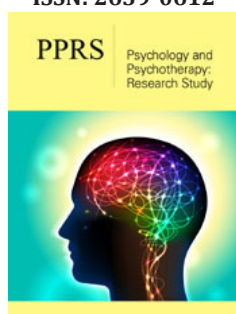


Are We There Yet? Norms and its Challenges in South Africa

August JO*, Ally Y, Jack NC, Eichstadt A, Jacobs S, Joubert K and Perelson S


Department of Psychology, Nelson Mandela University, South Africa

ISSN: 2639-0612



***Corresponding author:** Justin August, Department of Psychology, Nelson Mandela University, Building 07, ground floor, room 15, South Africa

Submission:  August 10, 2023

Published:  August 29, 2023

Volume 7 - Issue 3

How to cite this article: August JO*, Ally Y, Jack NC, Eichstadt A, Jacobs S, Joubert K and Perelson S. Are We There Yet? Norms and its Challenges in South Africa. Psychol Psychother Res Stud. 7(3). PPRS. 000662. 2023. DOI: [10.31031/PPRS.2023.07.000662](https://doi.org/10.31031/PPRS.2023.07.000662)

Copyright@ August JO, This article is distributed under the terms of the Creative Commons Attribution 4.0 International License, which permits unrestricted use and redistribution provided that the original author and source are credited.

Abstract

Psychometric testing can form a vital part in the diagnoses of many debilitating conditions, assessing school readiness and difficulties learning, as well as in the realm of occupational competencies. In order for this information to be fair and valid, the normative nature of each test needs to be critiqued and if found to be unsound within the given context, revised. This commentary conveys an understanding of the current state of norm development of three prominent assessments used in South Africa. Namely, the senior standard South African Individual Scales-Revised, the Wechsler Adult Intelligence Scale, and the Ravens Progressive Matrices [1]. The latest norm developments in relation to the diverse South African population are discussed for each of these tests as well as the strengths and limitations thereof. Evaluation of the information led to the opinion that norm development in South Africa is not moving forward steadily and is not yet representative of the diverse population.

Keywords: Psychometric assessment; South Africa; Senior standard South African individual scales-revised; Wechsler adult intelligence scale; Ravens progressive matrices

Introduction

The South African population is multicultural and diverse and therefore requires a dynamic view and practice of psychometric assessment. The inaccuracy and disregard for ethics when testing the entire population in comparison to one norm group may seem obvious. However, the complexity of variables influencing the outcome of assessments in South Africa has not always been acknowledged. Post 1994, with the birth of democracy, many individuals wanted to remove psychological testing altogether due to the trauma and discrimination perpetuated by racially motivated assessment practices during apartheid [2]. Concurrently, practitioners were starting to realize a need for new measures as all racial groups were able to apply for the same occupational and educational opportunities and competencies needed to be compared equitably irrespective of race, language, or gender. Initially, two perspectives on how to address this concern were employed by researchers. The first was to develop and norm assessments for more than one South African language and racial group [2]. For example, pencil and paper games. The second way was to adapt existing measures that had been normed for the white population or were internationally sourced to be better applied to all racial and cultural groups [2]. An example of these that is in common use today is the Ravens progressive matrices. However, the new norming and development of applicable tests has neither been a simple nor quick process with an extended hiatus setting its own norm. To this end, it is necessary to examine the existence and development of the norm groups of the psychometric tests that are commonly used in South Africa and determine whether development is moving in the direction of inclusivity or not. To illicit needed discussion in this regard, the authors provide a commentary on the status of norm development of three psychometric tests that are in common use in South Africa. Namely, the Senior Standard South African Individual Scales-Revised (SSAIS-R), the Wechsler Adult Intelligence Scale (WAIS), and the Ravens Progressive Matrices (RPM). Whether representative, recent, and sufficient norm development is occurring in South Africa will be critiqued in order to inform future research.

Contextualising Norms and Norm Development in South Africa

Due to the diversity that is present in the country, inclusive and fair norms are difficult to develop. Shuttleworth-Edwards [3] states that there is substantial evidence that reveals

the vast differences in the performance of South African individuals from differing demographic groups in psychological tests. The most substantial causes being that most tests were normed on westernised populations, have outdated norms, or norms that do not apply to all racial and language groups [3]. The level and quality of education received by any individual has a significant impact on the outcome of a psychological assessment. According to Shuttleworth-Edwards [3] the historical discrepancies in education for the black South African population has had negative effects on this population that include poor test results due to language barriers and the educational sophistication of tests. Individuals' education or lack thereof will influence the way they perform on psychometric tests and raises the question as to whether ability or education received is actually being assessed. In addition, the difference in socioeconomic status of South Africans provides a challenge to the norms previously created under apartheid. Socioeconomic status not only relates to access to education, but also to other factors that influence test taking ability such as literacy in one's mother tongue, nutrition, types of environmental exposure and stressors. According to Densem [4], data that does not reflect the cultures, languages, and socioeconomic status of a country, should not be used to create norms. However, various norms in psychometric tests used in South Africa have still not been sufficiently developed or adjusted to accurately reflect realities of the demographics and socioeconomic status of all South Africans. This raises the concern of what the effects will be of continuing with testing that does not serve the needs of a diverse population equitably.

Normative Development in South Africa

Senior standard South African individual scales-revised (SSAIS-R)

The SSAIS-R is a widely used verbal and non-verbal intelligence test within South Africa that was first published in 1964 [5]. The SSAIS-R was developed for white, Indian, and coloured Afrikaans and English-speaking individuals within South Africa [6]. The last census was conducted in 2011 and therefore accurate current demographic data for South Africa is unavailable. Nevertheless, to provide some perspective, the available statistics suggest that the South African population is predominantly black (81%), with coloured, white, and Indian populations in the minority [7]. Furthermore, probably only 23, 1% of South Africans are fluent in Afrikaans and English [8]. The SSAIS-R therefore fails to consider major South African ethnic and linguistic groups. Another limitation of the SSAIS-R is that the latest revision took place 31 years ago (in 1992) [5] and therefore a revised version has not been published within post-apartheid South Africa. The SSAIS-R might be biased in terms of favoring advantaged population groups [5] as on average individuals with low socio-economic status underperform compared to individuals from high socio-economic backgrounds [9]. Considering that the majority of South Africans live in poverty (World Bank Group, 2020) [10], it is of utmost importance that South African assessments such as the SSAIS-R are updated.

Wechsler Adult Intelligence Scale (WAIS)

The Wechsler Adult Intelligence Scale (WAIS) was published in 1955. This test was designed to measure the intelligence in older adolescents and adults [11]. There have been four different versions of the WAIS, with the most recent edition being the WAIS-IV which was released in 2008 [12]. The WAIS-IV was normed for a sample of 2200 people in the United States within the age range 16 to 90 years, and an extension of this norm group was created for 688 Canadians within the same age range [12]. Although this test has been revised numerous times, its norm group is still not applicable to the South African population. While the WAIS-III comprises an Afrikaans translation of the verbal subtests, this translation has not been standardized [13]. A welcome recent development is the Wechsler Adult Intelligence Scale-Fourth SA Edition [1] which suggests that at least some progress is being made in terms of developing relevant psychometric tests for South Africa. This edition was developed due to internationally emerging demographic and clinical trends and has been adapted to specifically suit the needs of the South African population. This test was reviewed and classified by the Health Professions Council of South Africa in July 2018 and is the most recent development for this test battery.

Ravens Progressive Matrices

The RPM were developed in 1938 and have been mostly standardised for British and American populations [14]. The more widely used norms for the RPM were developed in 1993 in America, but there have since been new publications in 2003 and in recent years [15,16]. Owen [17] developed norms for the RPM in South Africa based on a sample of white, Indian, coloured, and black pupils in 1992. This type of normative study in the South African context aids practitioners to confidently use the RPM as a non-culturally biased test of intelligence as it claims to be [14]. However, it is important to be mindful that this data is outdated and does not represent the current population of South Africa that is increasingly both more diverse and integrated. More recent normative studies on the coloured progressive matrices have been done with small samples in specific areas in the Eastern Cape [14]. This study added to the normative data on IsiXhosa speaking individuals in the South African context [14]. However, no more normative studies have been conducted on the RPM. The RPM are still widely used in South Africa today, and results from these tests are used to inform career paths and diagnoses, even though accurate updated local norms have not been established [14]. Further research on the RPM current applicability and development of new norms which reflect the racial and cultural diversity of the South African context is necessary for accurate interpretation of test scores by local practitioners.

Recommendations for Further Research and Concluding Remarks

Psychometric assessments can be valid and useful tools to be used in South Africa. While these tools can give indications of clients mental and emotional health, as well as their developmental

and intellectual ability, interpretation of test scores in South Africa is still biased. As has been commented on, the norm data does not represent the diverse demographic of the South African people. Local norms need to be developed in South Africa which reflect all racial, cultural, and socioeconomic groups. Many of the tests used in South Africa, such as the SSAIS-R, were normed prior to 1994. While it is questionable whether some tests were ever used fairly, it is evident that such tests in their current form cannot be used impartially to assess the current South African population. Due to the political and cultural shifts experienced since the establishment of previous norms, the tests require revision. Practitioners continue to use these psychological assessment measures but need to be aware of the power associated with assessment and diagnoses and interpret scores carefully in light of the limitations of the normative data discussed herein.

In order for valid and fair use of assessment measures in South Africa, there needs to be a purposive focus on establishing new, inclusive, and local norms. There has been progress in norm development in South Africa for the RPM [14]. However, this is merely one test. There is still a dire need for further research and normative development in all the assessment measures used in South Africa today. Norms in South Africa cannot be left as they are, and the expansion and revision thereof need greater focus. The norms of the SSAIS-R and RPM were last updated in 1992, and the WAIS in 2018. None of these norms employed are widely inclusive of the many significant demographic groups of South Africa in 2023. It is not only possible to develop norms that can accurately address the abilities and development of the diverse population of South Africa, but also a necessity. It is necessary for the equitable understanding of knowledge and ability across the populations' different expressions. South African practitioners must be able to assess the individuals that make up this multifaceted country accurately in order to do them justice with their interpretations. Testing should be guided by societal reality and relevant norms are the first step in developing a realistic and workable approach to psychometric testing in South Africa [15-18].

References

1. JVR Africa (n.d.) Wechsler Adult Intelligence Scale-Fourth SA Edition (WAIS-IV SA)-Catalogue JVR Africa Group.
2. Foxcroft C, Roodt G (2013) Introduction to psychological assessment in the South African Context. (4th edn). Cape Town: Oxford University Press, UK.
3. Edwards ABS, Merwe ASV, Tonder PJV, Radloff SE (2013) WISC-IV test performance in the South African context: A collation of cross-cultural norms. *Psychological Assessment in South Africa Research and Applications*, pp. 33-47.
4. Densem C (2015) Norms for psychometric assessment. *Psytech International* 11.
5. Cockcroft K (2013) The Senior South African individual scales revised: A review. In: Laher S, Cockcroft K (Eds.), *Psychological assessment in South Africa: Research and application*, NYU Press, US, pp. 48-59.
6. Bedell B, Eeden RV, Staden FV (1999) Culture as a moderator variable in psychological test performance: Issues and trends in South Africa. *SA Journal of Industrial Psychology* 25(3): a681.
7. Statista Research Department (2023) Total population of South Africa, by ethnic groups. Statista, South Africa.
8. PopulationU.com. (2020) South Africa Population.
9. Stumm SV, Plomin R (2015) Socioeconomic status and growth of intelligence from infancy through adolescence. *National Library of Medicine* 48: 30-36.
10. World Bank Group (2020) Poverty & Equity Brief South Africa-Sub-Saharan Africa. World Bank, USA.
11. Cherry K (2022) The wechsler adult intelligence scale. *Verywell Mind*.
12. Lautieri A (2023) Psychological Testing: Wechsler Adult Intelligence Scale. *MentalHelp.net*.
13. Grieve K, Eeden RV (2010) A preliminary investigation of the suitability of the WAIS-III for Afrikaans-speaking South Africans. *South African Journal of Psychology* 40(3): 262-271.
14. Knoetze J, Bass N, Steele G (2005) The raven's coloured progressive matrices: Pilot norms for IsiXhosa-speaking primary school learners in peri-urban Eastern Cape. *South African Journal of Psychology* 35(2): 220-229.
15. Rushton JP, Skuy M, Bons TA (2004) Construct validity of raven's advanced progressive matrices for African and non-African Engineering students in South Africa. *International Journal of Selection and Assessment* 12(3): 220-229.
16. Laher S, Cockcroft K (2014) Psychological assessment in post-apartheid South Africa: The way forward. *South African Journal of Psychology* 44(3): 220-229.
17. Owen KR (1992) The suitability of Raven's standard progressive matrices for various groups in South Africa. *Personality and Individual Differences* 13(2): 149-159.
18. Sulla V (2020) Poverty and equity brief Sub-Saharan Africa. World Bank Group, South Africa.