Factors associated with depression in the isiZulu speaking population of South Africa

Introduction

Mental health has become an important global public health concern as it has been recognized that mental disorders hinder the functioning and the quality of life of many people worldwide. According to the Global Burden of Disease Study 2015, depressive disorders were the third leading cause of global disability (Vos et al., 2016). Mental health is therefore a priority for global health and development. As such the Sustainable Development Goals (SDGs) include mental health as an important goal to facilitate the reduction of mortality from non-communicable diseases (Thornicroft & Patel, 2014).

South Africa has a high burden of disease from mental disorders. It is estimated that one third of South Africans experience mental disorders in their lifetime (C. Lund, Kleintjes, Kakuma, Flisher, & Consortium, 2010). South Africa has high levels of poverty which result in poor health outcomes for many South Africans (Mayosi & Benatar, 2014). Many South Africans are unable to access the necessities such as clean water, adequate shelter and daily nutritional requirements which increases their susceptibility to different health problems (Mayosi & Benatar, 2014). South Africa is also very diverse in terms of ethnicity and culture (Butler, 2017) and this has an impact on the understanding of mental health issues amongst different population groups.

Research illustrates that those with a higher socioeconomic status enjoy higher levels of health when compared to those are of a lower socioeconomic status (Adler & Rehkopf, 2008; Glymour, Avendano, & Kawachi, 2014; Meyer, Castro-Schilo, & Aguilar-Gaxiola, 2014; Williams, Priest, & Anderson, 2016). A great number of research studies in more developed countries have also found that mental health has the same negative relationship with socioeconomic status as researchers have shown that low socioeconomic status results in a higher possibility of poor mental health (Choi, Burgard, Elo, Heisler, & Medicine, 2015; Dohrenwend & Dohrenwend, 1969; Honjo, Kawakami, Tsuchiya, & Sakurai, 2014; Yu & Williams, 1999). In low-income and middle-income countries there has been fewer studies on the relationship between socioeconomic status and mental health but there is evidence of a negative relationship between socioeconomic status and mental health (C. Lund et al., 2011; C. J. E. Lund & sciences, 2015).

Objectives

To determine the prevalence of depression in the isiZulu-speaking population of South Africa.

To identify factors associated to depression in the isiZulu-speaking population of South Africa

Methods

The data that was used is the National Income Dynamics Study (NIDS) wave 5 (2017). The study will use a sub-sample of the isiZulu speaking population (Southern Africa Labour and Development Research Unit, 2012). NIDS is a nationally representative household panel survey conducted by the Southern Africa Labour and Development Research Unit (SALDRU) which provides individual and household level data (Leibbrandt, Woolard, & de Villiers, 2009).

<u>Variables</u>

Independent Variables

Socio demographic and economic characteristics including age, sex, marital status, educational status, employment status, geographical location, and perceived health status.

Dependent Variables

The dependent variable was Depression (yes/no) which was measured by the depression scale that is available in the NIDS. The NIDS has incorporated the Centre for Epidemiological Studies Depression Scale Short Form (CES-D-10) which measures depressive symptoms. The CES-D-10 has been validated for the isiZulu-speaking population of South Africa (Baron, Davies, & Lund, 2017).

Statistical Analysis

A logistic regression model was fitted to analyse the relationship between socio-demographic and health status factors and depression in the isiZulu-speaking population. The NIDS data was analysed using Stata version 15.

Results

The results of the adjusted regression model (Table 1) suggest that those who were middle aged, living in tribal formal areas, and having fair self-reported general health were significantly more likely to be depressed in the adjusted regression model. Those who are middle aged are 70% more likely to be depressed as compared to those who are young adults (AOR 1.77,95%, C/I 1.23-2.55). Those living in tribal authority and urban formal areas were respectively 65% and 67% less likely to be depressed as compared to those living in tribal formal areas. Being unemployed discouraged (48%) and being employed (64%) was significantly associated with being less likely to be depressed as compared to being not economically active. Those who perceived their health status to be fair were two times more likely to be depressed as compare to those who perceived their health status to be excellent (AOR 2.09,95%, C/I 1.34-3.25).

Discussion

The results of the study suggest that there are very high levels of depressive symptomology amongst the isiZulu-speaking population of South Africa. Using the CES-D-10 cut off score of ≥ 12 to estimate clinical depression, the isiZulu-speaking population's depressive symptomology was estimated at 17.5%. This estimate is high when compared to an estimated global prevalence of 4.4% for depressive disorders (World Health Organization, 2017). Representative samples of the South African population have consistently illustrated a high prevalence of depressive symptoms, 33.63% in 2008, 3.22% in 2010/2011 and 25.54% in 25.54% (Burger, Posel, & von Fintel, 2017). There is a significant relationship between age and depression where the results suggest that those who are middle aged (40-59) are more likely to have depression. A significant predictor of depression has been a stressful life event (Kendler, Karkowski, & Prescott, 1999). Middle age is a time in the life-course that may herald many stressful events such as dissolution of marriage and dissatisfaction with accomplishment in life. This may explain the increased likelihood of depression in middle age.

In more developed countries urban residence has been shown increase the risk of depression due to higher by higher rates of criminality, mortality, social isolation, air pollution and noise (Weaver, Himle, Taylor, Matusko, & Abelson, 2015). The results in this study indicate that those who reside in rural formal areas are significantly more likely to have depression. This unexpected result deserves further exploration because South Africa has a long history of spatial segregation in the various population groups in the country. Further insight into the reasons for the increased probability of depression in formal rural areas could help to improve prevention and treatment programmes for depression in the country. The results from the relationship between perceived health status and depression suggest that those who perceive their health as being fair are more likely to be depressed as compared to those who perceived their health to be excellent. These results concur with research that suggests that those who have poorer health such as those with chronic illness are more likely to develop a depressive disorder (Katon, 2011).

References

Adler, N. E., & Rehkopf, D. H. (2008). US disparities in health: descriptions, causes, and mechanisms. *Annu. Rev. Public Health, 29*, 235-252.

Baron, E. C., Davies, T., & Lund, C. (2017). Validation of the 10-item centre for epidemiological studies depression scale (CES-D-10) in Zulu, Xhosa and Afrikaans populations in South Africa. *BMC psychiatry, 17*(1), 6.

Burger, R., Posel, D., & von Fintel, M. J. J. o. a. d. (2017). The relationship between negative household events and depressive symptoms: Evidence from South African longitudinal data. *218*, 170-175.

Butler, A. (2017). *Contemporary South Africa*: Macmillan International Higher Education.

Choi, H., Burgard, S., Elo, I. T., Heisler, M. J. S. S., & Medicine. (2015). Are older adults living in more equal counties healthier than older adults living in more unequal counties? A propensity score matching approach. *141*, 82-90.

Dohrenwend, B. P., & Dohrenwend, B. S. (1969). *Social status and psychological disorder: A causal inquiry* (Vol. 84): John Wiley & Sons.

Glymour, M. M., Avendano, M., & Kawachi, I. (2014). Socioeconomic status and health. *Social epidemiology, 2*, 17-63.

Honjo, K., Kawakami, N., Tsuchiya, M., & Sakurai, K. J. I. j. o. b. m. (2014). Association of subjective and objective socioeconomic status with subjective mental health and mental disorders among Japanese men and women. *21*(3), 421-429.

Katon, W. J. J. D. i. c. n. (2011). Epidemiology and treatment of depression in patients with chronic medical illness. *13*(1), 7.

Kendler, K. S., Karkowski, L. M., & Prescott, C. A. J. A. J. o. P. (1999). Causal relationship between stressful life events and the onset of major depression. *156*(6), 837-841.

Leibbrandt, M., Woolard, I., & de Villiers, L. (2009). Methodology: Report on NIDS wave 1. *Technical paper, 1*.

Lund, C., De Silva, M., Plagerson, S., Cooper, S., Chisholm, D., Das, J., . . . Patel, V. (2011). Poverty and mental disorders: breaking the cycle in low-income and middle-income countries. *The Lancet, 378*(9801), 1502-1514.

Lund, C., Kleintjes, S., Kakuma, R., Flisher, A. J., & Consortium, M. R. P. (2010). Public sector mental health systems in South Africa: inter-provincial comparisons and policy implications. *Social psychiatry and psychiatric epidemiology, 45*(3), 393-404.

Lund, C. J. E., & sciences, p. (2015). Poverty, inequality and mental health in low-and middle-income countries: time to expand the research and policy agendas. *24*(2), 97-99.

Mayosi, B. M., & Benatar, S. R. (2014). Health and health care in South Africa—20 years after Mandela. *New England Journal of Medicine, 371*(14), 1344-1353.

Meyer, O. L., Castro-Schilo, L., & Aguilar-Gaxiola, S. (2014). Determinants of mental health and self-rated health: a model of socioeconomic status, neighborhood safety, and physical activity. *American journal of public health, 104*(9), 1734-1741.

Southern Africa Labour and Development Research Unit. (2012). National income dynamics study 2008. In. Cape Town: Southern Africa Labour and Development Research Unit.

Thornicroft, G., & Patel, V. (2014). Including mentalhealth among the new sustainable development goals. *BMJ (Clinical research ed), 349*, g5189.

Vos, T., Allen, C., Arora, M., Barber, R. M., Bhutta, Z. A., Brown, A., . . . Chen, A. Z. (2016). Global, regional, and national incidence, prevalence, and years lived with disability for 310 diseases and injuries, 1990–2015: a systematic analysis for the Global Burden of Disease Study 2015. *The Lancet, 388*(10053), 1545-1602.

Weaver, A., Himle, J. A., Taylor, R. J., Matusko, N. N., & Abelson, J. M. J. J. p. (2015). Urban vs rural residence and the prevalence of depression and mood disorder among African American women and non-Hispanic white women. *72*(6), 576-583.

Williams, D. R., Priest, N., & Anderson, N. B. (2016). Understanding associations among race, socioeconomic status, and health: Patterns and prospects. *Health Psychology, 35*(4), 407.

World Health Organization. (2017). *Depression and other common mental disorders: global health estimates*. Retrieved from

Yu, Y., & Williams, D. R. (1999). Socioeconomic status and mental health. In *Handbook of the sociology of mental health* (pp. 151-166): Springer.

Table 1

Results of logistic regression

	Adjusted OR	p-value	CI		SE	t
Age						
Young Adult	1.000					
Older Adult	1.308	0.094	0.956	1.789	0.21	1.68
Middle Aged	1.772	0.002	1.231	2.550	0.33	3.08
Elderly	0.828	0.433	0.517	1.327	0.20	-0.78
Gender						
Male	1.000					
Female	1.218	0.145	0.934	1.588	0.16	1.46
Urban/Rural Dwelling						
Tribal Formal	1.000					
Tribal Authority Areas	0.649	0.023	0.447	0.942	0.12	-2.28
Urban Formal	0.666	0.053	0.441	1.006	0.14	-1.93
Urban Informal	0.772	0.287	0.479	1.243	0.19	-1.6
Education						
Less than Highschool	1.000					
Completed Highschool	1.229	0.180	0.909	1.660	0.19	1.34
Post Highschool	0.807	0.291	0.541	1.202	0.164	-1.06
Marital Status						
Married	1.000					
Living with partner	0.997	0.992	0.613	1.624	0.25	-0.01
Widowed	1.556	0.098	0.921	2.626	0.42	1.65
Divorced	1.841	0.360	0.498	6.811	1.23	0.91
Never Married	1.166	0.376	0.825	1.640	0.20	0.89
Employment Status						
Not Economically Active	1.000					
Unemployed Discouraged	0.484	0.041	0.242	0.970	0.17	-2.05
Unemployed Strict	0.877	0.502	0.598	1.287	0.17	-0.67
Employed	0.639	0.002	0.482	0.848	0.09	-3.11
Perceived Health						
Excellent	1.000					
Very Good	0.723	0.031	0.538	0.972	0.11	-2.15
Good	0.984	0.921	0.716	1.353	0.16	-0.10
Fair	2.089	0.001	1.344	3.247	0.47	3.27
Poor	1.699	0.106	0.893	3.232	0.56	1.62