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Development and Validation of the Soweto Coping Scale: A Mixed-Methods, Population-Based Study of Adults Living in Soweto, South Africa

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Abstract

Mental health disorders are among the leading contributors to the burden of disease and need to be prioritised in policy making and program implementation. In the absence of mental healthcare, people often navigate their own social support and activate individual coping mechanisms to sustain their emotional well-being. Few South African studies conceptualise and evaluate the strategies people use to manage adverse situations in non-clinical samples. We conducted two related ethnographic studies of stress and coping in Soweto (n= 107). We then used the studies to develop a novel scale to measure local forms of coping and evaluated its use in an epidemiological surveillance study (n=933). In a split sample analysis, we first conducted exploratory factor analyses and then a comparative fit index assessment. In the exploratory factor analysis, we obtained a two-factor solution: problem-focused/emotional coping and religious coping. In the confirmatory factor analysis, both domains had good model fit above the conservative 0.95 cut-off, and both factors had adequate internal consistency (religious coping = 0.72; problem/emotion focused coping = 0.69). Both the problem-focused/emotional and the religious coping subscales

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Author statement

All the persons who meet authorship criteria are listed as authors, and all authors certify that they have participated sufficiently in the work to take public responsibility for the content, including participation in the concept, design, analysis, writing, or revision of the manuscript.

Declaration of Competing Interest

The author(s) **declare(s)** that there is **no conflict of interest**'.

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were positively correlated with quality of life, except that the religious coping subscale was not correlated with social relationships. Total adverse childhood experiences were correlated with the problem-focused/emotional coping subscale but not with the religious coping subscale. We conclude that the Soweto Coping Scale provides a novel understanding of local forms of coping and can be used by mental healthcare researchers and providers who seek to develop interventions for promoting mental health and social well-being.

Introduction

Nine of the top 20 leading contributors to the global burden of disease are linked to mental health: low back pain (4), headaches (5), depression (6), other musculoskeletal—like fibromyalgia (8), self-harm (11), interpersonal violence (13), anxiety (15), drug use (16), and alcohol use (20) suggesting an urgent need to prioritise mental healthcare in primary care and in conjunction with multiple other synergistically interacting health conditions (Murray et al., 2020). These conditions are highly prevalent in low-to-middle income countries (LMICs) where care is inadequate for those who are affected (Gil-Rivas et al., 2019; Sankoh et al., 2018). Moreover, how people conceive of and embody psychological distress in LMICs tends to be more somatic and interpersonal, meaning that people's psychological pain both manifests in the physical body and is interrelated with social and family relations (Kohrt et al., 2020).

In South Africa, recent epidemiological data show that the estimated prevalence of any of the DSM 5 disorders is 16% and that mental health care is insufficient and uneven (Naidu, 2020). In the absence of mental healthcare, people often navigate their own social support and individual coping mechanisms for emotional well-being. Few South African studies conducted in non-clinical samples have conceptualised or evaluated how people employ different strategies to manage adverse life stressors, particularly when mental health care is inaccessible. Financial insecurity can prevent people from having a safe and a warm home, reliable water, and enough food: these challenges can have a profound effect on people's mental health and social well-being (Mushavi et al., 2020; Rehm & Shield, 2019; [information redacted to maintain the integrity of the review process]). South Africa's stark economic disparities are evidenced by 30.4 million people living in poverty -- more than one-half of the population -- which causes many people to reside in densely populated neighbourhoods with unsafe housing (Satumba et al., 2017). Such living conditions—particularly when someone does not have a reliable lock, or where homes are extremely close to each other—can predispose residents to criminal victimization such as rape, murder, hijackings, home invasions, and gender-based violence that remain hidden from view, despite their prevalence (Naidu, 2020). These less visible but highly prevalent forms of violence, for which few people receive governmental support for recovery or coping, are further exacerbated by confluent burdens of chronic illness, including both communicable (HIV) and non-communicable (diabetes) diseases, that further compound mental illness (Bickler et al., 2018) and, potentially, syndemic disease burden. Indeed, living with one or more chronic illnesses can cause psychological distress [information redacted to maintain the integrity of the review process]. This negative feedback loop of social distress, psychological distress, and chronic illness(es) cause elevated morbidity

and mortality because their interaction together causes more severe health deterioration compared to the experience of a single health or social condition in isolation (Singer et al., 2017; Tsai et al., 2017).

When mental health care and social services are limited, people find ways of coping or adapting by creating or finding their own survival skills, drawing on social resources and support systems to attain emotional well-being (Van der Walt et al., 2008). Good coping skills/strategies when facing stress/trauma can serve as a buffer or help people manage difficult emotions and may even help prevent mental illness [information redacted to maintain the integrity of the review process]. The coping construct has been supported in a myriad of studies, with most of these focusing on how coping is associated with other aspects of human functioning. Most studies in this literature have been conducted in high-income countries and are based on coping instruments developed in these contexts (Bragazzi et al., 2019; Folkman & Lazarus, 1985; Peters et al., 2020; Power et al., 2021; Stanton et al., 1994). We found two studies of the coping construct in South Africa, but they focused on primarily coping as a predictor or correlate of health promotion and mental well-being (Basterfield et al., 2014; Choi et al., 2015). There is a paucity of studies examining how coping strategies are activated by individuals in general community settings.

Soweto, the site of the current study, is situated in the greater Johannesburg metropolis, a large city in South Africa that is home to more than five million people. Although most residents are Black, Soweto is a more heterogeneous township than most others in Johannesburg (and South Africa more broadly) in its representation of housing, language, occupations, and living standards across the entire distribution, with many families who have resided there for generations. Sowetans are amongst the wealthier Black people in South Africa who have achieved a higher level of well-being and financial status, with many Sowetans identifying with a middle-class status (Phadi & Ceruti, 2011).

In this article, we describe the development of a novel scale to measure local forms of coping, based on data collected in two related ethnographic studies of stress and coping among Sowetans who have resided in the region for decades. In these studies, individual and interpersonal coping strategies emerged as central to how people lived with and recovered from acute (cancer) and chronic (diabetes) illness. These coping strategies are relevant for not all people living with acute/chronic illness, as not all conditions—mental or physical—are diagnosed due to limited access to healthcare and the fact that many people delay care-seeking. Nonetheless, we believe that these ethnographic studies provided a comprehensive assessment of local strategies that Sowetans use to cope with adversity. We developed a 14-item scale based on these emergent themes and asked study participants to respond to their experiences of coping in the present study. We outline the methods used to evaluate the psychometric properties of the scale below.

Methods

Developing the Soweto Coping Scale and the procedure for item generation

We developed the scale by identifying themes related to coping that emerged during the collection of 107 in-depth life history narrative interviews, each lasting between 2-3 hours,

that were conducted in two separate ethnographic studies. The first study was conducted in 2012 and focused on the social experience of stress and diabetes [information redacted to maintain the integrity of the review process]. The second study was carried out in 2017 and focused on cancer and resilience [information redacted to maintain the integrity of the review process]. Some interviews were conducted in English, some using a mix of English and vernacular, and some using only vernacular.

These life history interviews explored myriad topics such as early life experiences, schooling, labour, family and household environments, marriage, childrearing, migration, religion, and disease. In the interviews, we also probed about mental health conditions (e.g., depression and anxiety), mental-health related behaviours such as “thinking too much” (depressive rumination), and coping strategies people commonly used to manage and recover from psychological and social distress. Because everyone we interviewed had, at one point, been diagnosed with an acute (e.g., cancer) or chronic (e.g., type 2 diabetes or HIV) illness, we also probed for their perceptions and experiences of living with multimorbidity, including Type 2 diabetes, HIV, tuberculosis, various cancers, depression, anxiety, chronic pain, and hypertension. However, because the coping methods people conveyed did not relate to their illnesses alone, and because coping with life stressors overlapped with adversity in general, we did not believe these themes were solely related to coping with medical conditions or illness. Rather, we found that these were common local methods through which people managed challenges in their social and emotional worlds.

After each interview, we wrote extensive field notes outlining each individual’s life story, identifying core themes around stress, distress, coping, social support, and well-being that emerged in relation to and apart from chronic illness. We then transcribed and translated each in-depth interview into English. We used field notes and close review of transcripts to develop detailed codebooks. For each study, we developed more than 30 codes by holding an intensive workshop among research team members to develop, pilot, and revise the codebook, agreeing on clear definitions for each emergent theme. Any codes related to coping, and their definitions, that emerged in the two separate studies and demonstrated significant overlap between the two studies were then included as items in the 14-item coping scale that we used for the present study. Then we reviewed specific texts to which these codes were applied, to ensure that we agreed that each code was in fact distinct from others and exhibited shared meaning across datasets. Then we examined how frequently these codes emerged across datasets and closely compared their use and application. We also evaluated how many people were likely to report different coping strategies. The final scale, consisting of 14 items, is presented in Table 1, along with corresponding quotes reflecting broader meanings of the items that were generated from the ethnographic studies. The 14-item coping scale was then administered in a population-based epidemiological study (Although the scale administered in the survey consisted of 17 items, but we excluded alcohol and other substance use from this analysis).

Surveillance data collection

The epidemiological survey was nested within an enumeration study focused on comorbidity/multimorbidity conducted at [information redacted to maintain the integrity

of the review process]. For the enumeration study, we selected a random sample of six geographic coordinates (latitude and longitude) within residential areas of Soweto, which we identified as “clusters”. For each of the randomly selected coordinates, the closest household dwelling within 30 meters was approached for enrolment and identified as part of that cluster. Of 2,000 coordinates visited in Soweto, 11% did not have a dwelling within 30 meters. Of the thousands of households approached, 86% consented for participation in the research study. The total sample size was $n = 933$. Although a larger sample size had been planned, data collection was cut short due to the COVID-19 pandemic and government-mandated lockdown.

We recruited participants who were 25 years of age or older, who lived within each identified cluster, and who considered themselves to be a resident of Soweto. All people younger than 25 years of age were excluded as well as individuals who could not meaningfully communicate with the study team, such as those with cognitive impairments, people who were actively intoxicated through substance use, people who were too ill, or people who threatened our research team members with physical harm. Participants completed interviews through the Research Electronic Data Capture (REDCap) tool (Harris et al., 2009). Participants provided written informed consent. Ethics approval was obtained from the [information redacted to maintain the integrity of the review process].

Data on the following measures were included in this analysis:

1. Socio-demographic characteristics: age, gender, race, education and household assets.
2. Soweto Coping Scale: the 14-item measure described above. Each item elicits how often participants felt or experienced comfort associated with certain behaviours or activities in the four weeks prior to the survey. Possible response options were: 1= “you have never felt comfort in the past four weeks”, 2= “you have seldom felt the comfort”, 3= “you have often felt or experienced comfort”, 4= “you have very often felt or experienced comfort”, and 5= “you always feel or experience comfort”.
3. The World Health Organization Quality of Life Short Version (WHOQoL-BREF): a 26- item scale measuring perceptions of health and well-being over a period of two weeks (Skevington et al., 2004). Each item was scored on a Likert scale ranging from 1 = “disagree” or “not at all” and 5 = “completely agree” or “extremely”.
4. The Adverse Childhood Experiences (ACEs) (Felitti et al., 1998) questionnaire: an 11-item index that elicits physical, sexual, and emotional abuse and exposure to household dysfunction that happened prior to the age of 18 years. Each item had binary response options 0= “no” and 1 = “yes”.

Analysis

We used a random number generator to split the total sample into two halves. One half of the sample ($n= 467$) was used to conduct exploratory factor analysis (EFA) to evaluate the factor structure of the Soweto Coping Scale. We used the Keiser-Meyer-Olkin test (KMO)

for sampling adequacy: KMO values between 1 and 0.8 indicate sampling adequacy, values between 0.79 and 0.69 indicate a mediocre sample, values <0.6 indicate an inadequate sample, and values close to zero indicate widespread correlation. To understand the structure of variable clusters and identify latent variables we used the principal factor (pf) estimation technique. We also used the *estat anti* command to check if there were any variables that had correlations that were too high. We chose oblique oblimin rotation to allow factor correlation and to obtain the most parsimonious factor structure. To extract factors, we visually inspected the scree plot to identify the scree and used Kaiser's criterion (i.e., retaining factors with eigenvalues ≥ 1.0). Items with loadings ≥ 0.30 or higher were considered to be components of a domain, and at least 3 items needed to load onto a domain for it to be considered a valid factor.

To test whether all items were related to the hypothesized latent variable, we conducted confirmatory factor analysis (CFA) using the second half of the sample ($n = 466$) and used maximum likelihood estimation to explore the goodness of fit of the exploratory models. We estimated the following fit indices: chi-square (χ^2), chi-square/degree of freedom ratio (χ^2/df), comparative fit index (CFI; Hu & Bentler, 1999), Tucker-Lewis index (TLI; Hu & Bentler, 1999), root mean square root of approximation (RMSEA; Steiger, 1990), and standardized root mean square residual (SRMR; Hu & Bentler, 1999). Best practice guidelines suggest that χ^2/df should be <5 ; SRMR should be close to zero; and RMSEA should be $<.05$, thus indicating a close fit, whereas a value that is $<.08$ indicates a reasonable model, and values exceeding that indicate a mediocre or a poor fit (Byrne, 2010). For a good fit, the CFI and TLI are recommended to be ≥ 0.90 (Byrne, 2010; Hu & Bentler, 1999)

To estimate the internal consistency for each of the identified factors, we used Cronbach's alpha. Overall mean scores for each factor were tabulated. To assess construct validity, we used Pearson correlation coefficients to estimate the association between the Soweto Coping Scale and each of the WHOQoL-BREF and ACEs domains, given the hypothesized correlations between these constructs (Ramkisson et al., 2017). To interpret the magnitudes of the estimated correlations, we used standard rules of thumb, with a correlation coefficient of .10 suggesting a weak association, a correlation coefficient of .30 suggesting a moderate association, and a correlation coefficient of .50 suggesting a strong association. Stata software was used for analysis (version 15, StataCorp LLC, College Station, Tex.) (Cooperation, 2017).

Results

The epidemiological survey included 933 participants. Nearly all (99%) had full data on all variables of interest. The sample characteristics are presented in Table 1. The mean age of the participants was 46 years (standard deviation [SD], 12.7; range, 26-70 years). Most participants (579 [62%]) completed primary school, while 251 (30%) completed secondary school. Study participants reported 8 items or more, but variation was notable (range, 3-12 items). The means and standard deviations of the items of the Soweto Coping Scale are presented in Table 3, and those of the WHOQoL-BREF scale and sub-domains are presented in Table 1.

Factor analysis

For most items the KMO statistic was $>.70$, with an overall KMO statistic of $.79$, indicating sufficient variance and adequacy for sampling (and therefore suitability for further factor analysis) (see Table 3). Three substance use items (alcohol use, tobacco use and use of tobacco products) had mediocre KMO values that did not meet this threshold and were therefore removed from further analysis. To determine the number of factors to extract for the Soweto Coping Scale, we examined the scree plot, which indicated that at least two factors should be retained. In the final EFA we obtained a two-factor solution, and the results (factor loadings) are shown in Table 4. The correlation between the two factors was $r = .51$.

Factor 1 had an eigenvalue of 2.83 that explained 75 percent of the variance. It consisted of nine items, each with factor loadings ranging from $.30$ -. 53 . The items were internally consistent, with a Cronbach's alpha of 0.69 . Based on the item content, we labelled this factor "problem-focused/emotional coping".

Factor 2 had an eigenvalue of 1.19 that explained 32 percent of the variance. It consisted of five items, each with factor loadings ranging from $.41$ -. 79 . The items were internally consistent, with a Cronbach's alpha of 0.72 . Based on the item content, we labelled this factor "religious coping".

Scale dimensionality, consistency, and construct validity

We used confirmatory factor analysis (CFA) to test the hypothesised EFA model. Table 5 shows that we operationalised two domains of coping: problem-focused/emotional coping and religious coping. The two-factor unadjusted model had a mediocre fit, with CFI/TLI values below the 0.95 cut-off. We adjusted the model by removing the "accepted problem" item, and the model fit improved. The model fit after the *post hoc* adjustments indicates that the two domains captured covariances between the items and were theoretically sound. In this half sample, both factors again had adequate internal consistency (problem-focused/emotional coping, $\alpha = 0.69$; religious coping, $\alpha = 0.72$). Cronbach's alpha values confirm the fit indices that were shown by the CFAs.

To assess construct validity, we estimated the correlations between the Soweto Coping Scale domains, the total WHOQoL-BREF, and three WHOQoL domains (Physical Health, Psychological, and Social Relationships). Problem-focused/emotional coping had weak but statistically significant correlations with each of the WHOQoL domains. Religious coping had moderate correlations with each of the WHOQoL domains, weak but significant correlations with the total number of ACEs, and no correlation with experiences of abuse.

Discussion

This study assessed psychometric properties of the Soweto Coping Scale within a diverse community in urban Soweto, South Africa. The scale was developed using ethnographic interviews that captured how people defined ways of coping through family, community, and the self while living with chronic mental and physical illness. Our study provides evidence that the bidimensional scale is a reliable and a valid instrument. The CFA showed that there was a relationship between the generated items and the underlying latent constructs. We

determined construct validity by estimating the correlation between the coping subscales and other constructs hypothesised to be correlated with the coping construct.

This research provided important insights into how people define, and how researchers and clinicians measure, coping among South Africans who face an array of psychosocial and health-related issues. Our domains were operationalised to specify coping linked to emotional and religious dimensions, which reflect the mechanisms of dealing with stressful events through altering the source of stress or by attempting to reduce negative emotional responses in difficult situations (Coiro et al., 2017; Nielsen & Knardahl, 2014). Our results align with previous studies, which report a higher order bi-dimensional model (Dijkstra & Homan, 2016). The two domains are important for reducing symptoms of depression, anxiety, and somatisation by using spiritual and social resources (Coiro et al., 2017).

Locally, there has been one previously published coping scale developed and validated in South Africa (du Plessis & Martins, 2019). We also found two other scales; however, they are international scales that were adapted and validated in the South African context (Pienaar & Rothmann, 2003; Stapelberg & Wissing, 1999). No other coping scales were developed in this region, and such scales would be useful to South Africa to use or to compare with any newly developed scale because of the political, socio-economic and development context. We argue that more locally developed scales are needed because, while using (e.g., translating, adapting, and/or validating) global scales is important for generalisability, evidence consistently shows that many psychological or psychosocial problems are influenced by culture and localised world views (Moore & Constantine, 2005). For instance, non-western cultures (i.e., African, Latin America and Asian) report using social structures to cope with life difficulties or stressors, whereas people in western cultures may choose to be individualistic in how they deal with life stressors (Bhui et al., 2008). Also, different political and cultural settings speak to how mental health symptoms manifest, present and categorise; a factor which is important to study alongside coping strategies and be used in development of culturally appropriate therapeutic strategies and as a way of provide appropriate treatment and care.

The two domains were correlated with quality of life and ACEs and showed a positive relationship between problem-focused and/or emotional coping strategies as well as higher quality of life. The domains also had negative associations with ACEs, including abuse, which resembles previous findings elsewhere (Schilling et al., 2007; Sheffler et al., 2019). The religious coping strategies demonstrated the salience of community spiritual resources in Soweto. For example, when people gather in each other's homes to engage in personal prayer or reflection, or deepen their relationship with God, their ability to cope amidst and through adversity, or emotional distress strengthens. The power of personal and collective religious practice proved to play a powerful role in how people coped with life's challenges. These findings were similarly found in our previous ethnographic work, where people described social religious practice, and acceptance of life's challenges proved to be powerful conduits of good mental health and social well-being [information redacted to maintain the integrity of the review process].

The limitation with this locally oriented psychometric analysis is non-generalisability beyond the setting. The findings, however, may be applicable to other ethnically similar communities in South Africa. Moreover, because the original 14 items were developed based on interviews with people who had previously been diagnosed with an acute or chronic medical condition, it may be that other vital coping mechanisms emerge or are more common among people without medical conditions. Thus, this coping scale may be viewed as most relevant for us among people with previously diagnosed medical conditions, although we believe that it is more broadly relevant for Sowetans facing stress and adversity. We hope this work fuels financing and social resources for seeing how religious and social gatherings can serve individuals and communities well. Moreover, the local determination of coping items and high internal validity reveal a strength of the study regarding social and psychological interventions and can enhance well-being of the local community.

In conclusion, the development and validation of the Soweto Coping Scale is a novel attempt to understand meaningful and locally relevant expressions of coping. It is a potentially useful tool to implement in interventions that seek to assess and enhance mental health and social well-being of individuals and larger communities. Psychologists or mental healthcare workers can promote prosocial programs that build mental health and social solidarity through non-medical institutions such as churches, and other structures that foster a sense of community. As COVID-19 has demonstrated everywhere, physical distance and social isolation can be extraordinarily hard on our mental health and social lives, and those who have experienced more adversity throughout their lives do worse when faced with new threats like pandemics [information redacted to maintain the integrity of the review process].

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Data availability

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Highlights

Since this is an optional feature, we opt to not provide highlights to the study.

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Table 1.

Socio-demographics

Variables	n = 933	Mean (SD)	%	Range
Demographics				
Women	626		67	
Age, in years		46.0 (12.7)		26-70
Educational attainment (% attended)				
No school or primary school	579		62	
Secondary school	259		30	
Professional/teaching/university	69		7.4	
Other	29		3.1	
Number of household assets		7.9 (2.0)		3-12
WHOQoL-BREF				
General Quality of Life		6.7 (1.5)		0-10
Physical Health		27 (4.6)		0-35
Psychological		20 (3.5)		0-25
Social Relationships		10.9 (2.3)		0-15
Adverse Childhood Experiences				
Number of child abuse experiences		0.74 (0.96)		0-3
Total number of ACEs		3.4 (2.2)		0-10

* **Note:** ACEs, Adverse Childhood Experiences; WHOQoL-BREF, World Health Organization Quality of Life Short Version (domains are computed scores, not raw scores)

Table 2.

Items generated from qualitative interview data

Item from the Soweto Coping Scale	Representative Quote and Source
How often do you feel comforted by...	
Having someone you can rely on?	"I normally just keep quiet or call my daughter and relay the problem to her and she normally encourages me to be strong."
Spending time with family or friends?	"I have a neighbour—my neighbour is always supportive as well. Maybe we sit, chat, drink wine together. I am always happy. I don't want to be distracted. I'm always positive all of the time."
Someone who can lend you money?	"I can say 'please give me money to see the doctor' and they give it to me and then I go and see the doctor."
Having a family member you can go to when you have a problem?	"Talk to someone, not to everyone, but to someone you trust."
Having a neighbour you can go to when you have a problem?	"I try very hard to deal with the pain. I have taught myself to accept my predicament and embrace it and at times I pray about it. Talking to people like my neighbours also helps."
A friend at Church?	"I share with a friend"
Talking to God? (or Jesus)?	"I survive because of Him. He puts his faith in his heart and knows that Jesus knows everything."
Attending your Church service?	"Even now, I go to church and smile, they can't even ask if I am fine because they can see I am fine."
Prayer group? (Outside of Church)	"On Thursdays I go to a women's prayer group."
Relaxation by reading a book?	"It's either I go to play gospel music, and ja read books, but now when I feel like relaxing I won't understand books, my books, like you know I've got specific books to console me."
Thinking in a positive way?	"You know what helps me? Being happy when my spirit is okay. Everything is fine."
Accepting your problems?	"They differ in their minds and in accepting what happened to them. One accepted what happened to them. The one who's sick didn't accept what happened to them. If something happens to you, you need to take it out of you and talk about it, but if you don't talk about it and bottle it up in your heart, that's when you don't accept... If you don't accept things like Grace, you won't be happy in life and will develop illnesses. Illness develops because you are not talking to other people, seeking help, and it changes your behaviour."
Letting go of problems?	"Letting things go, letting go, in the long run it heals you, you become healed."
Getting sufficient rest or sleep?	"If I want to relax I go to bed and sleep."

Table 3.

Soweto Coping Scale item means, standard deviations, and Keiser-Meyer Olkin values

Measure	N	Mean (SD)	KMO
Someone to rely on	932	2.36 (1.47)	0.76
Spend time with family	932	2.92 (1.13)	0.84
Someone to lend me money	932	1.56 (1.51)	0.77
Family problems	932	2.50 (1.43)	0.84
Neighbour problems	932	1.27 (1.52)	0.80
Friend from church	932	1.41 (1.57)	0.72
Talking to God	932	3.26 (0.96)	0.87
Church service	932	2.05 (1.64)	0.71
Prayer group	932	0.94 (1.46)	0.83
Reading book to relax	932	2.24 (1.42)	0.85
Think in a positive way	931	2.69 (1.26)	0.76
Accepted problem	932	2.86 (1.06)	0.77
Let go of problem	931	2.48 (1.31)	0.74
Rest	932	2.53 (1.25)	0.83

* KMO, Keiser-Meyer Olkin; SD, standard deviation

Table 4.

Exploratory factor analysis for the Soweto Coping Scale

Factor 1: problem-focused/emotional coping			Factor 2: religious coping		
Items	Content	Factor Loadings	Items	Content	Factor Loadings
1	Someone to rely on	0.44	6	Friend from church	0.76
2	Spending time with family	0.51	7	Talking to God	0.40
3	Someone to lend me money	0.38	8	Church service	0.79
4	Family problems	0.51	9	Prayer group	0.54
5	Neighbour problems	0.32	10	Reading book to relax	0.41
11	Think in a positive way	0.44			
12	Accepted problem	0.53			
13	Let go of problem	0.49			
14	Get sufficient rest	0.37			
	Eigenvalue	2.85		Eigenvalue	1.29
	Variance explained	75%		Variance explained	32%
	Mean	2.05		Mean	2.36
	SD	1.00		SD	0.71
	Cronbach's alpha	.69		Cronbach's alpha	.74

Table 5.

Confirmatory factor analysis model fit statistics

Soweto Coping Scale	Observed	χ^2 (df)	χ^2 /(df)	CFI	TLI	RMSEA	SRMR
Unadjusted	464	223.69 (63)	3.55	0.84	0.80	0.07	0.06
Adjusted	464	132.65 (52)	2.55	0.90	0.88	0.06	0.05

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Table 6.

Correlations between the Soweto Coping Scale, WHOQoL-BREF, and ACEs

Measure	Problem-focused/emotional coping	Religious coping	Total WHOQoL	Physical health	Psychological	Social relationships	Total ACEs	Abuse ACEs
Problem-focused/emotional coping	-							
Religious coping	0.25 ^b	-						
Total WHOQoL	0.29 ^b	0.13 ^b	-					
Physical health	0.36 ^b	0.13 ^b	0.53 ^b	-				
Psychological	0.36 ^b	0.21 ^b	0.44 ^b	0.67 ^b	-			
Social relationships	0.25 ^b	0.03	0.33 ^b	0.35 ^b	0.28 ^b	-		
Total ACEs	-0.11 ^a	-0.02	-0.19 ^b	-0.14 ^b	-0.17 ^b	-0.18 ^b	-	
Abuse ACEs	-0.17 ^b	-0.01	-0.20 ^b	-0.17 ^b	-0.19 ^b	-0.17 ^b	0.75 ^b	-

* ACEs, Adverse Childhood Experiences; WHOQoL, World Health Organization Quality of Life Short Version

^a p<.01.

^b p<.001