


Article

Validation of the SpREUK—Religious Practices Questionnaire as a Measure of Christian Religious Practices in a General Population and in Religious Persons

Arndt Büssing ^{1,2,*} , Daniela R. Recchia ¹, Mareike Gerundt ², Markus Warode ² and Thomas Dienberg ²

¹ Institute for Integrative Medicine, Faculty of Health, Witten/Herdecke University, 58239 Herdecke, Germany; Daniela.RodriguesRecchia@uni-wh.de

² IUNCTUS—Competence Center for Christian Spirituality, PTH/School of Theology Münster, 48149 Münster, Germany; gerundt.iunctus@pth-muenster.de (M.G.), warode.iunctus@pth-muenster.de (M.W.), th.dienberg@web.de (T.D.)

* Correspondence: arndt.buessing@uni-wh.de

Received: 28 November 2017; Accepted: 8 December 2017; Published: 9 December 2017

Abstract: Measures of spirituality should be multidimensional and inclusive and as such be applicable to persons with different worldviews and spiritual-religious beliefs and attitudes. Nevertheless, for distinct research purposes it may be relevant to more accurately differentiate specific religious practices, rituals and behaviors. It was thus the aim of this study to validate a variant version of the SpREUK-P questionnaire (which measures frequency of engagement in a large spectrum of organized and private religious, spiritual, existential and philosophical practices). This variant version was enriched with items addressing specific rituals and practices of Catholic religiosity, by further differentiating items of praying and meditation. The instrument was then tested in a sample of Catholics (inclusively nuns and monks), Protestants, and in non-religious persons. This 23-item SpREUK-RP (Religious Practices) questionnaire has four factors (i.e., *Prosocial-Humanistic practices*; *General religious practices*; *Catholic religious practices*; *Existentialistic practices/Gratitude and Awe*) and good internal consistency (Cronbach’s alpha ranging from 0.84 to 0.94). An advantage of this instrument is that it is not generally contaminated with items related to persons’ well-being, and it is not intermixed with specific religious attitudes and convictions.

Keywords: Christian religious practices; Catholics; engagement frequency; validation; questionnaire

1. Introduction

Our societies are becoming more and more diverse (i.e., culturally, ethnically, philosophically, politically), and thus a person’s spiritual attitude may become more diverse, ranging from disinterest or strict a-religiosity to explicit dedicated religiosity or individualized patchwork spirituality (whatever the specific faith tradition is). Spirituality is a changing concept which is related to religiosity, but may also overlap with secular concepts such as humanism, existentialism, and probably also with specific esoteric views (Zwingmann et al. 2011). Therefore, measures of spirituality should be multidimensional not only in terms of the variety of topics, but also in terms of the related behaviors (Büssing 2012)—but not that exclusive that they are valid only for specific religious groups. To finally compare data from different societies and spiritual-religious orientation groups, inclusive instruments are preferred that account for this diversity.

Apart from this diversity, one also has to consider different ‘layers’ of spirituality that could be exemplified by *Faith/Experience* as the influencing core dimension, by *Attitudes* formed and shaped from this core dimension, and by subsequent *Behaviors* related to these attitudes and convictions (Table 1). It might be appropriate to use different valid measures related to these layers simultaneously instead of using instruments that condense all of these topics into one rather unsatisfying and less differentiated scale. Conceptually one has to clearly differentiate the ‘core’ dimensions (the faith/experience component) and the related ‘outcomes’ (i.e., attitudes, behaviors and rituals) (Table 1). Therefore, one may use different validated instruments to address the topics of these layers. A clear focus on common dimensions of spirituality which may be shared by specific religious groups and secular persons might be useful, but also on those dimensions which differ between religious and non-religious groups.

Table 1. Schematic levels of representation of different ‘layers’ aspects of spirituality (modified according to Büssing 2017).

Faith/Experience		
tradition		spiritual experience
Attitudes		
<i>Cognition:</i> beliefs, afterlife convictions, ideals etc.		<i>Emotion:</i> unconditional trust, hope, etc.
Behaviors		
<i>Ethics:</i> charity, etc.	<i>Rituals:</i> prayer, meditation, etc.	<i>Altruism:</i> charity, etc.

One of those instruments, which measures the frequency of spiritual-religious practices (overview in Zwingmann et al. 2011) is the SpREUK-P questionnaire (SpREUK is the German language acronym for “Spiritual and Religiosity as a Resource to cope with Illness; P = practices). It was originally designed as a generic instrument to measure the engagement frequencies of a large spectrum of organized and private religious, spiritual, existential and philosophical practices (Büssing et al. 2005). In its shortened 17-item version (SpREUK-P SF17) it differentiates five factors (Büssing et al. 2012), e.g., Religious practices, Prosocial-humanistic practices, Existentialistic practices, Gratitude/Awe, and Spiritual (mind body) practices. Because of this diversity of spiritual-religious practices and engagements, the instrument is suited for both secular and also religious persons. The sub-scale “Religious practices” has a clear focus on mono-theistic religions, while the sub-scale “Spiritual (mind body) practices” refers more to Eastern religious practices. This latter (non-Christian) sub-scale does not make any demands to represent Eastern forms of spirituality/religiosity thoroughly, but to be a contrast to Christian religious practices.

Nevertheless, for specific research purposes it may be relevant to more accurately differentiate Christian practices, rituals and behaviors. In Catholic pastoral workers from Germany for example, private praying and also praying the Liturgy of Hours were to some extent related to life satisfaction and lower depression, while participating or celebrating the Holy Eucharist or partaking in Sacramental Confession were rather not related (Büssing et al. 2016). Further, in Italian Catholics working as volunteers for handicapped persons, praying the Rosary was moderately related to their perception of the Sacred in their lives, but not private prayers or attending the Sunday service (Büssing and Baiocco, unpublished data). Thus, further differentiating items may be of relevance to elucidate the underlying motives, intentions and perceptions.

1.1. Aim of the Study

The aim of this study was to validate a variant version of the SpREUK-P questionnaire that was enriched with items addressing specific Catholic rituals and practices, and with more differentiated praying and meditation items. This variant version was tested in a sample of Catholics (inclusively nuns and monks, Protestants, and in non-religious persons as a reference group).

2. Material and Methods

2.1. Enrolled Persons

To test the new instrument, a heterogeneous sample of participants was recruited, among them religious persons from Franciscan but also from other religious congregations. Participation calls were sent to the German Congregation Superiors (“Ordens-Oberen-Konferenz”), to local Caritas societies, to university students (i.e., Alpen-Adria Universität Salzburg and Witten/Herdecke university), to a course on Christian Spirituality (University Zürich), to various social and management associations as well as to the private networks of the study team (‘snowball sampling’). The sample should be regarded as a convenience sample.

All participants were informed about the purpose of the study on the first page of the questionnaire (which did not ask for names, initials or location), and confidentiality and anonymity were guaranteed. With filling in the German language questionnaire and sending it back to the study team, participants agreed that their data would be anonymously evaluated. As most of the local Religious communities were small, we provided the opportunity to fill in the questionnaire either online (used by 25% of religious participants) or as a printout (used by 75% of the religious participants).

2.2. Measures

2.2.1. Engagement in Religious Practices (SpREUK-P)

The generic SpREUK-P (P—practices module) questionnaire was designed to measure the engagement frequencies of a large spectrum of organized and private religious, spiritual, existential and philosophical practices particularly in secular societies (Büssing et al. 2005). These practices and forms of engagement refer to the level of behaviors as described in Table 1. The shortened 17-item SpREUK-P differentiates 5 sub-constructs (Büssing et al. 2012), i.e.,

- Religious practices (alpha = 0.82), i.e., praying, church attendance, religious events, religious symbols
- Existentialistic practices (alpha = 0.77), i.e., self-realization, reflections upon the meaning of life, trying to gain insight (also into myself)
- Prosocial-humanistic practices (alpha = 0.79), i.e., helping others, considering their needs, doing good, thoughts to those in need
- Gratitude/Awe (alpha = 0.77), i.e., feeling of gratitude, reverence, experiencing the beauty in life
- Spiritual (mind body) practices (alpha = 0.72), i.e., meditation (Eastern style), rituals (“from other religious traditions than mine”), reading spiritual/religious books.

To make more accurate statements about religious practices of Catholics and derived a ‘religious practices’ module of the SpREUK-P (SpREUK-RP), we added 6 new items and more clearly differentiated the praying and meditation items (p1 and p4). Catholic items were PC1 (partaking Sacramental Confession), PC2 (receive the Holy Communion), PC3 (worship of the ‘Sacrament’), PC4 (ask the ‘Mother of God’ for help and support), PC5 (praying the Rosary) and PC6 (strong relation to special saints). Praying was differentiated as p1a (private praying, for myself, for others), p1b (praying the Liturgy of Hours) and p1c (intercessory prayer), while meditation was differentiated as p4a (meditation, Christian style) and p4b (meditation, Eastern styles). We also added items from the primary version of the SpREUK 1.1 (Büssing et al. 2005) which were not used in its 17-item short version (i.e., p26 feeling connected with others, p27 volunteer work for others, p6 reading religious/spiritual

books, p9 turn to nature, p17 being aware of how I treat the world around, and p21 belief in (my) guardian angel).

The items are scored on a 4-point scale (0—*never*; 1—*seldom*; 2—*often*; 3—*regularly*). The scores were referred to a 100% level (transformed scale score), which reflect the degree of an engagement in the distinct forms of a spiritual/religious practice (“engagement scores”). Scores > 50% would indicate higher engagement, while scores < 50 indicate rare engagement.

2.2.2. Transcendence Perception (DESES-6)

To refer to an experiential dimension as described in Table 1, we used the *Daily Spiritual Experience Scale* (DSES). This instrument was developed as a measure of a person’s perception of the transcendent in daily life, and thus the items measure experience rather than particular beliefs or behaviors (Underwood 2002; 2011). Here we used the 6-item version (DSES-6; Cronbach’s alpha = 0.91) which uses specific items such as feeling God’s presence, God’s love, desire to be closer to God (union), finding strength/comfort in God, being touched by beauty of creation (Underwood 2002). The response categories from 1 to 6 are *many times a day, every day, most days, some days, once in a while* and *never/almost never*. Item scores were finally summed up.

2.2.3. Franciscan-Inspired Spirituality Questionnaire (FraSpir)

To measure whether or not a person’s spirituality/religiosity is based on an attitude of searching for the Spirit of the Lord as a fundamental source, and living from the Gospel as a matter of religious dedication, we used a 13-item subscale from the *Franciscan-inspired Spirituality Questionnaire* (FraSpir) (Büssing et al. 2017). This “Live from the Faith/Search for God” scale (Cronbach’s alpha = 0.97) refers to the attitudes layer as described in Table 1. The scale uses items such as “My faith is my orientation in life”, “My faith/spirituality gives meaning to my life”, “I try to live in accordance with my religious beliefs”, “I feel a longing for nearness to God”, “I keep times of silence before God”, etc.. For Christians, living from the Gospel and searching the Sacred is the core principle which would have an influence on their attitudes and behaviors (Table 1).

The 13 items were scored on a 5-point scale from disagreement to agreement (0—does not apply at all; 1—does not truly apply; 2—half and half (neither yes nor no); 3—applies quite a bit; 4—applies very much).

2.2.4. Life Satisfaction (SWLS)

To measure life satisfaction, as a construct that is conceptually not directly related to spiritual practices and engagement, we relied on the German version of Diener’s *Satisfaction with Life Scale* (SWLS) (Diener et al. 1985). This 5-item scale (alpha = 0.92) uses general phrasings such as “In most ways my life is close to my ideal”, “The conditions of my life are excellent”, “I am satisfied with my life”, “So far I have gotten the important things I want in my life”, and “If I could live my life over, I would change almost nothing”. Although this instrument does not differentiate the fields of satisfaction, it is nevertheless a good measure of a person’s global satisfaction in life as it also addresses the self-assessed balance between the ideal and the given life situation. A benefit of the SWLS is the fact that it is not contaminated with positive affect variables, vitality, health function, etc. It can thus be used to analyze which other dimensions of spiritual engagement and experience would contribute to pastoral workers’ overall life satisfaction. The extent of respondents’ agreement or disagreement is indicated on a 7-point Likert scale ranging from *strongly agree* to *strongly disagree*.

2.2.5. Well-Being Index (WHO-5)

To assess participants’ well-being, which is conceptually also not directly related to spiritual practices and engagement, we used the *WHO-Five Well-being Index* (WHO-5). This short scale avoids symptom-related or negative phrasings and measures well-being instead of absence of distress (Bech et al. 2013). Representative items are “I have felt cheerful and in good spirits” or “My daily

life has been filled with things that interest me". Respondents assess how often they had the respective feelings within the last two weeks, ranging from 0 (*at no time*) to 5 (*all of the times*).

2.3. Statistical Analyses

Descriptive statistics, internal consistency (Cronbach's coefficient α) and factor analyses (principal component analysis using Varimax rotation with Kaiser's normalization) as well as analyses of variance (ANOVA), first order correlations and stepwise regression analyses were computed with SPSS 23.0.

To confirm the structure found by exploratory factor analysis, we performed a structured equation model (SEM) using the Lavaan packages of software R. This methodology involves many techniques such as multiple regression models, analysis of variance, confirmatory factor analysis, correlation analysis etc. With SEM one could determine the meaningful relationships between variables since the parameter estimates deliver the best scenario for the covariance matrix, and the better the model goodness of fit, the better the matrix is. The goodness of fit statistics used to evaluate the model are the root mean square error (RMSEA) which should be ≤ 0.05 ; the root mean square residual (RMSR) which should be ≤ 0.06 ; the comparative fit index (CFI) which should be ≥ 0.95 and the Tucker-Lewis index (TLI) which should be ≥ 0.95 .

Given the exploratory character of this study, the significance level of ANOVA and correlation analyses were set at $p < 0.01$. With respect to classifying the strength of the observed correlations, we regarded $r > 0.5$ as a strong correlation, an r between 0.3 and 0.5 as a moderate correlation, an r between 0.2 and 0.3 as a weak correlation, and $r < 0.2$ as negligible or no correlation.

3. Results

3.1. Participants

Among the 420 enrolled persons, men were predominant (62.5%); most had a high school education (70.0%) and were Catholics (65.1%). Participants from a religious congregation constituted 20.6% of the sample, 22.1% were university students, and the other participants were from the fields of pedagogy, medicine, psychology, theology, and others professions (Table 2). Among the religious, 72% were from Franciscan congregations, and 28% were from other religious congregations. All further sociodemographic data are depicted in Table 1.

Participants' life satisfaction was in the upper range, well-being scores in the upper mid-range, and transcendence perception in the mid-range (Table 2).

Table 2. Description of the sample (N = 420).

	Scores	Range
Age (years) (Mean \pm SD)	44.0 \pm 18.8	18–88
Gender (%)		
Women	37.5	
Men	62.5	
Educational level (%)		
Secondary school (Haupt-/Realschule)	14.1	
High school (Gymnasium)	70.0	
other	15.9	
Religious denomination (%)		
Catholic	65.1	
Protestant	20.0	
Other	4.1	
None	10.8	

Table 2. Cont.

	Scores	Range
Profession (%)		
Students	22.1	
Medicine/psychology	14.6	
Pedagogy	13.8	
Theology	8.8	
Other	21.1	
Religious community	20.6	
Life satisfaction (SWLS) (Mean \pm SD)	27.7 \pm 4.7	4–35
Well-being (WHO-5) (Mean \pm SD)	60.7 \pm 17.3	12–100
Transcendence perception (DSES-6) (Mean \pm SD)	21.4 \pm 7.8	6–36

3.2. Reliability and Factor Analysis of the SpREUK-P in Its Variant Version

Factor analysis revealed a Kaiser-Mayer-Olkin value of 0.93, which was a measure for the degree of common variance, indicating its suitability for statistical investigation by means of principal component factor analysis. Due to low item to scale correlations, six items were eliminated from the item pool prior to exploratory factor analysis (mainly from the previous scale “Spiritual (Mind-Body) practices”). During the process of factor analyses, one item was eliminated because of too low factor loading (p27 volunteer work for others), and three items because of strong side loadings (p4a meditation (Christian style), p6 reading religious/spiritual books, PC3 worship of Sacrament). Exploratory factor analysis of the resulting 23 items pointed to four main factors which accounted for 72% of variance (Table 3):

- The 8-item factor *Prosocial-Humanistic practices* (40% explained variance; Cronbach’s alpha = 0.91) is comprised of five items from the primary “Prosocial-humanistic practices” scale, and items from other scales which all share the topic of conscious dealing with the world around and with others. The item p31 addressing the perception and the value of beauty in the world load on this factor, too.
- The 6-item factor *General religious practices* (22% explained variance; Cronbach’s alpha = 0.94) uses four items from the primary “Religious practices” scale and two new items.
- The 5-item factor *Catholic religious practices* (5% explained variance; Cronbach’s alpha = 0.90) is comprised of five ‘Catholic’ items.
- The 4-item factor *Existentialistic practices/Gratitude and Awe* (4% explained variance; Cronbach’s alpha = 0.84) combines two existentialistic items and two items from the primary “Gratitude/Awe scale”.

The Difficulty Index (mean value 1.59/3) of these items is 0.53; all but one item (PC5) was in the acceptable range from 0.2 to 0.8 (Table 3).

Table 3. Reliability and factorial structure.

Primary Scale	Cronbach's alpha Eigenvalue	Mean \pm SD (Range 0–3)	Difficulty Index (1.59/3 = 0.53)	Corrected Item–Scale Correlation	α if Item Deleted ($\alpha = 0.931$)	Factor Loading			
						Prosocial-HUMANISTIC Practices	General Religious Practices	Catholic Religious Practices	Existentialistic Practices/Gratitude and Awe
						0.906 90.2	0.940 50.0	0.896 10.1	0.838 10.0
PHP	p25 try to do good	2.25 \pm 0.72	0.75	0.496	0.927	0.840			
PHP	p23 consider the needs of others	2.27 \pm 0.70	0.76	0.488	0.927	0.827			
PHP	p22 try to actively help others	2.14 \pm 0.79	0.71	0.495	0.927	0.819			
PHP	p26 feel connected with others	2.14 \pm 0.87	0.71	0.588	0.926	0.728			
/	p17 be aware of how I treat the world around	2.27 \pm 0.79	0.76	0.379	0.929	0.654			0.338
GA	p31 have learned to experience and value beauty	2.30 \pm 0.80	0.77	0.468	0.928	0.646			0.490
PHP	p24 thoughts are with those in need	1.82 \pm 0.84	0.61	0.636	0.925	0.640	0.382		
ExP	p16 convey positive values and convictions to others	2.07 \pm 0.82	0.69	0.469	0.928	0.640			0.421
RP	p20 participate in religious events (regardless of obligations)	1.33 \pm 1.10	0.44	0.744	0.923		0.796		
RP	p2 celebrating the Eucharist	1.22 \pm 1.25	0.41	0.751	0.923		0.796	0.405	
new	p1c intercessory prayer	1.30 \pm 1.17	0.43	0.769	0.922		0.790	0.334	
RP	p1a private praying (for myself, for others)	1.55 \pm 1.17	0.52	0.773	0.922		0.779		
new	PC2 receive the Holy Communion	1.29 \pm 1.28	0.43	0.725	0.923		0.763	0.400	
RP	p19 In my private area, religious symbols are important to me	1.27 \pm 1.14	0.42	0.772	0.922		0.715	0.354	
new	PC5 praying the Rosary	0.56 \pm 0.91	0.19	0.413	0.928			0.873	
new	PC1 Sacramental Confession	0.59 \pm 0.94	0.20	0.481	0.927			0.828	
new	PC4 ask the “Mother of God” for help and support	0.90 \pm 1.04	0.30	0.524	0.927			0.793	
new	PC6 strong relation to special saints	0.71 \pm 1.00	0.24	0.449	0.928			0.727	

Table 3. Cont.

Primary Scale	Cronbach's alpha Eigenvalue	Mean \pm SD (Range 0–3)	Difficulty Index (1.59/3 = 0.53)	Corrected Item–Scale Correlation	α if Item Deleted ($\alpha = 0.931$)	Factor Loading			
						Prosocial-HUMANISTIC Practices	General Religious Practices	Catholic Religious Practices	Existentialistic Practices/Gratitude and Awe
new	p1b praying the Liturgy of Hours	0.65 \pm 1.13	0.22	0.568	0.926	0.906 90.2	0.940 50.0	0.896 10.1	0.838 10.0
ExP	p11 try to get insight (also into myself)	2.17 \pm 0.88	0.72	0.476	0.927	0.433	0.419	0.708	0.714
ExP	p10 reflect upon the meaning of life	2.16 \pm 0.87	0.72	0.465	0.928	0.416			0.704
GA	p30 feeling of wondering awe	1.61 \pm 1.01	0.54	0.642	0.925		0.400		0.690
GA	p29 feeling of great gratitude	1.96 \pm 0.93	0.65	0.640	0.925	0.487	0.303		0.573
Excluded items									
new	PC3 Sacrament worship	0.76 \pm 1.05							
SpP	p4a meditation (Christian style)	0.89 \pm 1.09							
SpP	p4b meditation (Eastern style)	0.56 \pm 0.94							
SpP	p6 reading religious/spiritual books	1.34 \pm 1.10							
SpP	p7 work on a mind-body discipline (i.e., yoga, qigong, mindfulness etc.)	1.17 \pm 1.08							
SpP	p8 perform distinct rituals (originated in other religious/spiritual traditions than mine)	0.60 \pm 0.94							
ExP	p13 work on my self-realization	1.96 \pm 0.88							
/	p21 believe in (my) guardian angel	1.61 \pm 1.14							
/	p9 turn to nature	1.81 \pm 0.97							
/	p27 volunteer work for others	1.61 \pm 1.01							

Main component analysis (Variamax rotation with Kaiser normalization; rotation converged in 8 iterations); only factor loadings are depicted < 0.03 ; Abbreviations: ExP—Existentialistic practices; GA—Gratitude/Awe; PHP—Prosocial-humanistic practices; RP—religious practices; SpP—Spiritual (Mind-Body) practices; /—not related to a specific scale in the primary version; new—new item. Items with loading > 0.5 were highlighted (bold)

3.3. Structured Equation Model

After exploratory factor analysis (EFA) to identify correlative structure between the variables to get specific factors, we intended to validate the suggested structure by structured equation modelling (SEM). This method is a comprehensive methodology which involves techniques such as multiple regression models, analyses of variance, confirmatory factor analysis, correlation analysis etc. Investigation of the model structure using Exploratory Factor Analysis (EFA) involving four factors, showed that the model could not be validated through structured equation modelling (SEM: CFI = 0.860, TLI = 0.842, RMSEA = 0.105, SRMR = 0.082).

With SEM we could determine the meaningful relationships between variables since the parameter estimates deliver the best scenario for the covariance matrix. This means, that the better the model goodness of fit, the better the matrix. The following factorial structures could be identified (Figures 1–4):

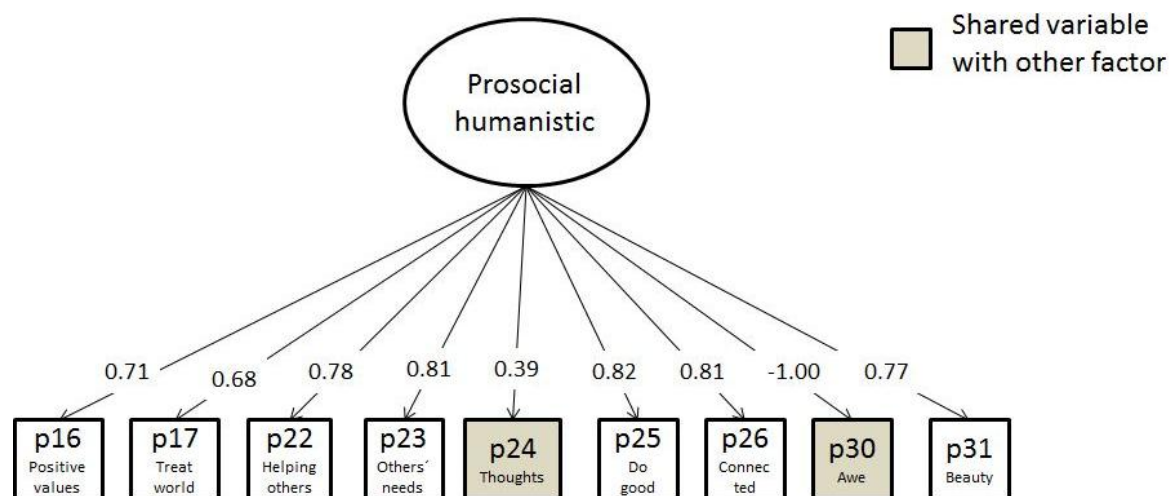


Figure 1. Factor Prosocial-humanistic practices from SEM.

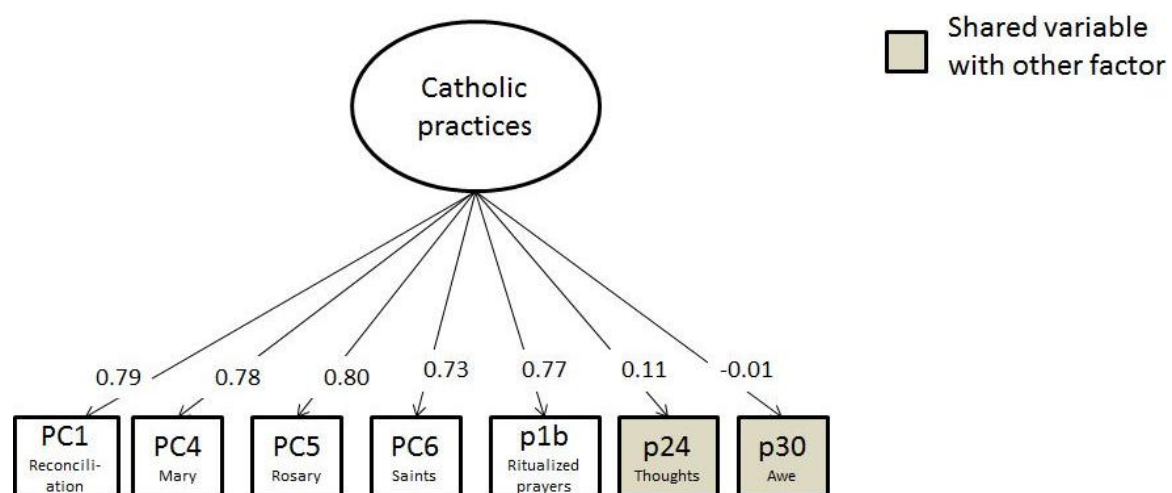


Figure 2. Factor Catholic practices from SEM.

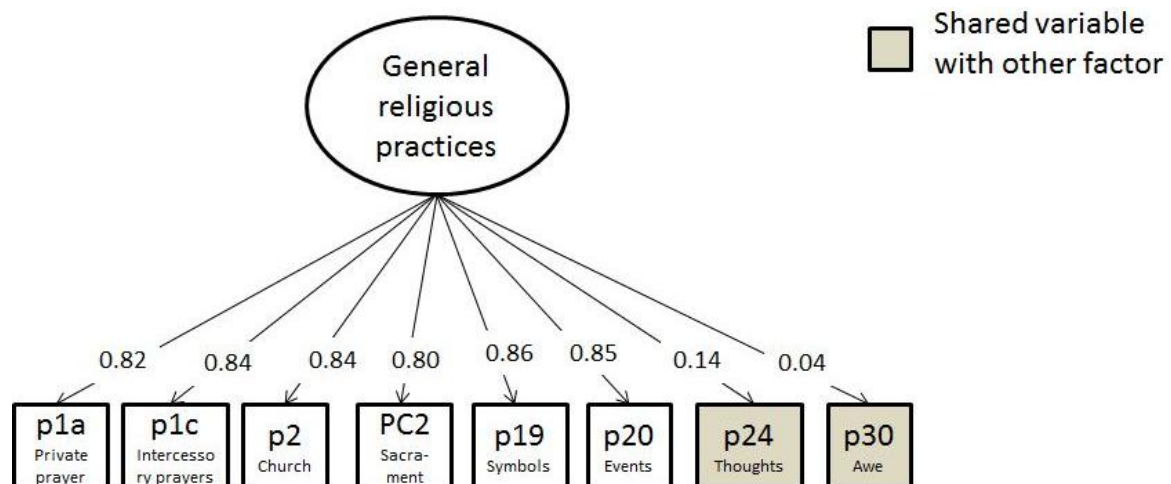


Figure 3. Factor General religious practices from SEM.

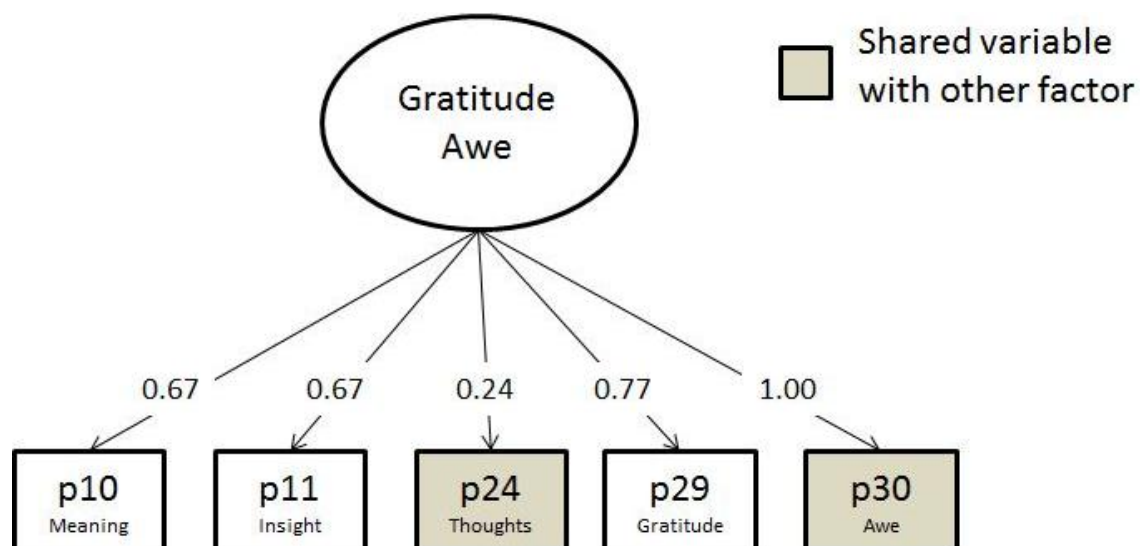


Figure 4. Factor Gratitude/Awe from SEM.

The new paths found through SEM provide a better representation of the relationship between the variables better (CFI = 0.96, TLI = 0.96, RMSEA = 0.05, SRMR = 0.06). Two items (p24—thoughts are with those in need; p30—feeling of wondering awe) are shared by other factors, and both load with variable strength to all four factors. Such cross-loadings are common in more complex statistical models where less restrictions are made in order to allow the variables and its correlations to move free between the latent constructs (Asparouhov and Muthén 2009). This new model with the new paths between factors and variables, as well as the correlation, now has a (very) good reliability: Prosocial-humanistic $\alpha = 0.91$, Catholic practices $\alpha = 0.84$ General religious practices $\alpha = 0.93$ and Gratitude Awe $\alpha = 0.85$.

These four factors are moderately to strongly interconnected, particularly Prosocial-humanistic practices and Gratitude/Awe ($r = 0.90$), Catholic practices and General religious practices ($r = 0.73$), (Figure 5), as well as a strong interconnection between the variables p2 (celebrating the Eucharist) and pc2 (receive the Holy Communion) ($r = 0.75$) (Figure 6). Regression analyses indicate that General religious practices account for 43% of the variance found in Catholic practices (as depending variable).

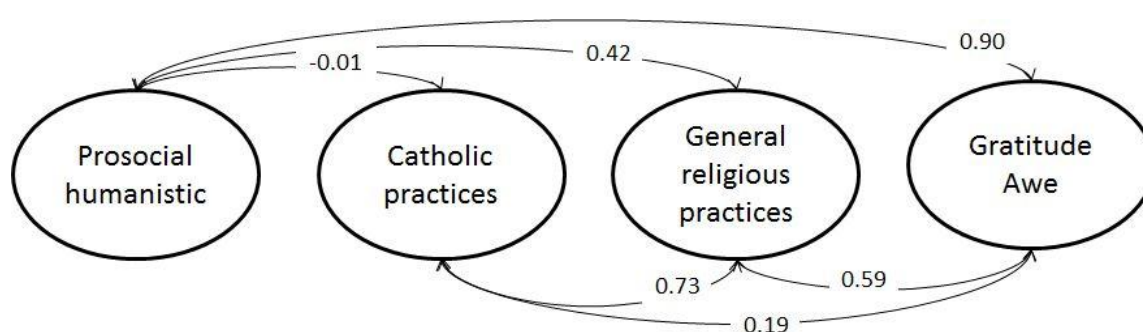


Figure 5. Correlations between factors.

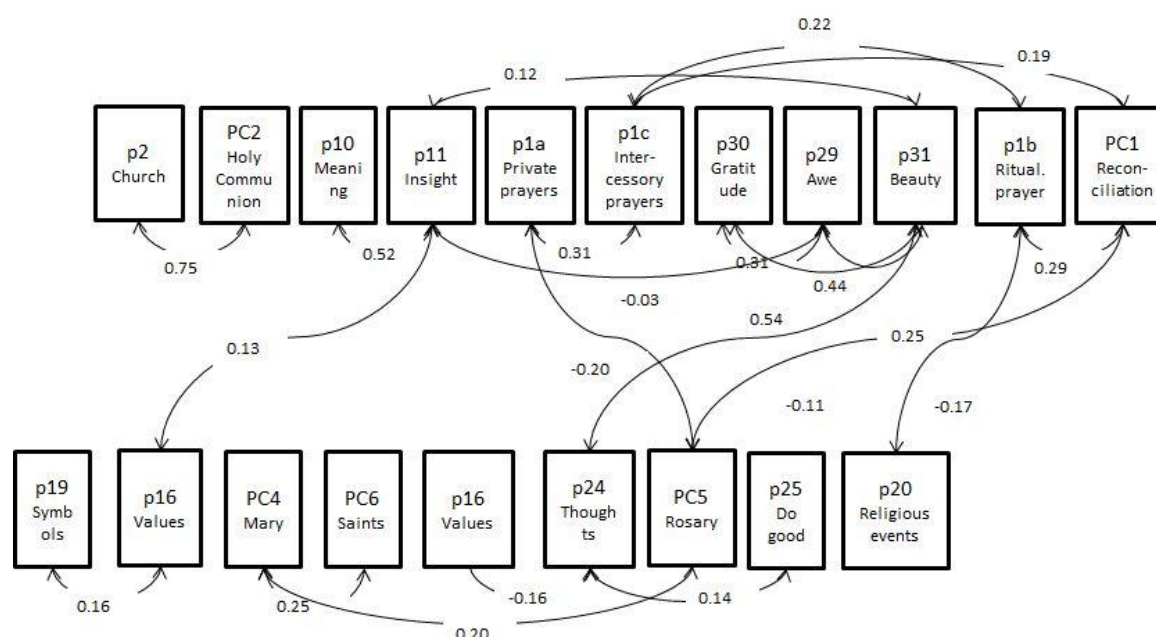


Figure 6. Correlations between variables.

3.4. Correlations with Life Satisfaction, Well-Being and Transcendence Perception

General religious practices (GRP) were strongly interrelated with Catholic religious practices (CRP), and Existentialistic practices/Gratitude and Awe (ExGA) with Prosocial-humanistic practices (PHP) (Table 4). However, CRP was only marginally related to PHP and weakly to ExGA.

The new scales correlated very strongly with the respective scales of the primary instrument (SpREUK-P SF17) (Table 4). The primary scale “Existentialistic practices” (SpREUK-P SF17) correlated strongly with PHP and ExGA, but only weakly with GRP, and not with CRP. Spiritual Mind-Body-practices (SpREUK-P SF17) correlated only weakly with ExGA, marginally with PHP and CRP, but not with GRP.

With respect to convergent validity, the new scales correlated moderately to strongly with Transcendence perception (DESE-6), and with “Live from the Faith/Search for God” (FraSpir) (Table 4). The subscales PHP and ExGA were moderately related to both measures of spiritual-religious perceptions and attitudes. With respect to discriminant validity, neither CRP nor GRP correlated significantly with life satisfaction or well-being. However, PHP was moderately related to life satisfaction and weakly to well-being, and ExGA marginally to life satisfaction and well-being.

Table 4. Correlation analyses.

	Religious Practices (SpREUK-RP)			
	Prosocial-Humanistic Practices	General Religious Practices	Catholic Religious Practices	Existentialistic Practices/Gratitude and Awe
Spiritual-religious practices (SpREUK-P SF17)				
Religious practices	0.491 **	0.988 **	0.689 **	0.505 **
Prosocial-humanistic practices	0.887 **	0.448 **	0.189 **	0.596 **
Existentialistic practices	0.589 **	0.201 **	−0.015	0.794 **
Gratitude/Awe	0.804 **	0.524 **	0.247 **	0.891 **
Spiritual Mind-Body practices	0.119	0.030	0.181 **	0.254 **
Spiritual-religious Attitudes and Perceptions				
Transcendence Perception (DSES-6)	0.392 **	0.542 **	0.496 **	0.417 **
Live from the Faith/Search for God (FraSpir)	0.366 **	0.693 **	0.658 **	0.454 **
Life satisfaction/Well-being				
Satisfaction with Life Scale (SWLS)	0.307 **	0.073	−0.024	0.168 **
Well-being (WHO-5)	0.248 **	0.007	−0.051	0.124

** $p < 0.01$ (Spearman rho); strong correlations were highlighted (bold).

3.5. Expression of SpREUK-RP Scores in the Sample

In this sample, *Prosocial-humanistic practices* (PHP: 70.7 ± 21.2) and *Existentialistic practices/Gratitude and Awe* (ExGA: 65.8 ± 25.3) scored highest, *General religious practices* scored in the lower mid-range (GRP: 44.3 ± 36.7) and *Catholic religious practices* (CRP: 22.9 ± 28.4) lowest (Table 5). All factors except GRP showed skewness (CRP with 39% stating “never”); positive kurtosis was found for PHP and negative kurtosis for GRP (Table 5).

Younger persons scored significantly lower for GRP, CRP and ExGA, which were highest in older persons. For PHP, there were no significant age-related differences. A lower educational level was associated with higher CRP and GRP scores, while there were no significant differences for ExGA or PHP. There were no relevant gender-related differences.

Table 5. Mean values in the sample.

		Prosocial-Humanistic Practices	General Religious Practices	Catholic Religious Practices	Existentialistic Practices/Gratitude and Awe
All	n	411	412	412	410
	Mean	70.74	44.27	22.89	65.75
	SD	21.19	34.65	28.35	25.34
	Skewness	−1.14	0.19	1.22	−0.64
	SE to Skewness	0.12	0.12	0.12	0.12
	Kurtosis	1.47	−1.44	0.41	−0.21
	SE to Kurtosis	0.24	0.24	0.24	0.24
All	z-Mean	0.00	0.00	0.00	0.00
	z-SD	1.00	1.00	1.00	1.00
Gender					
Women (n = 150)	z-Mean	−0.13	0.03	0.07	−0.11
	z-SD	0.92	1.07	1.08	0.98
Men (n = 261)	z-Mean	0.07	−0.02	−0.04	0.06
	z-SD	1.04	0.96	0.95	1.01
F-value		3.97	0.22	1.19	2.53
p-value		0.047	n.s.	n.s.	n.s.

Table 5. Cont.

		Prosocial-Humanistic Practices	General Religious Practices	Catholic Religious Practices	Existentialistic Practices/Gratitude and Awe
Educational level					
Secondary school (n = 58)	z-Mean	0.04	0.40	0.47	0.11
	z-SD	0.98	1.02	1.19	1.05
High school (n = 279)	z-Mean	−0.02	−0.09	−0.11	−0.04
	z-SD	1.01	0.98	0.92	1.00
Others (n=65)	z-Mean	−0.03	−0.02	−0.02	−0.06
	z-SD	0.98	0.99	0.92	0.92
F-value		0.09	5.93	8.84	0.56
p-value		n.s.	0.003	<0.0001	n.s.
Age groups					
<30 years (n = 131)	z-Mean	−0.05	−0.72	−0.59	−0.23
	z-SD	0.85	0.64	0.55	0.92
30–40 years (n = 44)	z-Mean	−0.11	−0.19	−0.07	−0.09
	z-SD	0.89	1.02	0.98	1.01
40–50 years (n = 55)	z-Mean	0.08	0.15	−0.08	0.23
	z-SD	0.96	0.87	0.69	0.99
50–60 years (n = 87)	z-Mean	−0.08	0.44	0.26	0.05
	z-SD	1.23	0.91	0.97	1.01
>60 years (n = 80)	z-Mean	0.15	0.59	0.72	0.17
	z-SD	1.01	0.88	1.19	1.04
F-value		0.93	41.39	30.47	3.30
p-value		n.s.	<0.0001	<0.0001	0.011
Religious congregation					
No (n = 324)	z-Mean	0.08	−0.18	−0.36	0.03
	z-SD	0.83	0.93	0.67	0.95
Yes (n = 85)	z-Mean	−0.31	0.69	1.38	−0.14
	z-SD	1.47	0.97	0.85	1.17
F-value		10.43	58.07	402.34	2.12
p-value		0.001	<0.0001	<0.0001	n.s.
Religious denomination					
Catholics (n = 262)	z-Mean	−0.02	0.35	0.36	0.03
	z-SD	1.09	0.98	1.06	1.02
Protestants (n = 83)	z-Mean	0.11	−0.48	−0.64	−0.08
	z-SD	0.78	0.74	0.45	0.95
Other (n = 17)	z-Mean	0.46	−0.12	−0.46	0.71
	z-SD	0.84	0.70	0.49	0.71
None (n = 45)	z-Mean	−0.36	−1.05	−0.70	−0.37
	z-SD	0.79	0.38	0.32	0.92
F-value		3.53	43.72	39.95	5.26
p-value		0.015	<0.0001	<0.0001	0.001

¹ z-means and standard deviations (SD) are standardized z factor values; strong deviations from the standardized mean are highlighted (bold).

Catholics had the highest CRP and GRP scores compared to all other enrolled persons. Nuns and monks scored significantly higher on CRP and GRP compared to other respondents, but significantly lower on PHP; with respect to ExGA there were no significant differences. While it is in line with the expectations that persons without any religious denomination score low on GRP and CRP, they also had low scores on PHP and ExGA (Table 5).

4. Discussion

Our intention was to develop a variant version of the already established SpREUK-P questionnaire. This new version focused more clearly on Christian religious practices, and included items specific for Catholic rituals and practices. Adding the respective items resulted in an elimination of the primary items referring to the “Spiritual (Mind-Body) practices” scale of the original instrument. Two of the new items (p1c intercessory prayer, PC2 receive the Holy Communion) load to the primary scale “Religious practices” which is now relabeled *General religious practices*, while the other new (‘Catholic’) items would build a discrete new factor labeled *Catholic religious practices*.

The primary scale “Prosocial-humanistic practices” was enriched by two items of primary SpREUK-P (p17 be aware of how I treat the world around; p26 feel connected with others), and by one item from the primary “Existentialistic practices” scale (p16 convey positive values and convictions to others) and one from the SpREUK-P SF17’s scale “Gratitude/Awe” scale (p31 have learned to experience and value beauty). The two items of the SpREUK-P SF17’s scale “Gratitude/Awe” (p30 wondering awe; p29 great gratitude) and two items from the primary scale “Existentialistic practices” (p11 try to get insight; p10 reflect upon the meaning of life) together form the new scale *Existentialistic practices/Gratitude and Awe*. Both of these short version scales have lost one item to the *Prosocial-humanistic practices* scale, and thus it is not a surprise that these scales are strongly interrelated.

While *Prosocial-humanistic practices* score highest in the sample (which means that socially desired activities are of high relevance for all participants), *General religious practices* were moderately related to these engagements and behaviors, while *Catholic religious practices* were only marginally related. It might be that these practices and rituals associated with Catholic religiosity focus more on transcendent sources (i.e., specific saints, mother Mary, praying the Rosary and the Liturgy of Hours) rather than sources related to concrete persons. This is interesting because from a theological point of view Christ can be experienced by others in need (Duncan 1998). In line with this observation, nuns and monks in particular, scored lower on *Prosocial-humanistic practices*, while Catholics as a more general group did not. This observation has to be interpreted with caution, because nuns and monks score high and in the upper range for these religious rituals and practices (GRP: 68.1 ± 33.8 ; CRP: 62.0 ± 24.0), moreover their other engagement scores are in the upper range (ExGA: 62.0 ± 29.7 ; PHP: 64.1 ± 31.0). Nevertheless, persons not participating in religious congregations score much higher on *Prosocial-humanistic practices* (PHP: 72.5 ± 17.5) and highly in *Existentialistic practices/Gratitude and Awe* (ExGA: 66.6 ± 24.2). Whether they have more chances to meet and care for others or whether their religion is more focused on their encounter with God in their prayer life, remains a matter of further analyses. In fact, non-congregational persons score in the lower range of *General religious practices* and very low on *Catholic religious practices*, and a-religious persons scored lowest on all sub-scales. These effects cannot be explained by gender-related effects, because gender showed no relation to the engagement frequency of these practices. Apart from these observations we found significant difference on engagement in religious rituals and practices related to the educational level, an effect that has been observed in other studies (Büssing et al. 2005).

With respect to convergent validity, the new scales correlated moderately to strongly with spiritual-religious attitudes and perceptions (i.e., Transcendence perception, and “Live from the Faith/Search for God”). These measures refer to the Faith/Experience level of the representation of different aspects of the spirituality model (Table 1) which will influence the levels of attitudes on the one hand and behaviors (rituals and practices) on the other hand.

With respect to discriminant validity, neither “Catholic religious practices” nor “General religious practices” were significantly related to a person’s life satisfaction or well-being. These findings would indicate that the religious scales of the SpREUK-RP are not *per se* contaminated with perceptions of general well-being. However, PHP were moderately related to life satisfaction and weakly to well-being. Detail analyses revealed that life satisfaction correlated strongest with the experience of beauty (p31: $r = 0.29$) and with trying to actively help others (p22: $r = 0.24$). These perceptions and behaviors may result in feelings of ease and thus satisfaction in life.

Limitations

A limitation of this study is the imbalance of Christian denominations with a dominance of Catholics. Further, women and persons with lower educational level are underrepresented. For the validation process this is not of major relevance, but for future studies more balanced samples are needed. Sensitivity-to-change analyses are for spiritual-religious engagement practices less relevant; nevertheless, future studies should address the development of these engagements during different phases of life.

5. Conclusions

We can confirm the 23-item variant version (SpREUK-RP), which more specifically addresses Christian religious practices as compared to the SpREUK-P, as a valid and reliable multidimensional instrument to be used in future studies. A benefit of the instrument is that it is not generally contaminated with items related to persons' well-being, and is not intermixed with specific religious attitudes and convictions. Compared to the primary SpREUK-P, which was designed to address not only religious but also secular forms of spiritual practices, the SpREUK-RP is intended to be used in education programs that refer to value-based attitudes and behaviors derived from specific Christian contexts.

Acknowledgments: There was no external funding for this study. We are grateful to all participants who filled in the questionnaire.

Author Contributions: A.B. has designed the questionnaire; A.B. and D.R.R. have analyzed the data; A.B., M.G., M.W. and T.D. have written and finally approved the manuscript.

Conflicts of Interest: The authors declare no conflict of interest. As a Capuchin, T.D. belongs to a Franciscan congregation; but this has not inappropriately influenced the data analysis, representation or interpretation of reported research results.

References

- Asparouhov, Tihomir, and Bengt Muthén. 2009. Exploratory structural equation modeling. *Structural Equation Modeling* 16: 397–438. [CrossRef]
- Bech, Per, Lis Raabaek Olsen, Mette Kjoller, and Niels Kristian Rasmussen. 2013. Measuring well-being rather than the absence of distress symptoms: A comparison of the SF-36 mental health subscale and the WHO-Five well-being scale. *International Journal of Methods in Psychiatric Research* 12: 85–91. [CrossRef]
- Büssing, Arndt, Peter F. Matthiessen, and Thomas Ostermann. 2005. Engagement of patients in religious and spiritual practices: Confirmatory results with the SpREUK-P 1.1 questionnaire as a tool of quality of life research. *Health and Quality of Life Outcomes* 3: 53. Available online: <https://www.ncbi.nlm.nih.gov/pubmed/16144546> (accessed on 26 September 2005).
- Büssing, Arndt, Franz Reiser, Andreas Michalsen, and Klaus Baumann. 2012. Engagement of patients with chronic diseases in spiritual and secular forms of practice: Results with the shortened SpREUK-P SF17 Questionnaire. *Integrative Medicine: A Clinician's Journal* 11: 28–38.
- Büssing, Arndt. 2012. Measures of Spirituality in Health Care. In *Oxford Textbook of Spirituality in Healthcare*. Edited by Mark Cobb, Christina M. Puchalski and Bruce Rumbold. New York: Oxford University Press, pp. 323–31.
- Büssing, Arndt, Eckhard Frick, Christoph Jacobs, and Klaus Baumann. 2016. Health and Life Satisfaction of Roman Catholic Pastoral Workers: Private Prayer Has a Greater Impact Than Public Prayer. *Pastoral Psychology* 65: 89–102. [CrossRef]
- Büssing, Arndt. 2017. Messung spezifischer Aspekte der Spiritualität/Religiosität. In *Spiritualität. Auf der Suche nach ihrem Ort in der Theologie*. Edited by Thomas Möllenbeck and Ludger Schulte. Münster: Aschendorf-Verlag, pp. 138–64.
- Büssing, Arndt, Markus Warode, Mareike Gerundt, and Thomas Dienberg. 2017. Validation of a novel instrument to measure elements of Franciscan inspired Spirituality in a general population and in religious persons. *Religions* 8: 197. [CrossRef]

- Diener, Ed, Robert A. Emmons, Randy J. Larsen, and Sharon Griffin. 1985. The Satisfaction with Life Scale. *Journal of Personal Assessment* 49: 71–75. [[CrossRef](#)] [[PubMed](#)]
- Duncan, Geoffrey. 1998. *Seeing Christ in Others. An Anthology of Worship, Meditation and Mission*. Norwich: Canterbury Press.
- Underwood, Lynn G. 2002. The Daily Spiritual Experience Scale: Development, Theoretical Description, Reliability, Exploratory Factor Analysis, and Preliminary Construct Validity Using Health-Related Data. *Annals of Behavioral Medicine* 24: 22–33. [[CrossRef](#)] [[PubMed](#)]
- Underwood, Lynn G. 2011. The Daily Spiritual Experience Scale: Overview and Results. *Religions* 2: 29–50. [[CrossRef](#)]
- Zwingmann, Christian, Constantin Klein, and Arndt Büssing. 2011. Measuring Religiosity/Spirituality: Theoretical Differentiations and Characterizations of Instruments. *Religions* 2: 345–57. [[CrossRef](#)]



© 2017 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).