BRIEF TEN

10. Mind the Gap:

A deep dive into mental health

PERCEPT

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15 JANUARY 2022

Research briefs on non-communicable diseases in South Africa

Percept has developed a series of briefs aiming to explain, explore and quantify the burden of non-communicable diseases (NCDs) in South Africa. Throughout the briefs both existing quantitative data as well as emerging qualitative data are drawn together. The primary qualitative data - presented in the form of vignettes - has been collected by Dr. Beth Vale, through in-depth ethnographic research. Given the rising global burden of NCDs, particularly in low- and middle-income countries (LMICs) these briefs are incredibly relevant. Given South Africa's high prevalence of HIV, there's also recently been a focus on the link between HIV and NCDs, as the population living with HIV grows increasingly older with the successful uptake of antiretroviral treatment (ART). As we'll explain in the briefs, an ageing population is more at risk for NCDs. Moving towards universal health coverage (UHC), it's imperative to understand the current needs of our population - and how these may change going forward. We have produced fourteen briefs in this series.

Percept is grateful for the generous funding provided by the following three partners. The views presented are however the authors' own:

- Actuarial Society of South Africa (ASSA): ASSA has an interest in being part of the development of high-quality evidence to support resource allocation and decision-making and the interplay between the supply and demand sides of the health system
- RGA Reinsurance Company of South Africa Ltd (RGA): RGA has an interest in the ways in which life insurance can be responsive to the changing burden of disease and the ways in which we can use data to drive decision-making
- Board of Healthcare Funders (BHF): BHF is a regional representative body of health funders, administrators, and managed-care organisations. It is committed to universal health coverage, value-based healthcare, and accountability for health. Addressing the NCD burden is an important element to achieve some of its objectives.

Take-home messages

- Mental health encompasses overall psychological wellbeing and extends beyond the absence of a mental disorder. However, this brief focuses on mental disorders as the prominent cause of mental illness.
- Factors affecting the onset of mental illness can be biological or environmental, or a combination of the two. It can therefore operate at both an individual and societal level.
- Many individual risk factors (such as poor diet, physical inactivity, substance abuse, etc.), as well as societal risk factors (such as poverty, childhood adversity, and violence) overlap, with risk factors for the development, as well as poor management, of other major NCDs – including diabetes, cardiovascular disease and cancer.
- Comorbidity between other NCDs and mental illness is extremely common, resulting from the overlap of risk factors, as well as a bidirectional relationship between the two categories of illness: mental illness increases the risk of NCDs and NCDs increase the risk of mental illness.
- Comorbidity between mental and physical illness translates to more complex treatment regimes, poor adherence and worse health outcomes.
- As with many other NCDs, and as highlighted in previous briefs, there are strong age and gender dimensions to mental illness. It typically develops in childhood or adolescence, and different mental disorders have varying risks across the genders. For example, depressive and anxiety disorders are more common in women, while substance use disorders are more common in men.
- The prevalence and severity of mental disorders appear to be on the rise in South Africa. However, the lack of recent and reliable data complicates the estimation of the true prevalence of mental disorders in the country.
- South Africa's history of violence and oppression largely contributes to the poor state of mental health of the country.

Introduction

Mental health conditions are becoming increasingly large contributors to disease and disability burdens worldwide.[1] Coupled with the fact that there's a large overlap of risk factors and a high level of comorbidity between mental illness and other major NCDs, it has led to mental disorders being increasingly recognised as a major NCD category. The close and complex interactions between mental health and other NCDs highlight the importance of understanding mental health in order to efficiently forecast and tackle the burden of NCDs.

Mental illness is an extremely widespread concern and its universality is evident in its high prevalence. Its incidence is on the rise globally and mental health is a fast-growing priority. The WHO estimates that one in four people will experience mental illness in their lifetime.[2] In South Africa, where poverty, substance abuse and violence are prevalent, the consequences of mental illness are acutely felt. However, it's complex to estimate the true burden of mental illness, due to a lack of reliable and recent data, as well as under-diagnosis and poor access to treatment.

This brief sets out to dive deep into the state of mental health in South Africa, as well as explore the links between mental health and other NCD groups.

Data and methods

Two broad quantitative data sets were used: household survey data and medical scheme data. Survey data includes General Household Survey (GHS) data, Demographic and Health Surveys (DHS) data and National Income Dynamics Study (NiDS) data. When analysing the quantitative datasets against one another for comparison, we standardised them based on age and sex, given the relationship between age and NCDs (as shown in this brief); and sex and NCDs (see brief 3). This standardisation was done against the 2018 Statistics South Africa (Stats SA) mid-year population estimates for all datasets to achieve fair comparison.

For the survey data, we use statistical methods to present our data. Statistical significance is a mathematical approach used to determine whether something has happened by chance or is truly as a result of a particular factor. We use asterisks to denote the extent of the significance for the graphs we present:

* = $p<0.1$: statistically marginally significant

** = $p<0.05$: statistically significant

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

Private-sector data were provided by a large healthcare administrator and managed-care services provider. The data provided included mental health hospital admission data between 2014 and 2018, and chronic benefit registration data for 2020. The prevalence of mental disorders in the medical scheme population is estimated by finding the proportion of beneficiaries who are registered for chronic disease benefits for the relevant disorder. Where relative prevalence ratios are calculated, this refers to the ratio of prevalence in one subgroup of the medical scheme population compared to another.

We also use qualitative data in this brief, based on primary data collection in one pocket of South Africa, to marry the quantitative findings to the reality on the ground.

What is mental health?

Mental health vs mental disorders

While mental disorders are defined as medical conditions, "characterized by a combination of abnormal thoughts, perceptions, emotions, behaviours and relationships with others,"[3] mental health is defined as "a state of wellbeing in which every individual realises his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community".[4]

Mental health is therefore not merely the absence of a mental disorder, but it encompasses the overall psychological, emotional and social welfare of an individual.[5] This means that mental health problems can manifest in a variety of ways, including some that don't have a predefined clinical diagnosis. It makes it complex to understand and estimate the true burden of mental health problems.

> While mental health is not limited to the absence of a mental disorder, mental disorders will be considered the principal factor affecting mental illness for the purposes of this brief.

The *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*, a publication by the American Psychiatric Association that sets a standard for the diagnosis of mental disorders, recognises nearly 300 mental disorders, which cover a wide range of symptoms. It then broadly categorises mental disorders into groups (including depressive disorders, substance use disorders, etc.), based on their dominant features.

The sheer number of mental disorders highlights the vastness of mental health. Furthermore, mental disorders vary by cause of onset, symptoms and severity, and can be acute, intermittent or chronic in nature. Despite this great diversity across mental disorders, they are commonly grouped together and viewed as a singular health issue. This is problematic, as doing so fails to acknowledge the intricacies and nuances of each disorder. Therefore, this deep dive focuses on mental disorders that are most prevalent and impactful in South Africa, including depression, anxiety, substance abuse, post-traumatic stress disorder (PTSD) and bipolar disorder.

What causes mental disorders?

Mental health, and the onset of mental disorders, in particular, is affected by various factors, which operate at both an individual and societal level.[6] Risk factors for mental disorders can be biological as well as environmental, including genetics, age, sex and gender, nutrition, stress, standard of living, external environment, working conditions and community support.[7] While there are different risk factors for different mental disorders, there is also a large overlap of risk factors across the various mental disorders. Some mental disorders are closely associated with biology and genetics, while others are more closely related to personal attributes or external stressors.[6] Additionally, while personal attributes may predispose individuals to a given mental disorder, external stressors often serve as a trigger for its onset, or worsen the severity.[8] Mental illness is often a result of a complex interaction of a combination of risk factors, and cannot usually be attributed to one single factor.[9]

Most mental disorders develop in childhood or adolescence.[10] Furthermore, childhood adversity is a prominent risk factor for mental disorders in adulthood.[11] Additionally, the incidence of mental disorders such as depression and anxiety are particularly high in the antenatal and perinatal period.[12] This highlights the potential benefit of implementing mental health interventions at young ages, and particularly in young women who are likely to fall pregnant. Risk factors of particular prominence in adolescents include low self-esteem, poor body image,[13] unfavourable family conditions,[14] and risky behaviours (substance use and sexual activity).[15]

As the use of social media becomes more widespread, particularly among adolescents, concerns around its impact on mental health have surfaced. Various studies have found associations between the use of social media, loneliness, depressive symptoms, low self-esteem and poor body image, particularly in women.[16] However, some evidence suggests that social media can also have positive effects on mental health by facilitating social connectedness, and serving as an escape from everyday life.[17] This gives rise to the belief that it isn't necessarily the use of social media that has negative impacts on mental health, but the frequency and nature of its use.

The onset of mental disorders also differs between men and women. For example, women are more likely to suffer from depression or anxiety disorders,[18] while men are more likely to suffer from substance-abuse disorders.[19] Differences in prevalence, symptoms, risk factors and treatment for mental illness between men and women can be attributed to both sex and gender, as well as a collision between the two.[18] Biological differences are largely attributed to differences in male and female hormone levels, which, for example, account for the increased risk of postpartum depression in women.[20] However, research on such biological differences highlights strong gender biases, and tends to focus on the role of female hormones with little reference to those of men.[21]

Gender roles and norms largely expose women to higher levels of risk factors for depressive, anxiety, trauma- and stress-related disorders. These include discrimination, poverty, sexual and domestic violence, and a high-care burden.[18] It helps to explain the higher prevalence of such disorders in women. Gender norms also explain differences in health-seeking behaviours between men and women (this is explored in greater depth in brief 3), particularly with regard to mental health, which is stigmatised. Evidence suggests that men seek mental healthcare at a later stage of symptom presentation than women do, which can increase disease severity and worsen outcomes.[21]

Social determinants also play a significant role in the prevalence of mental disorders. There are strong links between mental health and poverty: those who live in poverty are more likely to develop mental illness, due to the stress, poorer physical health, lack of social support, and increased exposure to violence associated with poverty. In turn, mental illness makes individuals more likely to fall into/remain living in poverty, because of the negative effects of mental illness on productivity (and therefore, also on employment and income), increased health expenditure and marginalisation as a result of stigmatisation.[10] Furthermore, as with many other serious problems, the poor bear the brunt of mental illness – they're not only at a higher risk of having a mental disorder, but also less likely to have access to quality healthcare, or able to afford it.[2]

Other societal factors associated with mental disorders include high levels of urbanisation,[22] workplace stressors (particularly in the case of bipolar disorder),[23] economic recessions, financial stress[24] and interpersonal violence.[25] Individuals who experience loneliness and low levels of social connectedness/support are also at a higher risk of developing a range of mental disorders, including depression and PTSD.[26] Additionally, mental illness is more prevalent in divorcees.[27]

Covid-19 lockdowns have further emphasised the association between loneliness and mental illness. The information box below explores this, and some other ways in which the pandemic has affected mental health.

Covid-19 and mental health

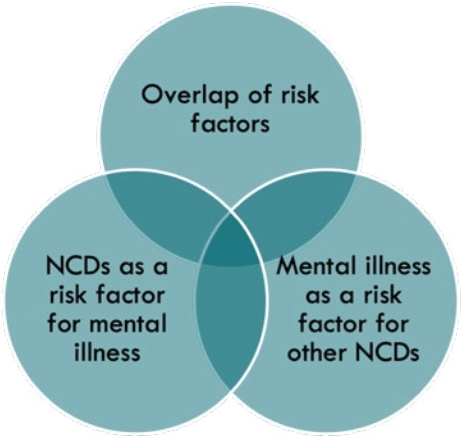
The Covid-19 pandemic has negatively impacted people's mental health in various ways. The general public, as well as healthcare workers, have experienced increased symptoms of depression, anxiety and PTSD, and those with pre-existing mental disorders generally reported an increase in psychiatric symptoms.[28,29]

This increased risk of mental disorders can be attributed to various aspects of the pandemic. Firstly, the loneliness and feelings of isolation associated with the strict lockdowns that were implemented to avoid the transmission of the virus have direct links to mental disorders such as depression.[30] The added stress associated with lifestyle changes and high levels of uncertainty, as well as the stress associated with the fear of contracting Covid-19 all have negative impacts on individuals' psychological wellbeing, putting them at higher risk of developing mental disorders.[30] Covid-19 also brought about increases in caregiving responsibilities for many, which is known to have direct associations with depression. Lastly, the economic downturn that accompanied the pandemic led to high levels of unemployment, which in turn increased financial stress. Both have negative effects on mental health.

No health without mental health

Mental health is increasingly being recognised as a necessary element for overall wellbeing, both in its own right and because of its impact on physical health. The strong links between mental and physical health are evident in the increased morbidity, disability and mortality rates in individuals suffering from mental illness.[31] For example, individuals with severe mental disorders are 60% more likely to have a premature death related to a physical health condition, particularly another NCD.[32] 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.[11] Subsequently, the majority of those with either a mental disorder or another NCD have a comorbidity.[14]

While it is recognised that mental illness is becoming an increasingly large contributor towards the global burden of both disease and disability,[1] current estimates of this contribution are likely to under-represent the true burden posed by mental illness for a variety of reasons. For one, mental disorders are often undiagnosed and therefore not recorded in metrics that assess the disease or disability burden. Furthermore, deaths related to mental illness are often not captured as mental illness in mortality statistics, unless the death was a direct result of the mental illness.[32] This means that even when a death is most likely associated with, or a result of, an underlying mental disorder, it's often recorded otherwise. A 2016 study estimates that the Global Burden of Disease (GBD) study has underestimated the burden of mental illness by more than 30%,[32] despite the GBD reporting that depression is one of the largest contributors to the disability burden worldwide.[33] While likely still underestimated, the prevalence of mental disorders and mental illness' contribution to the disease burden is increasing over time.[34]



The magnitude of the health burden posed by mental illness, coupled with its strong associations with other major NCDs (cardiovascular disease, diabetes, cancer, and chronic respiratory disease) has led to mental illness increasingly being recognised as a major NCD group. The associations between mental illness and other NCDs are complex, and causality can be difficult to establish – not only do many of the risk factors for NCDs and mental illness overlap, but both NCDs and mental illness are risk factors for each other.

No health without mental health

Many risk factors for NCDs – such as physical inactivity, poor diet, substance abuse, and social factors – are also risk factors for mental illness.[11] Furthermore, both NCDs and mental disorders can reproduce these risk factors. For example, both depression and diabetes (see brief 8) can cause low energy levels and carbohydrate cravings, which can lead to physical inactivity and poor diet. In turn, these are risk factors for both NCDs and mental illness.[11] It highlights the vicious cycle when it comes to the overlap of risk factors between NCDs and mental illness – often leading to multimorbidity, which is associated with poorer health outcomes.[11]

The immense effect of societal mechanisms as a risk factor for both NCDs and mental illness is evident in the higher levels of comorbidity between mental and physical disorders in regions of lower socio-economic status.[11]

While substance abuse is considered a mental disorder itself, it's also a prominent risk factor for other mental illnesses, as well as other NCDs. The following vignette provides insight into the relationship between substance abuse and other disorders. It illustrates how substance abuse is not only a risk factor for NCDs and mental illness, but also often arises as a result of other disorders.

Vignette 1: Substance abuse

In February 2019, I sat with the family physician in a public health clinic in a small Karoo town. A woman, perhaps in her early 40s and dressed in orange overalls, entered the consultation room. The back of her overall read: CWP restoring dignity through work opportunities. She was employed by the Community Works Programme on a short, poorly paid contract. Much of her work involved collecting litter. I later learnt that she suffered from a vitamin B3 deficiency, which is often a consequence of alcoholism. It had already given her a skin condition, and also had the potential to cause delirium. Throughout the consultation, the doctor kept advising the patient to lower her alcohol consumption or risk 'going mad'. The woman sat silently with tears in her eyes.

This short vignette is reflective of the vicious cycle between mental illness and substance abuse: not only can physical illness and psychological distress prompt people to abuse drugs and alcohol; this substance abuse can also cause and worsen mental illness. As one of the leading risk factors for NCDs, substance abuse has significant consequences for physical health. Once diagnosed with an NCD or mental disorder, those who abuse substances are also less likely to be able to manage it effectively.

In the Karoo region where I did my fieldwork, drugs and alcoholism were major causes of concern among health providers, social workers, and community leaders. Some, including a local *dominee* (pastor), considered it the primary problem that had to be addressed before NCDs could be properly tackled.

Mental illness as a risk factor for other NCDs

The World Mental Health Survey found statistically significant results for an increased risk of heart disease, diabetes, stroke, cancer, asthma and arthritis in those with mood, anxiety, eating and substance-use disorders.[35]

Meta-analyses have found that those suffering from depression are almost twice as likely to develop cardiovascular disease[36] and 32% more likely to develop Type 2 diabetes,[37] while individuals with anxiety are 50% more likely to develop cardiovascular disease (see brief 9).[38]

The causal mechanisms behind these associations are starting to become clearer. Emerging evidence has shown that depressive and anxiety disorders, as well as PTSD, have negative impacts on physical health through immune, inflammatory and other physical effects associated with these disorders.[11] Additionally, some medication used for the treatment of mental disorders can lead to weight gain or increased levels of fat/cholesterol in the bloodstream, which can have poor implications for metabolic disorders such as diabetes.[11]

The burden of mental illness is further exacerbated by the high levels of comorbidity among mental disorders themselves. Studies have estimated that between 30[39] and 45%[40] of patients with mental disorders have more than one, which is associated with increased disease severity.[40]

NCDs as a risk factor for mental illness

Conversely, other NCDs also serve as risk factors for various mental illnesses, including depression, anxiety and PTSD.[11] For example, depression is up to twice as common in individuals with diabetes[41] and between 1.5 to 3 times as likely in cancer patients.[42,43] Various mechanisms drive this association of NCDs as a risk factor for mental illness, including the fact that physical NCDs serve as stressors that can lead to the onset of mental illness. The diagnosis of an NCD (or any disease) can lead to feelings of hopelessness and despondence, which then serve as risk factors for mental illness, particularly depression. Additionally, mental disorders can also be a result of the biological changes associated with the onset of the physical disorder, as well as a side-effect of medication for the relevant NCD.[11] For example, some steroids used in cancer treatment can increase the risk of depression.[11]

The burden of comorbidity

Comorbidity between mental and physical illness is associated with higher levels of disability and unemployment,[11] higher morbidity and higher mortality.[31] Comorbidity and multimorbidity also generally equate to poorer quality of care received and higher health expenditure.[11]

One of the greatest challenges associated with mental-physical comorbidities is that of poor adherence: mental disorders are associated with poor adherence to treatment, both in terms of treatment for the mental disorder and treatment for physical disorders. This can be attributed to a range of reasons, including the stigma surrounding mental disorders. Another possible explanation for poor adherence is that symptoms of mental disorders can make adhering to the behavioural changes necessary for managing NCDs more difficult.[11] For example, individuals experiencing depressive symptoms may find engaging in regular physical activity and eating a healthy diet more difficult to adhere to.[11] Those suffering from mental illness such as anxiety or depression may also be less inclined to seek healthcare or attend appointments with healthcare providers, as a direct result of symptoms associated with their mental illness, such as low motivation and hopelessness.[44]

Poor adherence not only worsens morbidity and mortality, but also feeds into the cycle of overlapping risk factors and causal mechanisms between mental disorders and NCDs. Furthermore, multimorbidity leads to the need for more complex treatment regimes, highlighting the need for a person-centred approach in the provision of care.[11]

Mental health is pivotal to ensure physical health and address the burden of NCDs. The close associations that exist between NCDs, mental illness, and their risk factors provide strong evidence in favour of tackling mental health and other NCDs together.

Mental health in South Africa

South Africa faces a high burden of mental disorders

South Africa suffers from a large burden of mental illness, and it's ranked as the third-largest contributor to the country's burden of disease.[45] The South African Stress and Health (SASH) study of 2003/2004 found that 1 in 3 South Africans suffer from a lifelong common mental disorder, while the global estimate by the WHO is that 1 in 4 people will suffer from a mental health disorder.[2] The SASH 12-month prevalence rates for common mental disorders were also found to be relatively high compared to other countries.[46] Furthermore, high rates of comorbidity of mental disorders were observed: 11.2% of respondents had two lifelong mental disorders, and 3.5% of respondents had three or more mental disorders. The most common class of disorder (lifetime and those which had been present for at least 12 months) was anxiety, followed by substance-use disorders and depressive disorders.[46]

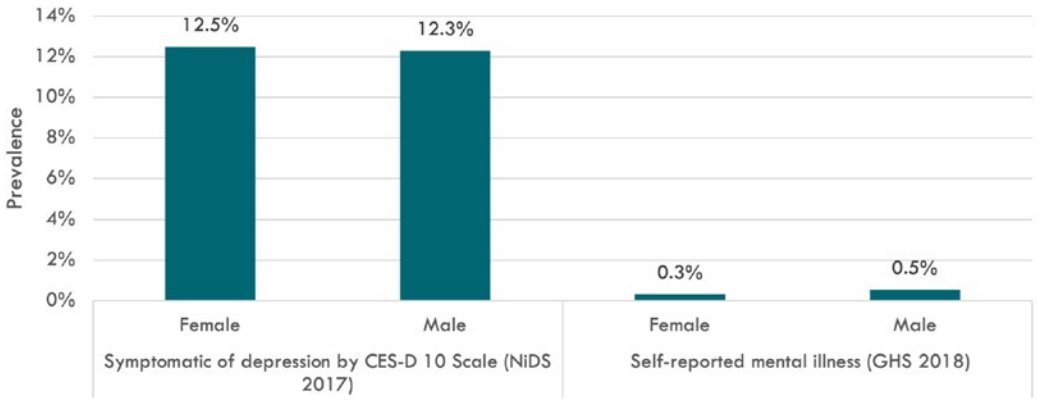
The SASH study of 2003/2004 is the most recent survey investigating the prevalence of mental disorders at a national level, highlighting a severe lack of available mental health data.

The lack of recent data and information on the prevalence of mental disorders and the state of mental health in South Africa is a major concern. Without recent data, accurate resource allocation and intervention prioritisation are impossible.

A source of more recent mental health data is household surveys, some of which include data on the prevalence of mental illness. The accuracy of this data is questionable though, as it is largely based on self-reported responses. The GHS self-reported prevalence of mental illness is extremely low (under 2%) at all ages. NiDS ncludes a CES-D-10 measure for depression in its questionnaire, which provides

a slightly more objective measure of mental health. The prevalence of those symptomatic of depression as per the CES-D-10 scale in the NiDS is much higher than the self-reported prevalence of mental illness found in the GHS (Figure 1). The NiDS found that more than one in ten South Africans (12.5% of females and 12.3% of males) were symptomatic of depression.

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)[a]



Medical scheme utilisation data perhaps provides a more realistic picture of mental health. While such data is only representative of the private-sector population, the close associations between poverty/socio-economic status and mental health would suggest that there is a similar or higher prevalence of mental disorders in those who are unable to afford medical scheme membership. Furthermore, medical schemes don't provide comprehensive cover for mental health and therefore the data, even within this more privileged group, could be an underestimate.

The prevalence of mental disorders in the medical scheme population is estimated by finding the proportion of beneficiaries who are registered for chronic disease benefits for the relevant disorder. Analysis done on a subset of benefit options of a large medical scheme, such that the benefit options included in analysis provide cover for chronic benefits for some mental disorders, estimates a higher prevalence of mental disorders than that of household surveys, as seen in Table 1 below.

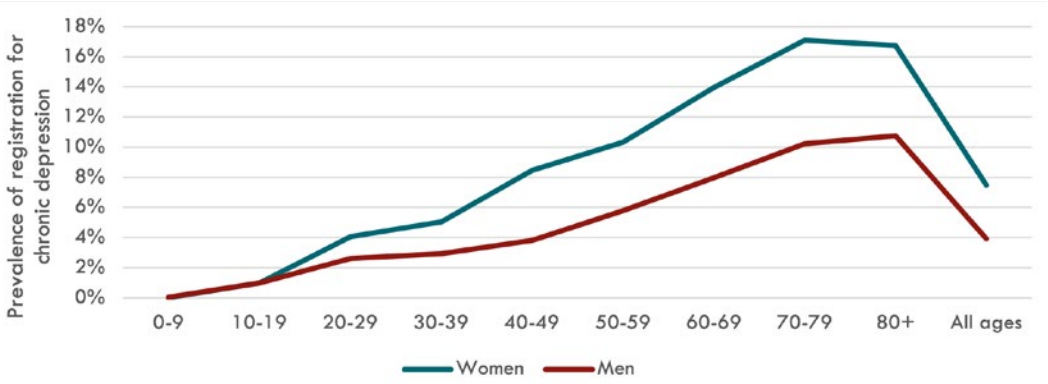
Table 1: Proportion of beneficiaries registered for chronic benefits for mental disorders in 2020*** (own analysis)

	BIPOLAR	DEPRESSION	ANXIETY/ PANIC DISORDERS	SCHIZOPHRENIA	PTSD	PSYCHOSIS
Proportion of beneficiaries	1.1%	5.8%	0.2%	0.2%	0.2%	0.2%

[a] 2016 mid-year population estimates from Stats SA

As seen in the table above, 5.8% of beneficiaries were registered for chronic medication for depression in June 2020. When broken down by age and sex, we see that the proportion of beneficiaries on chronic disease programmes for depression increases with age (see Figure 2), and that females are almost twice as likely to be registered for a chronic depression benefit compared to men. This difference is likely a result of both an increased risk for depression and the effect of higher levels of health-seeking behaviour in females. While these figures are much higher than that of the household surveys, it's likely that it's still an underestimation, since not all those with depression will be registered for the chronic benefit – for a variety of reasons which include differences in health-seeking behaviour and the associated stigmas.

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

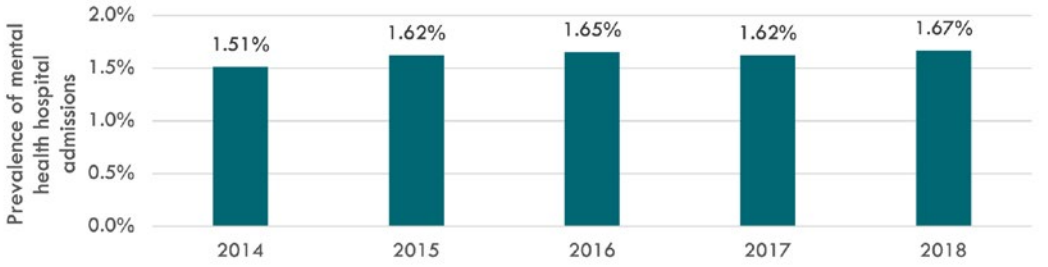


Increasing prevalence of mental disorders

Furthermore, there's been an increase in the utilisation of mental healthcare services over time. Medical scheme data from 2014-2018 shows a clear increase in the proportion of beneficiaries admitted to hospital because of mental health disorders over the period. As such, an increase in hospitalisation on the grounds of mental illness likely equates to increased prevalence of mental illness.

The proportion of beneficiaries claiming for mental health hospital admissions increased by 10.3% between 2014 and 2018 (from 1.5% to 1.7%). Similarly, at an individual disorder level, the proportion of beneficiaries claiming for depressive, bipolar and substance-use disorder admissions increased by 20.4%, 30% and 14.7%, respectively. Depressive disorders accounted for the majority of admissions (68%), followed by bipolar disorders (16%) and substance-use disorders (8%).

Figure 3: Proportion of beneficiaries hospitalised for mental disorders from 2014 to 2018 (own analysis, medical scheme data)

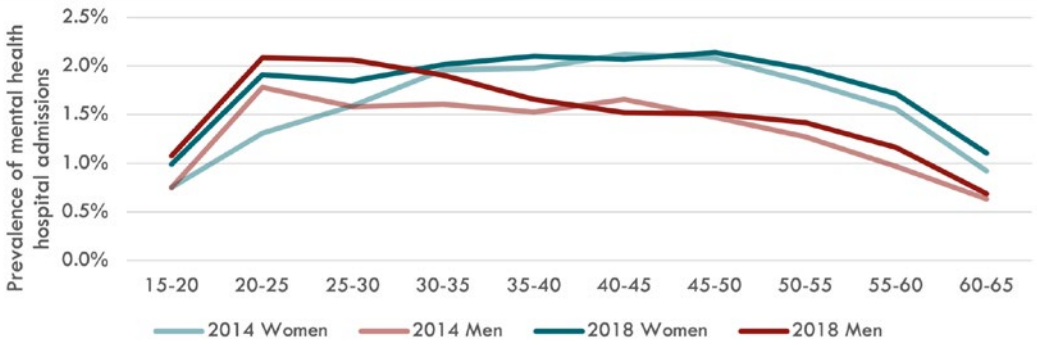


The highest increases in mental health hospital admissions occurred at younger ages. Given that the majority of mental disorders develop in childhood or adolescence, this isn't surprising. There was a 38% increase in admissions related to all mental disorders in those aged between 15 and 20. Increases for depressive and bipolar disorders over the 5 years between the ages of 15 and 25 ranged from 55% to 65%. These results could indicate an increase in risk factors for mental disorders in adolescents. The increased use of social media – which is associated with increases in low self-esteem and poor body image in adolescents – in recent years could help to explain the significant increases in the prevalence of depression at young ages.[47]

Gender differences in mental disorders (as explored in brief 3) are also evident in the medical scheme data: women were found to be 24% more likely to be admitted with any mental health disorder than men. Women were also 51% and 47% more likely to be admitted for depressive and bipolar disorders, respectively, while men were found to be 403% more likely to be admitted for substance-use disorders.

> The disproportionate burden of depressive and anxiety disorders in women can largely be explained through gender norms and power imbalances, particularly in South Africa, where violence against women is a long-standing issue.

Figure 4: Proportion of beneficiaries with mental health hospital admissions in 2014 and 2018, by age and gender*** (own analysis, medical scheme data)



Interestingly, restricted medical schemes[b] had a much higher percentage increase in bipolar-disorder-related admissions than that of open schemes. This discrepancy can likely be explained by the direct relationship between bipolar disorder and workplace stressors, since the restricted schemes analysed cover occupation classes that are traditionally viewed to involve high stress levels. To maintain anonymity, these schemes and occupations will not be disclosed.

The aforementioned increases in mental health hospitalisation in the medical scheme population could also indicate increases in the severity of mental disorders, given that hospitalisation occurs only in severe cases. 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 supports this.

[b] Restricted medical schemes have membership-eligibility criteria which includes employment or membership of a particular employer, profession, trade, industry, calling, association or union.[70]

The average length of a stay for substance-use disorder (one of the most prevalent mental disorders in the country) is much longer than that of other mental disorders, averaging at 17.4 days in 2014 and 18.2 days in 2018 (i.e., an increase of 0.8 days). The Prescribed Minimum Benefits (PMBs) limit hospital admissions for mental health conditions to three weeks per year.[48]

The overlap of mental illness and NCDs 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 illness is "stress". Vignette 2 provides some insight as to how the idea of stress is also understood to be an explanation for the connection between mental and physical disorders.

Vignette 2: Stress

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 her elderly clients to me, and how they supported large families from their pensions, including adult children who hadn't been able 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 anti-depressant, was regularly prescribed throughout the clinics I observed, often as a chronic treatment for sleeplessness, pain, and anxiety. Indeed, many described stress as related to physical pain.

Both within and without 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 of stress from taking on the care of her grandchildren. Others, in an attempt to explain their poor treatment-adherence to clinicians, spoke of being "under stress".

While some in this region had received mental health diagnoses – with bipolar, 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 illness can also cause serious psychological distress. As Karoo residents, carers, and clinicians grapple with rising rates of NCDs, they're also grappling with language, and how best to describe complex webs of psychological and physical distress.

Emily Mendenhall and Shane Norris' study[49] with a cohort of diabetic women in Soweto in South Africa showed similar findings: descriptions of stress were widespread among participants who also believed stress to be a cause of sickness and physical pain. Many also attributed their stress to social problems, particularly problems in the family and histories of grief.

High levels of comorbidity between mental disorders and other NCDs are common in South Africa. The analysis performed on medical scheme chronic registration data found that 3 in 5 beneficiaries older than 20 who are registered for chronic benefits for depression are also registered for chronic benefits for hypertension, while 1 in 4 are also registered for chronic benefits for diabetes.

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

	ASTHMA	HEART PROBLEMS	HYPERTENSION	DIABETES	ARTHRITIS
Prevalence ratio	2.76	2.49	1.84	1.69	3.42

Drivers of mental health issues in South Africa

High rates of poverty, urbanisation, violence and substance abuse all help to explain the high burden of mental disorders in South Africa. Our country's past of segregation and oppression has largely contributed to the current state of mental health of its citizens (see Vignette 3).

Another hindrance to access, availability, and use of mental healthcare is the stigma associated with mental illness.[62] The results of a survey in South Africa found that 50% of respondents don't believe mental health is a priority,[45] despite the direct and indirect health problems associated with it. The marked differences in self-reported prevalence and the more objective measure of depressive symptoms in household surveys highlight this stigma in the reluctance to disclose mental health status, even anonymously (see Figure 1). Not only does stigma complicate the estimation of the true prevalence of mental disorders, but it also often translates to late diagnosis, making treatment more complex. It can even lead to the inappropriate treatment of physical conditions, given that a

patient's clinical history is incomplete.[11] However, stigma is not the only reason that those experiencing mental illness don't present for diagnosis. As explored in Vignette 2, many of those who experience psychosocial dis-ease describe themselves as "stressed" or living in "stressful circumstances", rather than having a clinically-definable condition. Arguably, the medicalisation of mental illness, while hugely important in many aspects, shifts the focus from social structures to the individual, which can lead to those suffering from mental illness to feeling as if the problem is their fault.

The effects of socio-economic factors on mental health are rife in South Africa. The association between poverty and mental illness is important, given that almost half the population live below the poverty line.[63] While South Africa experienced decreases in poverty between 1994 and 2011, recent years have shown an increase in poverty and unemployment,[64] as well as the slowing of the South African economy. This could help to explain the increased prevalence of mental disorders.

Another contributing socio-economic factor is urbanisation: the SASH found that provinces with higher levels of urbanisation (such as Gauteng) had a higher prevalence of mental disorders than rural provinces,[46] which is likely owing to the increased overcrowding, pollution, violence, and other stressors associated with urban life.[22]

Vignette 3: Generational trauma

One of the many questions I asked residents, patients, and care workers in the Karoo was why they believed NCDs to be so prevalent in their region. Here, it wasn't uncommon for participants to link chronic illness to a much longer history – of land dispossession, deepening droughts, economic pressure, and generational trauma. "It could be the water, or the chemicals farmers are using, the sun, smoking…" one health practitioner told me.

"But there are also more spiritual things. You think of the history of this place – the wars, apartheid. There are still Afrikaners here who haven't forgiven the English. The resentment runs deep and it rots. It's passed down from generation to generation. For example, you have a farmer who can't set his son free from his own resentment… We've seen drought. We've seen people losing their farms and their jobs. We've seen people returning to the Karoo having lost their jobs in bigger cities. People struggle to survive." The effect, she said, is cumulative, unless these root issues are dealt with. She told me she had worked with the KhoiSan, who were "totally lost and dispossessed – in search of belonging".

A Xhosa elder and poet who I met described the region's intergenerational trauma like this:

> Still we meet in the streets of Nojoli [Somerset East]
> And exchange civil snarls,
> Daggers dangerous, hiding evil wishes
> Whilst lookers-on, watch in awe
> The incredible change since ninety-four
> What they cannot see
> Is the pretence in the squinted eyes

But, the times and maturity
Urge that we move on,
Hurl the past into oblivion
Lest unresolved history evokes a hysteria
And throw us all into a state of dementia.

In Mendenhall & Norris' study[50] of the depression-diabetes syndemic in Soweto, the authors register how "the psychological imprints of political violence of the apartheid era and structural violence of HIV/AIDS have shaped social and health discourses".

Psychological trauma has well-established intergenerational features, in which the effects of unresolved trauma are passed from one generation to the next.[51] Transference can happen through the telling of history[51], maternal behaviour[52], maternal psychosocial factors[53], or poor emotional regulation from traumatised parents.[54] Recent epigenetic research also suggests that trauma creates chemical changes in DNA, altering gene function,[55] and modifying cognition, emotional regulation and behaviour.[56] There is strong evidence, too, to suggest that mental illness is intergenerationally transmissible. In South Africa, research drawing on a longitudinal household survey has found that one-third of adolescents will suffer if a parent does so. Parental mental health was also found to be the largest determinant of children's mental health.[57] This offers strong evidence that South Africa's history of trauma can be carried in the body with consequences for mental health.

Added to this, the majority of South Africans also have poor access to adequate mental healthcare services: only 28% of individuals suffering from common mental disorders receive relevant care.[58] This is in part a result of a lack of geographical access to mental healthcare, because despite the large number of rural communities in South Africa, mental healthcare facilities are predominantly situated in urban areas.[59] While new national policies are progressively moving away from the historic hospi-centric approach to mental healthcare, aiming to integrate mental healthcare into primary and general care with a focus on community-based care,[58] the development of any such community-based services has been slow and mental healthcare remains largely centred around hospitals.[60] In addition to poor access, concerns around the quality of care exist. South Africa ranks at the bottom four countries in terms of mental healthcare,[61] with 50% of health facilities not meeting required quality standards.[45]

The burden of mental illness goes beyond health impacts

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;[45] all of which present a cost to the workplace and therefore an economic cost and burden to the country. It's estimated that the total annual loss of earnings in South Africa owing to mental illness amounts to R40 billion, which amounts to 2.2% of the country's gross domestic product.[65]

According to the Council for Medical Schemes (CMS), mental health spending by medical schemes has increased in recent years. Payments to psychiatrists and psychologists increased by 35% and 26% respectively between 2011 and 2013.66 Between 2010 and 2014, out-of-hospital psychiatrist visits and hospital admissions advised by psychiatrists increased by 5% and 2.6% respectively.[67] The annual CMS reports show a 511% increase in annual risk expenditure on mental disorder hospital admissions between 2008 and 2012.[65]

In recent years, there have been substantial increases in disability claims in South Africa.[68] Specifically, there have been increases in disability claims as a result of mental disorders (predominantly depression, anxiety, and post-traumatic stress disorder), which are the leading causes of disability claims.[69] Given that disability claims are expected to increase during periods of economic downturn, as financial stress can lead to the onset of mental illness,[68] South Africa's current economic climate suggests that increases in disability claims related to mental illness can be expected.

There are also severe social costs related to mental illness: not only are high levels of mental illness a result of poverty, but it can also 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.[10] The knock-on effect of NCDs in households explored in brief 5 also highlights the social costs of mental illness. The burden of caregiving (which predominantly falls to women in South Africa) translates to a higher risk of mental illness, which in turn leads to the caregiver being at higher risk of developing another NCD. Ultimately, it causes NCDs to cluster in households.

Conclusion

There is no health without mental health, and yet, mental illness is still largely stigmatised and left undiagnosed and/or untreated in South Africa, and globally. This, coupled with the severe lack of mental health data, highlights the need to prioritise mental health. Without reliable data, the true burden of mental illness cannot be understood nor estimated, with poor implications for resource allocation.

The high levels of comorbidity between physical disease – NCDs in particular – and mental illness emphasise the need for a holistic approach to care that considers both physical and psychological aspects of health. Without this, the detrimental relationship between mental and physical disorders will thrive, worsening mortality and morbidity and placing an extra burden on the health system.

While mental disorders are caused by a variety and interaction of factors, the strong associations and overlapping risk factors between many mental disorders and other NCDs support the notion of tackling mental health and other major NCD groups together.

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