

# Loneliness and psychological well-being among the elderly in Buffalo City, South Africa

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## Abstract

This study examined the correlation between loneliness and four dimensions of psychological well-being (PWB) of old people in South Africa as they vary by their socio-demographic characteristics. Respondents were a non-probability/random sample of 301 elderly in Buffalo City, South Africa (female = 69.1%, male = 30.9%; mean age (old age home /private home) = 75.43 /74.39 years, SD (old age home /private home) = 7.25 /7.68 years; black = 57.9%, white = 42.1%) were used. The respondents completed the Ryff Psychological Well-being Scale (RPWBS) and the University of California Loneliness Scale (UCLALS). Hierarchical regression analysis results indicate ethnicity is predictive of loneliness. Specifically, black people had both lower levels of loneliness and autonomy compared to the white elderly. Moreover, white elderly with low levels of loneliness had higher levels of self-acceptance compared to the black elderly. These findings suggest ethnic affiliation to moderate self-acceptance, environmental mastery, and autonomy; except for purpose in life. Interventions to support the elderly with loneliness should prioritise building their social capital base for psychological well-being.

**Keywords:** elderly, ethnicity, loneliness, psychological well-being, South Africans

## Introduction

The world's elderly population (those 65 years and above) is fast increasing, calling for evidence-based interventions to support this population. For instance, as of 2015, total population of the elderly was more than 900 million, with a projection to rise to 1.4 billion by 2030 (He et al., 2016; United Nations, 2015a). Europe and Asia still have the highest number elderly people, presently grappling with the COVID-19 pandemic. By 2050, about 30% of Europe's population would be more than 65 years which is cause for concern (United Nations, 2015b). In Asia, Japan has the highest number of elderly people in the world with 26.6% while Qatar and the United Arab Emirates (UAE) have the least, with just 1% of the global population of the aged (He et al., 2016).

Like the rest of the world, rapid aged population growth has been reported in Africa (Ghana Statistical Service, 2013; Kwankye, 2013). In 2015, Sub-Saharan Africa (SSA) alone had 46

million elderly population (World Health Organization [WHO], 2018) with a possibility that it may increase in more than two folds by 2050 (United Nations General Assembly, 2012). Specifically, in South Africa, the number of older people increased from 2.8 million in 1996 to 4.1 million in 2011 and is expected to increase to 7 million by 2030 (Statistics South Africa, 2014). The WHO World Report on Ageing and Health presents an even more serious picture of the impact of ageing in the longer term, projecting that the number of older adults in South Africa will increase to 15.4% of the population by 2050 (Daviaud et al., 2019). Global ageing may have a significant impact on diverse issues including how individuals find fulfilment or happiness. Often, older adults experience social isolation and perceive to be lonely, depending on their social ecology (Button et al., 2018; Jarvis et al., 2021; Ralston et al., 2018, 2019). We aimed to explore the correlation between loneliness and psychological well-being in a multi-ethnic sample of South African older adults.

### ***Loneliness and abuse of older adults***

Loneliness refers to a subjective negative feeling characterised by both emotional and social exclusion, which may occur even in the presence of other people (de Jong Gierveld et al., 2006). It is a negative psychological response to a discrepancy between the social relationships one desires and the relationships one has (Yanguas et al., 2018). Emotional loneliness is the absence of an attachment figure or ‘significant others’; while social loneliness is the absence of a circle of people that allows an individual to develop a sense of belonging (Yanguas et al., 2018).

As people age, they tend to experience loneliness to a greater extent either because of living alone or due to a lack of close family ties (Actor et al., 2002; Allen, 2008). Additionally, the experience reduced connections to community activities (Singh & Misra, 2009; Victor et al., 2009). Older adults with cognitive disorders are at an elevated risk for depression (Kosloski et al., 2005; Penninx et al., 1997; Yanguas et al., 2018), especially if they have other comorbid health challenges (Calvo et al., 2013). A decline in cognitive ability increases the probability of institutionalised care (Fratiglioni et al., 2000; Tijhuis et al., 1999). Further, older adults with good subjective health are less likely to experience loneliness than those with poor subjective health (Phaswana-Mafuya & Peltzer, 2017).

With social isolation comes increases in perceived stress, fear of negative evaluation, anxiety, and anger. Social isolation is also capable of diminishing self-esteem and self-worth (Cacioppo et al., 2006). Well-being of the elderly is premised on (i) self-acceptance, (ii) environmental mastery or ability to self-manage, (iii) positive relations with others, (iv) autonomy in decision making, (v) sense of purpose in life, and (vi) belief in personal growth (Galiana et al., 2020; Harling et al., 2020; Kovalenko, & Spivak, 2018; Ryff, 1989). Fulfilment across these six dimensions is associated with hedonic well-being (feeling of experiences of pleasure and enjoyment) and eudaimonic well-being (experiences of meaning in life and purpose: González-Celis et al., 2016). Difficulties in the expression of positive emotions, preoccupation in shortcomings, weakening of the internal locus of control, deterioration of self-esteem, and lack of proper ways to compensate for losses, tend to decrease self-confidence and increase feelings of unfitness. Further, a lack of life satisfaction increased the risk for poorer subjective well-being (Kovalenko & Spivak, 2018).

## ***The South African context***

Amongst South African adults participating in the Study of Global Ageing and Adults Health (SAGE), loneliness has been estimated to affect between 9.9% and 12.5% of those over 70 (Phaswana-Mafuya, & Peltzer, 2017). An overall prevalence of self-reported loneliness of 9.9% was reported with females having higher prevalence of loneliness (10.2%) compared to males (9.5%: Phaswana-Mafuya & Pelzer, 2017). However, as a post-colonial, racially diverse country, the well-being outcomes among the elderly may vary, depending on ethnicity, geographical location, gender, and marital status. Some studies have shown a relationship between certain demographic factors (e.g., marital status, race, or ethnic groups) and a decline in psychological wellness when experiencing loneliness (Bai 2014; Gitlin et al., 2016; Levy et al., 2016; Marks, 2013). For example, unmarried South African older adults were among the loneliest and are more likely to experience a decline in psychological wellness (Phaswana-Mafuya & Pelzer, 2017).

Furthermore, elderly South Africans are vulnerable to abuse due to ageism. For instance, a study in Mafikeng Local Municipality discovered that more than 64% of men and 60% of women experienced ageism and this was largely attributed to loneliness and neglect (Bigala & Ayiga, 2014). Older South African men were vulnerable to physical abuse; while social, emotional, financial, and sexual abuse were high among women (Bigala & Ayiga, 2014). In rural South Africa, black elderly people may be socially isolated and verbally abused, and even killed for allegation of witchcraft (Adinkrah & Adinkrah 2014). Further, it has been documented that a social network and support may mediate the problem associated with being alone or the feeling of loneliness among the elderly (Saracli et al., 2015).

## **Goal of the study**

The current study investigated the moderating effect of ethnicity on the relationship between loneliness and psychological well-being of the elderly South Africans. Our specific research questions were:

- What is the relationship between age, loneliness, and dimensions of psychological well-being?
- How does ethnic affiliation moderate loneliness and the dimensions of psychological well-being?

## **Method**

### ***Participants and setting***

We randomly selected 301 elderly people (female = 69.1%, male = 30.9%; black = 57.9%, white = 42.1%) from Buffalo City, East London, Eastern Cape, South Africa. The mean age for those living in a home = 75.43 years, SD = 7.25 years; mean age for those in their own private homes = 74.39 years, SD = 7.68 years. The Eastern Cape is divided into two metropolitan municipalities (Buffalo City Metropolitan Municipality and Nelson Mandela Bay Metropolitan Municipality) and six district municipalities, which are further subdivided into 37 local municipalities (Statistics South Africa, 2014). Buffalo City Metropolitan Municipality is situated on the east coast of the Eastern Cape Province with a total population above 785 000 (Statistics South Africa, 2014). Sample demographics are presented in Table 1.

**Table 1. Distribution of socio-demographic characteristics of the respondents**

Variables	Frequency	Percentage
<i>Age</i>		
65–69	98	32.6
70–79	100	33.2
80–89	103	34.2
Age range = 65.45–89.1		
<i>Sex</i>		
Male	93	30.9
Female	208	69.1
<i>Marital status</i>		
Married/Living together	95	31.6
Single/Separated/Divorced	113	37.5
Widowed	93	30.9
<i>Living arrangement</i>		
Own/Rented home	110	36.5
Home for the aged	191	63.5
<i>Ethnic affiliation</i>		
White	129	42.9
Black (IsiXhosa)	172	57.1

The racial composition of Buffalo City includes black (92.9%), coloured (2.4%), Asian (0.2%), and white (4.5%) people (Statistics South Africa, 2011). In this study, 93 (30.9%) of the participants were widowed, 113 (37.5%) were single/separated/divorced, and 95 (31.6%) were married/living together. Over a third (36.5%) of the participants were living in private/traditional homes while the rest were living in homes for the aged. Exclusion criteria included a history of cognitive impairment.

### ***Measures***

The participants completed the Ryff's Psychological Well-being Scale (RPWBS: Ryff & Keyes, 1995) and the University of California (UCLA) Loneliness Scale (UCLALS: Russell, 1996). The scales were back translated to isiXhosa language for use with the participants who preferred to respond in their home language.

### ***Psychological well-being***

The RPWBS is an 84-item self-report measure of six dimensions of PWB, including autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance (14 items per dimension). The items are scored on a six-point Likert-Type scale ranging from 1 = strongly disagree to 6 = strongly agree (Ryff & Keyes, 1995). Items 1, 3, 6, 8, 11, and 12 are reverse scored. Higher scores indicate a higher standing on each dimension. In the present study, the overall reliability of score from the RPWB was 0.81. In terms of the RPWBS dimensions, reliability scores were self-acceptance (0.758 full scale, 0.669 for the black group, and 0.475 for the white group), environmental mastery (0.682 full scale, 0.651 black group, and 0.514 white group), autonomy (0.735 full scale, 0.632 for the black group, and 0.376 for the white group), purpose of living (0.639 full scale, 0.505 black group, and 0.387 for the white group), personal growth (0.721 full scale, 0.227 for the black group, and 0.675 for the white group), and positive relations (0.624 full scale, 0.028 black group, and 0.786 for the white group). We used data on four dimensions (self-acceptance, environmental mastery, autonomy, and purpose of living) leaving out personal

growth and positive relation. Personal growth and positive relation were left out due to their low reliability co efficient scores and to avoid misleading results (Kruyen, 2012).

### ***Loneliness scale***

The UCLALS is a 20-item scale designed to measure one's subjective feelings of loneliness as well as feelings of social isolation (Russell, 1996). It is scored on a 4-point Likert scale ranging from 1 = never, to 4 = often. An example item includes: "How often do you feel that there is no one you can turn to?". Previous studies (Russell, 1996) reported internal consistency co-efficient ranging from 0.89 to 0.94 and test-retest reliability of 0.73 (over a year period). In the present study, scores from the UCLALS achieved a Cronbach alpha of 0.72 for the black sample and 0.86 for the white sample (full scale alpha = 0.81).

### ***Procedure***

Approval for the study was granted by the University of Fort Hare's Ethics Committee (LOU011SNT001). We informed the participants of the voluntary nature of the study and of their right to withdraw from the study without seeking permission from the researchers. In addition, we explained to the participants that the potential risks associated with the study were minimal, and of the availability of psychological counselling for those who expressed a need. The respondents completed the surveys during their leisure time. The confidentiality of the respondents was also guaranteed.

### ***Data analysis***

We analysed the data using the IBM SPSS version 25.0. Specifically, we utilised hierarchical regression analysis to predict psychological well-being from loneliness scores with moderation by ethnic scores (we controlled for sex and cognitive capacity through elimination). In the model, we entered loneliness and ethnic affiliation variables, respectively. We estimated these moderating effects by calculating the regression co-efficient for the regression comparisons between loneliness and the three psychological well-being scales (autonomy, environmental mastery, and self-acceptance) for the black and white elderly separately. For this purpose, two separate regression lines were calculated – one for the black elderly and one for the white elderly.

### **Results**

As can be seen in Table 2, loneliness correlates significantly and negatively with all four selected dimensions of the PWB on the 1% level; self-acceptance ( $r = -0.376$ ;  $p < 0.01$ ), purpose in life ( $r = -0.211$ ;  $p < 0.01$ ), environmental mastery ( $r = -0.235$ ;  $p < 0.01$ ), and autonomy ( $r = -0.283$ ;  $p < 0.01$ ). This indicates that the higher the levels of loneliness that the elderly experienced, the lower the levels of PWB they acquired. However, age did not significantly relate with any of the dimensions of PWB. Therefore, we regressed loneliness as a variable on all the dimensions of PWB.

**Table 2. Correlations between age, loneliness and dimensions of PWB**

Variables	1	2	3	4	5
1 Age	–				
2 Loneliness	0.219**	–			
3 Self-acceptance	–0.035	–0.376**	–		
4 Purpose in life	0.004	–0.211**	0.592**	–	
5 Environment mastery	–0.009	–0.235**	0.551**	0.481**	–
6 Autonomy	–0.006	–0.283**	0.573**	0.389**	0.314**

***Predicting PWB by loneliness and ethnic affiliation***

Table 3 presents the results for the moderated hierarchical regression analysis. The moderating effect of ethnic affiliation is significant on the 1% level. For autonomy as a sub-dimension, the change statistics ( $\Delta R^2 = 0.055$ ;  $F(1;295) = 18.685$ ;  $p < 0.01$ ) shows that, with the addition of the product between the two variables (loneliness and ethnic affiliation), there was a significant additional 5.5% of the variance in autonomy. Thus, we conclude that ethnic affiliation moderates the relationship between loneliness and autonomy in elderly people.

**Table 3. Moderated hierarchical regression analyses with loneliness as independent variable, ethnic affiliation as the moderator and the four PWB scales (autonomy, environmental mastery, purpose in life, and self-acceptance) as the dependent variable**

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Change statistics				
				R <sup>2</sup> change	F-change	df1	df2	Sig. F change
<i>Autonomy</i>								
1	0.284	0.081	0.078	0.081	25.991	1	296	< 0.000
2	0.368	0.135	0.130	0.055	18.685**	1	295	< 0.000
<i>Environmental mastery</i>								
1	0.235	0.055	0.052	0.055	17.271	1	296	< 0.000
2	0.397	0.158	0.152	0.102	35.888**	1	295	< 0.000
<i>Purpose in life</i>								
1	0.211	0.045	0.041	0.045	13.786	1	296	< 0.000
2	0.233	0.054	0.048	0.010	3.037	1	295	0.082
<i>Self-acceptance</i>								
1	0.376	0.141	0.138	0.141	48.694	1	296	< 0.000
2	0.424	0.180	0.175	0.039	14.003**	1	295	< 0.000

For environmental mastery, the change in the statistical results ( $\Delta R^2 = 0.102$ ;  $F(1;295) = 35.888$ ;  $p < 0.01$ ) shows that, with the addition of the product between the two variables (loneliness and ethnic affiliation), there exists a significance of 10.3% variance in environmental mastery. Moreover, for the self-acceptance, the change in statistics ( $\Delta R^2 = 0.039$ ;  $F(1;295) = 14.003$ ;  $p < 0.01$ ) shows that with the addition of the product between the two variables (loneliness and ethnic affiliation), there exists a significance of 5.5% variance in self-acceptance.

***Tests of moderation of loneliness by ethnic affiliation on PWB***

As indicated in Table 3, results further revealed that ethnic affiliation moderates autonomy with a change statistics of  $\Delta R^2 = 0.055$ ;  $F(1;295) = 18.685$ ;  $p < 0.01$ ; environmental mastery with the change statistics of  $\Delta R^2 = 0.102$ ;  $F(1;295) = 35.888$ ;  $p < 0.01$ ; and self-acceptance with the change statistics of  $\Delta R^2 = 0.039$ ;  $F(1;295) = 14.003$ ;  $p < 0.01$ , all at 1% level of significance. The regression lines for autonomy are illustrated in Figure 1, for environmental mastery in Figure 2, and for self-acceptance in Figure 3. As can be seen in Figure 1, when

low levels of loneliness are experienced, the black elderly showed lower levels of autonomy than the white elderly did. It can be inferred that an increase in loneliness reduces the level of autonomy of both groups (black and white). However, the white elderly constantly experienced higher levels of autonomy than the black elderly did when experiencing an increase in loneliness.

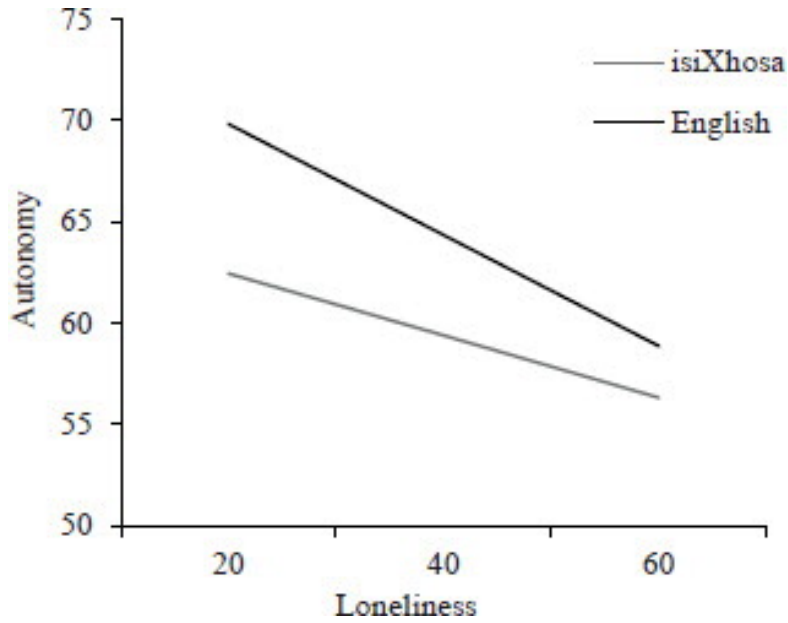


Figure 1. Regression lines of isiXhosa (black) and white elderly with loneliness as the independent variable and autonomy as the dependent variable

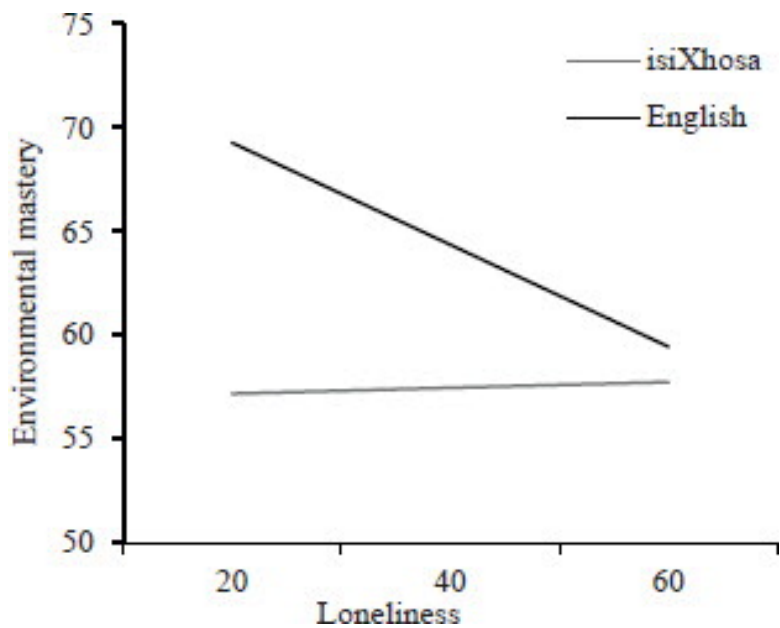
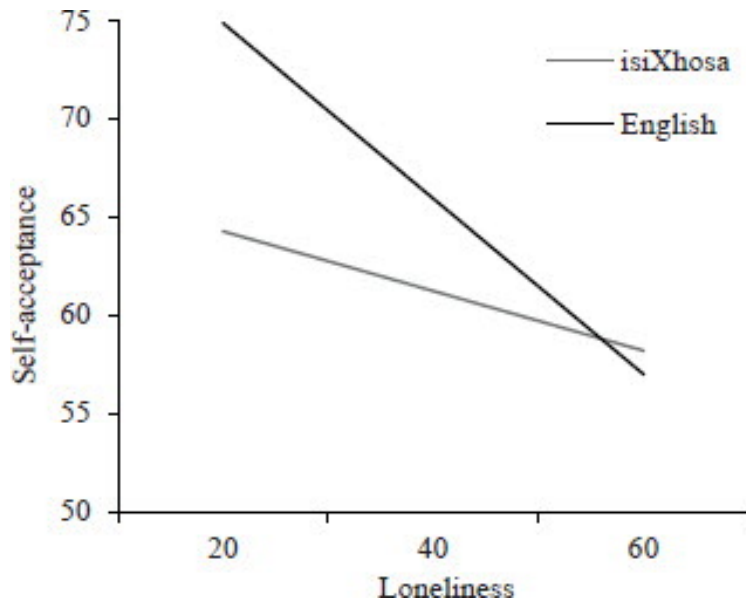


Figure 2. Regression lines of isiXhosa (black) and white elderly with loneliness as the independent variable and environmental mastery as the dependent variable



**Figure 3. Regression lines of isiXhosa (black) and white elderly with loneliness as the independent variable and self-acceptance as the dependent variable**

As depicted in Figure 2, results reveal that when low levels of loneliness are found, the white elderly were inclined to experience significantly higher levels of environmental mastery than the black elderly did. However, the figure also indicates that, with an increase in loneliness, the environmental mastery of the white elderly declines quickly, while the environmental mastery of the black elderly increases slightly. For the white elderly, the slope of the regression line is negative ( $-0.246$ ), while the slope is positive for the black elderly ( $0.014$ ). Although the black elderly participants did not really show a decline in environmental mastery with an increase in loneliness, they constantly showed lower levels of environmental mastery than the white elderly did. With an increase in loneliness, a significant decline in the environmental mastery of the white elderly was found. In Figure 2, the regression lines for the two ethnic affiliation groups are indicated to illustrate the relationship between loneliness and self-acceptance.

Figure 3 shows that the self-perceptions of low levels of loneliness significantly influenced higher levels of self-acceptance among the white elderly compared to the black elderly. Thus, an increase in perceived loneliness was associated with improved self-acceptance of the white elderly participants compared with the black elderly. This difference in the decline is apparent from the values of the two respective slopes, which is  $-0.447$  for the regression line for the white elderly, as opposed to the  $-0.152$  for regression line for the black elderly.

## Discussion

In this study, we examined the correlation between loneliness and psychological well-being among selected elderly South Africans and how ethnicity moderated this correlation. The study found that loneliness negatively related with the well-being of the elderly people studied. Specifically, we found that the higher the levels of loneliness experienced by the elderly, where ethnicity remains constant, the lower the levels of well-being.



Loneliness is a significant risk factor for poor health behaviours, physical health problems, and mental health conditions (Canham et al., 2016). The level of psychological well-being is higher among the elderly who do not feel lonely and have enough opportunities for communication, taking part in a social life, and living with their relatives (Kovalenko & Spivak, 2018). Well-being is the ability to compromise and express sympathy and compassion toward others, personal sense of growing and comprehension at different stages in life, and more positive attitude toward different sides of one's personality (Kovalenko & Spivak, 2018).

We also found ethnicity to moderate the relationship between loneliness and well-being of the elderly people studied. For example, we observed an association between lower levels of loneliness and lower levels of autonomy among the black elderly (the majority group) than among the white elderly (the minority group). Not much has changed in post-Apartheid South Africa for elderly black South Africans in their dire living standards of the elderly black South Africans (Button et al., 2018; Daviaud et al., 2019; Frisoli, 2016). For example, in post-Apartheid South Africa, housing schemes are still exclusively available to white elderly, while black elderly are forced to seek residence in private homes or are left without accommodation and without friends and relatives to care for them (Daviaud et al., 2019; Frisoli, 2016).

We also found that white elderly reported with higher levels of environmental mastery, higher levels of self-acceptance, and lower levels of loneliness than the black elderly. South African older white people may have the advantage of cumulative wealth providing them with better access to health, education, income, and basic public health infrastructures (Kon & Lackan, 2008). They also may have social interaction opportunities and amenities that would promote their sense of wellness (Chane & Adamek, 2015; Chinnappan, 2015; Gana et al., 2013; Sirois & Hirsch, 2013).

### **Limitations of the study and suggestions for future research**

This study was cross-sectional and involved only a small sample of South African elderly people. This limits the generalisability of the current findings. We used self-report measures which is at risk for social desirability bias. Future research should utilise bigger samples and supplemental observational measures to test the replicability of findings among a larger group of racially diverse South African elderly.

### **Conclusion**

The current study found ethnicity to moderate the impact of perceptions of loneliness on autonomy, environmental mastery, and self-acceptance. White elderly with low levels of loneliness had higher levels of self-acceptance compared to the black elderly. Purpose in life did not differ by racial group membership. Interventions to support the elderly with loneliness should prioritise building their social capital for psychological well-being.

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