# Factors predicting mental well-being among the South African working age population

**Constance Mabela**
Statistics South Africa
Tshepomab78@gmail.com

## ABSTRACT

An individual's mental well-being is the base on which all the other quality factors of life could be influenced. Examining the association of socio-economic and demographic variables with mental health conditions provides an initial approach to understanding contributors to the prevalence of mental health conditions among the general South African working age population (i.e. men and women aged 15 to 64 years). This study accordingly looks at the socio-economic and demographic profile of mental illnesses among the South African working age population by ascertaining factors predicting mental well-being. Using weighted, secondary survey data from Statistics South Africa's General Household Survey (GHS), the results show that employment status accounts for the biggest contributor to mental well-being among the working age population. The risk of persons likely to report themselves to be suffering from both single and multiple types of mental illnesses relative to no mental illnesses for persons who were not employed was also found to be higher than for those who were employed. Other socio-demographic contributors to mental well-being include gender, population group, age and education.

**Keywords:** demographic variables; labour force participation; mental well-being; mental health; mental illnesses; socio-economic variables; working age population.

An individual's mental well-being is the base on which all the other quality factors of life could be influenced (Sawatzky, 2007). It is unlikely that an individual who suffers from poor mental well-being would enjoy other aspects of life such as family life, social life, financial success and general productivity (Goldsmith, Veum, & Darity,

 ISSN 1812-6371
New Voices in Psychology 10(2)2014 pp. 43-62

1996; Sawatzky, 2007). One of the most important characteristics of the working age population is its ability to participate in the labour force. The International Labour Organization [ILO] (1982) defines the labour force as comprising of all persons aged 15 to 64 years who are employed as well as all persons who are unemployed. This is important because labour force participation is critical to the economic growth of a country, particularly a developing one such South Africa (Goldsmith et al., 1996). Low levels of labour force participation have been linked to poor mental well-being among persons who are not employed (Goldsmith et al., 1996; Taris, 2002). Statistical evidence provided by social psychologists suggests that the effects of unemployment can manifest as 'helplessness' among those affected (Goldsmith et al., 1996; Taris, 2002). Feelings of helplessness have been known to impair motivation, hamper learning and generate undesired emotional consequences, all of which are expected to reduce personal productivity (Goldsmith et al., 1996; Taris, 2002). Goldsmith et al. (1996) argue that if a substantial number of people experience spells of unemployment, these individually-based productivity and attachment affects are likely to manifest themselves in observable impacts upon aggregate labour supply and demand. In South Africa, a country that is characterised by poverty as well as high and increasing levels of unemployment (StatsSA, 2008a), the importance of good mental health among the working age population therefore becomes extremely essential. Accordingly, the purpose of this study is to examine the impact of socio-economic and demographic variables on mental well-being. This evaluation is critical in isolating added factors that could influence mental well-being among the population under study.

## LITERATURE REVIEW

### Mental well-being

Mental illnesses are common and cause a social burden in most countries (Araya, Rojas, Fritsch, Acuna, & Lewis, 2001). According to the World Health Organisation [WHO] (2001), approximately 6.2 million people in the world suffer from some kind of mental illness, 10.8% (668,000) of these individuals live in the sub-Saharan Africa. Depression is estimated to be present in about 31% of all those seeking care at primary health care facilities worldwide, 21.6% in the sub-Saharan Africa (WHO, 2001). Mental illnesses are diseases that affect cognition, emotion, and behavioral control and can substantially impair individuals' functioning within their families as well as in the broader society (Hyman, 2006). In psychology literature, mental well-being (also referred to as psychological well-being) is defined as a contented state of being psychologically healthy (Wright, Cropanzano, Douglas, Bonett, & Diamond, 2009). This state of well-being is characterised by the relative presence of positive emotions and the relative absence of negative emotions (Maluka, 2004; Wright et al., 2009). Psychologically well individuals are those who optimally balance their

negative feelings with more positive feelings (Wright et al., 2009). In contrast, poor mental well-being has been associated with mental illnesses (Ryff et al., 2006).

## Measuring mental health

### *Mental health indicators*

This section sets out the background and the rationale for the selection of indicators that are used to measure mental health in this study. The current study uses three self-reported mental health indicators as measured by the General Household Survey (GHS) and selected from the (American Psychiatric Association's [APA], 1994) Diagnostic and statistical manual of mental disorders (DSM-IV) and (World Health Organisation's [WHO], 1992) International Classification of Diseases (ICD-10), namely: depression, alcohol and drug abuse as well as a group of mental health disorders classified as behavioural problems associated with psychological disturbances and physical factors. Behavioural problems, associated with psychological disturbances and physical factors in this study, include eating and sleeping disorders, sexual dysfunction and the abuse of dependence-producing substances (ICD -10).

In this study, self-reported poor mental health is defined as the proportion of men and women of working age (i.e. aged 15 to 64 years) who perceive themselves to be suffering from either one of the mental illnesses indicated above. Although instruments such as the Composite International Diagnostic Interview (CIDI 3.0) and the General Health Questionnaire (GHQ) have been widely used to generate clinical mental health diagnostics (Bijl, Ravelli, & van Zessen, 1998; Kessler et al., 1998; Stein et al., 2008), the use of self-reported mental illnesses as a measure of prevalence of mental illnesses within individuals is not only accepted but common and has been used in various studies (Myer, Seedat, Stein, Moomal, & Williams, 2009).

## Systems and theories influencing mental health

Systems such as poverty and unemployment have been found to have both direct and indirect effects on the social, mental and physical well-being of an individual. For example, Wilkinson (1996) found that there were several obstacles, deficits and threats to health that were inherent in poverty. Wilkinson (1996) argued that the poor are exposed to dangerous environments and that they lack necessities, information and support. One of the most popular studies conducted on the effects of unemployment on mental health subject is by Moller (2001), who researched the quality of life of black unemployed South Africans residing in urban areas from a social-psychological perspective. The overall conclusion in Moller's (2001) study was that unemployment was significantly associated with higher rates of financial and psychological deprivation.

Theories explaining poverty and health outcomes include the Artefact theory by Townsend, Davidson, and Whithead (1992), which suggests that both class and health are artificial variables, and that the relationship between them may itself be an artefact. It is believed that the failure to reduce the gap between classes has been counterbalanced by the shrinkage in the relative size of the lower socio-economic classes themselves. Built on Charles Darwin's (1859) work, the Natural Selection theory on the other hand suggests that a higher social class has the lowest rate of premature mortality because it is made up of the strongest and most robust men and women in the population, and that the lower social class has the weakest people. The Materialist theory emphasises the role of economic impact and associated socio-structural factors in the distribution of health (Shaw, 2004), while Behavioural theories suggest that cultural or behavioural explanations of the distribution of health propose that unequal distribution in modern industrial society is the result of reckless lifestyles, wherein people harm themselves or their children by their excessive consumption of harmful commodities, and by their underutilisation of preventive health care (Lewis, 1967).

### *Other socio-demographic factors*

Mental well-being may also be affected by a wide range of factors different among individuals. For example, gender, marital status, age, and education have been known to impact mental health in different ways (Afifi, 2007; Gollust, Lantz, & Ubel, 2010; Kessler et al., 2009; Patel, Flisher, Nikapota, & Malhotra, 2008). For example, women have been prone to suffer from depressive and anxiety disorders while men are most likely to suffer from substance abuse (Afifi, 2007; Williams et al., 2008), while the effect of marital status on health is generally assumed to be mediated by psychosocial factors, material circumstances and health-related behaviours (Schafer, Quesenberry & Wi, 1995).

## METHODOLOGY

### Study design

The relationship between mental well-being and socio-economic and demographic factors was investigated using a cohort group in which the mental health of persons, aged between 15 and 64 years, were followed over a five year period, concentrating on three points between 2004 and 2008 (i.e. 2004, 2006, and 2008).

In general, cohort analysis attempts to identify cohort effects: Are changes in the independent variable (mental health problems in this example) present because the sample members belongs to the same cohort (employed vs. not employed)? Furthermore, because cohorts measure events in chronological order, they can be used to establish a relationship between two or more variables. The benefit of

conducting a longitudinal study that uses a cohort over time is that, unlike panel studies (where the same individuals are studied over time), different members of the cohort may be studied at each time point. Using cohort analysis in the present study was therefore the preferred method of analysis because of its high flexibility, including the fact that it can be used with either original data or secondary data (Adams et al., 2007; Pai et al., 2004).

## Data sources

The results in this study are presented using weighted secondary survey data from Statistics South Africa's General Household Survey (GHS). The sampling weights for the data collected from the sampled households are constructed so that the responses could be properly expanded to represent the entire civilian population of South Africa. The weights are the result of calculations involving several factors, including original selection probabilities, adjustment for non-response, and benchmarking to known population estimates from the Demographic division of Statistics South Africa (Stats SA) (Stats SA, 2008c). All GHS datasets are in the public domain and are available on the website of Statistics South Africa (www.statssa.co.za). The GHS is well suited for such an investigation since it contains detailed information on the personal characteristics of individuals in the sample, as well as their labour force status.

## Data reliability

The GHS sample comprises approximately 30,000 households, sampled on a statistically representative basis across nine provinces and 53 District Councils within provinces throughout South Africa (Stats SA, 2008b). On average, a final GHS dataset would typically consist of approximately 94,000 valid person records in that year. GHS results are subject to two types of possible error:

**Sampling error** is a measure of variability that occurs by chance because a sample, rather than the entire population, is surveyed. The magnitude of the sampling error is controlled by the size of the sample and the use of statistically sound techniques, such as increasing the sampling size, which can directly affect the margin of sampling error that is reported with survey results as well as sampling reconciliation whereby reconciling collected data with the sample to ensure all sample units are accounted for during data collection.

**Non-sampling error** on the other hand, includes errors arising from biases in the patterns of response and non-response, inaccuracies in reporting by respondents, and errors made in processing data.

## Data analysis

Data analysis in this part of the study mainly focused on assessing the incidence of self-reported mental illnesses among the South African working age population. Analysis was conducted over a five year period, focusing on the years 2004, 2006 and 2008. Mental health indicators as identified earlier were used to measure mental well-being. Analysis in this section was conducted as follows:

Descriptive and multivariate statistics were used to report the incidence of self-reported mental illnesses among men and women aged 15 to 64 years. Multinomial logistic regression models were conducted to tests for the best predictors of mental illness among the working age population using socio-economic and demographic variables as the independent variables against mental health as the binary dependant variable.

## Ethical considerations

Permission to use the data was received from Statistics South Africa's (Stats SA) executive management on Monday the 2nd of February 2009. Although the study is about mental illnesses among unemployed individuals, no invasive physical procedures were conducted on respondents. Instead, the study relied on self-reported mental health problems and the study therefore measured perceived mental illnesses as reported by individuals under study. In addition, as part of all Stats SA field work training procedures, field workers were trained to accept whatever they were told by the respondents without probing further, especially when dealing with sensitive issues. Lastly, although the final dataset includes respondents' personal information such as names and physical addresses, this information was only collected for administrative purposes. Any personal information that would make the identification of respondents possible was not reported on so as to ensure respondent anonymity.

## Limitations of the study

The first limitation of the study lies in the fact that the study follows a cohort study design. One of the disadvantages in cohort studies is that it is difficult to assess whether associations between cohort and dependent variables derived from the studies are of a causal nature or not (Power & Elliott, 2006). Cohort studies are subject to the influence of factors over which the investigator most often does not have full control. By using longitudinal data, where the same individuals are followed over a period of time, the study would be better suited to further explore the possible differences of mental health status between respondents. The second limitation of the study is that the incidence of mental illnesses was not obtained by clinical diagnosis. Diagnoses were based on self-reported incidences of mental illnesses collected by lay interviewers. Self-diagnosis could lead to very low or high prevalence rates as it depends on how respondents understood terms such as

depression, substance abuse, eating or sleeping disorders. Prevalence could also have depended on how respondents felt emotionally or physically on the day of the interview.

### Strengths of the study

Despite this limitation, the present study is one of the first studies in the country that uses weighted population survey data to examine factors predicting the likelihood of reporting mental illnesses. The use of weighted survey data allows for greater generalisation than those previously reported in studies that are based on characteristics of confined population groups such as those found in clinics or hospitals. An additional strength of analysis in this study is that it is one of the few investigations employing multinomial logistic regression analysis in predicting mental illness. This technique allowed for distinctive prediction in the likelihood of reporting one type or multiple types of mental illnesses relative to reporting no mental illnesses.

## RESULTS

### Mental health among the working age population

This section provides a context on perceived levels of mental health among men and women aged 15 to 64 years (i.e. the working age population) in the country so as to ascertain how it has evolved over time. The analyses provide trends on self-reported mental illnesses by making comparisons over the period 2004 to 2008.

#### *Prevalence of self-reported mental illnesses among the working age population*

In 2004, 181 thousand (0.6%) of South African men and women of working age reported themselves to be suffering from at least one of the three mental illnesses covered in this study (Table 1). The proportion of persons self-reporting these mental illnesses has been gradually increasing, reaching its highest level of 0.9% (283 thousand) in 2008 (an additional 101,233 thousand individuals since 2004).

**Table 1:** Presence of mental illness among the working age population

| **Presence of mental illness** | **2004** | | **2006** | | **2008** |
|---|---|---|---|---|---|
| | Number | Per cent | Number | Per cent | Number |
| No mental illness | 28 640 162 | 99,4 | 29 577 928 | 99,2 | 30 285 911 |
| At least one mental illness | 181 382 | 0,6 | 231 646 | 0,8 | 282 615 |
| **Total** | **28 821 544** | **100,0** | **29 809 574** | **100,0** | **30 568 526** |

### *Types of perceived mental illnesses among the working age population*

In 2008, among the incidences of reported mental illnesses, the highest proportion self-reported depression (48.6%) followed by behavioural problems associated with psychological disturbances (41.1%) as shown in Figure 1. In 2004, persons suffering from substance abuse accounted for fewer than 5%. Since 2004 however, the proportion of those reporting substance abuse has more than doubled (i.e. from 4.1% in 2004 to 10.3% in 2008), while the proportions of individuals suffering from depression and behavioural problems seems to have declined.

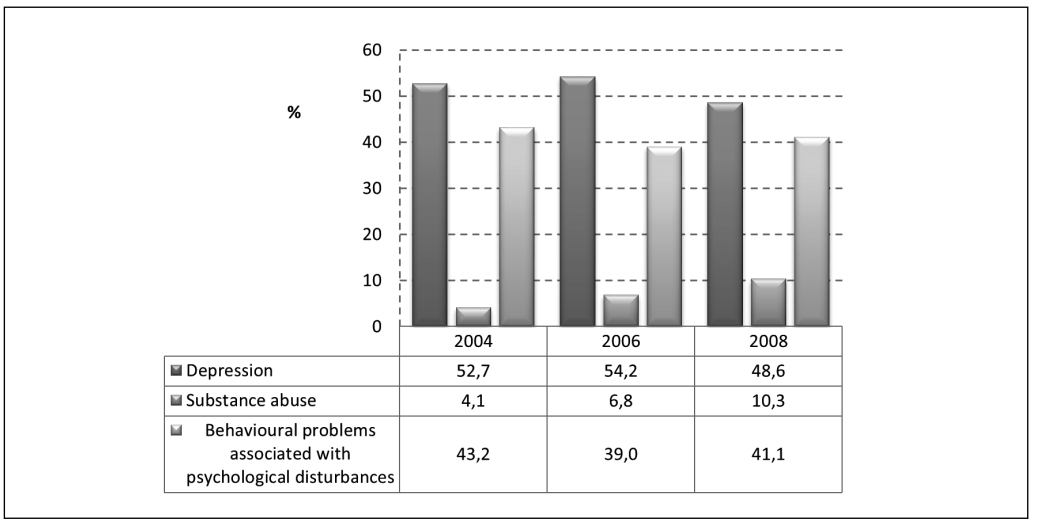


**Figure 1:** The distribution of mental illnesses among those afflicted

An index of mental illnesses was created to ascertain the extent to which individuals report themselves to be suffering from more than one type of mental illness.

**Table 2:** Model 1 - Predicting the likelihood of reporting one type of mental illness relative to no mental illness among the working age population using multinomial logistic regression model (relative risk ratios)

NOTE: Marital status was excluded from the model

Base outcome mental health index = 0

| Mental health index score = 1 | Dependent effect | | |
|---|---|---|---|
| | 2004 | 2006 | 2008 |
| **Gender** | | | |
| Male | 1,00 | 1,00 | 1,00 |
| Female | 0,71*** | 0,70*** | 0,74*** |
| **Population group** | | | |
| Black | 1,00 | 1,00 | 1,00 |
| Coloured | 2,35*** | 0,74*** | 1,79*** |
| Indian/Asian | 1,32*** | 0,95** | 0,97 |
| White | 0,94*** | 0,47*** | 1,29*** |
| **Education** | | | |
| No schooling | 1,00 | 1,00 | 1,00 |
| Less than primary completed | 0,93*** | 0,66*** | 0,51*** |
| Primary completed | 0,46*** | 0,40*** | 0,36*** |
| Secondary not completed | 0,46*** | 0,32*** | 0,25*** |
| Secondary completed | 0,32*** | 0,39*** | 0,21*** |
| Tertiary | 0,55*** | 0,43*** | 0,12*** |
| **Age groups** | | | |
| 15-24 yrs | 1,00 | 1,00 | 1,00 |
| 25-34 yrs | 3,13*** | 2,43*** | 1,62*** |
| 35-44 yrs | 3,64*** | 2,82*** | 2,42*** |
| 45-54 yrs | 3,89*** | 3,28*** | 2,37*** |
| 55-64 yrs | 2,77*** | 2,70*** | 1,74*** |
| **Province** | | | |
| Western Cape | 1,00 | 1,00 | 1,00 |
| Eastern Cape | 1,07*** | 0,59*** | 2,17*** |
| Northern Cape | 0,78*** | 0,59*** | 1,67*** |
| Free State | 0,95*** | 0,57*** | 2,22*** |
| KwaZulu-Natal | 0,65*** | 0,44*** | 1,58*** |
| North West | 0,97* | 0,52*** | 2,42*** |
| Gauteng | 0,57*** | 0,25*** | 2,24*** |
| Mpumalanga | 1,01 | 0,43*** | 2,55*** |
| Limpopo | 0,81*** | 0,28*** | 1,27*** |
| **Employment status** | | | |
| Employed | 1,00 | 1,00 | 1,00 |
| Not employed | 4,20*** | 2,76*** | 2,72*** |
| **household** | | | |
| No employed person in the household | 1,00 | 1,00 | 1,00 |
| household | 0,76*** | 0,75*** | 0,93*** |
| household | 0,61*** | 0,59*** | 0,79*** |

*** = p ≤0,001 ** = p ≤0,02 * = p ≤0,05

**Table 3:** Model 2 - Predicting the likelihood of reporting two or more mental illness relative to no mental illness among the working age population using multinomial logistic regression model (relative risk ratios)

NOTE: Marital status was excluded from the model

Base outcome mental health index = 0

| **Mental health index score =2** | Dependent effect | | |
|---|---|---|---|
| | **2004** | **2006** | **2008** |
| **Gender** | | | |
| Male | 1,00 | 1,00 | 1,00 |
| Female | 0,42*** | 0,20*** | 0,51*** |
| **Population group** | | | |
| Black | 1,00 | 1,00 | 1,00 |
| Coloured | 6,01*** | 3,87*** | 1,71*** |
| Indian/Asian | 6,93 | 3,03*** | 1,91*** |
| White | 8,10*** | 0,46*** | 0,950 |
| **Education** | | | |
| No schooling | 1,00 | 1,00 | 1,00 |
| Less than primary completed | 0,24*** | 0,30*** | 0,35*** |
| Primary completed | 0,19*** | 0,60*** | 0,59*** |
| Secondary not completed | 0,07*** | 0,25*** | 0,36*** |
| Secondary completed | 0,09*** | 0,14*** | 0,36*** |
| Tertiary | 9,32 | 2,25 | 3,38 |
| **Age groups** | | | |
| 15-24 yrs | 1,00 | 1,00 | 1,00 |
| 25-34 yrs | 3,60*** | 6,52*** | 2,41*** |
| 35-44 yrs | 2,87*** | 8,94*** | 0,61*** |
| 45-54 yrs | 1,35*** | 5,31*** | 6,42*** |
| 55-64 yrs | 1,01 | 2,33*** | 5,34*** |
| **Province** | | | |
| Western Cape | 1,00 | 1,00 | 1,00 |
| Eastern Cape | 0,68*** | 5,52*** | 0,16*** |
| Northern Cape | 1,69 | 2,16*** | 0,15*** |
| Free State | 1,54*** | 18,11*** | 1,31*** |
| KwaZulu-Natal | 0,64*** | 9,92*** | 0,17*** |
| North West | 1,20*** | 10,54*** | 0,55*** |
| Gauteng | 1,39*** | 18,42*** | 0,44*** |
| Mpumalanga | 1,69*** | 27,40*** | 0,38*** |
| Limpopo | 0,41*** | 52,20*** | 0,30*** |
| **Employment status** | | | |
| Employed | 1,00 | 1,00 | 1,00 |
| Not employed | 1,63*** | 6,00*** | 3,13*** |
| **No. of employed persons in the household** | | | |
| No employed person in the household | 1,00 | 1,00 | 1,00 |
| At least one employed person in the household | 0,45*** | 1,02*** | 1,10*** |
| Two or more employed person in the household | 0,09*** | 1,73*** | 0,86*** |

*** = p ≤0,001 ** = p ≤0,02 * = p ≤0,05

## Predicting the likelihood of persons self-reporting one type versus multiple types of mental illness relative to reporting no mental illness.

In this section, the effects of the various predictive demographic and socio-economic variables on the likelihood of individuals reporting themselves to be suffering from mental illnesses in the country was examined through multivariate (dependent effect) modelling. Multinomial logistic regression was used to ascertain these predictors using the mental illness index. Table 2 (Model 1) gives the relative risk ratios of scoring 1 on the mental health index (i.e. suffering from at least one of the mental illnesses identified in the study) relative to scoring 0 (reporting no incidence of mental illness) for each predictive variable. Table 3 (Model 2) on the other hand, gives the relative risk ratios of scoring two or more on multiple illnesses on the mental health index (i.e. suffering from two or more mental illnesses) relative to scoring 0 (reporting no incidence of mental illness) for each predictive variable.

It should be noted that the mental health index in the multinomial logistic regression model has been reduced to only three levels, i.e. 0, 1, 2. The reduction of levels within the index was necessitated by the fact that the score of 3 in the original index did not yield any significant effects on the model. Therefore, scores of 2 and 3 on the mental health index discussed below were merged, so that a score of 2 is representative of individuals who had indicated suffering from two or three types of mental illness.

### *Gender*

When controlling for other variables in the model, the relative risk for females relative to males self-reporting one or multiple types of mental illness relative to no mental illness is expected to decrease ($p<.001$) over the five year period when looking at the dependent effect. The risk however drops even lower compared to reporting more than one type of mental illness (i.e. decrease of 0.49% for females reporting multiple illnesses compared to a decline of 0.26% in the likelihood of reporting one type of illness in 2008).

### *Racial differences*

The relative risk of persons perceiving themselves to be suffering any type of mental illness (one or multiple) relative to reporting no illness was generally higher among Coloured persons compared to the reference group (Black African), when a range of socio-economic and demographic variables were controlled for in the models. In 2008, however, there was a slight decrease in the difference among these two groups when reporting multiple illnesses. For example, in 2008, Coloureds were 0.79% ($p<.001$) more likely to report some kind of mental illness compared to Black African people. Although Coloured people were still more likely to report mental

illness, this risk dropped to 0.71% ($p<.001$) when reporting multiple illnesses compared to Black people.

### *Age*

Since 2004, the relative risks of individuals likely to report themselves to be suffering from mental illness relative to no mental illnesses was consistently higher for persons between the ages of 45 and 54 years, relative to those aged 15 to 24 years. These findings were true irrespective of the number of types of mental illnesses reported, although the relative risk ratios predicting multiple illnesses were on average two to three times higher than those shown in the prediction of one type of mental illness.

### *Geographical location*

Between 2004 and 2006, the relative risk of persons perceiving themselves to be suffering from at least one type of mental illness relative to no mental illness was lower across all eight provinces relative to the reference province (Western Cape), while no consistent pattern was observed in the prediction of reporting multiple illnesses. From 2004 to 2006, individuals living in Gauteng were least likely to report one type of mental illness. In 2008, however persons living in the Eastern Cape, Free State, North West, Gauteng and Mpumalanga were twice more likely to report a maximum of one incidence of mental illness relative to individuals residing in the Western Cape. This was, however, not true when reporting more than one type of mental illness.

### *Socio-economic status*

Socio-economic status, measured as a combination of educational levels, employment status, and the number of employed persons in a household, is seen to be related to the absence or presence of mental illnesses. Those with lower levels of education, not employed, and living in households with no employed persons were more likely to self-report at least one type of mental illness. This pattern was consistent throughout all the years of reporting (2004 to 2008). Socioeconomic status therefore is an additional important independent factor influencing mental well-being.

### *Effects of education*

When predicting the likelihood of reporting a single incidence of mental illnesses, the relative risk for individuals with higher education perceiving themselves to be suffering from mental illness relative to no mental illness was expected to decrease in comparison to those with no education. However, contrary to results shown in Model 1 (Table 1: predicting one type of mental illness), no significant differences were found between individuals with tertiary education and those with no schooling in the relative risk of reporting two or more mental illnesses. In fact, the relative risk

for persons having tertiary education was found to be much higher than for those with no or very little education in Model 2.

### *Employment status*

The relative risk for self-reporting single or multiple types of mental illnesses relative to no mental illnesses for persons who are not employed increases relative to those that are employed. Furthermore, the relative risk ratios reported for the likelihood of reporting multiple illnesses were twice as much as those reported for one type of mental illness for all the years of reporting. Although the relative risk ratios for predicting one type of mental illnesses had declined by almost half from 2004 to 2008, employed persons were least likely to report any type of mental illnesses.

### *Number of employed persons in the household*

The presence of at least one employed household member in a household where an unemployed individual lived was found to ameliorate the impact of self-reporting one type of mental illness among persons who were not employed. This was, however, not true when more than one type of mental illness was reported.

## DISCUSSION

### Perceived mental health among the working age population

The results presented in the previous section showed that the proportion of persons self-reporting mental illness among the South African working age population has been gradually increasing since 2004. In 2008, approximately 283 thousand (0.9%) individuals aged between 15 and 64 years reported themselves to be suffered from at least one of the three mental illnesses used in the study (an additional 101,233 individuals since 2004). The prevalence reported in this study (for the year 2008) is comparable to the figure reported by Kessler, Amminger, Aguilar-Gaxiola, Alonso, Lee, and Üstün (2007) for South Africa - although this figure was slightly higher at 1.5%. More recent studies however report prevalence rates ranging from 4.0% to 16.5% for South Africa alone (Myer, 2009; Williams et. al., 2008). For example, Williams et al. (2008) reported a prevalence of 16.5% for any Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) or Composite International Diagnostic Interview (CIDI) disorder for a duration of 12-months.

The extent to which the different profiles of mental illnesses differ could be due to a number of reasons. Firstly, studies used for comparisons in this study used different methods. The instrument used considered three types of mental illnesses while comparative studies used a wider list of mental disorders to measure mental illness. Secondly, while analyses and diagnoses in this study were based on self-reported incidences of mental health, the prevalence of mental illnesses in the

comparative studies were based on clinical diagnostics. In addition, and perhaps the most important factor, is the time frame. The large amount of literature used for comparison purposes used a 12 month time frame for reporting any illnesses, while the current study used one month. Lastly, studies also show that under-estimation of reporting of mental illnesses in studies can often be linked to research showing that people with disorders are less likely than others to participate in mental health surveys (Kessler et al., 1998; Kessler et al., 2007). These studies indicate that there is often a bias against reporting embarrassing behaviors and that there are also age-related underestimations of illness and failures to report past disorders. On the other hand, reports also talk about '*the interviewer error*' which is reported to sometimes lead to over-estimating prevalence when the interview thresholds for defining disorders are too liberal (Kessler et al., 2007).

In spite of the differences reported in the prevalence of mental illnesses shown and discussed above, it is envisaged that the figures and the prevalence reported in this study will add on to the much needed documentation of mental health in South Africa.

## Mental illnesses and socio-economic and demographic factors among the working age population

Examining the association of socio-demographic variables with mental health conditions provides an initial approach to understanding contributors to the prevalence among the general South African working age population. The discussion below accordingly discusses socio-economic demographic factors which were found to contribute to the likelihood of reporting mental illnesses among the South African working age population.

### *Gender*

Men were more likely to report themselves to be suffering from single or multiple types of mental illnesses compared to women. Although literature does point to the fact that gender does play an important role in predicting mental illnesses, the effects of gender on mental health are limited to the extent as it relates to specific types of mental illnesses. For example, women have been prone to suffer from depressive and anxiety disorders while men are most likely to suffer from substance abuse (Williams et al., 2008). Future studies, adopting a gender analytical approach, would prove to be invaluable in providing a better understanding of mental health problems and decisions relating to treatments of these problems among the two gender groups.

### *Population group*

The likelihood of persons self-reporting mental illnesses in this study was consistently lower among White persons compared to other racial groups, with Coloured people

more likely to report mental illnesses. This finding is consistent with that reported in a study by Williams et al. (2008). Of interest, however, is the noticeable increase in the proportion of individuals reporting mental illness among the Black African population from 2004 to 2008. The differences reported on mental illnesses among racial groups are often attributed to factors such as western definitions of mental illness and instruments used to measure mental illnesses; cultural differences between races such as the expression of distress; the stigmatization and the misunderstanding of mental illness among the different cultures; and difficulties with access to and use of mental health services often faced by disadvantaged communities (Gollust, Lantz, & Ubel, 2010).

### *Education*

In this study, the proportion of persons reporting themselves to be suffering from only one mental illness among individuals with less than primary education has been on average twice as much as those with at least secondary education. These results were consistent over the five year period of reporting (2004 to 2008). These analyses demonstrate that high prevalence of mental disorders are associated with reduced educational achievement and are consistent with findings from Europe, North America and Australia (Patel et al., 2008; Townsend, Flisher, & King, 2007). Given the high prevalence of mental disorders among persons with lower educational achievement reported, not only in the present study regarding this country but also in other countries, any intervention aimed at increasing levels of mental well-being among the population should take into consideration the role of education and its impact on mental health. Taking this approach could have important implications for the way mental health policy is assessed. The results differed for persons reporting more than one type of mental illness. Persons with a tertiary education were found to be more at risk of having more than one type of mental illness than those with no or a very low level of education. It is perhaps an indication that having a tertiary education brings with it the expectation that a high level of education would ensure not only employment, but also employment that would offer high rewards in earnings. The ensuing devastation as a result of the unrealised expectations would consequently have a much more drastic effect on these persons than those of lower educational levels whose expectations would not be as high.

### *Age*

The perceived incidence of mental illness among the working age population in this study was found to gradually increase with age. These results are consistent with those reported in previous research (Kessler et al., 2009; Ormel et al., 2007). Mental disorders are known to have earlier ages of onset. The analysis conducted by Kessler et al. (2009) showed that early-onset mental disorders were significant predictors

of the subsequent onset and persistence of a wide range of physical disorders later in life. This fits into a larger pattern of associations between early onset of mental disorders and a variety of factors such as reduced educational attainment, early marriage, marriage instability and low occupational and financial status (Kessler et al., 1998). As far as intervention is concerned, literature is rather vague as to whether the relationship between the associations and age is causal or not. As a result it is difficult to decide if these outcomes are consequences of mental health or vice versa.

### *Geographical area*

The results discussed in the previous section showed that there was a consistent increase in the proportion of persons reporting themselves to be suffering from mental illnesses among persons living in five of the nine provinces, Northern Cape, Free state, North West, Gauteng and Mpumalanga over the period 2004 to 2008. Conversely, there was a gradual decline in the proportions of cases of mental illness among people living in the Western Cape. The lowest proportion of persons reporting themselves to be suffering from mental illness was reported among those living in Gauteng and Limpopo since 2004. No other South African studies have compared mental illness across provinces. Studies generally tend to focus on mental health trends within the country or in a specific province (Myer et al., 2009; Williams et al., 2008).

### *Employment status*

There was a significant effect resulting from employment status on mental health, with employed persons less likely to self-report mental illnesses compared to persons who were not employed. These results are supported in literature where persons, who were not employed, were shown to have poorer mental health than employed people (Murphy & Athanasou, 1999; National Survey on Drug Use and Health [NSDUH], 2006). Copious amounts of research have additionally attempted to establish a link between unemployment and poor mental health or, in other words, does the status of not being employed cause psychological problems or vice versa. For example, Schaufeli (1997) argued that people with pre-existing psychological problems are more likely to become unemployed (the 'selection hypothesis'). However, while those with pre-existing psychological problems do appear among persons not employed, they are unlikely to account for the majority of the unemployed (Fryer, 1997). In addition, various longitudinal studies (that are able to track psychological changes in individuals over time) have shown that people's mental well-being changes as their employment status changes. For example, in studies reviewed by Murphy and Athanasou (1999), evidence was found of both decreased mental health for those moving from employment to unemployment and increased mental health for those moving from not being employed to being employed. Murphy and

Athanasou (1999), therefore, concluded that the 'selection' effect did not seem to apply in the majority of the surveyed studies and that the studies best placed to control for such potential confounding variables concluded that unemployment *per se* had an effect on mental health.

## CONCLUSION

The findings presented in this study are disconcerting. Increasing levels of self-reported incidences of mental illness among the general South African working age population have been observed since 2004. The results shown in this study indicated an increase of more than 101 thousand reported incidences (of at least one type of mental illnesses) among the working age population over the period 2004 to 2008.

When predicting factors associated with the likelihood of self-reporting mental illnesses among the working age population, employment status accounted for the biggest contributor, specifically not being employed. Other socio-demographic contributors included gender (males were most likely to report mental illnesses), population group (with the Coloured and the Black African population groups more likely to be at risk), age (the relative risk for older persons reporting mental illnesses was higher than it was for younger persons) and education (having lower levels of educational resulted in increased chances of reporting mental well-being). The risk of reporting both single and multiple types of mental illnesses relative to no mental illnesses for persons who were not employed was found to be higher than for those who were employed.

## BIOGRAPHICAL NOTES

**Constance Sarah Mabela** completed her doctorate degree (DLitt ET Phil) from Unisa's Psychology Department. She is currently employed as a Manager in the Labour Statistics division at Statistics South Africa. In this capacity she is responsible for questionnaire design, data analysis and the dissemination of household labour market statistics within the organization. Dr. Mabela works closely with other researchers including interns. Prior to joining Statistics South Africa, she held various research positions in other organisations, including the Medical Research Council (MRC) and the Human Rights Commission (HRC), which has led to her diversity in applying research in a number of fields such as Health Care, Policy analysis and Labour.

## REFERENCES

Adams, T.D., Gress, R.E., Smith, S.C., Halverson, R.C., Simper, S.C., Rosamond, W.D., Hunt, S.C. (2007). Long-term mortality after gastric bypass surgery. *New England Journal of Medicine, 357* (8): 753–61. doi:10.1056/NEJMoa066603. PMID 17715409.

Afifi, M. (2007). Gender differences in mental health. *Singapore Medical Journal, 48 (5), 385–391*.

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders -DSM-IV-* (4th ed.). Washington, DC: Author.

Araya, R., Rojas, G., Fritsch, R., Acuna, J., & Lewis G. (2001). Common mental disorders in Santiago, Chile: prevalence and socio-demographic correlates. *British Journal of Psychiatry, 178*(3), 228–233.

Bijl, R. V., Ravelli, A., & van Zessen, G. (1998). Prevalence of psychiatric disorder in the general population: Results of the Netherlands Mental Health Survey and Incidence Study (NEMESIS). *Social Psychiatry & Psychiatry Epidemiology, 33*(12), 587–595.

Darwin, C. R. (1859). *On the origin of species by means of natural selection, or the preservation of favoured races in the struggle for life*. London: John Murray.

Fryer, D. (1997). International perspectives on youth unemployment and mental health: Some central issues. *Journal of Adolescence*, *20*(3), 333–342.

Goldsmith, A.H., Veum, J.R., & Darity, W. (1996). The impact of labour force history on self-esteem and its component parts, anxiety, alienation and depression. *Journal of Economic Psychology*, *17*(2), 183–220.

Gollust, S.E., Lantz, P.M., & Ubel, P.A. (2010). Images of illness: How causal claims and racial associations influence public preferences toward diabetes research spending. *Journal of Health Politics, Policy and Law, 35*(6), 921–959.

Hyman, R. (2006). Marxist Thought and the Analysis of Work. In M. Korczynski, R. Hodson, and P. Edwards (Eds.), *Social Theory at Work* (pp. 26–55). Oxford: Oxford University Press.

Lewis, O. (1967). *The Children of Sanchez*. New York: Random House.

Kessler, R., Aguilar-Gaxiola S., Alonso J., Chatterji S., Lee S., Ormel J. *et al.* (2009). The global burden of mental disorders: An update from the WHO World Mental Health (WMH) Surveys. *Epidemiologia e Psichiatria Sociale, 18*(1), 23–33.

Kessler, R.C., Amminger, G.P., Aguilar-Gaxiola, S., Alonso, J., Lee, S., & Üstün, T.B. (2007). Age of onset of mental disorders: A review of recent literature. *Current Opinion in Psychiatry, 20*(4), 359–364.

Kessler, R.C., Wittchen, H-U., Abelson, J.M., McGonagle, K.A., Schwarz, N., Kendler, K.S., Zhao, S. (1998). Methodological studies of the Composite International Diagnostic Interview (CIDI) in the US National Comorbidity Survey. *International Journal of Methods in Psychiatric Research*, 7(1), 33–55.

International Labour Organization (ILO). (1982). *Resolutions Concerning Economically Active Population, Employment, Unemployment and Underemployment*. Adopted by the 13th International Conference of Labour Statisticians, October 1982, para. 8. Accessed 06 November 2011 from www.ilo.org/public/english/bureau/stat/download/res/ecacpop.pdf

Maluka, C.S. (2004). *Subjective well-being and self-esteem in a disadvantaged community*. (Doctoral dissertation). University of South Africa, Pretoria.

Moller, V. (2001). 'Monitoring quality of life in cities: The Durban case', *Development Southern Africa, 18* (2), 217–238.

Murphy, G., & Athanasou, J. (1999). The effect of unemployment on mental health. *Journal of Occupational and Organizational Psychology, 72*(1), 83–89.

Myer, L., Seedat, S., Stein D.J., Moomal, H., & Williams, D.R. (2009). The mental health impact of AIDS-related mortality in South Africa: A national study. *Epidemiology Community Health, 63(*4), 293–298.

National Survey on Drug Use and Health (NSDUH) Report (2006). *Substance use disorder and serious psychological distress, by employmenAt status.* Issue 38.

Ormel, J.,Von Korff, M., Burger, H., Scott, K., Demyttenaere, K., Huang, Y.Q., Kessler R. (2007). Mental disorders among persons with heart disease – results from World Mental Health surveys. General Hospital Psychiatry, *29*(4), 325–334.

Pai, J. K., Pischon, T., M., J. M., Manson, J. E., Hankinson, S. E., Joshipura, K... Rimm, E. B. (2004). Inflammatory markers and the risk of coronary heart disease in men and women. *New England Journal of Medicine, 351*(25), 2599–2610.

Patel V., Flisher, A.J., Nikapota, A., & Malhotra, S. (2008). Promoting child and adolescent mental health in low and middle income countries. *Journal of Child Psychology and Psychiatry*, *49*(3), 313–334.

Power, C., & Elliott, J. (2006). "Cohort profile: 1958 British Cohort Study". *International Journal of Epidemiology, 35*(1), 34–41.

Ryff, C.D., Dienberg Love, G., Urry, H.L., Muller, D., Rosenkranz, M.A., Friedman, E.M., ... Singer, B. (2006). Psychological well-being and ill-being: Do they have distinct or mirrored biological correlates? *Psychotherapy and Psychosomatics, 75*(2), 85–95.

Sawatzky, R. (2007). *The measurement of quality of life and its relationship with perceived health status in adolescents* (Doctoral dissertation). University of British, Columbia.

Schaefer, C., Quesenberry, C.P., & Wi, S. (1995). Mortality following conjugal bereavement and the effects of a shared environment. *American Journal of Epidemiology*, 141(12), 1142–1152.

Schaufeli, W.B. (1997). Youth unemployment and mental health: Some Dutch findings, *Journal of Adolescence*, *20*(3), 281–305

Shaw, M. (2004). Health inequality: An introduction to theories, concepts and methods. *International Journal of Epidemiology, 34*(2), 500–502.

Statistics South Africa (2008a). *Labour Market Dynamics in South Africa: 2008*. Report No: P02-11-02. Stats SA, Pretoria.

Statistics South Africa (2008b). *General household survey: 2008*. Statistical Release: P0318. Stats SA, Pretoria.

Statistics South Africa (2008c). *Guide to the Quarterly Labour Force Survey.* Report No: 02-11-01. Stats SA, Pretoria.

Taris, T.W. (2002). Unemployment and mental health: A longitudinal perspective. *International Journal of Stress Management, 9*(1), 43–57.

Townsend, P., Davidson, N., & Whithead, M. (1992). *The Black Report and the Health Divide: Inequalities in Health* (2nd ed). London: Penguin.

Townsend, L., Flisher, A.J., & King, G. (2007). A systematic review of the relationship between high school drop-out and substance use. *Clinical Child and Family Psychology, 10*(4), 295–317.

Wilkinson, R. G. (1996). *Unhealthy Societies: The Afflictions of Inequality*. London: Routledge.

Williams, D., Herman, A., Stein, D., Heeringa, S., Jackson, P., Moomal, H., & Kessler, R. (2008). Twelve-month mental disorders in South Africa: Prevalence, service use and demographic correlates in the population-based South African Stress and Health Study, *Psychology Medicine, 38*(2), 211–220. doi:10.1017/S0033291707001420.

World Health Organisation (1992). *ICD-10 Classifications of Mental and Behavioural Disorder: Clinical Descriptions and Diagnostic Guidelines*. Geneva.

World Health Organisation (2001). *Global Burden of Disease 2001 estimates recalculated by World Bank region*. Retrieved March 16, 2009, from http://www.fic.nih.gov/dcpp/gbd.html

Wright, T.A., Cropanzano, R., Douglas, G., Bonett, D.G., & Diamond, W.J. (2009). The role of employee psychological well-being in cardiovascular health: When the twain shall meet. *Journal of Organizational Behavior, 30*(2), 193–208.