

Article

Spirituality as a Resource to Rely on in Chronic Illness: The SpREUK Questionnaire

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Abstract: The SpREUK questionnaire (SpREUK is an acronym of the German translation of "Spiritual and Religious Attitudes in Dealing with Illness") was developed to investigate how patients with chronic diseases living in secular societies view the impact of spirituality in their dealing with illness (in terms of reactive coping). The aim was to operationalize and quantify patients' search for a transcendent source of support; their reliance on such a source of help; and whether they regard their illness as a chance for reflection and subsequent change of life and behavior. The contextual 15-item SpREUK has very good internal consistency estimates (ranging from 0.86 to 0.91), and differentiates three factors, *i.e.*, Search (for Support/Access), Trust (in Higher Guidance/Source), and Reflection (Positive Interpretation of Disease). It avoids exclusive religious terminology and appears to be a good choice for assessing patients' interest in spiritual/religious concerns, which is not biased for or against a particular religious commitment. This reliable and valid instrument is suited for patients in secular and also in religious societies.

Keywords: SpREUK; spirituality; religiosity; questionnaire; coping; secular societies

1. Background

One can not ignore the trend to individualization and secularization in Western societies with subsequent rejection of ecclesiastic approaches and development of new forms of 'secular spirituality' or even 'religious patchworks' instead. In times of existential need, several patients with chronic or fatal diseases rely on powerful external sources of help [1], *i.e.*, medical health professionals, information and alternative help, or even transcendent sources. Even in secular societies we have large

fractions of patients with a vital interest in spirituality/religiosity; those who are not interested in institutional religiosity but in individual ways of spirituality; and those who do not care about spirituality/religiosity at all. For example, despite the predominance of a Christian denomination (82%; 5% had other religious affiliations, 14% had none) in German patients with chronic pain diseases, 50% would not regard themselves as religious; at least 32% reported themselves as religious but not spiritual (R+S−), and 18% as both religious and spiritual (R+S+), while 8% regarded themselves as not religious but spiritual (R−S+), and 42% as neither religious nor spiritual (R−S−) [2]. Thus, instruments with a very particular religious perspective and traditional religious terminology are less suited for individuals with an atheistic or agnostic background, albeit one may assume that they do appreciate pluralistic forms of spirituality, particularly secular humanism. One can not ignore a need for measures of spirituality valid and specific also for patients living in secular societies.

For this purpose, one should differentiate behavioral aspects of spirituality/religiosity (*i.e.*, frequency of engagement in specific forms of spirituality) and cognitive and emotional aspects (*i.e.*, specific attitudes and convictions). To address the behavioral aspects, we have developed a practice manual, the SpREUK-P(ractices), and a disease-related instrument, the SpREUK (SpREUK is an acronym of the German translation of "Spiritual and Religious Attitudes in Dealing with Illness"), which refers to patients' attitudes and convictions.

The SpREUK questionnaire was developed to examine how patients with chronic diseases view the impact of spirituality/religiosity on their health and how they cope with illness [3-6]. The intention was to have a specific instrument which operationalizes whether patients with chronic diseases are in **search** of a transcendent source of support; whether they still do rely on such an external source of help (*i.e.*, they **trust** such a higher source); and whether they can view their illness as a chance for **reflection** and subsequent change of life and behavior. The SpREUK relies on these essential motifs found in counseling interviews with chronic disease patients (*i.e.*, having trust/faith; search for a transcendent source to rely on; stimulus to change life/message of disease) [7]. The instrument was qualitatively upgraded in several steps and avoids exclusive religious terminology. Moreover, it appears to be a good choice for assessing patients' interest in spiritual/religious concerns which is not biased for or against a particular religious commitment.

2. Factorial Structure of the SpREUK-15

During the process of optimization, there was an 18-item version (SpREUK 1.2) which was tested in German patients [8], and a 16-item version (SpREUK 1.2b) which was tested in Arabic Muslims and German patients [5]. Here, the structure of the final 15-item version (SpREUK-15) which is particularly suited for patients in secular societies will be reviewed. All items were scored on a 5-point scale from disagreement to agreement (0 - does not apply at all; 1 - does not truly apply; 2 - don't know; 3 - applies quite a bit; 4 - applies very much). The respective scores were conveyed to a 100% level (transformed scale score).

The SpREUK-15 has a very good internal consistency (Cronbach's alpha = 0.94; Table 1). The item difficulty index (mean value of all items = 1.71/4 [Likert scale scores 0–4]) was 0.56; only one item may produce a ceiling effect (item 3.7:0.84), all other items were in the acceptable range of 0.2 to 0.8. The 3-factorial structure of the SpREUK is maintained (Table 1), *i.e.*, (1) **Search** for Support/Access

to Spirituality/Religiosity (5 items, $\alpha = 0.91$); (2) **Trust** in Higher Guidance/Source (5 items, $\alpha = 0.91$) and (3) **Reflection**: Positive Interpretation of Disease (5 items, $\alpha = 0.86$). These three factors would explain 70% of variance.

Table 1. Factorial structure of the SpREUK-15 and mean values of respective items.

Character of Items	Items (with identifying item numbers)	Mean \pm SD [0–4]	Factor loading		
			I	II	III
Search for Support/Access to Spirituality/Religiosity ($\alpha = 0.91$; Eigenvalue 7.9; 53% explained variance)					
Behavior	(1.6) I am searching for an access to spirituality/religiosity.	1.15 \pm 1.32	0.83		
Cognition	(1.5) I am convinced that finding access to a spiritual source can have a positive influence on my illness	1.27 \pm 1.30	0.80		
Emotion	(1.1) In my opinion, I am a spiritual individual	1.38 \pm 1.36	0.78		
Emotion	(1.9) It urges me on to spiritual or religious insight, whether it diminishes my difficulties in life or not	1.21 \pm 1.33	0.70	0.41	
Cognition	(1.4) My illness has brought me a renewed interest in spiritual or religious questions	1.25 \pm 1.32	0.70		
Trust in Higher Guidance/Source ($\alpha = 0.91$; Eigenvalue 1.5; 10% explained variance)					
Emotion	(2.5) Whatever happens, I trust in a higher power which carries me through	1.99 \pm 1.47	0.31	0.81	
Emotion	(2.6) In my opinion, I am a religious individual	2.03 \pm 1.44		0.77	
Emotion	(37) I have faith in the spiritual guidance in my life	1.77 \pm 1.40	0.34	0.76	0.31
Cognition	(39) I am convinced that death is not an end	2.05 \pm 1.42		0.75	
Emotion	(38) In my mind I am connected with a “higher source”.	1.50 \pm 1.43	0.40	0.73	
Reflection: Positive Interpretation of Disease ($\alpha = 0.86$; Eigenvalue 1.1; 8% explained variance)					
Cognition	(3.3) My illness encourages me to get to know myself better	2.37 \pm 1.23			0.81
Cognition	(3.7) Because of my illness, I reflect on what is essential in my life	2.52 \pm 1.23			0.77
Cognition	(3.2) Something that happens to me is a stimulus that I should change my life	2.08 \pm 1.28			0.71
Cognition	(3.5) My illness is a chance for my own development	1.60 \pm 1.35	0.40		0.70
Cognition	(3.4) I am convinced that my illness has meaning.	1.43 \pm 1.33	0.38	0.32	0.61

749 complete data sets for reliability analysis; extraction of the main components (eigenvalue > 1); Varimax Rotation with Kaiser Normalization (rotation converged in 5 iterations); 70% explained variance; loadings < 0.30 were not depicted.

Source: 888 German patients with chronic diseases (64% women, 36% men; mean age 56 ± 14 years; 39% secondary school, 26% junior high school, 20% high school, 15% other; 49% married, 11% living with a partner, 15% divorced, 14% living as single, 11% widowed; 59% chronic pain diseases, 35% cancer, 6% other chronic diseases; 74% Christian denomination, 3% other, 23% none; 17% regard themselves as both spiritual and religious, 29% as religious but not spiritual, 6% as spiritual but not religious, and 48% as neither spiritual nor religious).

The *Search* scale (Search for Support/Access to Spirituality/Religiosity) consists of two cognitive, two emotional and one behavioral item. It operationalizes patients' intention to find or have access to a spiritual/religious resource which may be beneficial to cope with illness, and interest in spiritual/religious issues (insight and renewed interest). Moreover, the patients' self categorization as a spiritual individual is part of this scale, too. As shown in Table 2, the *Search* scale is strongly related with frequency of spiritual practices (*i.e.*, meditation, rituals, *etc.*) and also frequency of religious practices (*i.e.*, praying, church attendance, *etc.*), as measured with the SpREUK-P (practices).

Table 2. Correlation between spiritual/religious attitudes and engagement frequency (SpREUK-P).

	SpREUK-15		
	Search	Trust	Reflection
SpREUK-15 (n = 888)			
Search for Support/Access to Spirituality/Religiosity	1.00	0.71**	0.61**
Trust in Higher Guidance/Source		1.00	0.56**
Reflection: Positive Interpretation of Disease			1.00
Frequency of spiritual practices **			
Conventional religions (n = 858)	0.54**	0.76**	0.35**
Spiritual (Mind-Body) (n = 848)	0.59**	0.50**	0.42**
Existential (n = 751)	0.48**	0.44**	0.46**
Humanistic (n = 752)	0.16**	0.29**	0.20**
Gratitude/Reverence (n = 418)	0.33**	0.53**	0.27**

* $r < 0.01$ (Spearman rho); ** Frequency of spiritual practices was measured with the SpREUK-P [9]. The 24-item SpREUK-P ($\alpha = 0.916$) differentiates factors: 1) Conventional Religious Practice/Gratitude (*i.e.*, praying, church attendance, *etc.*); 2) Existential Practice (*i.e.*, personal insight and development, orientation to nature); 3) Spiritual Mind-Body Practices (*i.e.*, meditation, rituals, *etc.*); and 4) Humanistic Practice (*i.e.*, turning to and caring for others), and 5) Gratitude/Reverence. The items of the SpREUK-P were scored on a 4-point scale (0 - never; 1 - seldom; 2 - often; 3 - regularly).

The *Trust* scale (Trust in Higher Guidance/Source) consists of four emotional items and one cognitive item, and is a measure of intrinsic religiosity which identifies religion as an end in itself. This scale deals with the motifs of connection with a higher source which carries the patient through. The conviction that death is not an end (which implies either resurrection or rebirth, and persistence of the soul itself) is part of this scale. The scale correlates strongly with conventional religious practices, and also with spiritual practices and Gratitude/Reverence (Table 2), which underlines construct validity. Moreover, the *Trust* scale correlated strongly ($r = 0.78$) with the adaptive coping strategy *Trust in Higher Source*, which is a measure of intrinsic religiosity, too [2]. Although *Search* and *Trust* were strongly inter-correlated, and, from a conceptual point of view, the differentiation between spiritual *Search* and religious *Trust* is sound, one has to recognize that, particularly for Arabic Muslims [5] or Orthodox Jews [10], this distinction 'spiritual' or 'religious' might be less relevant in their daily life. In fact, the factorial structure of the 15-item Arab version of the SpREUK

(alpha = 0.923) differentiates the same three factors, but patients' perception of being a spiritual individual (item 1.1) and the cognitive statement that finding access to a spiritual source can have a positive influence on illness (item 1.5) would add to the *Trust* scale rather than the *Search* scale. Moreover, most Arabic Muslims would regard themselves as both a spiritual and religious individual (80% R+S+), just 5% as religious but not spiritual (R+S-), 2% as spiritual but not religious (R-S+) and 14% as neither spiritual nor religious (R-S-) [5]. This is in sharp contrast to findings among German patients [5]. In a sample of 888 patients (see Table 3) with chronic diseases, 48% would regard themselves as R-S-, 6% as R-S+, 29% as R+S- and 17% as R+S+, despite a predominance of a Christian denomination (74%, 3% other, 23% none).

The third scale, *Reflection* (Positive Interpretation of Disease) refers to a cognitive appraisal attitude, and operationalizes the possibility to interpret illness as an opportunity, a 'hint' to change life, or to reflect upon what is essential in life. Even patients without an explicit interest in spirituality/religiosity (either agnostics or atheists) can interpret illness in such a way. Nevertheless, *Reflection* was strongly associated with both *Search* and *Trust*, indicating its spiritual connotation, and moderately with existential practices (i.e., personal insight and development, orientation to nature, etc.) and with spiritual and religious practices (Table 2). In fact, several patients argued that they regard their illness as a 'hint' (i.e., by God) to change their life, to behave differently, etc. [2,11,12]. A similar interpretation can be found in the Quran (i.e., illness as given by Allah to remember and redirect) or in the Bible (i.e., healing connected with the imperative to change one's life, to behave differently). Interestingly, this scale was found to be moderately associated with patients' happiness, weakly with positive God images, and negatively with pain severity in patients with chronic pain diseases [13]. Positive interpretation of disease (*Reflection*) was found to be a mediator of the impact of a positive God image on patients' happiness [13]. The *Reflection* scale was closely correlated with the scale *Reflection: Illness as a Chance* ($r = 0.62$), which is a reappraisal strategy in terms of adaptive coping [2], indicating convergent validity. Moreover, it correlated moderately (r between 0.44 and 0.45) with positive disease interpretations (challenge, value) [2].

3. Variables with an Impact on the SpREUK Scores

In a sample of patients with chronic diseases, *Search* was of lowest relevance, while *Trust* was of moderate relevance, and *Reflection* of highest relevance (Table 3). In Arab Muslims, the mean scores were much higher (*Search*: 74.5 ± 13.6 ; *Trust*: 82.2 ± 13.0 ; *Reflection*: 79.0 ± 14.0) as compared to German individuals (Table 3). Although there were significant differences with respect to gender and age, most differences can be explained by patients' religious denomination. In fact, patients without a religious denomination had the lowest scores for *Search*, *Trust* and also *Reflection*. One cannot ignore the fact that patients with a higher educational level have significantly higher scores for *Search* ($F = 9.1$; $p < 0.0001$) and *Reflection* ($F = 2.7$; $p = 0.044$), while *Trust* did not differ ($F = 1.3$; $p = 0.286$). Moreover, the *Reflection* scores showed strong variances also for women and men (Table 3). Univariate analyses indicate that denomination rather than gender, age and education had the strongest impact on patients' *Search* ($F = 5.2$; $p = 0.002$) and *Reflection* ($F = 6.7$; $p < 0.0001$), while for *Trust* both denomination ($F = 14.5$; $p < 0.0001$) and age ($F = 3.8$; $p = 0.005$) were of outstanding relevance; disease itself had not relevant impact on the SpREUK scores. Because both spirituality and coping

strategies are highly individual, depending on several co-influencing variables, the respective mean values should not be used as expected 'norms' for the SpREUK but as reference values which may significantly differ between countries and communities.

Table 3. Mean values of German patients with chronic diseases.

	Search	Trust	Reflection
all patients	31.7 ±29.0	46.7 ±30.6	50.1 ±25.7
Gender			
women	34.2 ±29.0	50.0 ±30.7	53.6 ±25.7
men	27.3 ±27.3	40.9 ±29.7	43.8 ±24.4
F-value	11.8	18.0	30.4 ±
p-value	<0.0001	<0.0001	<0.0001
Age			
<40 years	31.6 ±28.7	40.1 ±29.6	55.7 ±25.2
41–50 years	32.2 ±30.0	42.3 ±30.7	52.5 ±25.2
51–60 years	34.0 ±29.4	46.5 ±31.5	53.9 ±26.3
61–70 years	32.0 ±26.9	49.5 ±29.0	46.9 ±24.5
>70 years	28.0 ±28.6	52.7 ±30.6	42.2 ±24.8
F-value	1.0	4.4	8.0
p-value	0.391	0.002	<0.0001
Denomination			
Christian	34.7 ±28.4	52.6 ±29.0	52.1 ±24.0
other	45.0 ±32.1	62.0 ±29.1	74.2 ±28.6
None	16.9 ±26.2	23.5 ±25.0	47.6 ±31.3
F-value	16.5	54.0	17.3
p-value	<0.0001	<0.0001	<0.0001

Data refer to 888 German patients (see Table 1).

Thus, there are distinct characteristics which may identify patients either in search of a spiritual source which might be beneficial in their struggle with disease, or those who already have found such a source of support. Regression analyses indicated that patients' engagement in spiritual practices (and also age and other forms of practice) may predict their *Search* for Support/Access to Spirituality/Religiosity, while their *Trust* in Higher Guidance/Source can be predicted by engagement in religious practices (and also engagement in other forms of practice); their ability or desire to reflect on their life (Positive Interpretation of Disease) can be predicted best by their engagement in existential practices (also age had a negative impact) (Table 4). These predictors underline construct validity of the scales.

Table 4. Predictor analysis (stepwise regression model).

Dependent Variable	Predictors *	R ²	Beta	T	Sign.
Search for Support/Access to Spirituality/ Religiosity	(Constant)	0.54		1.97	0.049
	Spiritual practices **		0.41	11.72	0.000
	Religious practices **		0.28	8.53	0.000
	Existential practices **		0.20	6.23	0.000
	Age category		−0.06	−2.04	0.042
Trust in Higher Guidance/Source	(Constant)	0.61		7.03	0.000
	Religious practices **		0.57	17.84	0.000
	Existential practices **		0.17	5.91	0.000
	Spiritual practices **		0.13	4.16	0.000
	No denomination		−0.10	−3.72	0.000
Reflection: Positive Interpretation of Disease	(Constant)	0.32		10.55	0.000
	Existential practices **		0.325	8.39	0.000
	Spiritual practices **		0.167	3.95	0.000
	Age category		−0.207	−6.14	0.000
	Religious practices **		0.160	4.01	0.000

Data refer to 888 German patients (see Table 1).

* Only the strongest prediction model is presented (gender, disease categories, and spiritual/religious self categorization were excluded from the respective models); ** Frequency of spiritual practices was measured with the SpREUK-P [9]. Engagement categories were never, seldom, often, regularly.

4. Conclusions

Apart from the inevitable differentiation of search for a beneficial source on the one hand (*Search*), and patients' conviction to have access to such a transcendent source of help (*Trust*), the SpREUK uniquely addresses patients' ability to view illness as a chance for reflection and re-orientation in life (*Reflection*). Both *Search* and *Trust* are strongly associated with this cognitive behavioral (meaning-focused) coping strategy. This means, although *Reflection* was found to be of relevance also in individuals without a religious denomination, it nevertheless has a spiritual connotation. Further findings with the SpREUK showed that particularly *Search* and *Reflection* were moderately associated with positive interpretations of illness (*i.e.*, value, challenge), but not with negative interpretations [2]. Spirituality thus can have an impact on how patients deal with their life concerns, and probably also on treatment decisions. None of the SpREUK scales correlated with life satisfaction [2] indicating that these dimensions are independent.

The SpREUK appears to be a reliable, valid, and useful measure of spirituality in the context of how a patient deals with chronic illness. The 15-item version of the SpREUK has important strengths: (1) it avoids exclusive religious terminology and thus is suited both in secular and also in religious societies; (2) it operationalizes aspects of spirituality relevant for patients facing chronic illness; and (3) the scales are not contaminated with positive character traits or indicators of mental health. In contrast to the 10-item short version, the SpREUK-15 has the advantage of two additional items relevant for patients' spiritual/religious self-categorization, and holds a more precise *Reflection* scale. In fact, the mean values of the *Search* and *Trust* scales of the SpREUK-15 and SpREUK-SF10 are

similar, while the *Reflection* scale of the short version has higher mean values. The SpREUK-SF10 is particularly suited to address “spiritual attitudes” of agnostics and atheists, too, and thus the data can be compared with those of other denominations.

The SpREUK is currently available in English, German, Arabic, Hebrew, and Spanish.

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