers its own career interest scale to High School pupils; the psychometric properties of the test are yet to be published (Patricia Mensah, personal communication, October 10, 2016). Again, Draw a Person Test for Ghana also exists in use in Ghana (Kniel & Kniel, 2008). Some of the tests classified under clinical and mental health are applied as part of educational testing when school administrators refer children for assessment (Erica D. Dickson, personal communication, March 29, 2017).

In the industrial or organizational setting, a number of tests are used and they tend to be user-constructed. Despite this, there are a handful of branded tests in use and these include: (1) Sixteen Personality Factors Inventory-South African version (J. Osafo, personal communication, December 13, 2013; A-N. Inusah, personal communication, March 4, 2016), (2) Wechsler Adult Intelligence Scale – III (A-N. Inusah, personal communication, March 4, 2016) and (3) Myers

Briggs Type Indicator (PMI First Consult, 2009; 2012). Additionally, the Accra-based Profiles West Africa (2005) also supplies tests produced by the Texas-based Profiles International Limited while the UK-based Central Test International also supplies personality and competencies inventories and intelligence and aptitude tests (Central Test International, 2013) to the Ghanaian market. Given that some agencies construct their own tests for assessment without intentions for commercial distribution, the above work-related tests are not, by any means, the only ones in use in Ghana. However, what remain unknown are the validation studies on the tests in use in Ghana.

Besides, the Department of Psychology (DoP) at the University of Ghana, Legon is a major supplier of psychometric testing services to a number of organizations in Ghana including the Ghana Armed Forces, Social Security and National Insurance Trust (SSNIT), Bureau of National Investigation (BNI), Volta River Authority (VRA), Gemini Life Insurance Company (GLICO), and a host of others. DoP administers a test battery comprising logical reasoning test, integrative processes test, letter sequence test, vocabulary test, verbal reasoning-comprehension test, and numerical ability test (Asumeng & Opoku, 2014). However, Asumeng and Opoku (2014) have indicated that the test administered by DoP has good psychometric properties, though the results of validation studies done so far have not been published yet.

In the mental health sector, psychological testing is also commonplace. Among the commonly used tests in Ghana's mental health practice are Wechsler Adult Intelligence Scale (WAIS-IV), Wechsler Intelligence Scale for Children (WISC), Kaufman Assessment Battery for Children (KABC), ADHD test, Bender Visual Motor Gestalt Test (Bender-Gesalt Test), Wide Range Achievement Test (WRAT-IV), Patient Health Questionnaire, General Health Questionnaire, Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), Woodcock Johnson Test-III, Childhood Autism Rating Scale, Minnesota Paper Form Board Test, Standard Progressive Matrices, Coloured Progressive Matrices, PTSD Test (Civilian and military), Minnesota Multiphasic Personality Inventory, Hopelessness Scale, Basic Personality Inventory, Coping Inventory for Stressful Situations, Multidimensional Aptitude Battery, Depression, Anxiety Stress Scale (DASS 420), Basic Personality Inventory, Quality of Life, Facial Recognition Test, Mini-Mental Status Exams, Trail Making Test, Revised Quick Cognitive Screening Test (QCST-R), and Alzheimer's disease Assessment Scale – Cognitive Subscale (A. A. Addae, personal communication, December 11, 2013; Asumeng & Opoku, 2014; E. D. Dickson, personal communication, December 12, 2013; J. Osafo, personal communication, December 13, 2013). Indeed, this list is not exhaustive of the tests being used by clinical psychologists in their practice in Ghana.

Among all the tests mentioned above, WRAT-IV (A. Afriyie, personal communication, December 11, 2013), Kaufman Assessment Battery for Children-II (Quartey, 2014), Basic Personality Inventory (Oteng-Yeboah, 2005), Coloured Progressive Matrices (J. Osafo, personal communication, December 13, 2013), Multidimensional Aptitude Battery (Debrah, 2002), Coping Inventory for Stressful Situations (Kyei, 2008), Wechsler Adult Intelligence Scale-IV (Miezah, 2015), and Standard Progressive Matrices (Yawson, 2008) are reported to have been standardized or validated in Ghana. Though not exhaustive, psychological tests in use in Ghana have been summarized in Table 1.

A point that deserves mention here is the fact that the standardization or validation of most of the tests has largely been carried out by master's students at the Department of Psychology (DoP) of the University of Ghana, Legon as master's research projects. Indeed, there is yet to be

a doctoral research project at the same department focusing on standardization of a psychological test. The NEA, the DoP-based general cognitive ability test battery, and The Draw a Person Test for Ghana are the only tests known, at the time of writing this paper, to have been validated by professional or qualified psychologists in Ghana (see Asumeng & Opoku, 2014; GES, 2014; Kniel & Kniel, 2008). Thus, the validation studies carried out in Ghana are largely unpublished research. It also suggests that professional or qualified Ghanaian psychologists have not actively been involved in the validation process, a situation that leaves much to be desired. This means there is a need for a crop of professional Ghanaian psychologists who should dedicate their skills, time, and effort to the validation of tests in use and development of new tests or alternative tests.

What is also unexamined is the extent of usage of the test norms that have been produced. Currently, the use is said to be relatively low (Erica D. Dickson, personal communication, March 29, 2017). This has been attributed to the fact that practitioners are unaware of the existence of the norms given that the research reports have not been published. Besides, little attempt has been made to even incorporate discussions of the existing test norms into the teaching and learning of psychometrics or psychological assessment at both the master's and doctoral levels. Doing so will create the necessary awareness and this paper contributes to such effort by initiating the creation of a database for use.

Table 1: Summary of Psychological Tests used in Ghana in educational, mental health and industrial/organisational settings

Setting	Types of Tests	Tests with Standardization Studies
School/ Educational	<ul style="list-style-type: none"> • Teacher-made tests (Eg: Class exercises, Homework, Oral examinations, Essay tests, Objective tests, and Assignments) • Examination Board-made tests • University Admissions Tests <ul style="list-style-type: none"> ○ English (Essay, Comprehension, Grammar and Usage) ○ General Paper (Quantitative Methods, Critical Thinking and Current Affairs) • National Education Assessment (NEA) • Draw a Person Test for Ghana • Self Search career interest test 	<ul style="list-style-type: none"> • National Education Assessment (NEA) • Draw a Person Test for Ghana
Mental health & Counselling	<ul style="list-style-type: none"> • Wechsler Adult Intelligence Scale (WAIS – III & IV) • Wechsler Intelligence Scale for Children (WISC) • Kaufman Assessment Battery for Children (KABC) • Comprehensive Test of Nonverbal Intelligence (CTONI) • ADHD test • Bender Visual Motor Gestalt Test (Bender-Gesalt Test) • Wide Range Achievement Test (WRAT – IV) • Patient Health Questionnaire • General Health Questionnaire • Beck Depression Inventory (BDI) • Brief Symptom Inventory (BSI) • Beck Anxiety Inventory (BAI) • Woodcock Johnson Test –III • Childhood Autism Rating Scale • Minnesota Paper Form Board Test 	<ul style="list-style-type: none"> • WRAT-IV • Basic Personality Inventory • Coloured Progressive Matrices • Multidimensional Aptitude Battery • Coping Inventory for Stressful Situations • Standard Progressive Matrices • Kaufman Assessment Battery for Children (KABC) • Wechsler Adult Intelligence Scale (WAIS IV)

<p>Mental health & Counselling</p>	<ul style="list-style-type: none"> • Montreal Cognitive Assessment • Standard Progressive Matrices • Coloured Progressive Matrices • PTSD Test (Civilian and military) • Minnesota Multiphasic Personality Inventory • Hopelessness Scale • Basic Personality Inventory • Coping Inventory for Stressful Situations • Multidimensional Aptitude Battery • Depression, Anxiety Stress Scale (DASS 420) • Basic Personality Inventory • Quality of Life Test • Facial Recognition Test • Mini-Mental Status Exams • Trail Making Test • Revised Quick Cognitive Screening Test (QCST-R) • Alzheimer's disease Assessment Scale – Cognitive Subscale 	
<p>Industrial & Organizational</p>	<ul style="list-style-type: none"> • General cognitive ability test battery compiled at Department of Psychology at the University of Ghana, Legon. • Sixteen Personality Factors Inventory - South African version (16PF-SA version) • Wechsler Adult Intelligence Scale (WAIS – III) - South African version • Myers Briggs Type Indicator (MBTI®) • Other general cognitive ability tests distributed by some test publishers • Other general cognitive ability tests compiled for use by Ghanaian industrial psychologists and other human resource practitioners 	<p>Department of Psychology test battery</p>

Source: Author's own construct

Problems Associated with Psychological Testing in Ghana

It is important at this point, perhaps, to admit that psychological testing has value in Ghana despite the current limited evidence of reliability and validity. They have still been used as a key screening tool for employment in Ghana. A number of organizations in both the private and public sector makes use of psychological testing as part of their employment process, particularly when there is high selection ratio, that is, several people competing for fewer job openings (Asumeng & Opoku, 2014; Oppong, 2016, 2011). Clinical psychologists administer tests to aid their diagnosis, albeit not without challenges (Erica D. Dickson, personal communications, August 20, 2016). The challenges have been due to the differences in meaning attached to items on the tests by Ghanaian testees and what was intended by the test developers; there is also an issue of reification. According to Pence (2000, p.46), reification refers to the “act by which an abstract idea or concept is assumed to be concrete reality, merely because it has verbal form”. The implication is that the mere fact that a set of items has been put together as a measure of a certain construct does not in any suggest that the construct being measured has a concrete existence. In other words, the fact that the test developer says a particular test measures a certain construct does not mean it actually exists in the Ghanaian reality. This is particularly important given that psychological constructs have been defined as ‘human kinds’ as opposed to being ‘natural kinds’ (see Danziger, 1999; Oppong, 2017). Owing to this, practitioners are likely to cause individuals to label themselves in certain ways that can result in self-fulfillment prophecy. Misdiagnosis and poor treatment can occur as a result. It is worthwhile noting that because testing outcomes influence lifelong decisions with sometimes irreversible life impacts, its reliability and validity should be secured. For instance, an individual may be encouraged to pursue a particular career path based on outcomes of psychological testing. If the reliability and validity of the tests are questionable, it could harm the person for life. Similarly, when an individual with potential to succeed on the job is denied unemployment on the basis of a psychological test with questionable psychometric properties, there are implications for organizational effectiveness and national productivity. What is known currently is that person-job mismatch (and person-team mismatch) affects organizational performance (Glew, 2012), commitment (Theresa & Vijayabanu, 2016), job satisfaction (Quintini, 2011), and national productivity (McGowan & Andrews, 2015; Zira, 2016). However, further studies need to be conducted to investigate the often unrecognized impact of person-job mismatches on economic growth (in terms of gross domestic product) by multidisciplinary research teams comprising applied psychologists and economists.

Further, Opoku (2012) has argued that there are no “culture-free” or “culture fair” tests. By being not “culture-free”, it is meant that there are no tests whose constructions are not influenced by the culture of the developers. Similarly, by being not “culture-fair”, it is meant that there are no tests on which performance is not influenced by the culture of the testees. However, he argues that the existing tests are culture-specific tests, which invariably describe the current Western psychological tests that are Western-specific. In fact, similar criticisms have also been raised against psychology in general in Ghana for remaining philosophically Eurocentric (for detailed account, see Oppong, 2017, 2016; Oppong Asante & Oppong, 2012; Oppong, Oppong Asante, & Kumaku, 2014). It is against this background, that Ghanaian psychologists are urged to norm imported tests on Ghanaian samples or construct their own tests (Asumeng & Opoku, 2014).

This call for validation of imported tests in Ghana as well as the development of Ghana-centric tests should be understood within the context of decolonizing psychology in Africa (Bulhan, 2015) or indigenizing psychology in Ghana (Mate-Kole, 2013; Nwoye, 2015; Oppong, 2017; 2016, 2013a, 2013b; Oppong Asante & Oppong, 2012; Oppong, Oppong Asante, & Kumaku, 2014). The main proposition is that the relevance of psychology in the African or Ghanaian context can be enhanced if it is decolonized or indigenized with respect to the methods, history, and theories. It has been suggested that indigenization can be achieved by targeting the following: (1) theories and concept, (2) history of psychology, (3) research problems studied, (4) methodology adopted for research, and (5) curriculum content and implementation (Oppong, 2017). In the absence of validation studies, certain questions beg to be answered: (1) What evidence exists that the tests being used are measuring the constructs they have been designed to measure among the Ghanaian test-takers? (2) What is the degree of consistency with which the tests measure the constructs? (3) How accurate are interpretations of the scores? Opoku (2012) has outlined some factors that account for poor performance of Western instruments measuring cognitive ability in Africa. The factors include the following: reliability and validity, interpretation of scores, influence of culture, ecological influences, and influence of language.

Sam (2014) has indicated that when human psychology is conducted within an absolutist framework, we risk ignoring culture-specific constructs or risk assuming the universality of constructs identified among the minority of the world, Westerners. Thus, there is a need to determine whether or not the constructs that the imported tests purport to measure actually exist among Ghanaians as well as their reliability. In this regards, the imported psychological tests without Ghanaian norms cannot be expected to be without challenges. For instance, Opoku (2012) has queried the use of imported psychological tests without a determination of its validity and reliability. That valid tests are reliable does not imply that reliable imported psychological tests are necessarily valid as not all reliable tests are valid, though all valid tests must by necessity be reliable first.

Opoku (2012) argues that if an imported Western test is administered to African semi-illiterate samples, interpretation of test scores and generalizing to other Africans can be misleading. This is because such samples lack familiarity with the concepts being tested by these tests. Kaplan and Saccuzzo (2009) have captured this issue as “ignorance versus stupidity”. Thus, do the lower scores obtained by Africans on Western intelligence tests imply ignorance or stupidity? Kaplan and Saccuzzo (2009) conclude that poor performance on “imported” cognitive ability tests implies ignorance rather than stupidity. They supported this conclusion using the evidence from the use of the Chitling Test and the Black Intelligence Test of Cultural Homogeneity (BITCH). It has been demonstrated that African Americans outperform middle-class Caucasians on BITCH as the latter are ignorant about the social milieu of the former (Kaplan & Saccuzzo, 2009). An account by Triandis (2009, p.4) best summarizes the inherent problem of interpretation of scores on imported tests:

... the concept of “intelligence” as involving fast and accurate learning and behaviour is not used in some cultures. In some culture they define intelligence as “knowing what the elders of the culture expect of you.” The criteria used by Western psychologists to determine if a person is “intelligent” are not always appropriate in other cultures. For example, Glick ... asked Kpelle farmers [in Liberia, West Africa] to sort familiar objects. Western psychologists assumed that it is more “intelligent” to sort them by taxonomic category (tools, food) than by colour (white, blue).

The farmers sorted them by colour. Glick did not believe that the farmers were less intelligent because of the way they sorted the objects, because they were obviously bright when they were in the market, and in everyday life. He asked them to sort them in many different ways, but all instructions resulted in sorting by color. Finally, he said: "Sort them in a stupid way." Then the farmers sorted them by taxonomic categories! In short what Western psychologists use as a clue for intelligence is used by the Kpelle is a clue for stupidity.

Even though one cannot generalize findings from the area of intelligence testing to psychological testing in general, it provides evidence of the trend happening in the other areas of psychological testing. This is because procedures used in constructing those tests are similar to those employed in developing intelligence tests. Clark and Watson (1995) have summarized scale development process as comprising conceptualization of construct, literature review, item pool generation, choice of response format, item selection and psychometric evaluation. At each stage in the scale development process, there are value judgments to be called by the test developer(s) who is already biased by his or her bounded rationality. Regardless of the type of test being developed, conceptualizing the construct, for example, is always a 'victim' of the developer's cognitive biases (which derives from one's culture through socialization). This view is consistent with the argument that social sciences cannot claim to be value-free and psychologists should not pretend that their science is objective or insulated against personal biases of the practitioner or the scholar (Oponong, 2017, 2016, 2014; Tyson, Jones, & Elcock, 2011). Indeed, psychology is a discipline in which the psychology of the practitioner affects how he or she conducts the science (Tyson et al., 2011).

Earlier, it was indicated that Opoku (2012, p. 541) has called into question the existence of culture-free or culture-fair tests. His arguments are that "culture stimulates a particular form of cognitive development" and that Western instruments for assessing intelligence, for instance, are based on a Western technological culture. In other words, assessing intelligence of Africans using such tests imply ultimate poor performance. This view is consistent with Sternberg's (2004) position that there are no culture-fair or culture-free psychological tests. Sternberg (2004, p.336) wrote:

Individuals in other cultures often do not do well on our [Western] tests, nor would we always do well on theirs [non-Westerners]. The processes of intelligence are universal, but their manifestations are not.

Sternberg (2004) concluded that due to our inability to create culture-free or culture-fair intelligence tests, our goal ought to be creating culture-relevant tests, a view that is consistent with Opoku's (2012) call for "culture-specific" tests.

On the issue of ecological influences, modern psychology is both culture-bound and culture-blind (Berry, 2013; Sam, 2014). By culture-bound, they meant that the origins, concepts, and empirical findings of psychology is limited to only a small region of the world (Western Europe and the United States) while by *culture-blind*, they meant psychology largely ignores the role of culture in shaping the development and display of human behaviour (Berry, 2013; Sam, 2014). Thus, the theoretical underpinnings of constructs are culture-bound and culture-blind given that the tests reflect the Western technology (Opoku, 2012). For instance, Opoku (2012) reports that street children engaged in hawking in Africa can quickly determine how much change they need to give someone, yet these children are unable to perform such mathematical operations with the same speed in a formal classroom environment.

“The language medium through which a test is administered has a significant influence on the subject’s test performance” (Opoku, 2012, p.543). Western tests are constructed in English, French, German or in other European languages and imported into non-Western societies for use. This practice is based on the assumption that non-native speakers have the same understanding of words, idiomatic expressions and phrases contained in the tests as the native speakers. Differences in understanding of test items call into question the subsequent interpretations of the scores. As a result, non-language or non-verbal tests such as the Progressive Matrices are often recommended. However, Opoku (2012, p.544) has argued that such tests still favour the “highly literate population who have received a Western-type of education”. Spector (2006, p.79) calls it criterion contamination and defines it as “part of the actual criterion (test) that reflects something other than what it was designed to measure”.

Recommendations

Opoku (2012) identified reliability and validity, interpretation of scores, influence of culture, ecological influences, and influence of language as some of factors that can account for poor performance of Western instruments measuring cognitive ability in Africa. Thus, in order to improve the performance of many of the psychological tests used in Ghana, there is a need to address each of the said problems. To begin with it, validation or standardization of imported tests is needed to address the problems of reliability, validity, and interpretation of scores. This is because the through the conduct of standardization studies, norms can be created to improve score interpretations. Again, item analysis will reveal the poor performing items in order to enhance the validity and reliability of the imported tests. The current review reveals that only a handful of imported tests has been subjected to such validation studies. These include but not limited to WRAT-IV, Basic Personality Inventory, Coloured Progressive Matrices, Multidimensional Aptitude Battery, Coping Inventory for Stressful Situations, and Standard Progressive Matrices.

To address the ecological and cultural influences, Ghanaian psychologists are encouraged to seriously consider constructing Ghana-centric psychological tests rather than relying heavily on the imported Eurocentric ones. This presupposes that the capacity already exists to construct the tests. To some extent, the capacity exists given that psychometrics is taught as a course from the undergraduate through to the doctoral level (Oppong, 2016). However, the knowledge has not yet been applied in the development of psychological tests as there are no known psychologists or groups of psychologists who have made it their business to be constructing Ghanaian-centric tests. This implies that further human capacity building in the area of psychological testing is needed in order to bridge all gaps that exist between knowledge (and skills) and practice. Additionally, Ghana Psychological Association may also consider creating a working group on psychological testing to provide a rallying platform for Ghanaian psychologists interested in psychological testing to share knowledge and provide one another the essential professional support.

On the issue of language, two key things may be required. First, imported tests should be translated into the widely spoken Ghanaian languages such as Akan (Twi), Ga, and Ewe. To ensure the reliability, validity, and the appropriate interpretation of scores, the translated versions should also be subjected to validation studies. Similarly, when Ghanaian psychologists plan on creating psychological tests, they should also create versions in the same widely spoken

languages and subject their versions to similar validation studies. In the translation process, some institutions would be essential. These include the Ghana Institute of Languages and the Ghana Bible Society. The latter institution is mentioned here as a result of its recognized capacity in translating the Holy Bible from English into a number of Ghanaian languages. Post-translation, test developers need to assess the construct structure to ensure they are similar across the different ethnic groups.

However, the Akan language is considered a commercial language and a widely spoken language in Ghana (Agyekum, 2012; Guerini, 2007; Hamzat, Samir, & Peters, 2009; Opoku-Amankwa, 2009). Therefore, producing Akan versions of the tests first is in order given the potentially huge logistical requirements for translating the tests into all the Ghanaian languages. To illustrate the point, Hamzat et al. (2009) demonstrated this by translating the Visual Analogue Scale used for assessment of post-operative pain into the Akan language. In their study, they reported concurrent validity coefficients (correlations between the original and the Akan versions of the scale) ranging between 0.55 (on the first day) and 0.82 (fifth day). Though Hamzat et al. (2009) are physiotherapists, their method could equally be adopted for use by Ghanaian psychologists. Ghanaian psychologists should generally be guided by standards for educational and psychological testing (see Chan, 2014; AERA et al. 2014).

To address the low adoption and use of the existing test norms, awareness should be created through dissemination of the norms. This can be achieved by means of (1) incorporating discussions on validated tests in Ghana into the teaching and learning of psychometrics at the universities and (2) provision of technical reports on the validated tests. These technical reports need not be detailed but should seek to indicate the name of the test, edition of the test, original publisher(s), the research team undertaking (who undertook) the validation study, year in which the validation study was conducted, summary of method used, and results of analysis conducted. These technical reports can be uploaded onto the website of Ghana Psychological Association (GPA) or made available to users upon request. Alternatively or complementary to this mode of dissemination, an issue of Ghana International Journal of Mental Health can be dedicated to publishing only these technical reports. Ultimately, what is important is to find a way to create user awareness and get them to use the norms.

Conclusion

This paper sought to conduct a narrative review of psychological testing in Ghana with a focus on identifying some of the tests being used in psychologists in health, education and work organizations. Opoku (2012) identified reliability and validity, interpretation of scores, influence of culture, ecological influences, and influence of language as some of factors that can account for poor performance of Western instruments measuring cognitive ability in Africa. Using the factors identified by Opoku (2012), an analysis was carried out to assess the potential for and the degree to which all those factors undermine the use of imported psychological tests in Ghana. In response to these, some recommendations were made including validation studies, construction of Ghanaian-centric tests and their translation into the widely spoken Ghanaian languages such as Twi, Ga, and Ewe. Again, attention was drawn to the low adoption and use of the existing test norms due to lack of awareness. It has been suggested that publication and/dissemination of

technical reports on the validated tests will contribute to improved awareness and the ultimate use of the norms. It is believed that the issues discussed also have implications for psychological testing among other non-European and non-American populations in the Majority of world.

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