

The association between biopsychosocial factors and disability in a national health survey in South Africa

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Abstract

The association between psychosocial factors and disability is less clear. This study investigated the biological and psychosocial (employment and psychological distress) factors associated with level of disability in an adult sample in South Africa. Data were analysed from a cross-sectional survey among adults aged 18–64 ($n = 4974$). Multiple linear regression was used to investigate the associations of the selected variables with disability. The mean percentage score on the WHODAS scale of disability was 5.31% (95% CI: 4.74–5.88). Age ($p < 0.001$) and race ($p = 0.0002$) were significantly associated with disability, and history of stroke ($\beta = 7.19$, 95% CI: 3.19–11.20) and heart-related conditions ($\beta = 2.08$, 95% CI: [0.23–3.93]) showed positive associations. Of the psychosocial variables, psychological distress ($\beta = 10.49$ [8.63–12.35]) showed a strong positive association while employment (-1.62 [-2.36 to -0.88]) showed a negative association with disability. The association between demographic factors, medical conditions and increased disability confirms the findings in the literature. The finding that psychological distress is associated with increased disability has not been frequently reported. This study highlights specific psychosocial targets that may be usefully addressed by health policies and interventions in order to improve disability management.

Introduction

The estimated prevalence of disability in Southern Africa is 24.5%, higher than the world average of 15% (World Health Organization [WHO], 2011). The WHO (2001) defines disability as the outcome of the interaction between a person's health condition and the context in which the person lives, which occurs at the *body*, *person* and *societal levels*. Understanding disability within a Biopsychosocial (BPS) Model is therefore appropriate as it encapsulates the complex interaction of factors that result in varying levels of disability.

Non-communicable diseases (NCDs) which include stroke, heart disease, hypertension and diabetes are recognised as major causes of disability in low- and middle-income countries (LMICs) (Hoy et al., 2013; Nojilana et al., 2016). In South Africa (SA), a MIC, NCDs account for an estimated 16% of disability-adjusted life years (DALYs) (Norman, Matzopoulos, Groenewald, & Bradshaw, 2007). NCDs share common risk factors, such as high blood pressure, elevated blood glucose, and abnormal blood lipids (Maimela et al., 2016). A

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