Differences in Mental Health among Migrants and Non-migrants in South Africa: Evidence from the National Income Dynamics Study

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The literature associates migration with poor mental health outcomes. Despite extensive empirical research in other countries, there is a paucity of research examining the mental health consequences of migration in South Africa, and the factors that compound the relationship between the two variables. The study objective was to evaluate the differences in the mental health status of internal migrants and that of non-migrants in South Africa with a special focus on depressive symptoms. The study considered the influence of various vulnerability and sociodemographic factors such as gender, age, educational attainment, race, income group, marital status and province of residence. Mental health disorders are already considered the largest contributor to the global disease burden. Hence, understanding the nature of the relationship between migration and mental health is critical for public health prevention efforts. To make the determination, the study applied descriptive analysis and logistic modelling based on the South African National Income Dynamics Study (NIDS) panel datasets of 2008, 2010, 2014/15 and 2017. Descriptive statistics were employed to derive the frequency distribution of sociodemographic characteristics and migration factors. Logistic regression analysis was used to assess the associations between depression, migration and sociodemographic factors.

Keywords: Migration, acculturation, gender, depression, sociodemographic factors

INTRODUCTION

The process of migration is complex and stress-inducing, regardless of whether migration is internal or international (Bhugra, 2004; Carroll et al., 2020). This is due to the association of migration with stressful experiences of change, inadequacy, perceptions of discrimination and social marginalization (Bhugra, 2004; Gkiouleka et al., 2018; Bauer et al., 2020). The migration process entails social change of cultural settings for the migrants and this change has implications for mental health (Ajaero et al., 2017). Therefore, migration has the potential to negatively influence mental health and has been identified as one of the social determinants of negative mental health outcomes (Satcher, 2000). The association between mental health issues and migration bears a considerable influence on health disparities (Ai et al., 2015). Empirical evidence has established sociodemographic inequalities in migrants' health (Giannoni et al., 2016). As such, migration and health inequalities continue to be a key concern of public and policy debates (Bircan et al., 2020).

The concept of migration is not new in South Africa. The country is one of the main destinations of immigration in Africa (Fauvelle-Aymar, 2014). Within the country, the Western Cape and Gauteng account for most of the inter-provincial migration (Kleinhans and Yu, 2020). Evidence suggests that the population of internal migrants has increased in the post-apartheid era (Ajaero et al., 2017). A significant proportion of internal migration within the country is intra-district and economically motivated (Rogan et al., 2009). Despite extensive empirical research in other countries, there is a paucity of research examining the mental health consequences of internal migration in South Africa. In this context, it therefore becomes pertinent to examine if migrants actually have better mental health than non-migrants in South Africa. Understanding the nature of the relationship between migration and mental health is critical for public health prevention efforts.

BACKGROUND AND CONTEXTUALIZATION

In South Africa, internal migration is historically associated with the social engineering and enforced fragmentation of families that took place under apartheid (Hall, 2016). This was part of the apartheid strategy to entrench minority rule through spatial arrangements that strategically divided families and split generations and separated breadwinners from dependants (Hall, 2016). Such social conditions have been conceptualized as a challenge to the emotional resilience of individuals who may experience psychological distress, personal crisis and could precipitate poor mental health (Portes and Rumbaut, 2006). In this context, it becomes relevant to examine if internal migrants have worse mental health than non-migrants in South Africa.

LITERATURE REVIEW/THEORETICAL/CONCEPTUAL FRAMEWORK

There are various theoretical frameworks in the literature that provide concepts that may be useful in analyzing the association between migration and mental health

outcomes. Theories of acculturative stress posit that tensions due to living in a foreign culture contribute to mental disorders (Gutierrez-Vazquez et al., 2018). Bhugra (2004) developed a contingency model which hypothesizes vulnerability (risk factors) or resiliency (protective factors) for psychological disorders based on the person's situation and migration stage.

In physical health literature, the selection hypothesis predicts that more prepared and healthier individuals are more likely to migrate compared to their counterparts in worse conditions (Akresh and Frank, 2008). Migrant selectivity could be evident in both observable and unobservable characteristics such as preparedness to migrate. As a result, migrants could be positively selected on the sociodemographic characteristics that are protective against poor mental health outcomes such as gender and family background. This implies that migrants could be better positioned to handle uncertainty and stress compared to those who select not to migrate. However, given the high prevalence of poor mental health among migrants, it could be that selection can negatively impact on mental health. According to Gutierrez-Vazquez et al. (2018), if migrants are negatively selected with respect to sociodemographic background, or have underlying traits that make them more prone to dissatisfaction, then selection could be an important contributor to adverse mental health outcomes.

The literature provides evidence of the significant prevalence of depressive symptoms within migrant population groups compared to non-migrants. Mulcahy and Kollamparambil (2016) investigated the impact of rural-urban migration on subjective well-being in South Africa between 2008 and 2012. The study adopted the use of instrumental variables to control for endogeneity caused by shock-induced self-selection, and propensity score matching to control for migration self-selection bias. The results indicated that rural-urban migration leads to decreased subjective well-being which could be due to unrealized expectations and changing reference groups used to peg aspirations, as well as the emotional cost of being away from family and a home environment.

Gkiouleka et al. (2018) researched the prevalence of depressive symptoms among migrant and non-migrant communities in 21 European countries. The research looked into the impact of gender, childhood experiences, sociodemographic factors and social support on depressive symptoms using data from the seventh round of the European Social Survey and the Greek Migheal survey. The study found that migrants reported significantly higher levels of depressive symptoms in seven of the examined countries, while in Greece and in the UK, they reported significantly lower levels compared with non-immigrant populations. The findings suggest that the impact of migration status on depressive symptoms is subject to additional determinants of mental health as well as on contextual factors.

Gutierrez-Vazquez et al. (2018) sought to explore the link between migration and depressive symptoms among Mexicans residing in the United States of America (USA) and those residing in the sending communities in Mexico. The study reviewed the standard explanations for the links between migration and depression, such as ac-

culturative stress, lack of social support, and powerlessness and isolation. The study also tested the migration selection hypothesis using propensity matching scores. The study results indicated a higher prevalence of depressive symptoms among migrant communities compared to non-migrant community groups. The study also found little support for selection as an important source of migrant depression. Instead, the study found strong evidence that migration itself was primarily responsible for depressive symptoms mainly due to the disruption of social networks that it entails. Family separation was found to be the strongest predictor of depressive symptoms and could account for a significant proportion of the poor mental health among migrants.

Akresh and Frank (2008) sought to quantify the extent of health selection among contemporary US immigrant groups. This entails checking the degree to which potential immigrants migrate, or fail to migrate, on the basis of their health status. Data for the study came from the New Immigrant Survey 2003 cohort which included unique series of questions to evaluate the health of immigrants in the United States to that of citizens in their country of origin. The study found that the extent of positive health selection differed significantly across immigrant groups and was related to compositional differences in the sociodemographic profiles of immigrant streams.

Past studies on migration highlight four key sociodemographic risk factors for depression among the general population: (i) low sociodemographic status; (ii) female gender; (iii) being unmarried; and (iv) undesired life events (Alegria et al., 2007). Mental health outcomes were found to be worse for immigrants who are unemployed, young, and female (Ai et al., 2015). However, in a completely different finding, Bauer et al. (2020) found that a high sociodemographic status does not necessarily protect refugees from the negative influences during migration and the first months or years in the new country.

There are several theoretical models and perspectives mainly focusing on rural-urban and international migration. However, migration research lacks theoretical advancement with empirical research disconnected from the theories (Kureková, 2010; Bircan et al., 2020). The existing migration theories do not adequately capture the dynamics of internal migration and depression. In the presence of these theoretical gaps, this study looks at confirming the hypothesis that migrants report greater rates of depressive symptoms than non-migrants after controlling for sociodemographic factors. Also, while there is extensive empirical literature on the impact of mental health on international migration, relatively little is known about internal migration and mental health outcomes, especially in the South African context. There is a paucity of research examining the mental health consequences of migration in South Africa, and the factors that compound the relationship between the two variables. Therefore, the key objective of this empirical research is to examine whether internal migrants are more likely to report poor mental health outcomes compared to non-migrants in South Africa, and if they do, to also determine the sociodemo-

graphic predictors of migrant status and mental health outcomes.

METHODOLOGY

Data

The study used data from the five waves of the National Income Dynamics Study (NIDS) survey: wave 1 (2008), wave 2 (2010–2011), wave 3 (2012), wave 4 (2014–2015) and wave 5 (2017) (SALDRU, 2020). The NIDS is a face-to-face, longitudinal, nationally representative panel survey of individuals and households focusing primarily on sociodemographics, labor market participation, grants received, education and health in South Africa. The NIDS adopted a stratified, two-stage cluster sample design in sampling the households and individuals identified in the 2008 base wave. In waves 2 to 5, the survey included the original sample members as well as new members who had joined the original households. Response rates in the NIDS survey were high, with over 81% of households being successfully interviewed in wave 5. This study considered only respondents who were 18 years of age or older at the time of the interview. For the data analysis, the dataset was weighted to account for attrition and under- or over-sampling errors.

Measures/Instruments

Depression variable

The depression variable was derived from responses to the emotional health questions in the survey questionnaires. Across all the waves, respondents were asked 10 questions relating to their mental well-being. The responses were scored on a 4-point Likert scale indicating the frequency of experiencing the depressive symptom. To calculate a total score for depressive symptoms, the survey responses were summed up using the 10-item version of the Centre for Epidemiological Studies-Depression (CES-D) scale (Radloff, 1977). This study used the threshold of 10 and above to define the presence of significant depressive symptoms (SDS). The threshold was also recommended by Radloff (1977). The same scale was adopted by other studies assessing depression using the NIDS such as Mungai and Bayat (2018) and Dowdall et al. (2017). The CES-D scale is a common psychiatric measurement tool for assessing depressive symptoms and has good psychometric properties (Dowdall et al., 2017; Mungai and Bayat, 2018). The Cronbach's alpha for this scale in the sample was 0.75. Following from Schuckit et al. (1993: 5), who asserted that "symptoms are not diagnoses", and the methodology employed by Mungai and Bayat (2018), the study did not attempt to diagnose depression but rather assessed the symptomatology that suggests significant vulnerability to being depressed.

Migration variable

This research followed Hall's (2016) methodology in defining migrants as those who

moved across municipal boundaries. It is a single variable that captures movements between waves 1 and 5, or any of the intervening waves. For instance, persons who moved between waves 1 and 2, but not between waves 3 and 4 are defined as migrants, on the basis that they had moved place at some time between waves 1 and 5.

Empirical model

The study uses logit models to analyze the likelihood of migration status to impact on mental health status. The adoption of logit models is appropriate, given that the dependent variables can be structured as binary outcomes. Logistic regression allows the research to predict the probability of the outcomes falling between the unit intervals. The technique can be used to model a response variable as a function of one or more explanatory variables. The study follows the approach of Chear (2015) and formulates the logistic model in the general form below:

$$\log \tfrac{P}{1-P} = \alpha + \beta_i X_i + \varepsilon$$

The regression equation considers depression status as the dependent variable. In the equation, P is the probability that the participant exhibits depressive symptoms and 1-P is the probability that the participant does not exhibit depressive symptoms. P/(1-P) is the odds that the participant exibits significant depressive symptoms. X is the vector of independent variables hypothesized to impact the probability of demonstrating significant depressive symptoms. The model included several sociodemographic characteristic indicators such as age, race, gender, educational attainment, and marital status. β are the coefficients of the independent variables and ε is the error term. After fitting the logistic regression model to the survey data, the study conducted model diagnostic tests for goodness of fit of the fitted model. The Hosmer-Lemeshow (HL) test was used to check the goodness of fit of the specified models. The independent variables were tested for symptoms of multi-collinearity through the Variance Inflation Factor (VIF) test. All the statistical tests were based on a p-value of a less than 5% level of significance.

Data analysis

The data analysis included the use of descriptive analysis and regression analysis to assess the association between depressive symptoms and migration status. The study applied multivariate logistic regression analysis to assess the likelihood of sample members to experience significant depressive symptoms taking into account their migration status and controlling for sociodemographic characteristics. The study used race, gender, educational attainment, age, marital and occupational status as indicator variables for sociodemographic status based on prior literature such as studies by Moussavi et al. (2007), Atwoli et al. (2013), and Mungai and Bayat (2018).

Ethical considerations

Ethical approval was not needed for the study due to the use of secondary data that was anonymous.

RESULT

Table 1 provides an overview of the sociodemographic characteristics of the study population. The sample consisted of more females compared to males in both the migrant and non-migrant population groups. The sample majority is also predominantly African, with 76% of the study sample being of the African race. Over 60% of both the migrant and non-migrant population groups have secondary school education. The unemployed comprised a bigger proportion of the study sample across both migrant statuses. More than half of the sample were aged between 18 and 44 years. Within provinces, the majority of the sample members were from KwaZulu-Natal.

Table 1: Characteristics of the study sample

	Migrants		Non-migrants		Overall	
	n	Proportion %	n	Proportion %	n	Proportion %
Gender						
Male	743	46%	3,983	39%	4,726	40%
Female	884	54%	6,146	61%	7,030	60%
Race						
African	1395	86%	7500	74%	8895	76%
Coloured	138	8%	1771	17%	1909	16%
Asian/Indian	24	1%	195	2%	219	2%
White	70	4%	663	7%	733	6%
Educational attainment						
No schooling	98	7%	1220	14%	1318	13%
Some primary	171	12%	2198	26%	2369	24%
Some secondary	555	40%	2813	33%	3368	34%
Completed secondary	341	25%	1205	14%	1546	16%
Tertiary or more	211	15%	1107	13%	1318	13%
Employment status						
Employed	537	39%	4,007	47%	4,544	46%
Unemployed	839	61%	4,536	53%	5,375	54%
Age group						
18-24	695	43%	1748	17%	2443	21%
25-34	458	28%	2320	23%	2778	24%
35-44	221	14%	2211	22%	2432	21%
45-54	143	9%	1855	18%	1998	17%
55-64	64	4%	1158	11%	1222	10%
65+	46	3%	837	8%	883	8%
Province						
Western Cape	130	8%	1653	16%	1783	15%
Eastern Cape	186	11%	1134	11%	1320	11%
Northern Cape	72	4%	772	8%	844	7%
Free State	85	5%	644	6%	729	6%
KwaZulu-Natal	487	30%	2528	25%	3015	26%
North West	149	9%	852	8%	1001	9%
Gauteng	211	13%	1007	10%	1218	10%
Mpumalanga	90	6%	689	7%	779	7%
Limpopo	217	13%	850	8%	1067	9%

Source: Authors' own calculations, based on NIDS 2008, 2010, 2012 and 2014/15 (SALDRU, 2020)

Figure 1 displays the overall distribution of depressive symptoms by migration status and gender. Based on the information in the figure, the pattern is similar for females with roughly the same distribution within both the migrant and non-migrant groups. For females, roughly 25% reported depression scores between 10 and 20 across both the migrant and non-migrant categories. It is also evident that there are more female outliers reporting higher depression scores for migrants compared to non-migrants.

Figure 1: Distribution of symptoms in CES-D depression screening by migration status and gender
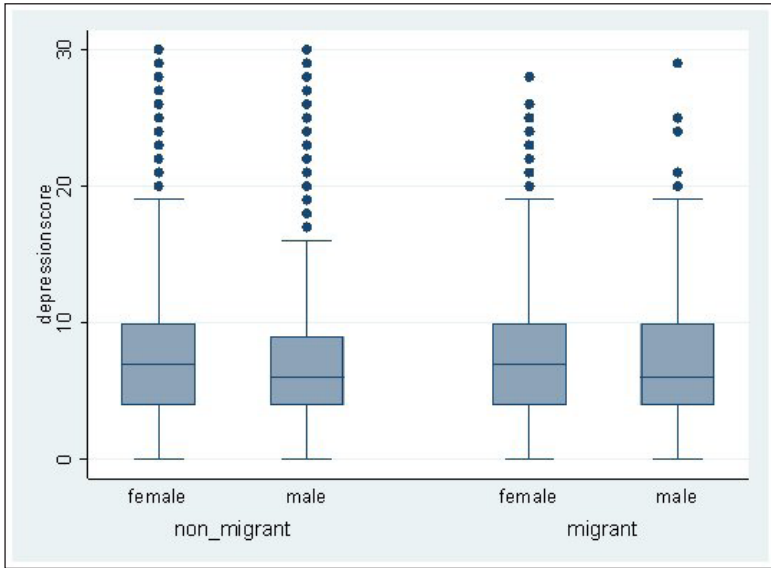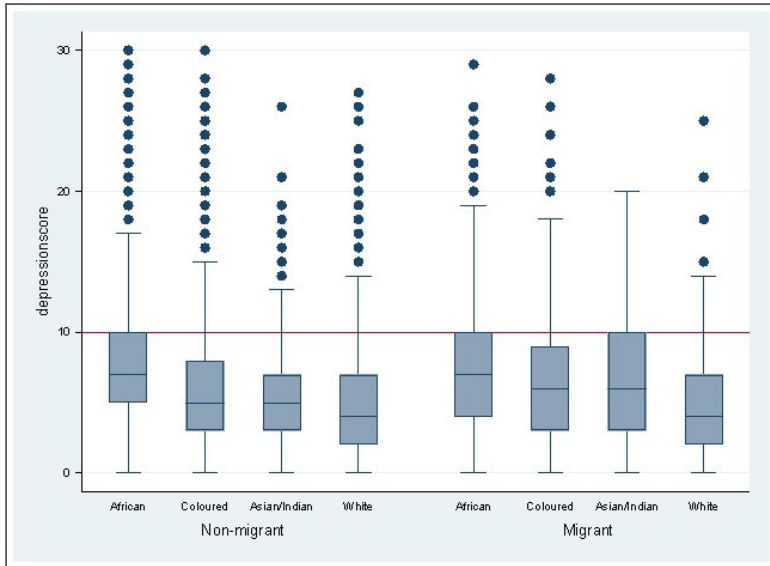

Source: Authors' own construction, based on NIDS 2008, 2010, 2012, 2014/5 and 2017 (SALDRU, 2020)

However, there is a marked difference between the distribution of depressive symptoms in the migrant and non-migrant groups of males. More migrant males displayed higher depressive scores compared to non-migrant males. Over 25% of migrant males reported depressive scores greater than 10 compared to about 15% for non-migrant males.

In Figure 2, we report the distribution of symptoms by migration status and race. The migrant sub-population group reported higher depressive scores across all the races. A total of 25% of migrant Asian/Indians had depressive scores above the cut-off of 10, followed by African migrants at slightly below 25%. Close to 20% of migrant Coloureds also reported depressive scores higher than 10. Despite a high number of outliers, the proportion of non-migrants reporting depressive scores of 10 or higher was less than that of migrants.

Figure 2: Distribution of symptoms in CES-D depression
screening by migration status and race

Source: Authors' own construction, based on NIDS 2008, 2010, 2012, 2014/5 and 2017 (SALDRU, 2020)

Figure 3 provides an overview of the distribution of symptoms in CES-D depression screening by migration status, race and gender. Based on information in the figure, there is no significant variation in the distribution scores of both migrants and non-migrants across both genders within the African racial group. About 25% of female migrants, male migrants and male non-migrants exceeded the threshold of 10 to qualify as displaying significant depressive symptoms. The only exception is the category of African non-migrant females who have more than 25% displaying significant depressive symptoms. The African race constituted the group with the highest depression scores compared to the other racial groups followed by Coloureds and lastly, the White racial group.

Figure 3: Distribution of symptoms in CES-D depression
screening by migration status, race and gender
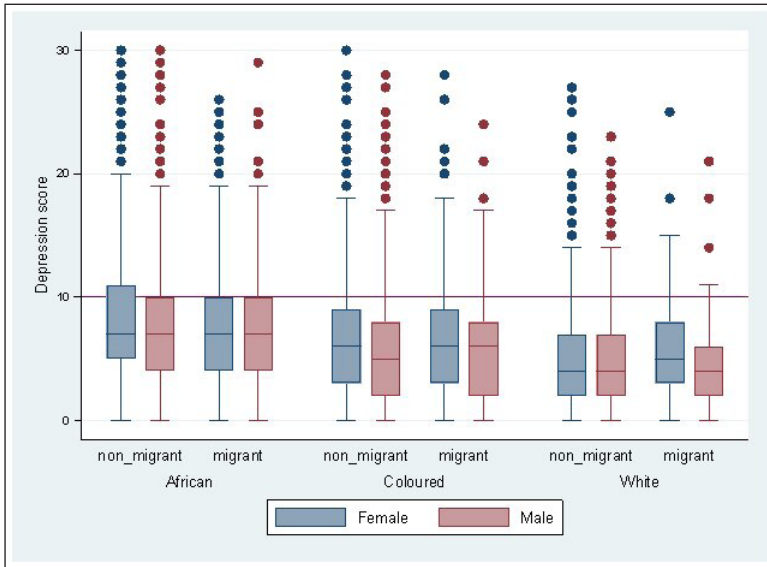
Source: Authors' own construction, based on NIDS 2008, 2010, 2012, 2014/5 and 2017
(SALDRU, 2020)

The figure shows that overall, the African population group exhibits the highest intensity and prevalence of depressive symptoms followed by the Coloured group and the White group. The female non-migrant African group accounted for the highest depression scores. The same group also constituted the group with the highest proportion of members with depression scores greater than 10. Within the Coloured racial group, females reported higher depression scores compared to males across both the migrant and non-migrant categories. White non-migrants across both genders reported similar patterns of depression in both intensity and distribution. However, female White migrants reported higher depression scores compared to male White migrants.

The study employed logistic regression analysis to ascertain the association between the depression status, migrant status and their sociodemographic characteristics. Table 3 displays the results of the logistic regression analysis, using data from the NIDS waves 1 to 5, pooled into cross-section. Model 1 is specified to control for migrant status only. Model 2 is a specification that controls for gender as well, while Model 3 controls for educational attainment, age, income groups, employment status, marital status and province of domicile. The majority of the predictors were statistically significant. An exception was race and migration status (White non-migrants) across all three models, race and migration status (Coloured non-migrant),

educational attainment (some primary education) and province (Free State and North West) in Model 3.

Table 2: Logistic regression on depression status by migration status and sociodemographic characteristics

Variables	(1) Model 1: Simple specification	(2) Model 2: Some controls	(3) Model 3: Full specification:
Race and migration status (Base: White migrant)			
African migrant	1.1135*** (0.2149)	1.1177*** (0.2151)	0.9459*** (0.2327)
Coloured migrant	0.7303*** (0.2423)	0.7401*** (0.2425)	0.5825*** (0.2632)
African non-migrant	1.2246*** (0.2132)	1.2054*** (0.2134)	0.8826*** (0.2309)
Coloured non-migrant	0.586*** (0.215)	0.5737*** (0.2152)	0.2679 (0.233)
White non-migrant	0.1736 (0.2243)	0.1702 (0.2245)	0.0631 (0.2418)
Gender (Base: Female)			
Male		-0.2688*** (0.022)	-0.157*** (0.0257)
Educational attainment (Base: No education)			
Some primary education			-0.0614 (0.0388)
Some secondary education			-0.2407*** (0.0425)
Completed secondary education			-0.3777*** (0.0529)
Tertiary or more			-0.4269*** (0.0533)
Income quartiles (Base: Lowest income group)			
Second quartile			-0.1057*** (0.032)
Third quartile			-0.1555*** (0.0342)
Fourth quartile			-0.2864*** (0.0416)
Age			0.0038*** (0.0011)
Marital status (Base: Married)			
Widowed			0.2541*** (0.0414)
Separated			0.3512*** (0.0679)
Never married			0.1914*** (0.0288)
Employment Status (Base: Unemployed)			
Employed			-0.1466*** (0.0265)
Province (Base: Western Cape)			
Eastern Cape			-0.1835*** (0.0582)
Northern Cape			-0.3437*** (0.0608)
Free State			-0.0628 (0.0655)
KwaZulu-Natal			-0.164*** (0.055)
North West			-0.1188* (0.0624)
Gauteng			-0.1502*** (0.0601)
Mpumalanga			-0.627*** (0.0693)
Limpopo			-0.5398*** (0.0636)
Constant	-2.0228*** (0.2128)	-1.9128*** (0.2132)	-1.3231*** (0.2439)

Source: Authors' own calculations, based on NIDS 2008, 2010, 2012 and 2014/15 (SALDRU, 2020) *** denotes significance at 5% level and * denotes significance at 10% level

The regression results in Table 2 reveal that all other racial groups in both migrant and non-migrant groups were more likely to be depressed compared to White migrants in models 1 and 2. The results were statistically significant except for White non-migrants across all 3 models. However, there were no statistically significant differences between White migrants and Coloured non-migrants, as reflected in Model 3.

On gender, being male compared to being female, reduces the likelihood of being depressed and this is apparent in both Model 2 and Model 3 results. Using 'no education' as the base category, moving into a higher educational attainment category reduces the odds of being depressed. With age, each year-increase in age, increases the chances of being depressed. The same patterns extend to income brackets. Taking the lowest income quartile as the base category, being in a higher income category reduces the chances of being depressed. Compared to being married, all other marital statuses are associated with higher odds of being depressed. Being employed rather than unemployed reduces the chances of being depressed. On province of residence, if we take the Western Cape province as the reference point, residing in any of the other 8 provinces is associated with lower odds of being depressed.

The study then appraises the determinants of mental health status in South Africa by gender and sociodemographic variables. Table 3 summarizes the logistic regression models to give a clearer picture of how gender influences the risk of depressive symptoms. Model 1 evaluates the effects of migrant status and sociodemographic variables on depression status for males. Model 2 undertakes a similar analysis for females, with Model 3 reporting the combined effect.

Table 3: Logistic regression on depression status by migration status, gender and sociodemographic characteristics

Variables	(1) Model 1: Male	(2) Model 1: Female	(3) Model 1: Combined
Race and migration status (Base: White migrant)			
African migrant	1.767*** (0.52)	0.6128*** (0.2667)	0.9344*** (0.2326)
Coloured migrant	1.4524*** (0.5522)	0.2241 (0.3128)	0.5762*** (0.2631)
African non-migrant	1.6585*** (0.5182)	0.5735*** (0.2639)	0.8791*** (0.2309)
Coloured non-migrant	1.0548*** (0.5208)	-0.046 (0.2669)	0.2717 (0.233)
White non-migrant	0.9152* (0.5305)	-0.3063 (0.2796)	0.0629 (0.2418)
Educational attainment (Base: No education)			
Some primary education	-0.085 (0.0718)	-0.059 (0.0463)	-0.0616 (0.0388)
Some secondary education	-0.2784*** (0.0755)	-0.2274*** (0.0518)	-0.2367*** (0.0424)
Completed secondary education	-0.4106*** (0.0893)	-0.3667*** (0.0664)	-0.3741*** (0.0528)
Tertiary or more	-0.4642*** (0.0905)	-0.4146*** (0.0668)	-0.4145*** (0.0532)
Income quartiles (Base: Lowest income group)			
Second quartile	-0.1183*** (0.0601)	-0.1055*** (0.0379)	-0.1098*** (0.032)
Third quartile	-0.1497*** (0.061)	-0.1704*** (0.0418)	-0.1686*** (0.0342)
Fourth quartile	-0.2617*** (0.0696)	-0.3058*** (0.0533)	-0.3097*** (0.0414)
Age	0.0044*** (0.002)	0.0039*** (0.0013)	0.0039*** (0.0011)
Marital status (Base: Married)			
Widowed	0.5763*** (0.1145)	0.2014*** (0.0462)	0.2967*** (0.0408)
Separated	0.5291*** (0.1238)	0.2539*** (0.0815)	0.371*** (0.0678)
Never-married	0.2686*** (0.0543)	0.1419*** (0.035)	0.1929*** (0.0289)
Employment status (Base: Unemployed)			
Employed	-0.2408*** (0.0461)	-0.0817*** (0.0327)	-0.1658*** (0.0263)
Province (Base: Western Cape)			
Eastern Cape	-0.2079*** (0.0994)	-0.1764*** (0.0719)	-0.1858*** (0.0582)
Northern Cape	-0.3788*** (0.1007)	-0.3214*** (0.0765)	-0.3511*** (0.0608)
Free State	-0.041 (0.1106)	-0.0776 (0.0816)	-0.0643 (0.0655)
KwaZulu-Natal	-0.1021 (0.0943)	-0.1952*** (0.0679)	-0.1591*** (0.055)
North West	-0.1269 (0.1038)	-0.1172 (0.0785)	-0.1258*** (0.0624)
Gauteng	-0.2097*** (0.1003)	-0.1063 (0.0755)	-0.1502*** (0.0601)
Mpumalanga	-0.6952*** (0.1183)	-0.5913*** (0.0859)	-0.6271*** (0.0693)
Limpopo	-0.4139*** (0.1093)	-0.5976*** (0.0783)	-0.5367*** (0.0636)
Constant	-2.2792*** (0.5375)	-0.9999*** (0.2807)	-1.3709*** (0.2438)

Sources: Authors' own calculations, based on NIDS 2008, 2010, 2012 and 2014/15 (SALD-RU, 2020) *** denotes significance at 5% level and * denotes significance at 10% level of significance

Based on the regression output, the overall finding was that compared to White migrants, male Africans across both migrant and non-migrant categories had

significantly higher chances of being depressed. This finding is evident from the significant results of all the 3 models. The impact is more pronounced for the male group compared to the female group with significant association for Coloured and White males and insignificant effect for their female counterparts. Poor sociodemographic status was significantly associated with reduced probability of good mental health across all 3 models. The factors include poor educational attainment, lower income, higher age, being widowed, separated or never married (using married as the base category), being unemployed and residing in any province other than the Western Cape ceteris paribus (except for Free State and North West across both genders and Gauteng province for females).

DISCUSSION

The aim of this study was to determine whether the prevalence of depressive symptoms is higher among migrants than non-migrants in South Africa. The study also sought to examine the association of migration status with a wide set of sociodemographic factors in the same context. The a priori expectation was that migrants would report higher depressive symptoms compared to non-migrants. In supporting findings, the study found that both migrant and non-migrant African groups were more vulnerable to depressive symptoms than Coloured and White migrants and non-migrants. The result had greater effect for males compared to females. The findings were consistent with the existing literature that suggests migration as a risk factor for depressive symptoms in South Africa with sociodemographic status having a modifying effect. This finding is consistent with the research by Ajaero et al. (2017) who found a similar association between migrant status and depressive symptoms in South Africa, using the 2012 NIDS data (SALDRU, 2020). These results were also consistent with findings by Bhugra (2004), Hwang et al. (2010), Gkiouleka et al. (2018), Gutierrez-Vazquez et al. (2018) and Carroll et al. (2020), who identified migration as a risk factor for depressive symptoms in various contexts.

The study also hypothesized that depressive symptoms would be more prevalent among those with low sociodemographic status after controlling for the migrant status. The research found significant associations between low sociodemographic status and the risk of poor mental health. Poor mental health was associated with lower educational status, unemployment and being part of a lower income group, in findings consistent with Alegria et al. (2007) and Gkiouleka et al. (2018).

The current study found significant gender disparities in mental health status with females, especially African migrant women, who displayed poorer mental health status compared to males across both migrant and non-migrant communities. The result is consistent with findings by Dalgard and Thapa (2007). A possible explanation for this, is that in South Africa, women have less economic and social power than males, yet they carry heavy family responsibilities (Mungai and Bayat, 2018). This factor can have a modifying effect on the risk of depressive symptoms when combined with the challenges of social integration for migrants.

Furthermore, age appears to be a significantly strong predictor of depressive symptoms with an increase in age being associated with increased risk of depressive symptoms. This finding is consistent with the study by Ardington and Case (2010), who also found that the likelihood of depression increases with age. This result can be explained in part, by older adults being more troubled by poverty compared to the relatively young members of the society.

This study found that marital status was significantly associated with depressive symptoms. It is apparent from the study results that all marital status categories have poorer mental health relative to the married category. This is consistent with the findings of Das et al. (2007) who also found that respondents who were separated, divorced or widowed, reported worse mental health compared to those who were married. This could be linked to the lack of social support, which adds to stress and lowers mental health.

The place of residence was also identified as a significant determinant of mental health status in the study. Compared to the Western Cape, residing in the rest of the South African provinces was associated with a lower risk of poor mental health after controlling for migration status.

LIMITATIONS

Notwithstanding the robust findings, the study has some limitations. First, the numbers in some of the racial sub-categories such as Whites and Indians/Asians constitute very few respondents, which makes it difficult to draw inferences from the results for these groups. Second, the available data makes it difficult to determine if a move represents a 'return' rather than 'migration'. Future research should consider employing more representative data for inferences regarding under-represented racial groups such as Whites and Indians/Asians.

CONCLUSION AND RECOMMENDATIONS

The aim of the study was to evaluate whether there are differences in the mental health status of migrants and non-migrants in the South African context, considering sociodemographic factors. The results highlighted significant associations between migrants and non-migrants with the relationship being compounded by sociodemographic characteristics. The study found empirical evidence that African migrants are at heightened risk of depressive symptoms, compared to other races. Both migrant and non-migrant African groups were more vulnerable to depressive symptoms than Coloured and White migrants and non-migrants. There were also significant differences in the way sociodemographic characteristics were associated with mental health status. Migrants with lower sociodemographic status were more susceptible to poor mental health, highlighting the unique challenges and threats that are faced by economically-deprived migrants. The gender analysis revealed significant differences in the mental health status of males and females, with male migrants

being impacted more than females. Being married was significantly associated with better mental health status. These findings provide insights into the racial, gender and sociodemographic dimensions of poor mental health in the migrant community in South Africa, which policy-makers can incorporate into intervention strategies. A key insight of the results is that strategies that impact on migration, such as local employment, housing and urban planning are likely to have important mental health outcomes at the population level. Therefore, there is a need to address neighborhood-level material deprivation and unemployment to reduce migration, which ought to impact positively on mental health.

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