



Effects Of Marginalized Language on Efficiency of Neuropsychological Tests

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Abstract

This paper throws light onto shadows casted by marginalized writing practices onto neuropsychological tests pursuing to halt in diagnosis of varying neurocognitive defects, suggests the significance of multimodal research and oriented practices and how they could help, ease the arduous task of detection along with diagnosis of latent neurological and cognitive dysfunctions. It was determined that there is an uneven cognitive space created by three factors: marginalization, governmental and institutional evaluation practices and the use of English. Unless the extent and nature of complex disability and the issues surrounding culturally safe policy, and service design sided along with engagement are addressed by Aboriginal and marginalized, including those who experience complex disablement, marginalized people continue to be effectively excluded from the extensive practices available. As a conclusion, a series of managerial and linguistic suggestions for varying clinical institutions is provided in order to promote ethnic diversity so as to release the penumbra casted upon quality tests. Between those whose have access to knowledge and participate in knowledge sharing, and the others, those relegated to the side-lines of knowledge societies suffers the impacts accounting to lowering of their cognitive scores. *Critical psychiatry: The politics of mental health* by David Ingleby (1980a) strongly advocates the conceptual foundations of psychiatry, their social role, and about issues of power surrounding mental illness.

Introduction

The consequences deriving back from the Third Industrial Revolution – emergence of critical new technologies – have changed the dynamics of society significantly (Unesco, 2005). Ideally, knowledge society keeping equity in sight, must generate equal access of technology to all and unfasten the existing knowledge disparities amongst nations (Färber, 2015). The effects of such discrepancy are visible in different clinical practices. Despite the rapid rate of population expansion amongst ethnic minority, the field of clinical neuropsychology has been slow to respond to the clinical needs of ethnic minority clients marking the constraint of language as a significant limitation in case of neuropsychological testings. There are varying tests available including pen-paper, number of scales are available in which language is a limitation but to some extent computerized tests addresses such barrier but, Computerized tests received low popularity (28 %) despite their numerous advantages, which include overcoming the language- and cultural-dependent limitations of traditional objective tests. This brings in light the accessibility differences amongst societies but suffrage does not come with the hindsight of variance. Thus, mandating the need for an outreach programme to address the needs of wide sections that are left unattended.



Significance of language in Neuropsychometric evaluations:

Neuropsychology as a varied discipline emerged around 2007 and despite the flexibility of time, it has not been able to instill the idea of being culturally competent.

. Neuropsychological tests serve variety of purposes:

1. Assessment of basic cognitive ableness or disableness;
2. Determination of different patterns of cognition associated psycho-legal issues.
3. Scrutinizing brain disorders or injury.
4. Probing brain-behavior relationships.

Amongst different limitations to such tests, language also creates a major barrier. Translating a test from one language to another does not eliminate the need to sight cultural influences and their impact on cognition development heightening the need to take in consideration the effects onto marginalized side-lines of the society. The tests are available in number of languages but such number is trivial ahead of cultural and language diversity. Multivariate results showcased that US acculturation significantly predicted 11–14% of the variance in global neuropsychological functioning, verbal fluency, and processing speed, whereas Latina/o acculturation predicted 6-8% of the variance in motor and executive function (trend level associations). Both linguistic and nonlinguistic cultural factors had distinct effects on neuropsychological performance. As a consequence, there is a tension between the concept of globalised science and spatial disparities in knowledge production, legitimisation and dissemination. This tension has resolved itself in the development of differentiated knowledge production conditions. These are determined by homogenised scientific practices, standardised publishing practices, the creation of uneven power relationships in the publishing business, evaluation cultures where rankings and metrics are used to assess the quality of performance, and restricted access to knowledge in the case of development countries, among other phenomena (Lillis and Curry, 2010; Paasi, 2015). To ensure a well formulation of clinical practices, there must be some considerations:

- (1) Awareness of one's own assumptions, values, biases, and stereotypes about ethnic minorities; how such beliefs and attitudes could negatively impact the provision of neuropsychological services; and the development of a positive stance towards multiculturalism. [SEP]
- (2) Knowledge and understanding regarding one's own worldview and that of one's clients; specific knowledge regarding the culture of one's clients; and understanding of sociopolitical influences. [SEP]
- (3) Acquisition of specific, culturally appropriate assessment, intervention, and communication skills necessary to effectively work with ethnic minority groups. [SEP]
- (4) Development of core cultural competencies, at the organizational level, based on new theories, practices, policies, and organizational structures that are more

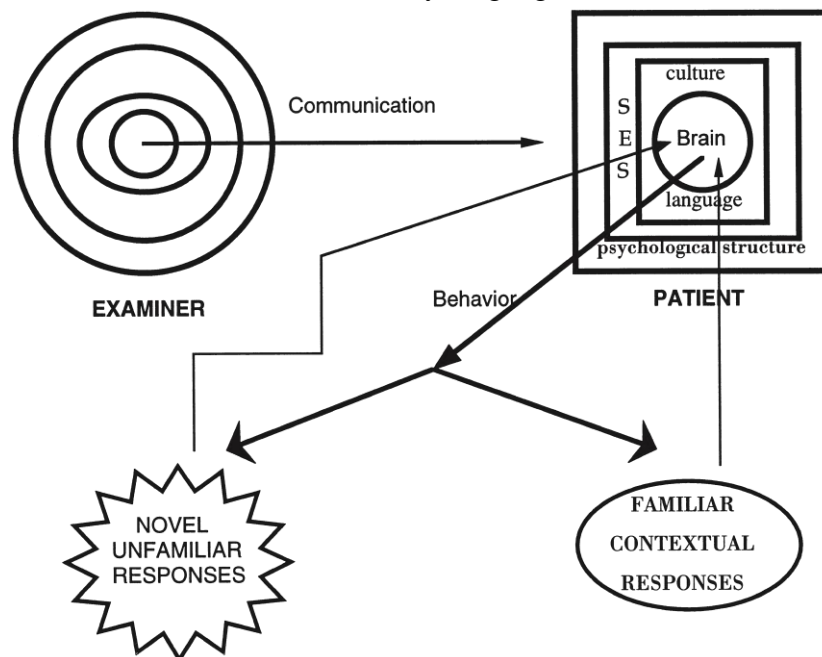


responsive to all groups

Validity of Construct:

According to the American Psychological Association’s (APA) Guidelines on Multicultural Education, Training, Research, Practice, and Organizational Change for Psychologists (APA, 2003), “all individuals are cultural beings who possess a cultural, racial, and ethnic heritage” (p. 380). APA Ethical Standard 9.02b (APA, 2002) states that “Psychologists use assessment instruments whose validity and reliability have been established for use with members of the population tested.” However, as Helms (1992) has cogently argued, by and large researchers (and test publishers) have floundered the investigation in equivalence to cultural linguisticity of neuropsychological instruments; that is, if the constructs measured (e.g., intelligence processing speed, learning, executive functioning, etc.) have analogous meanings within and across cultural groups. As Luria (1976) remarked, validated tests developed and used in one culture usually resulted experimental failures and discarded or treated invalid for the use with amongst cultural groups signifying, the neuropsychological instruments designed to measure constructs in one culture may not be readily applied to individuals of other cultures because of differences amongst norms, practices, distinct psychological mindset, varying effects of different educational institutions, any test is validated with the viewpoint of equal measurement of the same construct, the gap created is thus showcasing the needed quintessence of worldview.

The schematic illustration by Cacioppo, J. T., & Berntson, G. G. (1992) sophisticatedly showcases how the multimodalities of society influences the cognition as well as the effect of communication, which as well is affected by language barrier on the brain.



Applications:

Inculcating multi-cultural facets to the research widens the scope and is needed for paradigm



shift:

1. Assumptions regarding viewpoint, stereotypes, biases at bay could act as a key changer and positively impact the provisions of neuropsychological services and inculcate an optimistic approach towards multiculturalism.
2. Keeping in sight the worldview and tackling patient with a widened approach could also help in betterment of clinical practices.
3. Assessing the acquisition of skills, specific to ethnic minority also aid in an inclusive approach.
4. Engraining cultural competencies at organizational level adds to more responsiveness of all groups.

Historical precedent:

A universalist point of view is commonly held to practice in case of neuro-psychological testing holding “a direct, unencumbered link between the neurobiological brain, cognitive processes, and behavior” (Perez-Arce, 1999, p. 582). The potential universalist view holds in cognition freeing the need of examination of construct and worrying about its validity and other related issues. However, it is based on the view that such assessment instruments are valid throughout globe i.e. universally, easing the tedious task of tailoring required by neuropsychologists to sight the cultural diversity amongst clients during evaluation but, Cole marked universalists test as “culture-free” tests.

Demographic and sociopolitical shifts have resulted in a rapidly growing need for culturally competent neuropsychological services. We provide a call to action for neuropsychologists and related organizations to advance multiculturalism and diversity within the field by increasing multicultural awareness and knowledge, multicultural education and training, multicultural neuropsychological research, and the provision of culturally competent neuropsychological services to racial/ethnic minority clients.

Conclusion:

With the changing times, shifting the paradigm from mono-morbid or vertical interventions towards comorbid as well multimorbid approaches could help enhance the effectiveness along with efficiency of human resources utilization. Though, there is considerable literature available on comorbid conditions between mental and somatic diseases, this paper is strongly associated with conceptual, epistemological as well the treatment challenges, dilemmas and controversies posed in order to perform neuropsychological tests. Studies keeping comorbid conditions along with cultural differences in sight have been expected to provide an impetus to research on validity of the ongoing diagnostic systems as well as in establishing more effective and efficient treatments including personalized pharmacotherapy. Following the present resolutions available in medical and psychiatric comorbidities and in multimorbidity, number of disciplines are involved like psychosomatic medicine, behavioral medicine, mind-body medicine, integrative medicine, complementary medicine and others but it could all together make significant changes only when studied in association with cultural differences.

**References:**

1. Aragona M: *The role of comorbidity in the crisis of the current psychiatric classification system. Phylo- sophy, Psychiatry & Psychology* 2009; 16:1-11.
2. Arshi, T., Rao, V., Qazi, K., Begum, V., ALSabahi, M., & Ahmed, S. A. (2021). A Biopsychosocial Perspective of User-Generated Innovation in Open Innovation Models: A Moderated-Mediation Analysis. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(2), 131. MDPI AG. Retrieved from <http://dx.doi.org/10.3390/joitmc7020131>
3. Cacioppo, J. T., & Berntson, G. G. (1992). Social psychological contributions to the decade of the brain: Doctrine of multilevel analysis. *American Psychologist*, 47, 1019–1028
4. Dammann E. J. (1997). "The myth of mental illness:" continuing controversies and their implications for mental health professionals. *Clinical psychology review*, 17(7), 733–756. [https://doi.org/10.1016/s0272-7358\(97\)00030-5](https://doi.org/10.1016/s0272-7358(97)00030-5)
5. Helman CG: *Culture, Health and Illness*. Hodder & Arnold, London, 2007.
6. Helms, J. E. (1992). Why is there no study of cultural equivalence in standardized cognitive ability testing? *American Psychologist*, 47(9), 1083–1101. <https://doi.org/10.1037/0003-066X.47.9.1083>
7. Jakovljević M: *Transdisciplinary holistic integrative psychiatry – A wishful thinking or reality? Psychiatria Danubina* 2008b; 20:341-348.
8. Jakovljević M. (2009). Psychopharmacotherapy and comorbidity: conceptual and epistemological issues, dilemmas and controversies. *Psychiatria Danubina*, 21(3), 333–340.
9. Luria, A. R. (1976). *The neuropsychology of memory*. (Trans B. Haigh). V. H. Winston & Sons
10. Maj M: *'Psychiatric comorbidity': An artefact of current diagnostic systems? Brit J Psychiatry* 2005; 186:182-184.
11. Patricia Pérez-Arce, The Influence of Culture on Cognition, *Archives of Clinical Neuropsychology*, Volume 14, Issue 7, October 1999, Pages 581–592, <https://doi.org/10.1093/arclin/14.7.581>
12. Resnick, L. B., Levine, J. M. & Teasley, S. D. (1991). *Socially shared cognition*. Washington, DC: American Psychological Association.
13. Vygotsky, L. S. (1978). *Mind in society*. Cambridge, MA: Harvard University Press.