

The Relationship of Spiritual Coping with Resilience and Perceived Stress: Validation of the Dutch Spiritual Coping Questionnaire

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Abstract

The aim of this study is to translate and validate the Spiritual Coping Questionnaire in Dutch (SCQ-nl), compare this questionnaire with a religious coping questionnaire, and assess the levels of religious and spiritual coping in association to resilience and perceived stress because these are important determinants in mental health issues. The Dutch-speaking respondents ($N = 651$, $Age = 45$, $SD_{age} = 14$, $range = 18-80$) answered the SCQ, Brief RCOPE, Perceived Stress Scale, and Brief Resilience Scale. Validation of the SCQ shows it to be a reliable and valid questionnaire for assessing positive and negative spiritual coping in Dutch-speaking individuals. Although the positive and negative religious coping scales are associated with positive and negative spiritual coping questionnaires, religious coping was not predictive of perceived stress or resilience. Multiple regression analyses demonstrate positive spiritual coping to be associated with lower perceived stress and higher resilience levels and negative spiritual coping to be associated with higher perceived stress and lower resilience levels in Dutch-speaking individuals. The outcome of this study is that the SCQ-nl is a valid and reliable measure for assessing positive and negative spiritual coping in scientific psychological research and descriptively in clinical practice.

Keywords

Positive spiritual coping • Negative spiritual coping • Psychopathology • Flourishing • Optimal functioning

Manevi Başa Çıkmanın Psikolojik Dayanıklılık ve Algılanan Stresle İlişkisi:
Manevi Başa Çıkma Anketi Hollanda Formunun Güvenilirlik ve Geçerliliği

Öz

Bu çalışmanın amacı, Manevi Başa Çıkma Anketi Hollanda Formunu (SCQ-nl) uyarlamak psikometrik özelliklerini incelemek, bu anketi bir dini başa çıkma anketi ile karşılaştırmak ve katılımcıların psikolojik dayanıklılık ve algılanan stres düzeyleri ile ilişkili olarak dini ve manevi başa çıkma seviyelerini değerlendirmektir. Bu değişkenler ruh sağlığı ile ilgili önemli belirleyicilerdir. Hollandaca konuşan katılımcılar ($N = 651$, $yaş ortalaması = 45$, $ss = 14$, $yaş aralığı = 18-80$) SCQ-nl anketini, Kısa Dini Başa Çıkma Anketi Hollandaca Formu, Algılanan Stres Ölçeği ve Kısa Psikolojik Dayanıklılık Ölçeğini yanıtlamışlardır. SCQ'nun psikometrik incelemesi, bu ölçeğin Hollandaca konuşan bireylerde pozitif ve negatif manevi başa çıkmanın ölçülmesinde güvenilir ve geçerli bir anket olduğunu göstermektedir. Pozitif ve negatif dini başa çıkma ölçekleri, pozitif ve negatif manevi başa çıkma anketleriyle ilişkili olsa da, dini başa çıkma algılanan stres ya da psikolojik dayanıklılığı yordamadığı görülmüştür. Çoklu regresyon analizleri, Hollandaca konuşan bireylerde pozitif manevi başa çıkmanın düşük algılanan stres ve daha yüksek psikolojik dayanıklılık düzeyleri ile ilişkili olduğunu; olumsuz manevi başa çıkmanın ise daha yüksek algılanan stres ve daha düşük psikolojik dayanıklılık düzeyleri ile ilişkili olduğunu göstermiştir. Bu çalışmanın sonuçları, SCQ-nl'nin bilimsel psikolojik araştırmalarda ve betimsel olarak klinik uygulamalarda pozitif ve negatif manevi başa çıkmanın değerlendirilmesi için geçerli ve güvenilir bir ölçek olduğunu göstermektedir.

Keywords

Pozitif manevi başa çıkma • Negatif manevi başa çıkma • Psikopatoloji • İyi Oluş • Optimum işlevsellik

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People use different coping styles to handle daily stress and major life events. One of these coping styles is religious coping that, for example, can express itself in prayer or the experience of divine support (Pargament, Ensing, Falgout, & Olsen, 1990; Pargament et al., 1992). However, religious affiliation is declining in the Netherlands. Not even half of Dutch adult residents (46%) report having a religious affiliation, and attending religious services is limited to just 22% of residents (Center for Big Data Statistics [CBS], 2018). Also, with the Dutch population being culturally quite diverse, research and clinical practice should be able to accommodate both religious and non-religious individuals (Braam et al., 2010; Pieper, 2012). Restricting a coping style to religion in psychological research or clinical practice only seems to exclude a large part of the population that might cope with stress and adversity in a more spiritual way. Therefore, a Dutch questionnaire measuring spiritual coping is necessary in order to include not just religiously affiliated individuals but all individuals in Dutch-speaking countries.

Religion is taught by caregivers and society throughout life as a life philosophy of life, but the necessity for spirituality appears innate and is considered a fundamental and vital aspect of being human (Fisher, 2011; Hay, Reich, & Utsch, 2006; McCarroll, St. James O'Connor, & Meakes, 2006). Spirituality is thought to have four domains: transcendental, environmental, social, and personal (Fisher, 2011). The transcendental domain is related but not equivalent to religion. While religion is more focused on a relationship with a God, transcendence is about the relationship of the self with a larger whole (i.e., the universe or a higher power) or with something beyond the human level. The environmental domain is the relationship of the self with nature, being awestruck by nature, or caring for the environment. The social domain includes in-depth relationships with those around us. The personal domain concerns the relationship with the self and how we look at personal strengths and weaknesses. Spiritual health and coping is a dynamic state that integrates the four domains of spirituality and reflects the quality of the relationships someone has in all four domains (Charzyńska, 2014).

Positive spiritual coping expresses itself cognitively and behaviorally in relation to the four domains. At the personal level, an individual can pursue a life purpose, might search for meaning in life, or discover their weakness and work at improving it. Someone can turn to others, care for them, or show love and empathy at the social level. Regarding the environmental level, an individual might turn to nature to relax or be a vegetarian to reduce their ecological footprint. At the transcendental level, the relationship with God, a higher power, or the feeling of being part of the universe can support the individual in times of stress or adversity (Charzyńska, 2014).

For example, positive spiritual coping seems to be able to strengthen resilience for all groups of people, such as healthy adolescents (Kim & Esquivel, 2011), adolescents with depression symptoms (Cotton, Larkin, Hoopes, Cromer, & Rosenthal, 2005), adolescents

suffering from cancer (Hendricks-Ferguson, 2008), adults with life-long disabilities (Cardman, 2002), soldiers (Yeung & Martin, 2013), and the elderly (Manning, Ferris, Narvaez Rosario, Prues, & Bouchard, 2018). The innate need for spirituality seems to be an effective way to cope with daily stress and more adverse life-events.

Spiritual coping also has a dark side (Braam et al., 2010; Pargament et al., 2003). Negative spiritual coping can operate in all four domains of spirituality, just like positive spiritual coping. An individual can have no meaning in life or can focus only on their weaknesses at the personal level. Excluding others in life or maladaptive feelings such as hostility and envy towards others can impede social connections. An individual might consider nature as insignificant or conversely consider nature as a hostile environment that makes life difficult. At the transcendental level, God might be considered as a scrupulous entity that will punish the individual who does something wrong, or one can blame a higher power for the adversity that happen to someone (Charzyńska, 2014). These coping strategies can prevent the individual from benefitting from the strengths of positive spiritual coping.

The effects of negative spiritual coping are the opposite of positive spiritual coping. Detrimental effects from negative spiritual coping were found in women with gynecological cancer (Boscaglia, Clarke, Jobling, & Quinn, 2005), earthquake survivors (Stratta et al., 2012), and dialysis patients (Vitorino et al., 2017). Disturbed relationships in some or all four domains of spirituality might cause even more stress, which can aggravate daily burdens or serious adversities in life (Lee, Choi, & Ryu, 2019).

Positive and negative spiritual coping are distinct but related concepts. Although one may think of positive and negative spiritual coping as two sides of a continuum, research has shown this is not the case (Charzyńska, 2014). Negative spiritual coping is linked to signs of psychopathology in the short-term; it might also be associated with growth and well-being in the long-term (Pargament, Feuille, & Burdzy, 2011). Victor Frankl, Holocaust survivor and founder of existential intervention logotherapy, already stated, “The [...] crisis had to be reshaped into a spiritual rebirth” (Frankl, 1965, p. 183). This conception is supported by P. T. Wong (2012) in his dual-systems model of what makes life worth living. One of the two systems is related to avoidance behavior that can lead to both positive as well as negative outcomes, depending on how the avoidance behavior is addressed in life (P. T. Wong, 2012).

Purpose

The aim of this study is to translate and validate the Spiritual Coping Questionnaire (Charzyńska, 2014) in Dutch, compare this questionnaire with a religious coping questionnaire (Pargament, Koenig, & Perez, 2000), and assess the levels of religious and spiritual coping in association with resilience and perceived stress because these are

important determinants in mental health issues such as anxiety and depression (Yu et al., 2016). The goal is to provide science and practice with a suitable questionnaire for measuring spiritual coping, making it possible to include spiritual coping in research and intervention.

Method

Participants

We approached participants through social media, e-mail, personal contact, and door-to-door folders. Inclusion criteria were: (a) speaking Dutch and (b) being 18 years or older. Participants enrolled voluntarily, signed an informed consent form in which ethical and privacy issues were covered, and were rewarded for participation with a chance at gift cards. Confidentiality as well as anonymity was ensured; e-mail addresses were stored separately from the data and deleted after the data collection. The convenience sample consists of 651 Dutch-speaking adults at baseline (T_0 : $M_{\text{age}} = 45$, $SD_{\text{age}} = 14$, range = 18-80). At 6 weeks after baseline (T_1), 421 participants (65% of the initial sample) had completed the survey ($M_{\text{age}} = 46$, $SD_{\text{age}} = 14$). At 18 weeks after baseline (T_2), which is 12 weeks after T_1 , 309 participants (47% of the initial sample) had completed the survey ($M_{\text{age}} = 47$, $SD_{\text{age}} = 14$). At 30 weeks after baseline (T_3), which is 12 weeks after T_2 , 268 participants (41%

Table 1.
Sample Characteristics from the Total Sample ($N = 651$), and Dropout-Completer Comparisons

	Total sample	Dropouts	Completers	Δ Dropouts - Completers
N (%0)	651 (100)	383 (59)	268 (41)	
Age M (SD)	45 (14)	42 (14)	48 (14)	$t(487.82) = -5.229^{***}$
[range]	[18-80]	[18-76]	[18-80]	
Gender n (%)				
- Men	200 (31)	124 (62)	76 (38)	$\chi^2(1, N = 651) = 1.014$
- Women	451 (69)	259 (57)	192 (43)	
Education level n (%)				
- Low education	213 (33)	139 (65)	74 (35)	$\chi^2(1, N = 651) = 5.010^*$
- High education	438 (67)	244 (56)	194 (44)	
Religion n (%)				
- No belief	299 (46)	183 (61)	116 (39)	
- Christian	194 (30)	108 (56)	86 (44)	$\chi^2(3, N = 651) = 6.812$
- Other religion	33 (5)	25 (78)	8 (24)	
- Spiritual	125 (19)	67 (54)	58 (46)	
SCQ-PC M (SD)	2.95 (0.63)	2.90 (0.65)	3.02 (0.60)	$t(601.26) = -2.349$
SCQ-NC M (SD)	1.42 (0.47)	1.44 (0.49)	1.39 (0.43)	$t(616.26) = 1.500$
RCOPE-PC M (SD)	1.57 (0.71)	1.57 (0.72)	1.57 (0.69)	$t(590.00) = -0.020$
RCOPE-NC M (SD)	1.38 (0.38)	1.39 (0.40)	1.36 (0.36)	$t(613.17) = 0.953$
BRS M (SD)	3.68 (0.86)	3.61 (0.85)	3.78 (0.87)	$t(566.05) = -2.477^*$
PSS M (SD)	1.26 (0.68)	1.30 (0.69)	1.21 (0.66)	$t(588.77) = 1.649$

Note. $^{**} p < 0.001$, $^* p < 0.05$.

SCQ: Spiritual Coping Questionnaire; RCOPE: Religious Coping Questionnaire; PC: positive coping; NC: negative coping; BRS: Brief Resilience Scale; PSS: Perceived Stress Scale.

Dropouts are respondents who dropped out of the study at one of the follow-up measurements T_1 , T_2 , or T_3 . Completers are respondents who completed all four measurements.

of the initial sample) had completed the survey ($M_{\text{age}} = 48$, $SD_{\text{age}} = 14$). The 268 subjects at T_3 (hereafter called completers) have significantly higher educations and are older; they reported a slightly higher level of resilience compared to the subjects who had completed the survey only at T_0 or up to T_1 or T_2 (hereafter called dropouts; see Table 1).

Design and Procedure

This longitudinal prospective design consists of a baseline measurement (T_0) and three follow-up measurements (at times T_1 , T_2 , and T_3), covering a period of 6, 18, and 30 weeks respectively after the baseline of T_0 . Participants filled out an online survey that was offered through LimeSurvey. Those who participated in the first measurement (T_0), were asked to provide an email address. They received an email at times T_1 , T_2 , and T_3 based on their participation in the previous measure with the request to fill out the online survey. They could access the online survey by clicking a link in the email that included a unique 15-character personal access code.

Measures

Spiritual coping. Two bilingual psychologists translated into Dutch and back translated the Spiritual Coping Questionnaire (SCQ) developed by Charzyńska (2014), resulting in the SCQ-nl. The questionnaire consists of eight subscales: personal positive coping, social positive coping, environmental positive coping, transcendental positive coping, personal negative coping, social negative coping, environmental negative coping, and transcendental negative coping. The questionnaire can be found in Appendix A. Participants answered the items of the SCQ-nl using a 5-point Likert scale, ranging from *inaccurately* (1) to *accurately* (5). Calculating a mean for all subscales and a mean for operationalizing positive spiritual coping and negative spiritual coping is possible. Reliability and validity of the SCQ-nl will be examined in this study under the Results and Discussion headings.

Religious coping. Religious coping has been measured with the Dutch Brief Religious Coping questionnaire (Brief RCOPE; Braam et al., 2010; Pargament et al., 2000). This questionnaire consists of 10 items with the subscales for positive religious coping and negative religious coping each having five items. An example item for positive religious coping is “I try to find the lesson from God in crises” and for negative religious coping is “I question whether God really exists.” Participants answered the items of the Brief RCOPE using a 5-point Likert scale, ranging from *never* (0) to *very often* (4). Means are calculated for the two subscales. The validation study from Braam et al. (2010) showed the Dutch RCOPE to be a questionnaire with only good validity and internal consistency for positive religious coping (Cronbach’s $\alpha = .90$), but not good for negative religious coping (Cronbach’s $\alpha = .29$). This study reveals good internal consistency for the positive religious coping scale with



McDonald's $\omega = .89$, while revealing insufficient internal consistency for the negative religious coping scale with McDonald's $\omega = .65$.

Resilience. Resilience has been measured using the Dutch Brief Resilience Scale (BRS: Leontjevas, Op de Beek, Lataster, & Jacobs, 2014; Smith et al., 2008). The BRS-nl consists of six items, (e.g., *I tend to bounce back quickly after hard times*). Participants answer the items on a 5-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (5). A mean is calculated for the resilience level's total score. The validation study from Leontjevas et al. (2014) showed the BRS-nl to be a valid questionnaire for measuring resilience with good internal consistency (Cronbach's $\alpha = .83$). This study reveals good internal consistency for the BRS-nl (McDonald's $\omega = .92$).

Perceived stress. Perceived stress has been measured using the Dutch Perceived Stress Scale (PSS: Cohen, Kamarck, & Mermelstein, 1983; Longitudinal Aging Study Amsterdam, ongoing). The PSS-nl consists of 10 items (e.g., *In the last month, how often have you felt that things were going your way?*). Participants answer the items on a 5-point Likert scale ranging from *never* (0) to *very often* (4). A mean is calculated for the total score for the level of perceived stress. The original 10-item perceived stress scale is a valid and reliable measure for assessing perceived stress levels (Roberti, Harrington, & Storch, 2006). This study reveals good internal consistency for the PSS-nl (McDonald's $\omega = .90$).

Analyses

Principal component analysis (PCA) has been used with the items at T_0 to determine if the translated items show the same factors as the original SCQ. Confirmatory factor analyses (CFA) using maximum-likelihood estimation have been applied on the items of the SCQ-nl at T_1 to confirm the factor structure of the questionnaires at baseline (T_0). To assess goodness of fit, the chi-square (χ^2), comparative fit index (CFI), Tucker-Lewis Index (TLI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR) statistics have been examined. CFI values greater than 0.95, TLI values near .96, RMSEA values near .06, and SRMR values less than 0.05 are typically considered indicative that a model has been adequately parameterized, although values as high as 0.90 or as low as 0.10 are acceptable (Hu & Bentler, 1999). However, recent literature has shown the majority of valid and reliable measures to not have been reached using the cutoff criteria (Perry, Nicholls, Clough, & Crust, 2015); so not meeting the cutoff criteria for SRMR does not imply a measure to be inadequate or invalid. Internal consistency has been determined by McDonald's omega (ω), accounting for the proportion of variance that a potential latent variable explains over a general factor (Zinbarg, Revelle, Yovel, & Li, 2005). McDonald's omega values between 0.70 and 0.80 are considered acceptable, and values between 0.80 and 0.90 are considered good (Terwee et al., 2007). Test-retest reliability has

been evaluated using the intraclass correlation coefficient (ICC) through a one-way random-effects model with consistency (Shrout & Fleiss, 1979). An ICC greater than 0.70 can be considered good in a sample with at least 50 cases (Koo & Li, 2016). Linear and multiple regression analyses have been performed with the standardized means from the positive and negative spiritual coping scales, positive and negative religious coping scales, resilience scores, and perceived stress scores to assess the concurrent, convergent, and divergent validities. Because multiple analyses have been performed on the same data, the correction for multiple testing is $0.05 / 10 = 0.005$, so results have been interpreted against a significance threshold of 0.5% with 95% confidence intervals being calculated. Analyses have been conducted using R version 3.5.1 (R Core Team, 2014b) and the package programs *foreign* (R Core Team, 2014a), *psych* (Revelle, 2014), *lavaan* (Rosseel, 2012), *semPlot* (Epskamp, 2014), *irr* (Gamer et al., 2012), and *plyr* (Wickham & Wickham, 2018).

Results

Principal component analysis of the items from the Dutch SCQ at T_0 resulted in factor loadings equal to the subscales from the original SCQ (see Table 2). Confirmatory factor analysis has confirmed the 8-factor structure of the SCQ-nl at T_0 to have good fit with the sample data ($\chi^2_{(566, N=651)} = 1132.566, p < 0.001, CFI = 0.93, TLI = .92, RMSEA = .05, SRMR = 0.05$). The internal consistency for seven of the eight subscales at T_0 are acceptable to good with McDonald's ω values between 0.73 and 0.94. Only McDonald's omega for the subscale of personal positive coping is insufficient with an internal consistency of $\omega = 0.59$. However, deleting an item from the subscale of personal positive coping does not improve the internal consistency of this scale. For the subscales of positive spiritual coping and negative spiritual coping, McDonald's ω values are 0.90 and 0.77, respectively. The test-retest reliability for the positive and negative spiritual coping scale are good ($ICC = 0.797, F_{(241,726)} = 16.700, p < .001, 95\% CI [0.760 - 0.831]$) and ($ICC = 0.736, F_{(241,726)} = 12.100, p < .001, 95\% CI [0.691 - 0.778]$), respectively.

The mean score for the positive spiritual coping subscale of the SCQ is a strong predictor of RCOPE's positive religious coping scale ($\beta = .654, p < .001$), and the mean score from the negative spiritual coping subscale of the SCQ is a moderate predictor of RCOPE's negative religious coping scale ($\beta = .395, p < .001$). Positive spiritual coping alone does not predict resilience ($\beta = .031, p > .005$) or perceived stress ($\beta = -.016, p > .005$), while negative spiritual coping alone is a strong predictor for resilience ($\beta = -.390, p < .001$) and perceived stress ($\beta = .438, p < .001$).

When assessing the combined predictive values from the SCQ positive and negative spiritual coping on resilience and perceived stress, the two-scale models



Table 2.
Factor Loadings for the Principal Component Analysis of the Dutch SCQ

	TPC	EPC	SPC	PNC	SNC	ENC	TNC	PPC
SCQ5	0.89							
SCQ13	0.89							
SCQ4	0.88							
SCQ32	0.88							
SCQ26	0.85							
SCQ9	0.82							
SCQ20		0.85						
SCQ7		0.81						
SCQ30		0.81						
SCQ24		0.79						
SCQ1		0.64						
SCQ36			0.80					
SCQ11			0.74					
SCQ27			0.71					
SCQ17			0.69					
SCQ31			0.58					
SCQ22			0.57					
SCQ25				0.86				
SCQ10				0.79				
SCQ21				0.76				
SCQ19				0.63				
SCQ12					0.81			
SCQ14					0.79			
SCQ8					0.64			
SCQ16					0.58			
SCQ23						0.81		
SCQ28						0.81		
SCQ34						0.72		
SCQ33						0.48		
SCQ15							0.81	
SCQ3							0.74	
SCQ18							0.71	
SCQ6								0.67
SCQ29								0.64
SCQ35								0.64
SCQ2								0.50

Note. Principal component analysis with varimax rotation for 8 subscales.

TPC: Transcendental positive coping; EPC: Environmental positive coping; SPC: Social positive coping; PNC: Personal negative coping; SNC: Social negative coping; ENC: Environmental negative coping; TNC: Transcendental negative coping; PPC: Personal positive coping.

are significantly associated with the separate dependent variables at the levels of $p < .005$ and $p < .001$ (see Table 3). The model shows $F_{(2,633)} = 62.04, p < .001$ with an explained variance of 16% ($R^2 = .16$) for resilience and $F_{(2,648)} = 82.47, p < .001$ with an explained variance of 20% ($R^2 = .20$) for perceived stress. The two-scale models of the RCOPE are not associated with the dependent variables of resilience or perceived

stress. The model shows $F_{(2,633)} = 1.50, p > .005$ with an explained variance of 0% ($R^2 = .00$) for resilience and $F_{(2,651)} = 4.27, p > .005$ with an explained variance of 1% ($R^2 = .01$) for perceived stress.

To assess the cohesion of aggregated positive and negative spiritual coping, linear regression analysis shows the two scales to be associated with one another ($\beta = .202, p < .001$) through a small effect.

Table 3.

Multiple Regression Analyses Among Spiritual coping, Religious coping, Resilience and Perceived Stress

	PRC	NRC	BRS	PSS
PSC	$\beta = .654^{***}$ [.596 : .712]		$\beta = .031$ [-.047 : .108]	$\beta = -.016$ [-.093 : .061]
NSC		$\beta = .395^{***}$ [.324 : .466]	$\beta = -.390^{***}$ [-.461 : -.318]	$\beta = .438^{***}$ [.368 : .507]
PSC and NSC			$\beta = .111^{**}$ [.038 : .184] $\beta = -.411^{***}$ [-.484 : -.339]	$\beta = -.109^{**}$ [-.179 : .038] $\beta = .460^{***}$ [.389 : .530]
PRC and NRC			$\beta = 0.010$ [-.089 : .069] $\beta = -.067$ [-.147 : .013]	$\beta = -.042$ [-.120 : .036] $\beta = .113^{**}$ [.036 : .191]

Note. PSC = SCQ positive spiritual coping; NSC = SCQ negative spiritual coping; PRC: RCOPE positive religious coping; NRC: RCOPE negative religious coping; BRS = Brief Resilience Scale; PSS = Perceived stress scale. Significance threshold = .005: ** $p < .005$; *** $p < .001$

Discussion

The aim of this study is to translate and validate the Spiritual Coping Questionnaire (Charzyńska, 2014) in Dutch, to compare this questionnaire with a religious coping questionnaire (Pargament et al., 2000), and to assess the levels of religious and spiritual coping in association with resilience and perceived stress as these are important determinants in mental health issues such as anxiety and depression (Yu et al., 2016).

The analyses show the Dutch Spiritual Coping Questionnaire to be a reliable measure. While the subscale of positive personal spiritual coping showed low internal consistency, deleting an item did not improve the internal consistency, and combining it with the other positive spiritual coping items that comprise the positive spiritual coping scale shows a good internal consistency. The reliability over time of the positive and negative spiritual coping scale is good, indicating that the measure is capable of measuring an individual's level of spiritual coping over time in a representative and stable way (Koo & Li, 2016).

When looking at positive and negative religious coping as associated with resilience and perceived stress, only negative religious coping is associated with perceived stress; all other combinations of predictors and dependent variables show



no association at all. This seems to be evidence for the contention that religious coping is too narrow an approach for non-religious participants. The broader concept of spiritual coping appears to be a better construct to include when assessing the determinants of mental health in a less religious sample. Not much research exists that has explicitly looked at the different effects of religious and spiritual coping on mental health issues, but similar outcomes were previously found in a sample of patients with schizophrenia (Mohr et al., 2011), supporting the findings in this study.

Separate analyses using positive and negative spiritual coping as a predictor for resilience and perceived stress have shown positive spiritual coping to not be a predictor at all while negative spiritual coping has been shown to be associated with both dependent variables. However, when including both positive and negative spiritual coping as predictors for resilience and perceived stress, all associations show significant results at the significance threshold of $p = .005$. Also, the results indicate the positive spiritual coping scale and the negative spiritual coping scale to be relative independent of but related to each other. This seems to be evidence of the importance of assessing both a positive and negative approach to daily stress or adversity. This result is supported by studies on religious coping, suggesting an orthogonal nature for positive and negative religious coping (Pargament et al., 2011).

The results from this study support the assumption that negative spiritual coping can be deleterious for mental health by increasing perceived stress and reducing resilience, but also support positive spiritual coping's ability to reduce perceived stress and strengthen resilience (Frankl, 1965; Pargament et al., 2011; P. T. Wong, 2012). Previous research has shown similar results regarding perceived stress (Ano & Vasconcelles, 2005; Delgado, 2007) and resilience (S. Wong, Pargament, & Faigin, 2018). Future research should investigate the spatial order of occurrence of these associations to find evidence of adverse effects for psychopathology in the short-term as well as the beneficial effects for mental health and growth in the long-term.

Strengths and Limitations

This study is based on a large sample of healthy Dutch-speaking adults who were able to complete questionnaires four times over 30 weeks. The sample of this study is older, more educated, and more resilient than the respondents that did not complete the four measures of this longitudinal study. The differences in education level and reported resilience between completers and dropouts is very small and might be due to a Type I error. The difference in age between completers and dropouts is more notable. Older individuals may possibly have had more time on their hands to fill out a series of questionnaires than younger individuals who might have young children and/or are being kept busy with work and other activities.

Comparing the positive and negative religious coping scales with the positive and negative spiritual coping scales has shown both spiritual scales to have satisfactory to good concurrent validity. Positive religious coping is strongly associated with positive spiritual coping, indicating that both scales measure related but distinct concepts. When looking at the negative spiritual coping scale, it is positively associated with negative religious coping but less strongly. Recent research has shown that combining positively and negatively formulated questionnaire items can confuse respondents (Van Sonderen, Sanderman, & Coyne, 2013). While the RCOPE starts with five positively-worded items and ends with five negatively-worded items, the SCQ consists of mixed negatively- and positively-worded items, which can be a cause for confusion or inattention (Van Sonderen et al., 2013). Also, negatively-worded items more often show lower correlations with each other, or they appear as a separate factor within a questionnaire compared to positively-worded items (Roszkowski & Soven, 2010). This might explain the lower internal consistency, factor loadings, test-retest reliability, and concurrent validity of the negative spiritual coping scale in this study.

Implications and Conclusion

This study provides scientific ground for using the SCQ in Dutch. Research has shown that questionnaires in the language of the respondents prevents cultural accommodation (Harzing, 2005) and reduces the cognitive and emotional biases that can occur when answering questions in a language other than their own (Keysar, Hayakawa, & An, 2012). In addition, the international reader can benefit from this study because of the outcomes regarding religious and spiritual coping being associated with resilience and perceived stress.

The goal of this study has been to provide science and practices in Dutch-speaking areas with a suitable questionnaire for measuring the level of positive and negative spiritual coping, making it possible to include spiritual coping in research and interventions. The outcome of this study is that the SCQ-nl is a valid and reliable measure for assessing positive and negative spiritual coping in scientific psychological research and in a descriptive manner in clinical practice (Evers, Van Vliet-Mulder, & Groot, 2000).

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Appendix A

Dutch Spiritual Coping Questionnaire (SCQ-NL)

Toelichting

Geef aan in welke mate de volgende uitspraken betrekking op u hebben. Er zijn geen goede of foute antwoorden.

		Helemaal onwaar	Onwaar	Neutraal	Waar	Helemaal waar
1	Ik lette op het milieu.	1	2	3	4	5
2	Ik probeerde innerlijke rust te vinden.	1	2	3	4	5
3	Ik gaf de schuld aan God/hogere macht voor wat er gebeurde in mijn leven.	1	2	3	4	5
4	Ik zocht verlichting door te bidden.	1	2	3	4	5
5	Ik probeerde te focussen op de gedachte dat God/hogere macht van me houdt.	1	2	3	4	5
6	Ik probeerde een reden te vinden voor wat er gebeurde.	1	2	3	4	5
7	Ik probeerde dicht bij de natuur te komen.	1	2	3	4	5
8	Ik overtuigde mezelf dat andere mensen slecht waren.	1	2	3	4	5
9	Ik probeerde te kijken naar de aanwezigheid van God/hogere macht in het alledaagse leven.	1	2	3	4	5
10	Ik droomde ervan om op te houden te bestaan.	1	2	3	4	5
11	Ik zorgde voor andere mensen.	1	2	3	4	5
12	Ik probeerde aan andere mensen te bewijzen dat ze egoïsten zijn.	1	2	3	4	5
13	Ik richtte mij tot God/hogere macht met alles dat belangrijk was voor me.	1	2	3	4	5
14	Ik probeerde aan andere mensen te bewijzen dat ze hypocriet zijn.	1	2	3	4	5
15	Ik was boos op God/hogere macht dat hij me in de steek heeft gelaten.	1	2	3	4	5
16	Ik zocht naar wraak voor mensen die me pijn hebben gedaan.	1	2	3	4	5
17	Ik leefde mee met de pijn van andere mensen.	1	2	3	4	5
18	Ik dacht dat God/hogere macht me strafte voor mijn zonden.	1	2	3	4	5
19	Ik overtuigde mezelf dat ik een slecht persoon ben.	1	2	3	4	5
20	Ik zocht naar harmonie met de natuur.	1	2	3	4	5
21	Ik overtuigde mezelf dat er geen doel in mijn leven is.	1	2	3	4	5
22	Ik probeerde eerlijk te zijn naar andere mensen.	1	2	3	4	5
23	Ik dacht dat de natuur de mensen voortdurend in gevaar brengt.	1	2	3	4	5
24	Ik probeerde te kijken naar de schoonheid en het unieke karakter van de natuur.	1	2	3	4	5
25	Ik overtuigde mezelf dat mijn leven geen zin heeft.	1	2	3	4	5
26	In mijn relatie met God/hogere macht zocht ik naar kracht om te leven.	1	2	3	4	5
27	Ik reageerde toen iemand verdriet had.	1	2	3	4	5
28	Ik dacht dat de natuur mensen bedreigde.	1	2	3	4	5
29	Ik probeerde mezelf beter te leren kennen.	1	2	3	4	5
30	Ik probeerde de harmonie in de natuur te zien.	1	2	3	4	5
31	Ik voedde mijn liefdevolle houding naar andere mensen.	1	2	3	4	5
32	Ik concentreerde me op de gedachte dat God/hogere macht op me let.	1	2	3	4	5



		Helemaal onwaar	Onwaar	Neutraal	Waar	Helemaal waar
33	Ik overtuigde mezelf dat mensen en natuur geschieden zijn en dat dit niet veranderd kan worden.	1	2	3	4	5
34	Ik vond de natuurkrachten angstaanjagend.	1	2	3	4	5
35	Ik probeerde me te concentreren op mijn innerlijke leven.	1	2	3	4	5
36	Ik probeerde andere mensen te helpen.	1	2	3	4	5

Positieve Spirituele Coping :
Persoonlijke positieve coping : 2, 6, 29, 35
Sociale positieve coping : 11, 17, 22, 27, 31, 36
Milieugerelateerde positieve coping : 1, 7, 20, 24, 30
Transcendente positieve coping : 4, 5, 9, 13, 26, 32

Negatieve Spirituele Coping:
Persoonlijke negatieve coping : 10, 19, 21, 25
Sociale negatieve coping : 8, 12, 14, 16
Milieugerelateerde negatieve coping : 23, 28, 33, 34
Transcendente negatieve coping : 3, 15, 18

Bereken voor de positieve en negatieve spirituele coping schalen afzonderlijk een gemiddelde.