

Psychometric Analysis of the Brief Religious Coping Scale (Brief RCOPE) in Cancer Patients from Southern Peru

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Research Article

Keywords: religious coping, Brief RCOPE, Southern Peru, cancer patients

Posted Date: September 28th, 2026

DOI: <https://doi.org/10.21203/rs.3.rs-10963947/v1>

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Additional Declarations: No competing interests reported.

Abstract

The present study aimed to examine the psychometric properties of the Brief Religious Coping Scale (Brief RCOPE) in cancer patients from Southern Peru. The sample comprised 445 individuals diagnosed with cancer who were receiving care at a specialized public hospital. Participants were predominantly women (78.2%), with a mean age of 52.20 years. The instrument's internal structure was evaluated using CFA and ESEM, whilst measurement invariance was also assessed across age, educational level, cancer stage, and type. In addition, evidence of convergent and discriminant validity was examined. The results supported a two-factor structure consisting of Positive Religious Coping and Negative Religious Coping. The CFA model demonstrated excellent fit indices (CFI = .983; TLI = .980; RMSEA = .039, 90% CI [.027, .051]; SRMR = .048). Likewise, the ESEM model showed acceptable model fit (CFI = .971; TLI = .958; RMSEA = .056, 90% CI [.045, .068]; SRMR = .039). Regarding validity evidence based on relationships with other variables, Positive Religious Coping was negatively associated with negative affect, whereas Negative Religious Coping was positively associated with negative affect. No significant associations were found with life satisfaction or positive affect. Measurement invariance was established across all groups examined, and both subscales demonstrated high reliability as indicated by alpha and omega coefficients. In conclusion, the Brief RCOPE demonstrated adequate evidence of validity, reliability, and measurement invariance, supporting its use in cancer patients from Southern Peru.

Introduction

Religiosity has become an important topic of interest within the scientific community, as approximately 85% of the world's population identifies with a religion (Wasserman, 2024). Across 26 countries with diverse cultural backgrounds, most believers conceive of God as described in sacred scriptures such as the Bible, the Qur'an, and the Torah, among others. To a lesser extent, religion is understood as the presence of a higher spiritual power or force.

Christianity encompasses more than half of the world's religious population, followed by Islam, Hinduism, and Buddhism. Nevertheless, religious affiliation has declined over the past four decades in the United States and several European countries (Pew Research, 2025). In Peru, approximately 80% of the population identifies with a religion, accounting Catholicism for 76% of that religious affiliation (Ipsos Perú, 2023).

Religiosity is understood as a phenomenon characterized by an individual's disposition and openness toward God through various forms of expression (Hill & Pargament, 2003), which has contributed to identifying a relationship between religious practice and psychological functioning (Aggarwal et al., 2023; Kranz et al., 2023). Individuals' inclination toward religion has been examined primarily in adverse contexts, such as natural disasters (Amador et al., 2025; Sun et al., 2018) and physical illness (Almaraz et al., 2022; Ianello et al., 2022), as it is considered a source of comfort and coping in the face of adversity across diverse religious traditions, including Christianity, Islam, Judaism, Hinduism, and Buddhism (Abu-Raiya & Pargament, 2015). From this perspective, drawing closer to God may be understood as a means of coping with life's difficulties.

Within the field of psychology, Lazarus and Folkman (1984) conceptualized coping as the cognitive and behavioral efforts individuals employ to manage stressful life situations. Building on this framework, Pargament (1990) introduced the concept of religious coping, defining it as the efforts individuals make to understand and adapt to difficult life circumstances by relying on what is perceived as 'sacred', 'divine', 'supernatural', or 'God'. This theoretical framework encompasses the search for meaning, intimacy with others, identity, anxiety regulation, personal transformation, and the pursuit of spirituality; dimensions that evolve over time in response to life events and provide valuable insights into both religious experience and individuals' interpretation of life.

Research has shown that effective religious coping is associated with greater psychological well-being and higher life satisfaction, particularly during critical circumstances such as illness (Darviri et al., 2016), with especially robust evidence among cancer patients (Borges et al., 2021; Canada et al., 2022; Palmer Kelly et al., 2022; Rodríguez Carrión et al., 2021). These findings suggest that religion functions as a protective factor that should be considered within healthcare settings, in addition to its reported benefits for immune functioning and resistance to viral infections (Koenig et al., 2020).

Religious Coping and Subjective Well-Being

The literature has consistently demonstrated the relationship between religious coping and various indicators of mental health, including reduced depressive symptoms (Arjan et al., 2010), lower suicide risk and anxiety (Caporossi et al., 2018), as well as positive associations with quality of life (Paika et al., 2017) and resilience (Trejos et al., 2022). However, relatively little research has examined the affective and negative emotional states associated with negative religious coping. Pargament et al. (2004) reported substantial evidence of psychological distress among individuals experiencing a conflicted relationship with God, and this finding was further supported by a review of 42 studies, which identified significant associations between maladaptive religious coping and symptoms of anxiety and depression (Cheng & Ying, 2023).

Measurement of Religious Coping

Following Pargament's development of a conceptual framework explaining how religion can serve as a coping resource, and supported by empirical evidence demonstrating the relationship between adverse life events and religion (Pargament & Park, 1997), Pargament et al. (2000) developed the first Religious Coping Scale (RCOPE), instrument that was initially administered to a sample of 500 young adults in the United States and consisted of 105 items organized into five domains assessing both positive and negative expressions of religious coping, including meaning, control, comfort, intimacy, and transformation. The instrument was subsequently evaluated in hospitalized patients, leading to a reduction in the number of items. This research also revealed that religion may exert negative or ineffective effects that had received little prior attention, and the revised instrument on this sample provided a more balanced perspective on the role of religion and its impact on mental well-being (Boudreaux et al., 1995).

The Brief RCOPE then adopts a multidimensional approach that encompasses the assessment of religious cognitions and attitudes, being grounded in the assumption that positive religious coping reflects a secure relationship with the 'sacred', the 'divine', 'God', among others, fostering comfort, well-being, and a

sense that life has a broader meaning. Conversely, negative religious coping is characterized by tension, guilt, struggle, and hopelessness, and has been associated with psychological distress and, consequently, adverse effects on patients' physical health (Pargament et al., 2000). The current version of the instrument comprises 14 items, with seven assessing Positive Religious Coping and seven assessing Negative Religious Coping (Pargament et al., 2011).

Numerous validation studies of the Brief RCOPE have been conducted worldwide and, although these studies consistently support a well-defined two-factor structure, they differ in their analytical approaches and methodological decisions. For example, studies conducted in France (Caporossi et al., 2018), Portugal (Casaleiro et al., 2022), and Greece (Paika et al., 2017) relied exclusively on Exploratory Factor Analysis (EFA); while studies from Colombia (Trejos et al., 2022), Puerto Rico (Pagán-Torres et al., 2021), and Chile (García et al., 2021) employed Confirmatory Factor Analysis (CFA); and other investigations, including those conducted in Brazil (Esperandio et al., 2018) and multinational samples from African countries (Kwesi Agormedah et al., 2023), used both EFA and CFA. In addition, some studies examined the two dimensions separately. For instance, a study conducted in the Czech Republic (Janů et al., 2019) evaluated only the Negative Religious Coping dimension using both EFA and CFA, whereas a study from Mexico (Martínez & Sousa, 2011) analyzed the two dimensions independently.

Across these validation studies, interfactor correlations were generally low or nonsignificant, providing evidence of adequate empirical discrimination between the two dimensions; also, the factor loadings ranged from moderate to high ($> .50$), supporting the construct validity of the instrument. Nevertheless, a recurring psychometric concern has been the poor performance of Item 13 ("I decided that the devil made this happen"; Caporossi et al., 2018; Casaleiro et al., 2022; Martínez & Sousa, 2011; Pagán-Torres et al., 2021; Paika et al., 2017), and, to a lesser extent, Item 12 ("I wondered whether my church had abandoned me"; Caporossi et al., 2018; Pagán-Torres et al., 2021). Furthermore, one study (Trejos et al., 2022) reported that the CFA supported the expected two-factor solution; however, inspection of the published path diagram appears to contradict this conclusion, as several factor loadings were close to zero.

The Present Study

Based on the aforementioned considerations, the present study is supported by several perspectives. First, it is theoretically justified by its foundation in conceptual models such as the framework proposed by Lazarus and Folkman (1984), which provides a comprehensive understanding of coping through cognitive appraisals in stressful events. It also draws upon Pargament's (1990) contributions, which specifically examine the meaning individuals assign to adverse situations in relation to religiosity, acknowledging the inherent role of the spiritual dimension in human beings. This perspective provides a foundation for practical guidelines in social work interventions conducted with spiritual sensitivity (Xu, 2015).

Regarding its practical implications, the use of the Brief RCOPE will allow the assessment of religious coping among a cancer population facing significant challenges, particularly within the Instituto Regional de Enfermedades Neoplásicas del Sur (IREN Sur), where specialized oncology care is provided to the southern macro-region of Peru (Bustamante Coronado et al., 2022). Located in the city of Arequipa, IREN Sur provides comprehensive care to individuals who do not have access to Peru's social health insurance system (EsSalud, which primarily serves formally employed workers) and who are affiliated with the Seguro Integral de Salud (SIS), a public insurance program aimed at populations living in poverty or extreme poverty (Government of Peru, 2024). These healthcare disparities are further intensified by the challenges associated with managing a high volume of patients, which may hinder timely diagnosis and treatment and affect the processes of recovery or life prolongation (Ministerio de Salud, 2022).

From a methodological perspective, this study represents an opportunity to implement analytical approaches beyond the EFA and CFA methods previously applied in validation studies. Specifically, the use of Exploratory Structural Equation Modeling (ESEM; Asparouhov & Muthén, 2009) may allow a more comprehensive examination of cross-loadings (secondary factor loadings), which represent the influence of a factor on an item that does not theoretically belong to that factor (Mieres-Chacaltana et al., 2023). This approach is particularly relevant because the psychometric properties of the instrument have not yet been examined in cancer patients, a population exposed to specific vulnerability conditions that represent an additional source of stress beyond the emotional demands associated with cancer diagnosis and treatment (Moss et al., 2020). Furthermore, the conceptualization of religious coping in this population may differ from that observed in other samples experiencing different concerns or stressful circumstances, which may potentially influence the underlying structure and functioning of the instrument. Additionally, an unresolved issue in the evaluation of this instrument is the assessment of measurement invariance across sociodemographic variables (age and educational level) and diagnostic features (cancer type and stage). Examining these aspects may contribute to a better understanding of how this coping strategy may vary according to the diversity of patients receiving oncology care.

Accordingly, the research hypotheses propose that the Brief RCOPE will demonstrate a two-dimensional structure (Hypothesis 1), measurement invariance across the categorical variables examined (Hypothesis 2), and high reliability (Hypothesis 3). Besides, positive religious coping is expected to show a direct association with subjective well-being and positive affect (Hypothesis 4) and an inverse association with negative affect (Hypothesis 5).

Method

Design

The present study employed an instrumental design, which involves the analysis of the psychometric properties of psychological measurement instruments (Ato et al., 2013).

Participants

The study included 445 individuals with a cancer diagnosis who were receiving care at a public hospital in the southern region of Peru. The minimum required sample size was estimated based on a large effect size (.50), a significance level of .05, a statistical power of .95, two latent variables, and 14 observed variables (Soper, 2022).

The inclusion criteria comprised Peruvian men and women aged between 18 and 65 years who had received a cancer diagnosis at any stage of the disease and were undergoing some form of cancer treatment. Patients were excluded if they did not speak Spanish or had difficulties with reading and writing skills.

The sociodemographic analysis revealed a predominantly female sample (78.20%), with a mean age of 52.20 years ($SD = 11.50$). Regarding marital status, nearly half of the participants reported being married (48.1%), followed by those who identified as single (27.6%). Educational level showed a heterogeneous distribution, with a higher prevalence of individuals who had completed secondary education (33.9%) and completed higher education (25.2%). The most frequent cancer types were breast cancer (32.8%) and cervical cancer (21.6%). Other diagnoses with lower representation included prostate cancer (7.2%), skin cancer (5.6%), and stomach cancer (5.4%). Among cases with available staging information, Stage 3 was the most prevalent (31.9%). It should be noted that 30.4% of records did not specify the disease stage at the time of data collection (Table 1).

Table 1
Socio-Demographic Characteristics of Participants (N = 445)

Variable	n	%
Marital Status		
Married	214	48.1
Single	123	27.6
Separated or divorced	58	13.0
Widowed	50	11.24
Educational level		
Completed secondary education	151	33.9
Completed higher education	112	25.2
Incomplete higher education	78	17.5
Completed primary education	35	7.8
Incomplete secondary education	37	8.3
Incomplete primary education	39	7.2
Cancer stage		
Stage 3	142	31.9
Stage 4	70	15.7
Stage 2	57	12.8
Stage 1	41	9.2
Not specified	135	30.4
Cancer type		
Breast cancer	146	32.8
Cervical cancer	96	21.6
Prostate cancer	32	7.2
Skin cancer	25	5.6
Stomach cancer	24	5.4
Colon cancer	22	4.9
Lung cancer	16	3.6
Pancreatic cancer	5	1.1
Not specified	79	17.7
Religion		

Instruments

Sociodemographic Questionnaire

A sociodemographic questionnaire was designed using ordinal and nominal scale questions to collect information regarding age, gender, marital status, educational level, religious affiliation, type of neoplasm, cancer stage, and treatment modality.

Brief RCOPE Scale (Pargament et al., 1997)

The Brief Religious Coping Scale (Brief RCOPE) assesses religious coping in response to life stressors. It consists of 14 items distributed across two dimensions: Positive Religious Coping, which reflects a secure relationship with spirituality, and Negative Religious Coping, which is characterized by feelings of dissatisfaction with the divine, perceptions of abandonment, and spiritual struggle. The scale uses a four-point response format (0 = never; 1 = rarely; 2 = often; 3 = always). Pargament et al. (1997) conducted a factor analysis confirming the two-factor structure and a reliability analysis showing high levels of internal consistency (PRC = .92; NRC = .81).

Satisfaction With Life Scale - SWLS (Diener et al., 1985)

The Satisfaction With Life Scale (SWLS) assesses individuals' cognitive evaluation of their own lives. It consists of five items rated on a five-point response scale (1 = strongly disagree; 2 = slightly disagree; 3 = neither agree nor disagree; 4 = slightly agree; 5 = strongly agree). For the present study, the Peruvian version validated by Calderón et al. (2018) was used. The scale has demonstrated adequate psychometric properties, including evidence of validity (RMSEA = .052; CFI = .98; SRMR = .027) and reliability (ω = .90).

Positive and Negative Affect Schedule - PANAS (Watson et al., 1988)

The Positive and Negative Affect Schedule (PANAS) assesses individuals' emotional states and consists of 10 items measuring two dimensions: Positive Affect and Negative Affect. Items are rated on a five-point response scale (1 = never; 2 = slightly; 3 = moderately; 4 = quite a bit; 5 = extremely). The Peruvian version validated by Vásquez Vega et al. (2023) was used in the present study. The scale has demonstrated adequate psychometric properties, including evidence of validity (RMSEA = .052; TLI = .906; CFI = .976; SRMR = .042) and reliability (Positive Affect, ω = .81; Negative Affect, ω = .87).

Procedure

A back-translation procedure was conducted with the support of a translator who had completed undergraduate studies in psychology. In addition, previously published Spanish-language versions of the instruments were considered as supporting references (García et al., 2021; Pagán-Torres et al., 2021).

Following coordination with the hospital's quality management department, the in-person assessment process was initiated, taking place during August and September 2025, from Monday to Saturday between 7:00 a.m. and 2:00 p.m., in available areas such as waiting spaces, hallways, chemotherapy rooms, and areas surrounding the hospital. Patients attending medical appointments or receiving treatment were approached and invited to participate in the study. After reading and signing the informed consent form, participants completed the measurement instruments. The approximate completion time for all questionnaires was 15 minutes.

Data analysis

Evidence of Validity Based on Internal Structure

Preliminary analyses. The presence of multivariate outliers was assessed using the Mahalanobis distance ($p < .001$). Univariate normality was evaluated by examining the magnitude of skewness (< 2) and kurtosis (< 7 ; Finney & DiStefano, 2006), whereas multivariate normality was assessed using Mardia's multivariate kurtosis coefficient ($G2 < 70$; Rodríguez & Ruiz, 2008).

Measurement models and estimation. The original two-factor model (Pargament et al., 1997) was evaluated using CFA and ESEM (Asparouhov & Muthén, 2009).

For both models, the Weighted Least Squares Mean and Variance Adjusted (WLSMV) estimator was employed. This estimation method was selected because the items are ordinal (Bagheri & Saadati, 2021) and has been shown to perform adequately in the presence of substantial skewness (Li, 2016a, 2016b). For the ESEM model, an oblique target rotation ($\epsilon = .5$; Asparouhov & Muthén, 2009) was specified, allowing the primary factor loadings to be freely estimated while constraining the cross-loadings (i.e., factor loadings on non-target factors) to values close to zero (~ 0). Model fit was evaluated using the Comparative Fit Index (CFI, $> .95$), Tucker-Lewis Index (TLI, $> .95$), Standardized Root Mean Square Residual (SRMR, $< .05$), and Root Mean Square Error of Approximation (RMSEA, $< .06$) (Hu & Bentler, 1998, 1999). Additionally, the magnitude of the factor loadings was examined, with values greater than .50 considered adequate (Dominguez-Lara, 2018).

Convergent validity was assessed using the Average Variance Extracted (AVE), with values above .37 considered acceptable (Moral de la Rubia, 2019), whereas discriminant validity was evaluated by comparing the squared interfactor correlation (ϕ^2 ; representing the variance shared between factors) with the AVE. When the AVE exceeds the squared interfactor correlation, the factors are considered to be independent of one another (Chávez-Ventura et al., 2025; Voorhees et al., 2015).

As a complementary analysis within the ESEM framework, the relevance of the cross-loadings was examined using the Simplicity Factor Index (SFI; Fleming & Merino, 2005). This index is particularly informative because the CFA approach constrains cross-loadings to zero. Consequently, it allows the identification of items that receive substantial influence from more than one factor (SFI $< .70$; Lara et al., 2021).

Finally, measurement invariance was evaluated across age (Group 1: adults [18–59]; Group 2: older adults [60+]), educational level (Group 1: participants with higher education; Group 2: participants without higher education), cancer stage (Group 1: Stages I and II; Group 2: Stages III and IV), and cancer type (Group 1: breast and cervical cancer; Group 2: other cancer types). The equivalence of the measurement model was examined sequentially by testing configural invariance, weak invariance, strong invariance, and strict invariance (Pendergast et al., 2017). Evidence supporting measurement invariance was determined based on changes in model fit indices across successive models ($\Delta CFI > -.010$, $\Delta RMSEA < .015$, $\Delta SRMR < .030$; Chen, 2007).

Reliability

Reliability was assessed using Cronbach's alpha ($\alpha > .70$; Ponterotto & Charter, 2009) and McDonald's omega ($\omega > .70$; Raykov & Hancock, 2005). In addition, the difference between the two coefficients ($\Delta_{|\alpha-\omega|}$) was examined to evaluate the potential impact of violations of the tau-equivalence assumption on the estimation of Cronbach's alpha. A difference greater than |.06| was considered indicative of a meaningful discrepancy (Gignac et al., 2007).

Evidence of Validity Based on Relations to Other Variables

Evidence of validity based on relations to other variables was examined by assessing the associations between religious coping, affect, and life satisfaction. Pearson's correlation coefficient was used to evaluate the practical significance of these associations, with correlation coefficients greater than |.20| considered practically meaningful (Ferguson, 2009). Additionally, based on the results of the measurement invariance analyses, group comparisons were conducted using Cohen's *d*. Effect sizes greater than |.41| were interpreted as indicating practically meaningful group differences (Ferguson, 2009).

Software

All factor analyses, including CFA, ESEM, and measurement invariance analyses, were conducted using Mplus version 8.4 (Muthén & Muthén, 1998–2019).

Results

Evidence of Validity Based on Internal Structure

Preliminary analyses. A total of 23 multivariate outliers were removed. Most items showed acceptable evidence of univariate normality, although several exhibited values close to the recommended cutoffs (Table 2). However, multivariate normality was not supported ($G_2 = 109.965$).

Table 2
Descriptive statistics of Brief RCOPE

Item1	M	SD	g ₁	g ₂
	2.667	0.624	-2.081	4.531
Item 2	2.708	0.589	-2.280	5.654
Item 3	2.506	0.767	-1.478	1.420
Item 4	2.602	0.702	-1.822	2.855
Item 5	2.658	0.626	-1.971	3.898
Item 6	2.679	0.613	-2.031	4.051
Item 7	2.328	0.867	-1.063	0.122
Item 8	0.661	0.694	0.894	0.787
Item 9	0.411	0.667	1.630	2.314
Item 10	0.445	0.726	1.719	2.619
Item 11	0.326	0.622	2.122	4.705
Item12	0.258	0.548	2.448	6.901
Item 13	0.407	0.734	1.731	2.087
Item 14	0.175	0.507	3.489	13.549
Nota: M: Mean; SD: Standard Deviation; g ₁ : Skewness; g ₂ : Kurtosis				

With respect to the structural analyses, both the CFA and ESEM models demonstrated excellent model fit (Table 3), along with factor loadings of acceptable magnitude and adequate evidence of convergent and discriminant validity. Furthermore, the ESEM results indicated that no complex items were identified (Table 3), providing empirical support for the first research hypothesis. Finally, measurement invariance was supported across all grouping variables examined (Table 4), providing evidence in support of the second research hypothesis.

Table 3
Fit indices and factor parameters

CFI	CFA		ESEM	
	.983		.971	
TLI	.98		.958	
RMSEA	.039		.056	
90% CI	.027, .051		.045, .068	
SRMR	.048		.039	
	F1	F2	F1	F2
Item 1	.778		.779	.006
Item 2	.765		.760	-.009
Item 3	.672		.702	.067
Item 4	.865		.854	-.025
Item 5	.848		.819	-.065
Item 6	.656		.640	-.037
Item 7	.642		.676	.068
Item 8		.689	.069	.724
Item 9		.896	-.013	.888
Item 10		.871	.016	.879
Item 11		.713	-.023	.703
Item 12		.584	.084	.626
Item 13		.563	-.006	.559
Item 14		.821	-.118	.769
AVE	.565	.554	.563	.554
F1	1	.084	1	.084
F2	-.289	1	-.290	1

Note. CFA = Confirmatory Factor Analysis; ESEM = Exploratory Structural Equation Modeling; F1 = Positive Religious Coping; F2 = Negative Religious Coping; SFI = Simplicity Factor Index; AVE = Average Variance Extracted; values below the diagonal represent interfactor correlations, whereas values above the diagonal represent the shared variance between factors.

Table 4
Measurement invariance

Model	CFI	TLI	RMSEA	90% CI	SRMR	Δ CFI	Δ TLI	Δ RMSEA	Δ SRMR
Age									
Configural	.978	.969	.050	.036, .063	.046				
Weak	.985	.982	.038	.022, .052	.053	.007	.013	-.012	.007
Strong	.987	.986	.034	.016, .047	.057	.002	.004	-.004	.004
Strict	.985	.986	.034	.018, .047	.061	-.002	.000	.000	.004
Educational Level									
Configural	.966	.952	.067	.054, .078	.051				
Weak	.971	.965	.057	.045, .068	.060	.005	.013	-.010	.009
Strong	.969	.968	.054	.043, .065	.066	-.002	.003	-.003	.006
Strict	.965	.967	.055	.044, .065	.070	-.004	-.001	.001	.004
Cancer Stage									
Configural	.976	.965	.053	.040, .066	.047				
Weak	.985	.982	.038	.022, .051	.052	.009	.017	-.015	.005
Strong	.986	.986	.034	.017, .047	.054	.001	.004	-.004	.002
Strict	.988	.989	.030	.011, .044	.057	.002	.003	-.004	.003
Cancer Type									
Configural	.968	.955	.062	.050, .074	.054				
Weak	.971	.965	.055	.042, .066	.067	.003	.010	-.007	.013
Strong	.974	.973	.048	.036, .059	.069	.003	.008	-.007	.002
Strict	.970	.972	.049	.038, .060	.075	-.004	-.001	.001	.006

Reliability

Both Cronbach's alpha (α) and McDonald's omega (ω) demonstrated high reliability estimates for each dimension, providing support for the third research hypothesis. However, the difference between the two coefficients was meaningful (Table 5).

Table 5
Reliability

Positive Religious Coping	α	ω	$\Delta_{ \alpha-\omega }$
	.834	.900	.066
Negative Religious Coping	.809	.900	.091
Note. α = Cronbach's alpha; ω = McDonald's omega; $\Delta_{ \alpha-\omega }$ = Absolute difference between alpha and omega coefficients.			

Evidence of Validity Based on Relations to Other Variables

No significant between-group differences were identified in the analyzed cases (Table 6). Furthermore, a significant association was observed between coping dimensions and negative affect, whereas no significant associations were found with positive affect or life satisfaction (Table 7). These findings provide empirical support for the fifth research hypothesis, but not for the fourth.

Table 6
Group comparison

Age	Group	n	M	SD	d
Positive Religious Coping	Adults	327	18.211	3.242	0.01
	Older adults	118	18.178	3.343	
Negative Religious Coping	Adults	327	2.550	2.806	0.06
	Older adults	118	2.390	2.612	
Educational level					
Positive Religious Coping	Without higher education	255	18.529	3.030	0.24
	With higher education	190	17.763	3.517	
Negative Religious Coping	Without higher education	255	2.608	2.770	0.09
	With higher education	190	2.374	2.734	
Cancer stage					
Positive Religious Coping	Stages 1 and 2	98	17.959	3.217	-0.10
	Stages 3 and 4	347	18.271	3.280	
Negative Religious Coping	Stages 1 and 2	98	2.898	3.196	0.18
	Stages 3 and 4	347	2.398	2.610	
Cancer type					
Positive Religious Coping	Cervical and breast cancer	242	18.488	3.005	0.19
	Other types	203	17.862	3.528	
Negative Religious Coping	Cervical and breast cancer	242	2.198	2.463	-0.25
	Other types	203	2.877	3.029	

Table 7
Association with other variables

Positive Religious Coping	Life Satisfaction	Negative affect	Positive Affect
	.032	– .208	.185
Positive Religious Coping	– .109	.328	– .121

Discussion

Religion represents an intrinsic factor that becomes relevant across different stages of life, particularly during events involving uncertainty, stress, and a lack of control, such as illness (Almeida Filho et al., 2023). This form of coping may be expressed through spiritual practices, thoughts, and emotions that emerge when individuals experience vulnerability following a medical diagnosis, such as cancer (Batista et al., 2022). Likewise, personal history influences the transmission of religious practices across generations, which may constitute an additional source of support sought by patients during times of crisis (Rençber & Ulutaşdemir, 2025). Therefore, religious coping functions as a cross-cutting resource that influences psychological distress (Pagan-Torres et al., 2021) and patients' quality of life (Delgado Guay et al., 2021).

Accordingly, this study aimed to examine the validity and reliability evidence of the Brief RCOPE scale, yielding highly favorable results among cancer patients from southern Peru.

The findings satisfactorily demonstrated the consistency of the two-dimensional structure, highlighting its empirical distinction and the robustness of factor loadings. Moreover, no problematic item functioning was identified for items that have shown recurrent difficulties in previous studies (items 12 and 13), supporting the assumption of construct replicability across cultures. This finding is further supported by the diversity of countries included in the studies mentioned in the introduction, where the same two-dimensional structure has also been replicated. These results indicate that, regardless of cultural context, religion and its use as a coping mechanism represent key aspects of individuals' daily lives.

Furthermore, favorable evidence of measurement invariance was also observed across different sociodemographic and clinical factors, including cancer stage, cancer type, educational level, and age. Few studies have reported factorial invariance, as previous evidence has mainly focused on gender and nationality (Agormedah, 2023; Manzler et al., 2026). However, it is also relevant to consider sample-specific characteristics to explore differences in coping patterns. For instance, previous literature has documented higher levels of coping among female populations, as women have been more frequently studied in the context of crisis situations that require exploration from perspectives involving meaning, significance, reappraisal, and hope (Mirzaee et al., 2022).

Regarding reliability, the present study demonstrated adequate internal consistency. These findings are consistent with previous studies that have also reported Cronbach's alpha and McDonald's omega coefficients of similar magnitude (Caporossi et al., 2018; Casaleiro et al., 2022; Esperandio et al., 2018; Janu et al., 2019; Kwesi et al., 2023; Martinez & Sousa, 2011; Pagan-Torres et al., 2021; Paika et al., 2017).

Regarding the associations between religious coping dimensions and indicators of subjective well-being, the analyses revealed a significant relationship between the use of religious beliefs and practices and daily affective experiences. One of the most evident manifestations of the relationship between positive affect and religious coping is the capacity to accept illness, which has been examined as a relevant mediating factor (Hassan & Doğan, 2025). This process occurs through the search for spiritual support, from which hope and resilience commonly emerge (Caksen, 2025), as well as enthusiasm, inspiration, and strength (Galindo et al., 2015). These positive affective states have been found to motivate the adoption of self-care behaviors that enhance overall well-being, such as adequate nutrition and physical activity (Park et al., 2018).

However, the presence of Negative Religious Coping reflects a form of struggle against God, which some authors have referred to as *spiritual struggle* (Amado, 2020). This process is manifested through negative affective states arising from perceptions that illness represents divine punishment or abandonment by God, eliciting emotions such as anger, guilt, fear, and sadness, which are core components of negative affect (Gallardo et al., 2021). In summary, this coping style reflects a conflict with the sacred that significantly exacerbates emotional distress during health-related crises.

The absence of a significant correlation between Positive Religious Coping and life satisfaction may be explained by Diener's theoretical framework. According to this model, individuals' evaluations of their life trajectories involve cognitive and emotional components that develop progressively through long-term lived experiences (Diener et al., 1999; Shin & Johnson, 1978). Furthermore, evidence indicates that life satisfaction may persist even in the presence of illness, influenced by factors such as family support, sufficient economic resources to meet treatment-related demands (Janiszewska et al., 2008), educational level, particularly completion of at least primary education (Taskin Yilmaz et al., 2021), and psychological variables such as the meaning of life (Wilski et al., 2024). Nevertheless, coping is a broad and complex construct that encompasses styles, strategies, and types (Fernández Abascal, 1997). As such, it is associated with cognitive and behavioral mechanisms activated to manage and withstand immediate stressful situations (Lazarus & Folkman, 1984), facilitating adequate adaptation to the context, particularly in circumstances involving stress. However, coping does not necessarily refer to the positive emotions and affective states that may emerge from these personal efforts.

Considering this, the mental health of individuals with medical diagnoses is influenced by multiple psychological and contextual factors (Pargament et al., 2011). Comfort derived from the spiritual dimension may reduce adverse psychological symptoms; however, this does not necessarily imply that individuals experience greater life satisfaction, given that illness-related factors such as physical pain, disruption of life projects, loneliness, or advanced age may affect this evaluation (Alsan et al., 2021). Likewise, the perception of death as a latent possibility may influence this balance, particularly when patients are aware of their clinical stage (Sharif et al., 2018). In this regard, it is important to highlight that, in the present study, 31.7% of the sample was unaware of their disease stage, a condition that may have an ambivalent impact, either positive or negative, on the patients' mental health.

Regarding practical implications, the application of the Brief RCOPE may contribute to the assessment of patients' spiritual functioning. This identification is clinically relevant because it may allow the recognition of patients at greater risk of experiencing psychological distress or clinically relevant symptoms that may hinder their recovery process. Thus, psychometric assessment may strengthen timely multidisciplinary interventions aimed at preventing the persistence of psychological distress and promoting more adaptive coping with illness. Accordingly, these findings support the need to integrate the spiritual dimension into psycho-oncological interventions (Xu, 2015). In this regard, identifying the presence of Negative Religious Coping may guide therapeutic work toward the development of more adaptive and healthy strategies that promote emotional well-being, psychosocial adjustment, and a healthier relationship with the experience of illness.

Regarding limitations, access to the sample required more time than initially expected. Additionally, access to evaluators through the selected institution was challenging, and the physical spaces used for protocol administration were sometimes inadequate, which may have led to distractions due to the presence of multiple patients and healthcare personnel. It was difficult to recruit a comparable number of male participants, which prevented the analysis of measurement invariance across sex. Furthermore, many patients were unaware of their disease stage. Despite these limitations, the findings showed strong empirical support and were consistent with both the existing literature and previous studies. This suggests that the impact of these limitations may not have been substantial in the present sample, or that previous research has encountered similar methodological challenges.

In conclusion, the Brief RCOPE demonstrates adequate psychometric properties, including evidence of validity, reliability, and measurement invariance, supporting its use among cancer patients from Arequipa.

Regarding future directions, longitudinal designs should be incorporated to strengthen evidence regarding the use of the Brief RCOPE in oncology populations. Such designs would allow researchers to examine whether Positive and Negative Religious Coping strategies, as well as their emotional impact, vary significantly throughout the disease trajectory, from diagnosis to survivorship, recurrence, palliative care, or end-of-life stages (Pagan-Torres et al., 2021). This would provide a more accurate understanding of the stability of religious coping scores according to the psychological demands associated with each stage of illness.

Likewise, it is essential to examine validity evidence of the instrument considering the sociodemographic diversity of oncology populations across different age groups, including pediatric, adult, and older adult populations, as well as across disease stages. Given the central role of informal caregivers, examining the psychometric properties of the instrument in this group is also warranted, as caregivers play a fundamental role in patient care while simultaneously experiencing a substantial proportion of the physical, emotional, and spiritual burden associated with illness. Their inclusion would provide a broader understanding of religious coping within the most relevant support networks and as a relational and family-based phenomenon.

Another relevant research direction involves examining the influence of mediating variables that may attenuate the impact of Negative Religious Coping on mental health, including quality of life (Li et al., 2024), social support (Tao et al., 2022), family support (Raesi et al., 2025), psychological support, and perceptions of healthcare service quality (Afrasiabifar et al., 2021). In this regard, future studies should determine whether greater social, family, or institutional support reduces the association between Negative Religious Coping and negative affective states that contribute to psychological distress.

Similarly, examining the cross-cultural validity of the instrument in Latin American contexts and among non-Christian populations is highly relevant, given that concepts related to spirituality, God, and divinity may vary according to cultural and religious frameworks. This line of research may facilitate the application of the instrument in culturally diverse settings and determine whether diverse belief systems also conform to the same two-dimensional structure.

Finally, training healthcare professionals in spiritual health and in the recognition of indicators associated with Positive and Negative Religious Coping is recommended. Such training would facilitate the timely identification of patients requiring psychological, spiritual, or interdisciplinary support. Consequently, it would promote a comprehensive care model that extends beyond the treatment of physical illness and incorporates the preservation of existential integrity, meaning in life, and quality of life

Declarations

Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of this study.

Ethical Considerations

This study was approved by the Ethics Committee of the Regional Institute of Neoplastic Diseases of Southern Peru (IREN SUR), as documented in Letter No. 027-2025-GRA/GRS/GR-IREN-SUR/G-DCC-DI-CIEI-IREN-SUR. All participants provided informed consent prior to their participation in the study.

Consent for Publication

Not applicable.

Funding

This study was funded by the Research Directorate of Universidad Católica San Pablo, as it was one of the winning projects of the “Fomento de Investigación 2024” call (PFI24-UCSP-01).

Author Contribution

RASV: Organization, development of sections of the Introduction, Method, and Discussion, and final review. SAC: Writing selected sections of the Introduction, data collection, and drafting part of the Discussion. CHC: Writing selected sections of the Introduction, data collection, and drafting part of the Discussion. FCHQ: Drafting the Discussion, reviewing the writing, and checking citations and references. SDL: Justification, data analysis, and Discussion.

Acknowledgement

Acknowledgments We would like to thank Universidad Católica San Pablo for the funding provided, all the volunteer patients who participated in the study, and Paula Mercedes Pacheco Tapia for translating the manuscript.

Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request. The data are not publicly available due to ethical and confidentiality restrictions.

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