

RESEARCH ARTICLE:

Poverty, Agency and Suicide: Men and Women

Renier Steyn¹

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Abstract

Assumptions linking poverty with sex, associating poverty with agency, as well as connecting agency with suicide, are widespread. Women are often seen as being affected more by poverty than are men. Men are frequently considered to possess more agency than are women, and men are also more prone to suicide than are women. The research aims to assess if poverty, agency, and suicide differences occur across sexual lines, if a poverty-agency-suicide ideation relationship is supported by data, and how this relationship is influenced by sex. A cross-sectional survey design was used, and interviews were conducted with 3,531 participants. Analyses of variance were performed to calculate whether differences in poverty, agency and suicide ideation exist across sexual lines. Correlation analysis was implemented to test for the poverty-agency-suicide ideation relationship, and regression analyses were used to test the moderating effects of sex on the poverty-agency-suicide ideation relationships. Men and women did not differ significantly in terms of levels of poverty, agency, or suicide ideation. Poverty did relate to agency (a negligible effect), but agency did not influence suicide ideation. Poverty had a significant but small effect on suicide ideation. Sex moderated did not moderate the poverty-agency-suicide ideation relationship. The data do not support established stereotypes and empirical findings regarding sex differences across the poverty, agency, and suicide ideation spectrums. The data also do not support the poverty-agency-suicide ideation relationship, nor does sex influence this relationship. Healthcare professionals should be aware that (well-established) stereotypes do not necessarily materialise in all populations.

Keywords: poverty; agency; suicide; suicide ideation; mental health; sex

Introduction

Stereotypes and data suggest that poverty is associated with sex, with women living more often in poverty (Botreau and Cohen, 2020; Munoz Boudet *et al.*, 2018). Other stereotypes and data suggest that agency is associated with poverty (Murphy *et al.*, 2021; Powell *et al.*, 2017). The agency-sex link is often made (Farnworth *et al.*, 2020; Htun *et al.*, 2019), suggesting that women seem to have less impact than men to influence their circumstances. Poor women, in particular, seem to lack agency (Schein *et al.*, 2011; Sherafat-Kazemzadeh *et al.*, 2021). Agency and mental health also seem to be related (Anaf *et al.*, 2013; Hitlin *et al.*, 2015), where agency is generally associated with better mental health outcomes. When considering the mental health issue of suicide, the role of agency seems paradoxical: agency sometimes seems to prevent suicide (Lucas *et al.*, 2020) and, at other times, to enable it (Broz and Münster, 2016). The dilemma arises in the inherent contradictions (Reyes-Foster, 2016) when agency is simultaneously granted and taken away (Broz and Münster, 2016). In this paper, the aim is to establish whether a poverty-agency-suicide ideation link exists and if this link is dependent on sex. Understanding this link will not only be of theoretical value, but it may be beneficial for the prevention of suicide.

The World Bank (2020a; 2020b) declares US\$3.20 a day and US\$5.50 a day as the poverty lines in lower-middle-income and upper-middle-income countries, respectively. For low-income countries this is US\$2.15 per person per day. Poverty is also a subjective matter and so should not be measured in monetary terms only but also as a subjective feeling of poverty (Mahmood *et al.*, 2018). Multidimensional theories, such as the “capability poverty” theory of Sen (1996), which include indexes on education, health and living conditions, could be useful. In line with this, Bourguignon and Chakravarty (2019: 107) provide a comprehensive definition of poverty “as the failure to reach ‘minimally acceptable’ levels of different monetary and non-monetary attributes necessary for a subsistence standard of living”. This is in line with a definition of poverty as a “lack of social perceived necessities” (Halleröd *et*

¹University of South Africa, steynr@unisa.ac.za

al., 2018: 213), commonly mentioned in poverty definitions. For this study, poverty was measured subjectively with three items regarding participants' fulfilment of basic needs, as posited in the World Values Survey.

Agency is the next concept of concern in this study. Bandura defines agency as "the ability to influence intentionally one's functioning and life circumstances" (Bandura, 2006: 165). Following a comprehensive literature review, Goller and Harteis (2017) define human agency, more specifically, as "the capacity and tendency to make intentional choices, to initiate actions based on these choices, and to exercise control over the self and the environment". Agency is interwoven into the individual's social existence and is dependent on interpersonal relationships and social factors; as such, agency cannot be conceptualised as an individual characteristic of 'independent' actors (Landes and Settersten, 2019). Along these lines, agency can be seen as "part of an ongoing, complex interactional dynamic between individual strength of (moral) purpose and the emotional dynamic of workplace and external social and policy environments" (Day, 2018: 64). For this study, agency was operationalised with a single item from the World Values Survey, enquiring about the amount of freedom of choice and control the individual has.

Suicide is a serious public health issue and is among the top twenty leading causes of death, with more deaths due to suicide than to malaria, breast cancer, homicide, and war (WHO, 2019). The American Psychological Association (American Psychological Association, 2022) defines suicide broadly as the "act of killing oneself", while some dictionaries are more specific, referring to suicide as "the intentional taking of one's own life" (Medical Dictionary, n.d.) and "the act or an instance of taking one's own life voluntarily and intentionally" (Merriam-Webster, n.d.). Cholbi (2021) is more specific, stating that suicide occurs when the actor believes that a certain action, or some causal consequence of the action, would hasten death, and that that actor intends to die by engaging in that action. Suicide is often related to psychiatric disorders (e.g., major depression) and substance use, but it also occurs in the absence of any psychiatric disorder, especially in untenable situations (e.g., declining health) (American Psychological Association, 2022), where a deep feeling of hopelessness persists (Psychology Today, 2022). Apart from these scenarios, suicide also happens in moments of crisis, when individuals lose their ability to deal with life stresses (e.g., financial problems, relationship break-ups) (WHO, 2021). In this research, suicide ideation was measured as a proxy for suicide, based on two items in the World Values Survey, one dealing with the justification of suicide and the other with the justification of euthanasia. It should be noted that while suicide ideation is a prerequisite for suicide attempts and suicide (Teismann *et al.*, 2018), the majority of ideators will never act on their thoughts (Teismann *et al.*, 2018).

Linking Poverty, Agency, and Suicide with a Sex

The World Health Organization states the following: "While the link between suicide and mental disorders (in particular, depression and alcohol use disorders) is well established in high-income countries, many suicides happen impulsively in moments of crisis with a breakdown in the ability to deal with life stresses, such as financial problems, relationship break-up or chronic pain and illness" (WHO, 2021). This may imply that those who are poor may be more prone to suicide in times of crisis. Suicide rates may be elevated amongst the poorest of the poor, given that the American Psychological Association states that situations of extreme or prolonged hardship, such as bereavement or declining health, which is more common amongst the poor, sometimes result in suicide (American Psychological Association, 2022). This risk is compounded by the fact that the (WHO, 2021) states that suicide rates are also high among vulnerable groups who experience discrimination and among "indigenous peoples" (WHO, 2021). It thus makes sense that in 2019, over 77% of global suicides occurred in low- and middle-income countries (WHO, 2021).

The ability to influence one's functioning and life circumstances (Bandura, 2006) and exercise control over the self and the environment (Goller and Harteis, 2017) is a difficult task for the poor. "Poverty can diminish people's ability to exercise agency and empowerment in their lives" (Murphy *et al.*, 2021: 1). It has been found that those living in poverty perceive an inability to change their living circumstances (UK Coalition Against Poverty, 2020), thus demonstrating low levels of agency. In line with the notion that agency exists within a social context (Landes and Settersten, 2019), it has been found that in poorer communities, where there are high levels of unemployment and a lack of social support, individuals feel incompetent – partially due to institutional discrimination, but also because of a self-fulfilling prophecy of being stuck in a poverty cycle (Boardman and Robert, 2000). It was found, for example, that poorer sex workers displayed lower agency in enforcing the use of condoms (Choi and Holroyd, 2007), and that "when examining compound effects of agency and poverty, absence of agency reduces the positive effect of life skills training" (Sherafat-Kazemzadeh *et al.*, 2021-1). Life skills could be seen as a proxy for agency.

The inability to influence your circumstances, which may be the result of poverty and feelings of hopelessness (Roeder and Cole, 2019; Wolfe *et al.*, 2019), is often associated with depression, which is a well-known antecedent to suicide (Jiang *et al.*, 2021; Melhem *et al.*, 2019; Orsolini *et al.*, 2020). Psychology Today (2022) states that suicide often stems from a deep feeling of hopelessness related to the inability to see solutions to problems or to cope with challenging life circumstances. Within a given location (region), those with the lowest incomes are typically 1.5 to 3 times more likely than the rich to experience depression (Ridley *et al.*, 2020). As early as in 1931, the Jewish Telegraphic Agency (23 July 1931) report indicated increased numbers of suicides due to economic hardship. Also, risk of suicide is associated with county-level poverty rates (Kerr *et al.*, 2017). The poverty-suicide link is also evident in articles with titles such as “The impact of creditworthiness on financial well-being, anxiety, depression, hopelessness, and suicide” (Hughes, 2021), where credit ratings were found to be related to psychological well-being. For example, it was found that a loss of income and particularly a sudden loss of income affects mental health negatively (Ridley *et al.*, 2020). Another finding was that hopelessness is a strong moderator of the depression-suicide association (Zhang and Li, 2013). Meta-analyses confirmed the hopelessness-depression-suicide link (Ribeiro *et al.*, 2018), with both depression and hopelessness being predictors of suicidal behaviour. It may well be argued that the hopelessness, or absence of agency, often associated with poverty may result in suicide.

Sex plays a major role in the world of suicidology (Cleary, 2019), and statistics indicate that women are more likely than men to attempt suicide but that men are more likely than women to complete the act (WHO, 2021). On average, 16.3 men and 4.6 women per 100 000 individuals commit suicide (Khazaei *et al.*, 2017). This is related to the gender paradox of suicide (Canetto and Sakinofsky, 1998), with women having higher morbidity but lower mortality from suicidal behaviour than men, contrary to other life-threatening behaviour that is associated with both high morbidity and high mortality. Combine this with the sex-based myths of suicidal behaviours (e.g., that suicide is a masculine act, women are too simple-minded to kill themselves, or that women do it because of lost love and men do it for lost glory), as noted by Canetto (2021), and it is possible to speculate about the agency-suicide link, regarding a specific sex. Jaworski (2010) discusses this matter at length in her article “The gender-ing of suicide”, questioning the matter of agency, focusing on the validity of these myths and stating that “agency in suicide is to be caught in a paradox” where the “freedom to do something also depends on social norms”. She also suggests that “it might be more useful, then, to consider that suicide as an individual act cannot be divorced from the specific contexts and the norms that operate in such contexts” (Jaworski, 2010). These norms seem to favour men, where a masculine and feminine (active and passive) description of suicide is presented to “meet the criteria of masculinist standards of intent” (Jaworski, 2010). The relational nature of agency was mentioned earlier in this article, and it seems evident here too, where men and women act as individuals but also as part of society (social context).

In this paper the link between poverty, agency and suicide is investigated, with the condition that this relationship may be sex specific. This may be important as some report the positive effects of minimum wages on suicide rates (Ahern, 2020; Kaufman *et al.*, 2020) and that increases in earned income among low-wage earners decreases suicide (Mizushima and Noguchi, 2021); others, however, did not find a link between minimum wages and mental health (Kronenberg *et al.*, 2017), or they found that the mental health effect of poverty alleviation interventions was inconclusive (Lund *et al.*, 2011). The empirical data presented here will complement the sex-based agency-suicide debate (Jaworski, 2010), which sometimes seems feministic, rather than evidence-based.

Methodology

In this section the design of the study, sampling, the procedure, measurement instruments used, the appropriate statistical techniques and the ethical considerations are discussed. The World Values Survey (WVS) collected cross-sectional data via interviews in South Africa and only these data were used in this research. The focus of the study was to determine sex-based differences on the absolute levels of poverty, agency, and suicide ideation, and then to test whether sex influences the relationship between these variables. The WVS website provides a detailed description of how individuals were sampled across countries (Inglehart *et al.*, 2014), and every effort was made to sample individuals randomly. The data from the WVS were extracted in the Statistical Package for the Social Sciences format. Demographic statistics were calculated for both men and women to describe the participants. Next, the focus was on descriptive statistics for poverty, agency, and suicide ideation per sex group. Thereafter, the relationships between the variables were calculated, as well as the impact of sex on the relationships between the variables. The research was concluded by discussing the results within the context of the presented literature.

Apart from a few demographic variables, poverty, agency, and suicide ideation were measured. Poverty was measured by means of three items, using the following questions as indicators of poverty:

- “In the last 12 months, how often have you or your family gone without enough food to eat?” The response options are on a four-point scale, where 1 represents “Often”, 2 “Sometimes”, 3 “Rarely” and 4 “Never”. This is V188 in the WVS.
- “In the last 12 months, how often have you or your family gone without medicine or medical treatment that you needed?” The response options are on a four-point scale, with 1 being “Often”, 2 “Sometimes”, 3 “Rarely” and 4 “Never”. This is V190 in the WVS.
- “In the last 12 months, how often have you or your family gone without a cash income?” The same four response options apply as in the preceding two questions. This is V191 in the WVS.

Agency was measured with only one item, namely: “Some people feel they have completely free choice and control over their lives, while other people feel that what they do has no real effect on what happens to them. Please use this scale, where 1 means “no choice at all” and 10 means “a great deal of choice”, to indicate how much freedom of choice and control you feel you have over the way your life turns out.” (V55).

Two questions related to suicide ideation were asked, specifically regarding its justification. The participants were requested to give their opinion on specific matters, as per the following introductory sentence: “Please tell me for each of the following actions whether you think it can always be justified, never be justified, or something in between” The following questions in the WVS were relevant to this study:

- “Suicide” (V207 in the WVS)
- “Euthanasia” (V208 in the WVS)

On this scale, 1 represents “Never justifiable” and 10 represents “Always justifiable”. High scores were interpreted to be reflective of suicide ideation. Sex was assessed with item V240 in the WVS, and this was done by the interviewer through observation. The coding was 1 for “Men” or 2 for “Women”.

Initially, statistical calculations were performed on the demographic variables to get a clear picture of the characteristics of the participants. Then descriptive statistics were calculated on the five questions posed related to poverty and the two each for agency and suicide ideation. Composite scores per construct were created by weighting the items similarly, which is an extremely effective strategy across contexts (Bobco *et al.*, 2007) and is endorsed by the highly respected authors, Cascio and Aguinis (2011). Descriptive statistics for these composite scores were also calculated. Regarding poverty, V188, V190 and V191 were reversed (e.g., 5 - V188), as they were negatively scored and were weighted with 2.5 (e.g., reversed V188 x 2.5) to convert the four-point scale to a scale with an upper score of 10. For the agency item, V55 was left unchanged, as it was positively presented, with a high score of 10 indicative of high levels of agency. Scores on suicide ideation were left unchanged, as the coding was similar, with a maximum score of 10.

Differences across sexual lines were identified using analyses of variance, where the focus was on the mean scores for poverty, agency and suicide ideation for men and women. As the sample is relatively large, statistical significance was set at $p < .01$. To test the effect size of the differences, Cohen d-values (Cohen, 1988) were calculated.² Then the correlations between the variables were calculated, followed by regression analyses, focusing on predicting suicide ideation. As this research focuses on sex, correlation analysis results were presented per sex. Correlations were seen as practically insignificant if below .1, small if between .1 and .3, medium if between .3 and .5, and large if more than .5 (Cohen, 1988). The level of difference between correlations was tested by calculating Z-observed scores (Pallant, 2013)³.

² $d = (\text{Mean}_{\text{Group 1}} - \text{Mean}_{\text{Group 2}}) / \text{Pooled standard deviation of Group 1 and Group 2}$. Cohen defines d-values below .2 as practically insignificant, small if it is between .2 and .5, medium if between .5 and .8, and large if it is more than .8.

³ $Z\text{-observed} = (Z_1 - Z_2) / \text{square root of } [(1/N_1 - 3) + (1/N_2 - 3)]$, with Z_1 and Z_2 being the Z-scores for the correlation of Group 1 and Group 2, respectively, and N_1 and N_2 being the size of Group 1 and Group 2 (Field, 2009). Z-observed scores higher than (+/-) 1.96 were interpreted as indicative of significant differences between the correlations, at $p < .01$ (Pallant, 2013). When Z-observed scores were smaller than (+/-) 1.64, it was assumed that the differences in the correlations were not significant.

Sex was further tested as a moderator between poverty, agency and suicide ideation, in accordance with the calculating guidelines suggested by Mackinnon (2010). Given that the sample is relatively large, statistical significance was set at $p < .01$. With the regression models, differences or improvements of R-squared greater than .02 were deemed significant (Mackinnon, 2010).

The WVS data are open to all interested parties, subject to referencing the database, which has been done in the reference list (see Inglehart *et al.*, 2014). No data were collected specific to this research. At university level, the use of this secondary data was approved by the local ethics committee: 2022_SBL_AC_001_SD

Results

Presented below are the demographic data, as well as the tests for reliability and then also validity. This is followed by a presentation of the descriptive statistics per variable, the correlation between the variables, as well as a regression model predicting suicide ideation, in each case presented per sex. As a final analysis, regression analyses were used to test for the moderation effect of sex in the proposed model.

In total, 3 531 individuals were interviewed. Of these, 1 707 (48.3%) were men and 1 824 (51.7%) were women. The youngest person interviewed was 16 years of age and the eldest, 85 years. The mean age was 37.72, with a standard deviation of 15.675. The age data were positively skewed (.646; se. .041) and the kurtoses were negative (-.484; se. .082), but within a normal range. As far as ethnic groups are concerned, blacks (N=2 700) were the largest group (76.5%), followed by whites (N=427; 12.1%), coloured people (N=307; 8.7%) and those who identified themselves as Indian (N=96; 2.7%), that is, people of Asian descent. Only two participants selected the "Other" option. The level of formal education varied, with 39.5% completing secondary schooling, 4.2% holding degrees and a large number (60.5%) of the participants not having completed their secondary education.

The three items on poverty had a Cronbach alpha coefficient of .864, while the two items on suicide ideation had a coefficient of .907. When performing an exploratory factor analysis including all the items, two factors emerged, explaining 70.579% of the variance. When applying principal component analysis as an extraction method and varimax with Kaiser normalisation as a rotation method, the three poverty items loaded on the first factor with loadings of .840, .886 and .886. The two suicide ideation items primarily loaded on the second factor, with loadings of .953 and .950. Agency did not load particularly well on either factor, with a loading of -.249 on the poverty factor and .026 on the suicide ideation factor.

Below are the central statistics per variable. In Table 1 and all the following tables, suicide represents suicide ideation.

Table 1: Means and standard deviations, statistical and practical differences across sex

Variables / Indicators	Men N=1 707		Women N=1 824		ANOVA		Cohen d
	Mean scores	Std. dev.	Mean scores	Std. dev.	F	p	
V188	4.976	2.543	5.038	2.612	.513	.474	-.024
V190	5.075	2.556	5.162	2.567	.988	.320	-.033
V191	5.538	2.657	5.605	2.629	.560	.454	-.025
Poverty	15.555	6.862	15.800	6.930	1.134	.287	-.036
Agency (V55)	7.173	2.074	7.060	2.087	2.536	.111	.053
V207	4.031	2.905	3.983	2.922	.232	.630	.016
V208	3.941	3.001	3.894	3.023	.209	.647	.015
Suicide	7.971	5.635	7.880	5.687	.221	.639	.016

From Table 1, it is evident that none of the mean scores differed significantly (see p-values) and as could be expected, none of the differences were meaningful on a practical level (see d-scores).

In Table 2, the correlations between the three main variables are presented per sex.

Table 2: Correlations between poverty, agency, and suicide ideation per sex (data for men are left of the diagonal and data for women are right of the diagonal).

	Poverty	Agency	Suicide
Poverty	-	-.136 $p < .001$.226 $p < .001$

Agency	-.132 p<.001	-	-.024 p=.310
Suicide	.219 p<.001	-.002 p=.944	-

In terms of the size of the correlations, it can be observed from Table 2 that the correlations between agency and suicide ideation were not statistically significant (for men and women). Poverty related negatively to agency, for both men and women, and although this correlation was statistically significant, it was negligible on a practical level. Significant correlations were found between poverty and suicide ideation, which were small on a practical level. This applied to both men and women. The differences in the size of these correlations across sex are of interest in this research. The Z-observed scores for poverty and agency was .089, for poverty and suicide ideation, it was .149, and for agency and suicide ideation, it was .719. None of these Z-observed scores was beyond +/- 1.96, indicating that the collocations did not differ significantly across sex.

Without the consideration of sex, poverty and agency are weak predictors of suicide ideation (R=.223; R Square=.050; Adjusted R Square=.049), explaining about 5% of the variance in suicide ideation. Model fit, as per the ANOVA results, was acceptable (F=88.637, p<.001). In Table 3 (Model 1), it can be observed that poverty, rather than agency, is associated with suicide ideation. Also presented in Table 3 are the regression models per sex. The model for men (R=.222; R Square=.049; Adjusted R Square=.048) was slightly weaker than the model for women (R=.226; R Square=.051; Adjusted R Square=.050) and showed good fit in both cases (F=41.762; p<.001 and F=47.178; p<.001). From Table 3, poverty was the main predictor of suicide ideation for men (Model 2) and for women (Model 3).

Table 3: Poverty and agency predicting suicide ideation per sex

Model		Unstandardised beta (standard error)	Standardised beta	t	p
1 All	(Constant)	4.879 (.427)	-	11.432	<.001
	Poverty	.183 (.014)	.224	13.242	<.001
	Agency	.021 (.046)	.008	.457	.648
2 Men	(Constant)	4.726 (.622)	-	7.593	<.001
	Poverty	.183 (.020)	.224	9.125	<.001
	Agency	.053 (.067)	.020	.801	.423
3 Women	(Constant)	5.021 (.587)	-	8.557	<.001
	Poverty	.184 (.019)	.225	9.604	<.001
	Agency	-.010 (.064)	-.004	-.159	.874

Following the procedure described by Mackinnon (2010), the moderation effect of sex on the poverty-agency-suicide ideation relationship was tested. As stated before (Model 1 in Table 3), the general model, not considering sex, was a weak predictor of suicide ideation (R=.223; R Square=.050; Adjusted R Square=.049). Adding sex marginally improved the model (Model 2 in Table 4) (R=.224; R Square=.050; Adjusted R Square=.049), while when adding the interaction effects (Model 3 in Table 4) (poverty x sex and agency x sex), the model was left unchanged.

Table 4: The moderation effect of sex on the poverty-agency-suicide ideation relationship

Model		Unstandardised beta (standard error)	Standardised beta	t	p
1	(Constant)	4.879 (.427)	-	11.432	<.001
	Poverty	.183 (.014)	.224	13.242	<.001
	Agency	.021 (.046)	.008	.457	.648
2	(Constant)	5.108 (.519)	-	9.849	<.001
	Poverty	.183 (.014)	.224	13.248	<.001
	Agency	.020 (.046)	.007	.434	.664
	Sex ^a	-.147 (.189)	-.013	-.777	.437
3	(Constant)	4.431 (1.379)	-	3.213	.001
	Poverty	.182 (.044)	.223	4.097	<.001
	Agency	.117 (.148)	.043	.790	.429
	Sex	.295 (.856)	.026	.345	.730
	Sex x poverty ^b	.001 (.028)	.002	.022	.982
	Sex x agency ^c	-.064 (.092)	-.054	-.690	.490

Of primary interest in Table 4 is the direct effect of sex on predicting suicide ideation (marked ^a) and the effects of the interaction terms of poverty and sex (marked ^b) and agency and sex (marked ^c) when predicting suicide ideation. The results revealed that sex is not a direct predictor of suicide ideation, nor does the interaction affect the relationship. In sum, the results presented in Model 3 (Table 4) indicate that sex does not moderate the poverty-agency-suicide ideation relationship.

Discussion

From the literature review it is evident that the concepts of poverty, agency and suicide are complex. Nevertheless, there is some consensus in the literature about what each of the concepts entails. This allowed for the identification of items in the WVS that could act as predictors of these concepts; moreover, using suicide ideation as a proxy for suicide, as previously mentioned, is a prerequisite for suicide attempts and suicide (Teismann *et al.*, 2018). The literature is clear that poverty is rife among women (Botreau and Cohen, 2020; Smith and Mazure, 2021), that poverty leads to a loss of agency (Schein *et al.*, 2011; Sherafat-Kazemzadeh *et al.*, 2021) and that men are more prone to suicide than are women (Khazaei *et al.*, 2017; WHO, 2021). If the loss of agency is hopelessness, which may result from poverty, it could be argued that impoverished women should identify more with suicide than do men. To labour this point, Ribeiro *et al.*, (2018), Ridley *et al.*, (2020) and Zhang and Li (2013) recognise the importance of hopelessness in predicting suicide.

Data were collected from a broad spectrum of people living in South Africa. Therefore, given the WVS oversight in the sampling process, as well as the statistics presented in the demographics section of the article, it is reasonable to believe that the sample is a good representation of the population. Only six items from the WVS were used in this analysis. The three items that represent poverty and the two on suicide ideation delivered acceptably reliable data. Agency was measured with only one item. The items informing the constructs had high face validity, and when performing exploratory factor analyses, the poverty and suicide ideation items grouped on different factors, while agency did not load particularly well on either of these factors. Given the above, the instruments were deemed reliable and valid. The results revealed that there were no statistically significant differences in poverty levels, agency, or suicide ideation across sex. These results are contrary to most literature, which suggests differences in poverty levels (Smith and Mazure, 2021), agency (Schein *et al.*, 2011; Sherafat-Kazemzadeh *et al.*, 2021) and suicide (Khazaei *et al.*, 2017; WHO, 2021) ideation.

While mean differences may be absent, differences in relationships may still occur. Small and statistically significant correlations were found between poverty and suicide ideation for both men ($r=.219$) and women ($r=.226$). The size of this correlation did not differ significantly across sex. Poverty was related to agency (men $r=.132$; women $r=.136$), but the size of the correlation was negligible and did not differ across sex. Agency did not correlate significantly with suicide ideation. These results are contrary to those suggesting strong poverty-suicide (WHO, 2021) and agency-suicide (Ribeiro *et al.*, 2018) relationships. Regression analyses were used to test the moderating effect of sex on the poverty-agency-suicide ideation. Sex did not moderate the poverty-agency, agency-suicide ideation, nor the poverty-agency-suicide ideation relationships. Sex was also not a direct predictor of suicide ideation.

Conclusion

The results were contrary to what is proposed by the theory and what was found in previous research. The researcher expected to indicate how much mean scores differ and the extent to which the poverty-agency-suicide ideation relationship can be nuanced with reference to sex. This expectation was not met. Three explanations may be provided for these results. The first is that the seemingly logical poverty-agency-suicide ideation relationship doesn't exist. Poverty may not be directly linked with agency, and agency may not be directly related to suicide. The agency-suicide paradox (Reyes-Foster, 2016; Broz and Münster, 2016) is evidence of this complicated relationship. The fact that the psychometric properties of the variables may be poor indicators of the construct is another possible explanation for the results. Can the single item of agency truly represent agency? Perhaps more telling, can the justification of suicide and euthanasia, as attitudes towards broad social phenomena, truly be an adequate measure of suicide ideation, a seemingly personalised and individualistic perception? Linked with this is the use of the WVS within a non-WEIRD (Westernized, Educated, Industrialized, Rich, Democratic) context. It could be that poverty is rife in this context and that the range on this variable was too small. Was the concept of agency defined too abstractly? Was it possible to measure suicide ideation, given the widespread taboos on suicide and possible ignorance of euthanasia? The researcher concludes that the use of the WVS in countries such as

South Africa should be revisited, because of successive unsatisfactory findings regarding the validity of the WVS in this context (Ndofirepi and Steyn, 2022).

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