

Appendix A

METHODS

This analysis was part of a broader study that aimed to develop a theoretical model of NR suited to the South African context that would be flexible enough to adjust to changing realities and practical needs. The research design followed an exploratory, descriptive approach based on Program Theory. Program Theory arose out of a need to design interventions that are accountable and efficient, and to investigate the processes that lead to desired outcomes (1). It attempts to explicitly delineate the processes leading from a problem, to an intervention, to desirable outcomes (2). The importance of understanding the processes that lead to outcomes has become a central focus of Program Theory (3).

The beginning phase of the research design incorporated a literature review that aimed to study all theory and existing literature about the focus of the intervention and available treatment modalities. The role of theory is crucial in intervention design (4) as theory-driven interventions are based on an idiographic worldview that accommodates inter-individual differences. The sequential procedure described by Hidecker et al. (5) was used to incorporate guidelines from the vast body of literature for NR into the model. The procedure followed is described below.

Step 1: Determine the question(s) that need to be answered

Systems thinking advocates that healthcare systems are complex, adaptive, dynamic, and are influenced by history and culture (6). An important development in healthcare intervention research in the last two decades has been an increasing awareness that a problem cannot be separated from the political, social, and geographical conditions in which it occurs (7). Many evidence-based systematic reviews in healthcare are limited by a lack of consideration of social outcomes and structural inequities, and their impacts on disadvantaged groups (8). The question asked for this article was: what are the South African contextual factors that influence the accessibility of neuropsychological rehabilitation after ABI?

Step 2: Investigate the literature for possible answers to the questions

The literature search of the broader project was collated between January 2017 and June 2018. Databases included in the literature search were those available on Pubmed, EbscoHost, Google Scholar and ProQuest Dissertations & Theses Global. Reference chaining was also utilised to find

sources that focused on South African or African contextual influences, Keywords in the literature search were “South Africa”, “Africa”, “brain injury”, “neuropsychological rehabilitation” and “rehabilitation”. Sources that were included needed to be (1) published in English, (2) published between 1990 and 2018, and (3) have a focus on contextual influences that impact accessibility of NR.

This article focuses on the results that prioritised African and South African literature on rehabilitation after ABI. From a total of 1662 initial literature sources, 346 were screened after duplicates and irrelevant sources were removed. From the 346, 25 were chosen for the final synthesis based on the content of their abstracts and full-texts. It was deemed necessary to analyse individual studies as well as reviews, particularly for the former’s value in discussing the socio-political, ecological, cultural, and technical contexts of interventions in detail (8). One of the biggest criticisms of systematic reviews and meta-analyses is that there is no verification that the contexts of interventions are similar therefore, findings are generalised with little understanding of the proposed implementation context.

Tools like intervention mapping assist practitioners to bridge theory and practice (9). This literature search was guided by all three of the approaches to literature searches for intervention mapping described by Bartholomew et al. (10) namely, the issue approach, the concept approach, and the general theories approach. Once all relevant literature was identified and read based on the issue approach, the literature was reread with the aim of integrating a range of useful theoretical perspectives for the defined problem. Then based on the concept approach, existing intervention approaches were linked to theoretical constructs or models. Lastly, based on the general theories approach, possible answers and theories were examined for congruence, and gaps identified that could lead to further research.

[Step 3: Evaluate the evidence in the literature for its validity, relevance, and applicability to the South African context](#)

The context of an intervention influences the needs, assets, problems, and opportunities relevant in developing the intervention (11). The updated International Classification of Functioning, Disability, and Health (ICF) (12) emphasizes how environmental barriers and facilitators are fundamental in understanding experiences of health and disability, and how the context influences the manifestations of impairments in activity limitations and participation restrictions. Examples of context-specific influences include access to public transportation, the existence of cohesive community-based groups that can assist with community reintegration, and the availability of services (13). Geographical barriers are also relevant as most healthcare facilities in South Africa are concentrated around urban areas and patients in rural communities suffer from a lack of access.

Many interventions currently practiced in healthcare settings in Africa lack a contextual basis and a process of evidence-based decision-making (14). Middle-income countries have complex healthcare systems with features relevant to both high- and low-income countries and are often facing the same lack of access to services of the latter (8). With the level of multicultural and multilingual patient diversity in South Africa, clinicians often have to adapt and be flexible with the implementation of interventions (15). Language, access to healthcare, culture, socioeconomic status, community, and family factors influence the clinical presentations of patients after ABI (16).

In this step, the literature results were analysed from a context-specific lens, using available information about the South African context. For example, due to the racial segregation inherent in the apartheid system in South Africa, African traditional beliefs and indigenous healing practices were totally excluded from the healthcare system (17). This led to the identification of a need based on socio-historical factors.

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