

Mind the gap: South Africa's mental health burden

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Abstract

Introduction: Mental health conditions are becoming increasingly large contributors towards disease and disability burdens worldwide. In South Africa, mental disorders are ranked as the third-largest contributor to the burden of disease. The aim of this paper is to explore this burden and to inform a potential investment case for the funding or delivery of mental health services.

Methods: This paper draws on multiple data sources to form a picture of the extent of the South African mental health burden and to create empirical data for an investment case. Household survey data and medical scheme data were used for the quantitative analysis. Household survey data include the 2018 General Household Survey (GHS) and the 2017 National Income Dynamics Study (NiDS). Medical scheme data were provided by a large medical scheme administrator and managed care service provider. These included mental health hospital admission data, between 2014 and 2018, and chronic-benefit registration data for 2020. We also used qualitative data derived from primary data collected in one region of South Africa.

Results: Self-reported measures of prevalence of mental disorders were far lower (~2%) than objective measures of depression prevalence (one such mental health disorder) (~12%). The medical scheme data illustrated high levels of comorbidity between mental disorders and other non-communicable disease (NCDs) in the South African medical scheme population, three in five beneficiaries aged 20+ who are registered for chronic benefits for depression were also registered for hypertension benefits, while one in four was also registered for diabetes benefits.

Conclusion: The high levels of comorbidity between mental and physical illness strengthen the mental health investment case in South Africa. By creating an investment case, policy-makers will be able to prioritise high-impact activities to improve diagnosis, treatment and management of mental health disorders. This investment is likely to avert downstream costs from both the comorbidities and complications that create pressure on the (already constrained) health system and negatively impact the economy.

Introduction

The aim of this paper is to explore the burden of mental health in South Africa, to inform a potential future investment case for the funding and delivery of mental health services. As per the World Health Organization's (WHO) Special Initiative for Mental Health: 2019-2023, there is no health without mental health (World Health Organization 2019). In recent years, there has been an acknowledgement of the need to increase investment in mental healthcare to avoid the negative health consequences of poor prevention, screening, management and treatment of these conditions (World Health Organization 2019).

Mental health conditions are becoming increasingly large contributors towards disease and disability burdens worldwide. In South Africa, mental disorders are ranked as the third largest contributor to the burden of disease (Hamdulay 2013). This high burden can largely be explained by socioeconomic factors such as the high levels of poverty and inequality, urbanisation (Srivastava 2009), violence, substance abuse and intergenerational trauma stemming from a long history of oppression (Adonis 2016). All of these are prominent risk factors for the onset of mental disorders (Nguse and Wassenaar 2021).

Despite the high prevalence of mental disorders, access to adequate mental health services is lacking. Only 28% of individuals suffering from mental disorders receive the relevant care (Lund et al. 2010) and 50% of health facilities do not meet required quality standards (South African Depression & Anxiety Group n.d.). In line with best practice for mental healthcare, new national policies are progressively moving away from the historic hospital-centric approach. The intention behind this shift to mental health services in primary healthcare settings is to integrate mental healthcare into community-based care, to improve health outcomes most cost-efficiently (Lund et al. 2010). However, the development of any such community-based services in South Africa has been slow and mental healthcare remains largely centred around hospitals (Docrat et al. 2019).

Mental ill-health also has major implications for physical well-being. Individuals suffering from mental illness experience higher morbidity, disability and mortality (Grandón et al. 2019). For example, those with severe mental disorders can be up to

60% more likely to have a premature death related to a physical health condition, particularly another NCD (Vigo, Thornicroft, and Atun 2016). Comorbidity is also associated with poorer adherence to treatment (for both the mental and physical conditions) because of the mental disorder's symptoms. For example, low motivation and other symptoms of depression can make it more difficult for patients to maintain a healthy diet and remain physically active to manage metabolic diseases such as diabetes or can lead to missing healthcare appointments.

Furthermore, the relationship between mental and physical health is bidirectional: those with mental disorders are more likely to suffer from physical disorders and those with physical disorders are also more likely to suffer from mental disorders (Stein et al. 2019). Mental-physical comorbidity becomes the rule as opposed to the exception: the majority of those with either a mental disorder or another NCD have both (Wille, Bettge, and Ravens-Sieberer 2008). The impacts of mental ill-health are therefore wide-reaching and felt far beyond symptoms and costs directly attributable to mental disorders alone; this demonstrates that overall well-being and health cannot be achieved without mental health.

Methods

This paper draws on multiple data sources to form a picture of the extent of the South African mental health burden, to create empirical data for a future investment case. There is a striking absence of accurate data to fully estimate the mental health burden of disease – in part because mental health conditions show up in mortality data to a limited degree, and in part because of widespread under- and misdiagnosis, stigma (which contributes to poor health seeking) and low levels of screening.

Two broad quantitative data sets were analysed for this research: household survey data and medical scheme data. Household survey data include the 2018 GHS (Statistics South Africa 2019) and the 2017 NiDS (Southern Africa Labour and Development Research Unit 2018). Prevalence from the GHS dataset is estimated using self-reported data around previously diagnosed mental disorders. Prevalence of depression from the NiDS dataset is estimated based on the results of a standardised diagnostic tool (CES-D 10 scale) which is included as a part of the NiDS questionnaire.

Participants with a CES-D 10 score of 15 or greater are considered to have symptoms of depression.

Medical scheme data were provided by a large medical scheme administrator and managed care service provider. These included mental health hospital admission data, between 2014 and 2018, and chronic benefit registration data for 2020. Only those schemes that offer benefits for mental disorders beyond the required prescribed minimum benefits were included in the dataset. Prevalence of mental disorders in the medical scheme population is estimated by ascertaining the proportion of beneficiaries registered for chronic disease benefits for the relevant disorder. Relative prevalence ratios indicate the ratio of prevalence in one subgroup of the medical scheme population compared to another.

Asterisks are used to denote the statistical significance of the findings of the household survey and medical scheme data analysis:

* = $p < 0.1$: statistically marginally significant

** = $p < 0.05$: statistically significant

*** = $p < 0.01$: statistically highly significant

Where results have been age standardised, the standardisation is based on the Statistics South Africa mid-year population estimates for 2018.

We also use qualitative data (carried out by one qualitative researcher, Dr Beth Vale) in this article, based on primary data collected in one pocket of South Africa, to marry the quantitative findings to the reality on the ground.

The qualitative and quantitative data collection and use were approved by Stellenbosch University's Human Research Ethics Council (N20/01/002).

Results

Household survey analysis

The GHS' self-reported prevalence of mental illness is extremely low (under 2%) at all ages. The results of the CES-D 10 scale, which was included as part of the NiDS questionnaire in the health module, show that more than six times as many South Africans (12.5% of females and 12.3% of males) had symptoms of depression alone.

Figure 1 shows that the prevalence of self-reported mental disorders was far lower than prevalence based on objective measures of depression (one such mental health disorder), on an age-adjusted basis. It is clear that South Africa has a large undiagnosed burden of mental ill-health, and that stigma around mental health persists as a problem in the country.

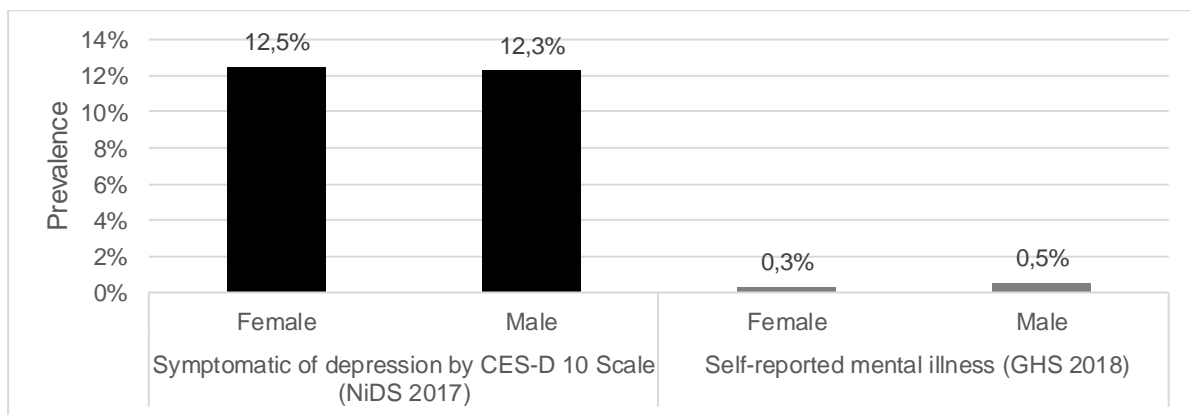


Figure 1: Age-standardised prevalence of depressive symptoms vs self-reported prevalence of mental illness in men* and women*** (NiDS 2017 and GHS 2018: own analysis)**

Medical scheme data

Medical scheme utilisation data, particularly for schemes that offer extensive mental health benefits, provide useful insights into the prevalence of mental ill-health in South Africa. However, these figures are also likely to reflect underdiagnosis due to stigma and reluctant health-seeking behaviour. The close associations between poverty/socio-economic status and mental health would suggest that there is an even higher prevalence of mental disorders in those who are unable to afford medical scheme cover. Therefore, medical scheme data are limited in their applicability to the rest of the South African population but provide a good baseline estimate in the absence of detailed public sector data.

The prevalence of mental disorders in the South African medical scheme population is estimated by finding the proportion of beneficiaries who are registered for chronic disease benefits for the relevant disorder. Unsurprisingly, due to better access to care, the medical scheme data show a higher prevalence of mental illness than the self-reported data in household surveys (Table 1).

Table 1: Proportion of beneficiaries registered for chronic benefits for mental disorders in 2020* (Own analysis)**

Mental disorder	Proportion of beneficiaries registered for chronic mental health benefits
Anxiety and panic disorders	0.2%
Bipolar	1.1%
Depression	5.8%
Schizophrenia	0.2%
PTSD	0.2%
Psychosis	0.02%

When disaggregated by age and sex, the data show that females are almost twice as likely to be registered for a chronic depression benefit as men, and that the risk of depression increases with age (Figure 2).

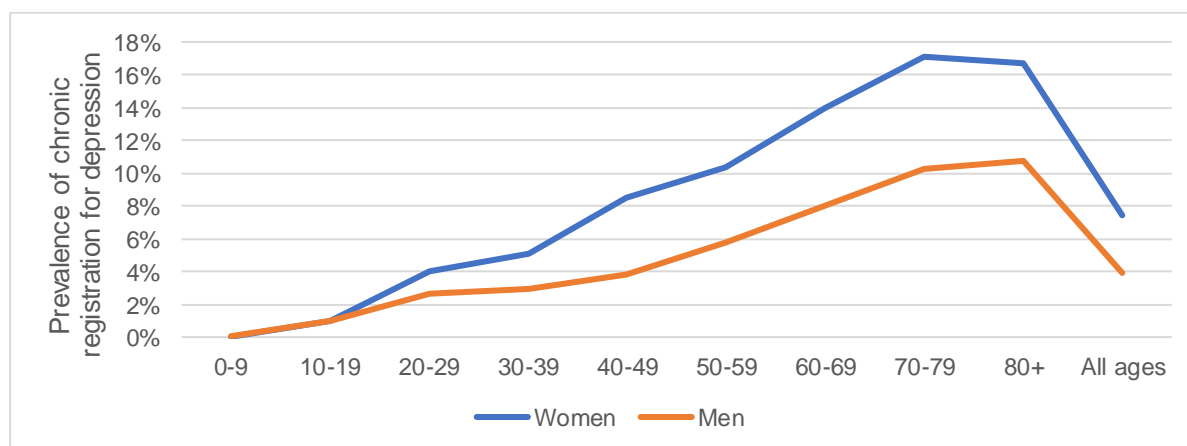


Figure 2: Proportion of beneficiaries registered for chronic benefits for depression in 2020, by age and sex* (Medical scheme data 2020: own analysis)**

The age- and sex-standardised prevalence rate of depression in the medical scheme population (4%) is lower than the prevalence of having depression symptoms, as per the NiDS (12%). The medical scheme chronic registration data likely under-estimate true prevalence, given that not all those with depression are necessarily diagnosed

and/or actively receiving (pharmaceutical) treatment (which they would need to be in order to be registered for the chronic benefit). The lower prevalence in the medical scheme population could also reflect the higher incidence of mental disorders in populations with lower socio-economic status (owing to the associations between socio-economic status, depression and other mental disorders).

The medical scheme data also show an increase in the utilisation of mental healthcare services over time. Data from 2014-2018 show a clear increase in the proportion of beneficiaries admitted to hospital because of mental health disorders over the period (the Council for Medical Schemes reports on admissions to psychiatric facilities, but this excludes psychiatric admissions to acute hospitals and is not disaggregated by age and sex).

The proportion of beneficiaries claiming for mental health hospital admissions increased by 10.3% between 2014 and 2018 (from 1.5% to 1.7%) (Figure 3). The highest increases in mental health hospital admissions occurred at younger ages, with a 38% increase in admissions in those aged between 15 and 20. Women were 51% and 47% more likely to be admitted for depressive and bipolar disorders, respectively, compared to men. Substance use disorders were more common in men, who were found to be 403% more likely to be admitted for such disorders compared to women. An increase in hospitalisation on the grounds of mental illness likely equates to increased prevalence of mental illness. However, the increases in mental health hospitalisation in the medical scheme population could also indicate increases in severity of mental disorders, given that hospitalisation occurs only in severe cases. (It could also be a reflection of the way benefits are designed, as these are more likely to fully cover in-hospital care than outpatient care). Supporting the severity argument is the fact that the average length of stay in hospital for any mental illness admission increased by 0.5 days from 10.6 days in 2014 to 11.1 days in 2018.

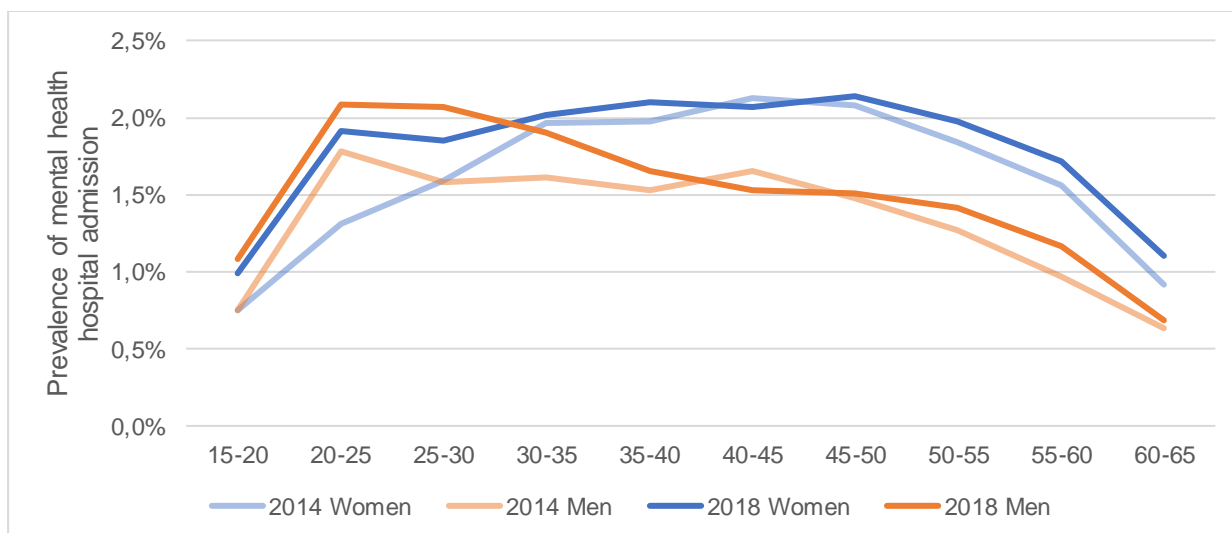


Figure 3: Proportion of beneficiaries with mental health hospital admissions in 2014 and 2018, by age and gender* (Medical scheme data: own analysis)**

The burden of comorbidity

Data analysis confirms high levels of comorbidity between mental disorders and other NCDs in the South African medical scheme population. The analysis showed that three in five beneficiaries aged 20+ who are registered for chronic benefits for depression were also registered for chronic benefits for hypertension, while one in four was also registered for chronic benefits for diabetes. Table 2 depicts the relative prevalence ratios (for beneficiaries over 20 years) of being registered for chronic benefits for an NCD in those registered for chronic benefits for depression compared to those who are not; this demonstrates the close association between depression and NCDs.

Table 2: Increased risk of chronic benefit registration for NCDs in beneficiaries aged 20+ who are registered for chronic benefits for depression* (Medical scheme data 2020: own analysis)**

NCD	Ratio of prevalence of chronic benefit registration for NCDs in beneficiaries aged 20+ who are registered for chronic benefits for depression compared to those who are not
Arthritis	3.42
Asthma	2.76

Diabetes	1.69
Heart problems	2.49
Hypertension	1.84

Qualitative insights on mental health in South Africa

The ‘invisibility’ of mental disorders, owing to their lack of physical symptoms, means that mental health issues are framed and described in a variety of ways. In South Africa, a common framing of mental ill-health is ‘stress.’ Box 1 provides some insight into how the idea of ‘stress’ is also understood to be an explanation for the connection between mental and physical disorders.

Box 1: Stress

Reflections from the field, by Dr Beth Vale

In my observations in Karoo clinics, ‘stress’ was the primary language through which patients reported their psychological dis-ease. Social workers and caregivers also spoke regularly of their clients’ stresses. Reported sources of stress included debt, childcare, sickly relatives and work.

A social worker described to me her elderly clients, supporting large families off their pensions, including adult children who were unable to find work. For the few with jobs, there was also immense pressure to support wider families. ‘This is also compounding stress in the town,’ she said. ‘Add to this the level of debt and anxieties over repayment and you have a recipe for disaster.’

Trepiline, a mild antidepressant, was regularly prescribed throughout the clinics in which I observed, often as a chronic treatment – for sleeplessness, pain and anxiety. Indeed, many described ‘stress’ as related to physical pain.

Both within and outside clinics, those living with chronic illness often related ‘stress’ both to the emergence and management of their condition. On one farm, an insulin-dependent diabetic described the emergence of her diabetes as an outcome consequent on the ‘stress’ of taking care of her grandchildren. Others, in an attempt to explain to clinicians their poor treatment adherence, spoke of being under ‘stress’. While some in this region had received mental health diagnoses — with bipolar disorder, schizophrenia and depression seemingly the most common — others were experiencing psychological distress that was either undiagnosed, a precursor to a later diagnosis, or a reflection of everyday stressors that could nevertheless have a severe effect on physical health. Conversely, physical ill-health can also cause serious psychological distress. As Karoo residents, carers and clinicians grapple with rising rates of NCDs, they are also grappling with language and how best to describe complex webs of psychological and physical distress.

Emily Mendenhall and Shane Norris’ study (Mendenhall and Norris 2015) of a cohort of diabetic women in Soweto, South Africa, showed similar findings: descriptions of ‘stress’ were widespread among the participants, who also believed stress to be a

cause of sickness and physical pain. Many participants also attributed their 'stress' to social problems, particularly problems in the family and histories of grief.

Discussion

According to the Council for Medical Schemes' (CMS) annual reports, mental health spending by medical schemes has increased dramatically. Payments to psychologists increased by ~300% from 2010 to 2020 in real terms. From 2015 to 2020 admissions to mental health institutions increased by 137%. These changes are indicative of dramatic changes in resource allocation and are, at least in part, driven by an increase in the prevalence and severity of mental disorders in the South African medical scheme population. The increased expenditure may also reflect changes to benefits and the supply of mental health services.

In addition to the negative health impact and subsequent burden to the health system, mental illness can lead to decreased productivity, decreased quality of work, increased absenteeism and safety risks at work (South African Depression & Anxiety Group n.d.); all of these come at a cost to the workplace and thus an economic cost/burden to the country. It is estimated that the total loss of earnings in South Africa owing to mental illness amounts to R40 billion annually, approximately 2.2% of the country's gross domestic product (Bateman 2014).

There are also severe social costs related to mental illness: not only are high levels of mental illness a result of poverty, but mental illness can lead to poverty itself. Individuals suffering from mental illness may be subject to stigma and discrimination, which can in turn act as a barrier to education, employment and other basic human rights (National Department of Health: South Africa n.d.). The burden of caregiving (which predominantly falls on women in South Africa) translates into higher risk for mental illness, which in turn leads to the caregiver being at higher risk of developing another NCD.

The findings also point to a severe increase in mental disorders in the youth. The highest increase in mental health hospital admissions occurs in those aged 15-20. These results could indicate an increase in risk factors for mental disorders in adolescents, including the impact of intergenerational trauma and the effects of violence. In the Western Cape, 17% of children under the age of 16 are suffering from the effects of violence, with 8% experiencing post-traumatic stress disorder and 11%

experiencing generalised anxiety disorder (Swingler 2019). In recent years the increased use of social media, which is associated with increases in low self-esteem and poor body image in adolescents, could help to explain the large increases in prevalence of depression at young ages (Kelly et al. 2018).

The large differential in self-reported mental ill-health and objective measures of depression in the NiDS demonstrate that stigma around mental health persists as a national challenge. Stigma can lead to unfair treatment, abuse, rejection, neglect and isolation of mentally ill individuals. As a result, stigma can have major social costs (Docrat et al. 2019). Stigma also has negative impacts on access to, availability of and use of mental healthcare, thus worsening the country's state of mental health (Docrat et al. 2019).

The South African Stress and Health (SASH) study of 2003/2004 (Herman et al. 2009), is the most recent survey investigating the prevalence of mental disorders at a national level; the most recent review of mental health services in the country dates from more than two decades ago (1997) (Lund et al. 2010). The severe lack of recent and reliable data on mental health in the country poses a major challenge to estimating the true burden of disease. Additionally, it hinders the ability to understand the true extent of the impact of mental-physical comorbidity. The high health-related, economic and social costs of mental ill-health highlight the importance of quantifying and understanding the burden thereof, so that resources can be allocated and interventions designed accordingly.

Conclusion

Routine data collection on mental health and mental health service provision should be prioritised, including enhanced survey data. The data described here provide evidence of a high burden of mental disorders in South Africa. However, the true burden of mental illness is difficult to estimate, owing to a lack of reliable and recent data, as well as underdiagnosis and poor access to treatment. Late diagnosis can make treatment more complex and can even lead to inappropriate treatment for physical conditions, given that the clinical history is incomplete (Stein et al. 2019).

An integrated approach to mental health services should be adopted. The high levels of comorbidity between mental and physical illness highlight the value of an integrated approach to tackling the mental health burden in the country (for example,

the inclusion of social workers and psychologists in multidisciplinary teams), as opposed to considering mental health in isolation or as only the ambit of psychiatrists.

Addressing the burden of mental health should be prioritised as a high-impact intervention. High levels of mental-physical comorbidity also provide evidence of the need for a mental health investment case in South Africa. By creating an investment case, policy-makers will be able to prioritise high-impact activities to improve diagnosis, treatment and management of mental health disorders. It would also create impetus for better routine data collection. This investment is likely to avert downstream costs from the comorbidities and complications that create pressure on the (already constrained) health system and negatively impact on the economy.

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