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Mental distress and substance use among rural Black South African youth who are not in employment, education or training (NEET)

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Abstract

Background: South Africa (SA) has one of the highest rates of youth unemployment and youth who are not in employment, education or training (NEET), even higher among Black South Africans. SA's NEET rates are 3 times those of UK; 5.4 times of Germany; 1.3 times of Brazil; and 2.5 times of Malaysia. Given that youths between 15 and 24 years of age make up 24% of the total population, these are significant challenges for the economy and further fuel the cyclical, pervasive and enduring nature of poverty. We hypothesised that rural youth who are NEET would have a greater prevalence of mental disorders and higher rates of substance use compared to their non-NEET counterparts. The objective of the study is to determine the differences in rates of psychological distress and substance use between NEET and non-NEET rural African 14- to 24-year-old young men.

Methods: The study took place in a remote and rural district municipality in KwaZulu-Natal, South Africa. We divided the district's five sub-municipalities into two clusters (large and small) and randomly selected one from each cluster for inclusion in the study. We further randomly selected wards from each sub-municipality and then rural settlements from each ward, for inclusion in the study. We recruited young men as part of a larger study to explore sociocultural factors important in gender-based violence in rural SA. We compared 15- to 19-year old and 20- to 24-year old youth NEET and non-NEET on rates of psychological distress symptoms (depression, anxiety, suicidal thoughts, hopelessness and worthlessness) and substance misuse (including alcohol, cannabis, other recreational drugs) using a Multivariate Analysis of Variance (MANOVA) statistics at $p < .005$ level of significance level.

Results: About 23% of the 355 male participants were NEET. There were no statistically significant differences in psychological distress or substance use between youth NEET and non-NEET, controlling for age.

Conclusion: The study highlights difficult transitions to post-secondary education and work for Black youth in rural SA where opportunities for employment are limited. Education, training and employment appear to offer limited benefit.

Keywords

Poverty, education, unemployment youth, depression, alcohol, South Africa

Background

Poverty, a major global challenge affecting over 600 million people worldwide (World Bank, 2020), has pervasive and enduring consequences that impact many life domains including educational and employment opportunities, physical and mental health (Ziglio et al., 2012). While global poverty rates had been steadily declining, an estimated 9.2% still lived below the poverty line of US$1.90 per day in 2017. Global estimates suggest that the COVID-19 pandemic could worsen poverty outlooks or directly affect approximately 150 million people, 20% more than before the pandemic (Laborde et al., 2021).

Many of the countries with the highest poverty rates are in Sub-Saharan Africa (World Bank, 2020), with an additional 23% of the total population and 15% of the rural population expected to become newly poor as a result of the COVID-19 pandemic (Laborde et al., 2021). South

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Africa (SA) is relatively affluent compared to most other countries in the region, however, poverty presents an ongoing challenge despite government efforts aimed at reducing poverty (World Bank, 2018a). Before the COVID-19 pandemic, there had been periodic improvements in poverty rates in the country, with an estimated 55.5% of adults living below the upper bounds of the poverty line (World Bank, 2021) and 37.6% living below the international poverty line (World Bank, 2018a).

Poverty distribution by South African Province

South Africa has the highest levels of income inequality in the world with a measure of wealth distribution (Gini coefficient) of 63.4 compared to Slovenia with a Gini coefficient of 24.6 (World Population Review, 2021a). Differences in poverty rates occur along the lines of race, gender and geographic location in SA (World Bank, 2018a). Poverty is highest among the Black population, with 47% of households headed by a Black person experiencing poverty compared to 23% among households headed by a person of mixed race (referred to as Coloured in SA; World Bank, 2018b). In comparison, poverty rates are lowest among Indian/Asian, and White South Africans, at approximately 1%, for each of these population groups (World Bank, 2018b). Furthermore, Black youth are overrepresented among individuals who are not in education, employment or training (NEET) in SA. While Black South Africans make up 80.8% of the national population, Black youth are overrepresented (88.3%) among the NEET in the country. South Africans of mixed race (known as Coloured) are 8.8% of the population and 8.0% of the NEET, while White (7.85%) and Asian (2.58%) groups, have far lower numbers of NEET youth at 2.6% and 1.2%, respectively (Hurlbut, 2018).

Rural versus urban differences

Education and employment are critically important tools in the sustainable alleviation of poverty (Armstrong et al., 2008). The dynamic and complex relationships among these elements can be understood within a number of frameworks and perspectives, including the impact of Adverse Childhood Experiences (ACEs; Manyema & Richter, 2019; O'Connell et al., 2009). The effects of poverty in childhood may persist across the life course and multiple generations in that, severe and prolonged poverty during childhood may negatively impact neurodevelopment, increasing the chances of social, emotional and cognitive challenges (Manyema & Richter, 2019; O'Connell et al., 2009). In turn, these challenges increase the likelihood of engaging in risky health behaviours with negative physical, mental health, vocational and educational outcomes. Furthermore, low parental education (also associated with poverty) has been linked to limited opportunities for their children (Duncan, 2019; Manyema & Richter, 2019; O'Connell et al., 2009). Consequently, young people with low educational attainment are less able to compete for highly skilled higher paying jobs, thus perpetuating inequalities and the scope of opportunities. This intergenerational effect increases the likelihood that parents who live in poverty may also have offspring who experience childhood poverty (World Bank, 2018a), thus repeating the cycle.

Compared to their urban counterparts, youth in rural or remote African communities face additional challenges, linked to the dearth and inequality of opportunity (Hurlbut, 2018), reduced quality of life, with higher rates of poverty, limited resources (Bantjes & Kagee, 2013; Booysen, 2003; Petersen & Lund, 2011) and risk of mental disorders (Patel & Kleinman, 2003). Adverse childhood experiences such as trauma, poverty, violence, chronic illness and substance misuse in the family are not uncommon in South Africa, and are among the most commonly recognised risk factors for educational, adolescent mental health and substance misuse challenges (Manyema & Richter, 2019; World Health Organization, 2017, 2019).

In the South African province of KwaZulu-Natal, the Harry Gwala district is an example of a rural community living in poverty. Many residents of the district live in absolute poverty with families lacking basic necessities, limited access to services and limited opportunities for quality education. With a shortage of employment opportunities, families in this area also experience multi-generational poverty as the cycle of deprivation persists from parents to children and their own children thereby maintaining low levels of household wealth. Characterised by multidimensional poverty, this predominantly Black African district intersects high rates of poverty, lower educational attainment and multiple ACEs (Massyn et al., 2020). The South African Multidimensional Poverty Index (SAMPI; World Bank, 2018a), consists of four weighted dimensions, including health, education, living standards and, economic activity.

Youth not in employment, education and training (NEET)

The term NEET is used to describe young people not in employment, education or training. Education has an inverse relationship with poverty and is, thus, an important tool in the alleviation of poverty (Weber et al., 2007). Although rates of young people who are NEET vary by gender, age, country and race (Lolwana et al., 2015), the negative impact on livelihoods and mental health is universal. With one of the highest youth unemployment rates in the world (World Population Review, 2021b), SA faces a significant challenge for the economy given that youths between 15 and 24 years of age make up 24% of the total population (Organisation for Economic Co-operation and Development [OECD], 2015b). Comparing NEET rates for the persons aged 15 to 24 by country in 2018, South

Africa had rates that were 3 times those of UK; 5.4 times of Germany; 1.3 times of Brazil; and 2.5 times of Malaysia (Khuluvhe & Negogogo, 2021). Furthermore, of all South African provinces, KZN has the highest number (approximately 22%) of the NEET with 26% of youth coming from poorer households (De Lannoy & Mudiriza, 2019).

Another important consideration is that South African youth face additional challenges related to the legacy of apartheid, which severely restricted education, employment and entrepreneurial prospects among the Black population. Against this backdrop, there are high rates of interpersonal violence (Massyn et al., 2020; Mngoma et al., 2021), and arguably, many young people would have experienced or witnessed some form of serious violence in childhood. For example, a study of youth in a rural South African community showed that exposure to adverse childhood experiences is common; and that these experiences, including emotional abuse and emotional neglect, were associated with greater odds of reporting depression and suicidality, in males (Jewkes et al., 2010) and other behavioural difficulties (Felitti et al., 2019). Further evidence shows that being NEET also has a bidirectional relationship with symptoms of psychological distress such that depression and anxiety in early youth may be associated with an increased risk of being NEET in later youth and young adulthood (Baggio et al., 2015; Huesmann et al., 2019) conversely, youth who are NEET are at an increased risk for depressive and anxiety symptoms as a consequence of prolonged periods of functional inactivity (Waghorn & Chant, 2005).

Few studies have explored social functioning and antecedents of emotional distress in young men living in rural South African communities. While homogeneous in poverty, differences may exist among subgroups of NEET youths. Determination of their characteristics stands to advance our knowledge, perspectives and understanding of this demographic group. Furthermore, there is a paucity of studies exploring interrelationships between a lack of youth educational, training and employment opportunities with mental health challenges and substance misuse, particularly, in rural, remote and impoverished areas in Africa. It is anticipated that this information would also help inform public health and policy interventions. We hypothesised that rural youth who are NEET would have a greater prevalence of mental disorders and higher rates of substance use compared to their non-NEET counterparts.

The objective of the study is to determine the differences in rates of psychological distress and substance use between NEET and non-NEET rural African young men between the ages of 14 and 24 years.

Methods

Study context

The study took place in the remote, rough terrain, rural and impoverished Harry Gwala District municipality [District Code DC43] in KwaZulu-Natal province; an area with a 44% youth unemployment rate, interpersonal violence (Mngoma et al., 2016) and high incidence of self-inflicted injury in young men (Massyn et al., 2018; Mngoma et al., 2021; Statistics South Africa, 2018). The Harry Gwala District is a low density and widespread municipality of over 492,000 inhabitants, located 200 km southwest of Durban, with 61% of the population under 25 years of age (Massyn et al., 2018).

Study design and data collection

We recruited young men and boys as part of a larger study to explore sociocultural factors associated with gender-based violence. The study area had five sub-municipalities, and we classified them into small and large areas according to size. We randomly selected one sub-municipality from the large group and one from the small group for inclusion in the study. We then randomly selected 9 out of 18 wards in the large area and 4 out of 10 in the smaller area for a total of 13 wards. We categorised the wards into small and large wards, and then randomly selected two and four traditional settlements per ward, respectively.

Young men aged 14 to 24 years who lived in the area and spoke isiZulu language were randomly selected for inclusion in this study and the response rate was 98%. Once consent had been obtained, participants completed the survey in the widely spoken isiZulu language using the ACASI: Audio Computer-Assisted Self-Interviewing Software (ACASI) system (Tufts University, 2014), in privacy.

Ethical approval

The study was reviewed and approved by the General Research Ethics Board at Queen's University, Kingston Ontario, Canada (reference number GENG-008-08) and the Biomedical Research Ethics Committee of the University of KwaZulu-Natal, South Africa (reference number BF007/08).

Measures

Socio-demographic variables. We collected demographic information including age, current education status, employment status, marital status and household wealth. We estimated household wealth using locally relevant proxy assets such as household ownership of a working vehicle, working television, landline telephone, bank account and cattle. Ownership of each asset was assigned a score of 1 and an additional score of 1 to 5 for the number of head of cattle owned (Moyo, 2015). Cattle ownership is an important proxy of wealth in this rural community. We then constructed a composite score with possible scores ranging from a minimum of 0 to a maximum of 10. Similar proxy measures are commonly used to estimate household wealth in surveys (Rutstein, 2008). We created the NEET variable by combining education and employment variables similar to the OECD (2018) approach.

Psychological variables. We used the well-established 53-item self-report Brief Symptom Inventory (BSI®) to assess symptoms of psychological distress (Derogatis, 1993). The BSI has been used in non-clinical populations, in African contexts (Shacham et al., 2008) and among isi-Zulu-speakers (Collings, 1995; Shanahan et al., 2001). The psychometric properties of the BSI have been established in some Sub-Saharan Africa contexts. For example, in a study based in Western Kenya, the internal consistency values for the subscales ranged between .63 and .78 (Shacham et al., 2008). The convergent validity with the PHQ-9 was .64 for depression and .68 for anxiety.

Likewise, the SCL-90-R (parent instrument of the BSI) has been validated for isiZulu-speakers and the sensitivity of .70 and specificity of .77 were reported (Shanahan et al., 2001). The participant rates how much each psychosocial problem has distressed or bothered them during the past 7 days, and scores range from 0 (has bothered me not at all) to the highest score of 4 (has bothered me extremely; Derogatis, 1993).

Substance use. To establish patterns of substance use, we asked participants about their use of alcohol, cannabis and other recreational drugs using questions drawn from the Ontario Student Drug Use and Health Survey (OSDUHS). The OSDUHS has been extensively used to monitor trends in substance use among young people (Boak et al., 2017) and considered one of the world's longest running surveys of youth substance use. We asked questions related to the frequency of substance use in the past year and past month, intoxication and binge drinking. The following are some examples of the questions asked, (1) How many times did you have alcohol to drink this past year/past month? (Alcohol includes beer, wine, liquor, utshwala, umqombothi, imfulamfula, ugavini and isiqatha); (2) Now think back over the last 2 weeks. How many times did you have five or more drinks in a row? Count each drink. An alcoholic drink is counted as a small bottle or can of beer, a glass of wine, a shot of liquor, a glass of mixed drink, a cup or glass of utshwala, umqombothi, imfulamfula, ugavini and isiqatha; (3) When you drink alcoholic beverages, how often do you drink to feel pretty drunk? Would you say never or very infrequently, less than half of the time, about half of the time, more than half of the time, very frequently or always? (4) How many times did you use marijuana [dagga] to get high in the past year/past month? How many times did you use an illegal drug other than marijuana [dagga], such as cocaine, crystal meth, mandrax or heroin in the past year/past month?

We categorised frequency of alcohol use as follows: monthly drinkers (those who had one to two drinks per month), weekly drinkers (those who had one to two drinks per week) and daily drinkers (those who had three or more drinks per week). Cannabis use and use of other recognised drugs in the environs were similarly categorised.

Data analysis

The data were analysed using the Statistical Package for the Social Sciences SPSS® version 23.0 The data were analysed using the Statistical Package for the Social Sciences SPSS® version 23.0 (IBM, 2020). We examined sample characteristics and distribution of the measures using descriptive statistics (minimum, maximum, median, mean and standard deviation scores) to determine symptom severity for depression, anxiety symptoms, hopelessness, worthlessness and suicidal thoughts. Further, we compared the rates of psychological distress symptoms between the NEET and non-NEET controlling for age using Chi-squares. A Multivariate Analysis of Variance (MANOVA) was used to compare the NEET and non-NEET for psychological symptoms and substance misuse between 15- and 19-year old and 20- to 24-year old youth at $p < .005$ level of significance level.

Results

Characteristics of the sample

A total of 355 Black South African young men between the ages of 14 and 24 years participated in the study. The mean age (*SD*) was 18.6 (2.7) years and 23.1% were NEET (see Table 1 for more descriptive statistics).

Psychological distress and substance use between NEET and non-NEET youths

Figure 1 shows the rates of symptoms of depression, anxiety, hopelessness, worthlessness and suicidal thoughts among the NEET and non-NEET youths. The results of the study showed that there were no statistically significant differences in the rates of psychological distress symptoms between the two groups when controlling for age.

There were no statistically significant differences in the rates of substance use (see Table 2) or severity of psychological distress between the younger and older NEET and non-NEET youths (see Figures 2 and 3 for estimated marginal means).

Discussion

Youth is a period of significant transitions and growth; therefore, ACEs and indeed, hardship experiences have potential to alter the life trajectory. The critical years characterised by cognitive, personality and emotional development may confer advantages or disadvantages to young people by virtue of the social circumstances of their birth and location. This stage is all the more relevant since 75% of mental disorders have their genesis in the first 25 years of life. A limited number of studies have explored the complex relationship between NEET status, poverty, mental wellbeing and substance misuse in rural Africa, particularly

Table 1. Participant demographic information.

	NEET, $n = 84$ (23.7%)	Non-NEET $n = 271$ (76.3%)
Age (years)		
Median (min-max)	21 (17–24)	18 (14–24)
Mean	21.1	17.8
Age groups*	*n* (%)	*n* (%)
14 years	0 (0)	35 (12.9)
15–19 years	17 (20.2)	173 (63.8)
20–24 years	67 (79.8)	63 (23.2)
Household wealth		
0–3	42 (50.1)	127 (46.9)
4–7	33 (39.2)	100 (36.9)
8–10	9 (10.8)	44 (16.2)
Relationship status		
Partnered %	51 (60.7)	105 (38.9)
Highest level of education attained (%)		
No formal education	1 (1.2)	1 (0.4)
Grade 3	1 (1.2)	0 (0.0)
Grade 4	1 (1.2)	0 (0.0)
Grade 5	2 (2.4)	3 (1.1)
Grade 6	4 (4.8)	10 (3.7)
Grade 7	7 (8.3)	31 (11.4)
Grade 8	5 (6.0)	35 (12.9)
Grade 9	8 (9.5)	31 (11.4)
Grade 10	15 (17.9)	49 (18.1)
Grade 11	5 (6.0)	60 (22.1)
Grade 12	34 (40.5)	41 (15.1)
Diploma/college	1 (1.2)	7 (2.6)
Bachelor's degree	0 (0.0)	3 (1.1)

*Level of significance, $p < .001$.

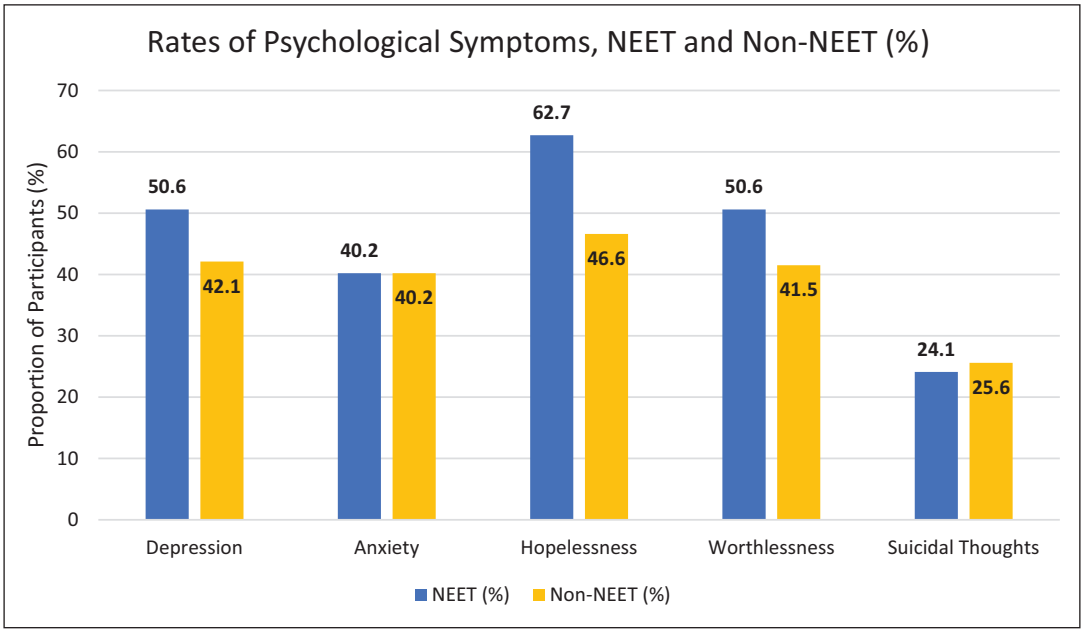

Figure 1. Rates of psychological distress symptoms among NEET and non-NEET youths.

Table 2. Patterns of substance use among youth NEET vs. non-NEET.

	NEET, *n* = 84 (23.7%)	Not NEET, *n* = 271 (76.3%)
Alcohol use		
Non-drinkers	15 (31.3)	45 (39.5)
Monthly drinkers	17 (35.4)	32 (28.1)
Weekly drinkers	7 (14.6)	17 (14.9)
Daily drinkers	9 (18.8)	20 (17.4)
Binge drinking		
Non-binge drinkers	6 (18.2)	23 (34.3)
Monthly binge drinkers	14 (42.4)	20 (29.9)
Weekly binge drinkers	8 (24.2)	12 (17.9)
Daily binge drinkers	5 (15.2)	12 (17.9)
Drunkenness		
Never to less than half of the time	29 (60.4)	78.0 (69.0)
About half of the time	14 (29.2)	17 (15.0)
More than half of the time to always	5 (10.4)	18 (15.9)
Cannabis use		
Non-users	6 (23.0)	7 (25.0)
Monthly users	8 (30.8)	7 (25.0)
Weekly users	3 (11.5)	5 (17.9)
Daily users	9 (34.6)	9 (32.1)
Other drug use		
Non-users	0 (0)	3 (25.0)
Monthly users	3 (50.0)	3 (25.0)
Weekly users	1 (16.7)	2 (16.7)
Daily users	2 (33.3)	4 (33.3)

in areas with a transgenerational legacy of racial segregation and high levels of historical violence.

In recognition of the employment, education and training challenges faced by the country's young people, the government of South Africa created national, provincial and local opportunities to attempt to mitigate the impact of poverty on health (National Youth Development Agency, 2016). Some of the targeted interventions focus on the multifactorial and multidimensional nature of these challenges. Initiatives include on the job training, internships, a variety of post-secondary vocational institutions, micro-finance funding options and other forms of support designed to improve young people's chances to succeed in their transitions to post-secondary training and employment. Despite these efforts, scores of rural youths still struggle with these transitions. Of concern, the impact of NEET status has been found to persist into older years with a direct association with poverty indices (Khuluvhe & Negogogo, 2021). At a local level, the Harry Gwala District has implemented youth initiatives including, Operation Sukuma Sakhe (Rise up, Let's build), which identifies children who are orphaned, abandoned or otherwise destitute and connect them with relevant services, and this includes out-of-school youth (IDP Harry Gwala, 2020).

A limitation of categorisation is the risk of presenting heterogeneous youth with disparate childhood experiences and households as homogenous. Therefore, there may be within-group differences unexplored with premorbid or concurrent mental disorders. The specific duration of non-participation in employment, education and training was not measured in this study and therefore the temporal relationship with symptom severity and substance misuse is unknown. While findings can inform policy, detailed disaggregation of findings would be required for targeted interventions.

Studies have reported the impact of poor mental wellbeing on education, vocational training and job seeking (De Lannoy et al., 2018; De Lannoy & Mudiriza, 2019). It could be hypothesised that the severity of early psychological distress alone would be challenging for the youth if vocational opportunities existed. However, this would be difficult to determine given the very low employment rates in the community. Conversely, unemployment and frustration with seeking employment also have a direct impact on mental wellbeing and self-esteem (De Lannoy et al., 2018). About a quarter of the youth and young adults were NEETs. In many African societies and broader afield, education is promoted and seen to be a vehicle out of poverty and better life prospects. Education without vocation likely leads to frustration as it confers little benefit in these primarily agrarian communities.

Our study could not convincingly determine whether drug and alcohol use preceded NEET status or was a consequence of being NEET. Studies have described

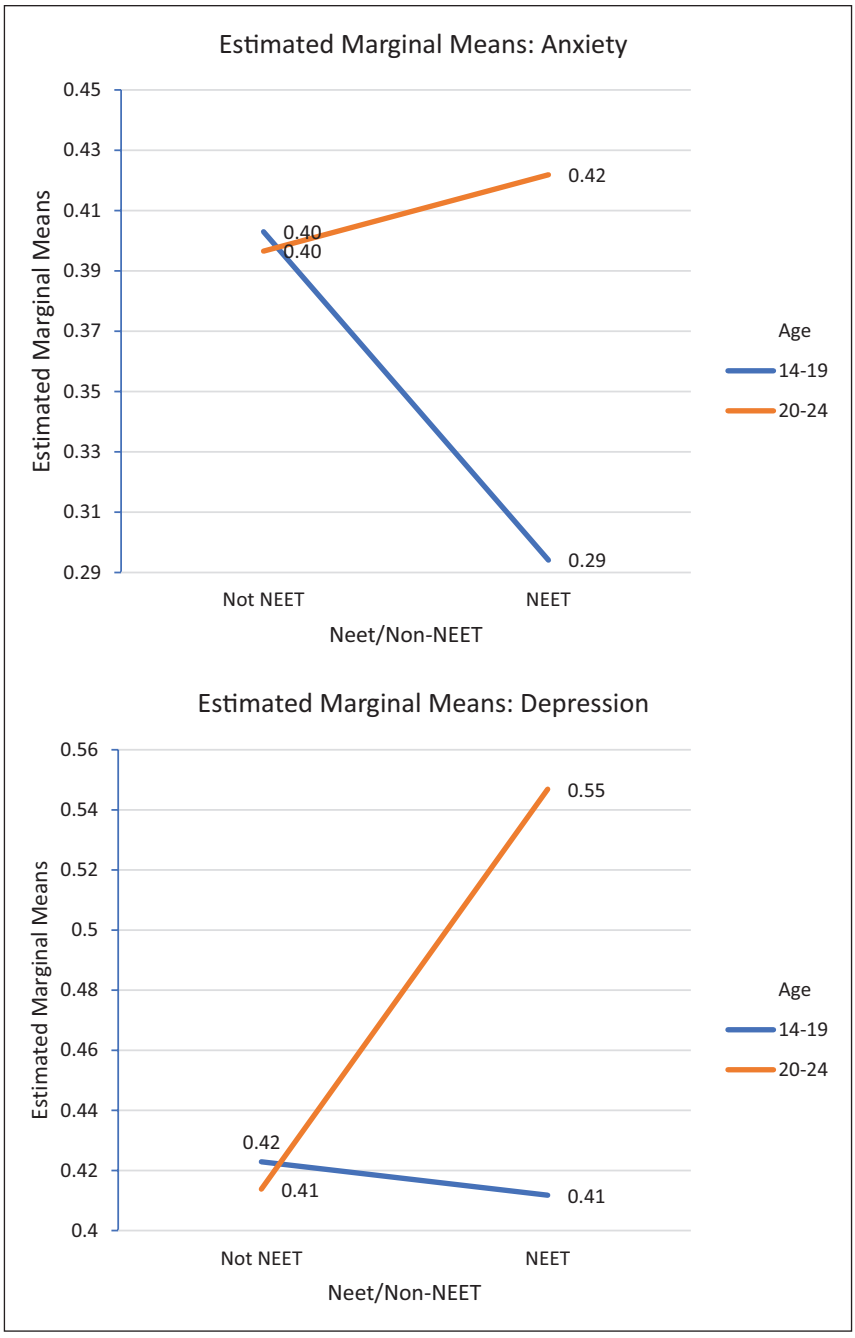

Figure 2. Estimated marginal means for anxiety and depressive symptoms.

the "discouraged job-seeker" as a sizeable proportion (17%–21%) of the 15- to 24-year-old NEET populations (De Lannoy & Mudiriza, 2019; Khuluvhe & Negogogo, 2021); hopelessness would understandably contribute to this. Higher levels of hopelessness among NEET youth may indicate a state of learned helplessness and amotivation in the population. With learned helplessness and amotivation, NEET youth are less likely to competitively engage in job seeking. This may be further compromised by the effects of substance use and affective symptoms.

Depression and anxiety also impair ability to competitively seek and sustain employment. As with alcohol and substance use, this effect may be bi-directional whereby mental symptoms affecting job acquisition and the absence of employment affecting mental wellness.

Unemployment and poverty are disincentives for lengthy years of commitment to education among some youth as put by a young man, "what's the point of education if you can't find a job". In some cases, individual employment was insufficient to meet the basic household poverty needs even

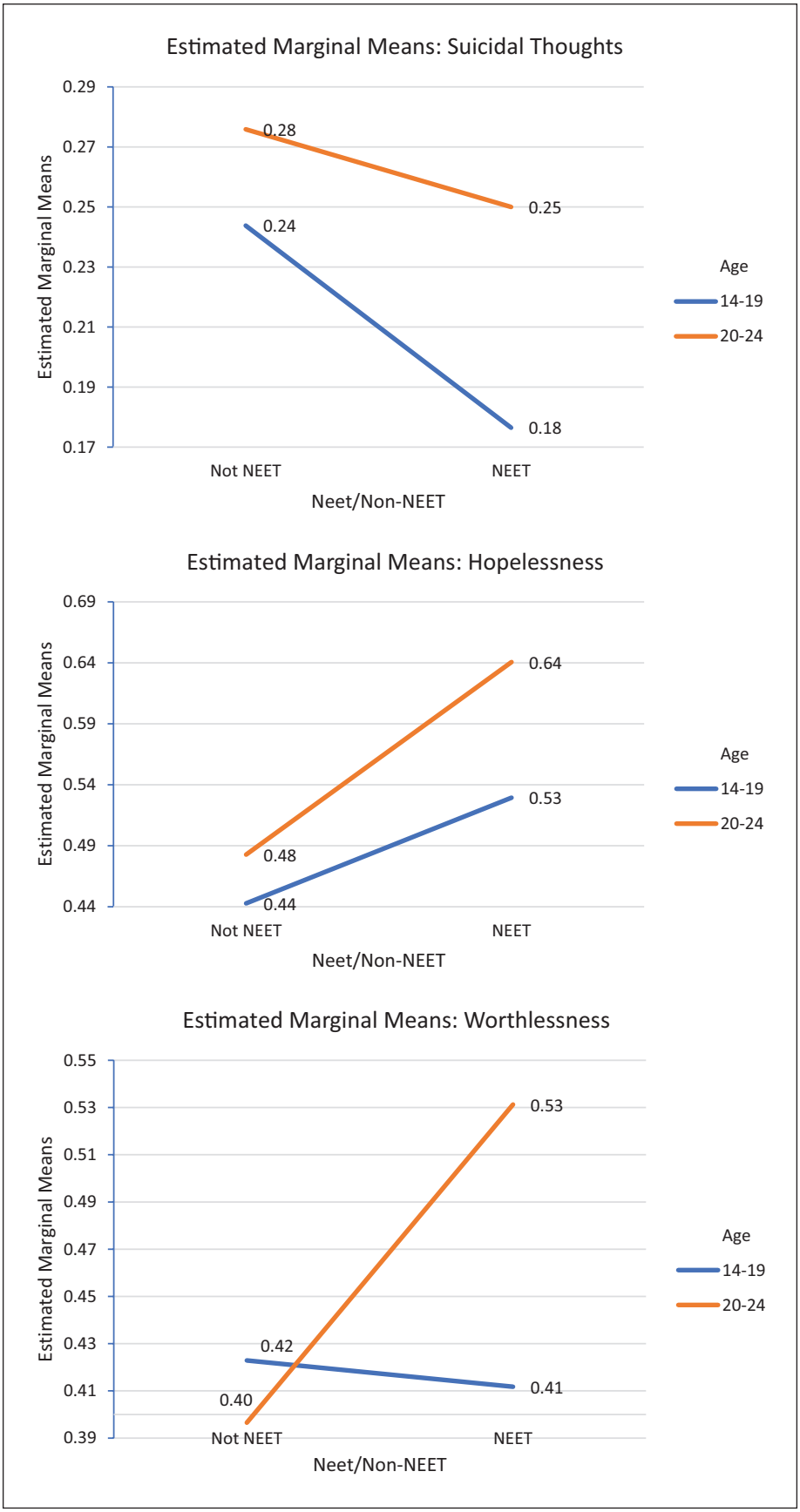

Figure 3. Estimated marginal means for suicidal thoughts, hopelessness and worthlessness.

when compounded with other domestic income. In addition, the study was unable to determine the number of failed attempts at education or employment in these youth or the probability that some were excluded from education due to problematic or maladaptive behaviours.

The dearth of employment opportunities is likely to be an important driver of rural – urban migration with some of the most able and confident youth leaving and the gradual fragmentation of societal structure. We are unable to determine from this study whether some of the participants are the youth who have been unable to migrate or still considering leaving the community. Although sampling was carried out during the "homecoming" season for urban migrants, one cannot ignore the striking size of the Black NEET population and the additional interplay of rural existence, depression, anxiety and harmful alcohol use on these young men.

There is an urgent need to expand access to post-school education as well as training opportunities in order to support the expanding NEET. This will invariably require resource allocation to both school and non-school completers. While virtual or remote work and learning has been widely embraced internationally and in more affluent areas, this community experiences an expanding digital divide further exposed by the COVID-19 pandemic. In the future, alternative education and vocations may need to be developed and resourced.

Limitations

Several study limitations are worth noting in this report. One of the limitations is that in this study we did not distinguish between jobseekers and those who had given up looking for work, although, given the young age of the participants, that may not be the case. Youth who are NEET are not necessarily a homogenous group.

Another limitation is that with a cross-sectional study design, it is not possible to determine whether psychological distress or mental states preceded or were as a consequence of unemployment, and/or non-participation in education or training.

The duration of being NEET, which was not measured in this study, may also influence the youths' mental or emotional state such as feelings of frustration, depression and hopelessness. That notwithstanding, it does not reduce the experience or its severity among these youth. Likewise, since this was a descriptive study, participants' future aspirations may influence their trajectory. Some studies have shown that NEET youths may not easily transition to work, further education or training (National Youth Development Agency, 2016), thus further increasing the likelihood of psychological distress although conversely, this could be related to pre-existing mental challenges.

This study raises important questions about possible multifactorial and multidirectional associations between education, employment and mental wellbeing in rural South African youth with NEET youth potentially experiencing worse functioning than their peers. Initiatives, offering a combination of local, micro-finance, coaching and sustainable employment can have an impact on youth and adult mental health. Invariably, policies that focus on rural household sustainability and/or the location of small and medium scale industries may be key to the availability and access to decent and meaningful work opportunities. The structural limitations of employment and education in this community were insufficient to confer significant benefits on emotional wellbeing. Local infrastructure such as good roads, electricity, clean water and reliable internet access play important roles in public health and wellness infrastructure. Paradoxically, rural development will also make these areas more attractive for the health professionals required to support these communities.

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Author contributions

First author contributed to all stages of the research, data analysis and manuscript preparation. Second author contributed to the writing, reviewing and editing of the manuscript.

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