Developing the ReliROM:
Measuring religion and spirituality in Routine Outcome Monitoring

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Abstract

This study was the first step in developing the ReliROM, a questionnaire that aims at measuring religion and spirituality (R/S) in a reliable and valid way along multiple dimensions in Routine Outcome Monitoring. Based on theoretical considerations, 70 items from existing questionnaires measuring R/S were selected and filled in by 366 clinical and non-clinical patients. The aim of the present study was to refine the item pool and generate a provisional version of the questionnaire. Principal component analysis identified two dimensions of R/S: intrinsic religiosity and divine struggle. Furthermore, assessment of the responsiveness of the scales showed Searching for Meaning, Anxiety and Passivity to be most sensitive for measuring change over a three month period. At last, a hierarchical cluster analysis differentiated five religious profiles for psychiatric patients, namely Highly religious, Moderately religious, Struggling with divine, Struggling with meaning and Minimally religious. A MANOVA followed up by a simple contrast revealed highly religious patients to be more satisfied with their interpersonal relationships and functioning better in their work and leisure than patients who are struggling with meaning and minimally religious patients. It is suggested that items measuring the following three aspects of R/S need to be included in the ReliROM: 1) internalized, positively valued R/S, 2) negatively experienced R/S and 3) searching for meaning.

Key words: religion and spirituality, mental health, Routine Outcome Monitoring, dimensions, responsiveness, clusters analysis

Developing the ReliROM:

Measuring religion and spirituality in Routine Outcome Monitoring

Routine Outcome Monitoring (ROM) is a method in mental healthcare that is used to measure the condition of patients in a structural and repetitive manner during treatment (de Beurs et al., 2011). Comparison of these different measurements over time renders it possible to determine whether patients' condition improves, deteriorates or does not change over the course of treatment. Based on this information, interventions may be adapted to patients' performance during treatment. In the process of assessment of the progress of a patient, it is important to take into account the different dimensions of health. According to the biopsychosocial model of health, biological (e.g. physical health, genetic vulnerabilities), psychological (e.g. emotions, personality, coping skills) and social (e.g. family background, social/economic status) dimensions interact as factors for physical and mental health (Engel, 1977). In the early days of modern psychology, pioneers in the field like William James (1902/2002) and G. Stanley Hall (1904) considered psychological aspects of human religiousness also to be of great importance for mental health. Despite their efforts to begin to understand the psychological bases of R/S, empirical research of this topic was abandoned from the mid-1920s till the mid-1960s. Sigmund Freud (1927) and Carl G. Jung (1938) attempted to explain religiousness on bases of their theories of human nature during this period. They, however, did little to gain empirical evidence that supported their views. The mid-1960s brought a new generation of psychologists who were more concerned with studying issues that had social relevance in the world of their days such as racism, sexism, violence and poverty (Paloutzian & Park, 2005, p. 4). Although R/S also became topics of interest, they were mostly included as adjustment variables in context of large epidemiological or sociological surveys of respectively medical and national populations, using only global measures like frequency of church attendance. It was not until the 1980s and 1990s R/S themselves received a great deal of attention as health-related variables (Bergin, 1983; Larson, Pattison, Blazer, Omran & Kaplan, 1986; Levin, 1996b; Pargament, 1997). These studies showed that religious and spiritual factors were consistently related to mental health in religious patients. These findings were validated by other studies during the last two decades, which showed R/S to be fostering the relief of psychiatric complaints as well as being sources for psychological hardship (Dew et al., 2008; George, Ellison, & Larson, 2002; Koenig & Larson, 2001; Moreira-Almeida, Lotufo Neto, & Koenig; 2006).

These connections are generally found to be positive, but weak (Bonelli & Koenig, 2013; Granqvist, 2014; Park et al., 2013).

Although these findings show the importance of R/S in mental health, they do not give any explanation for these complex interactions. A closer look at the different concepts of R/S that have been found to be related to mental health, might give more insight into the relationships that exist between them. To be able to understand these connections better, R/S have to be defined first. This needs to be done in such a way that it opens the door for linkages with these concepts. As there has been disagreement about the nature and meaning of R/S among researchers in the field of psychology of religion for a long time, this might prove to be a challenge.

Defining religion and spirituality

Throughout most of the history, R/S have been considered to be multidimensional processes. James (1902/2002) already recognized these constructs to consist of feelings, acts and experiences of individual men in relation to whatever they may consider the divine. Stark and Glock (1968) expanded the understanding of James by distinguishing the dimensions of belief, knowledge, experience, practice and consequences. R/S already had been acknowledged to be one of the most powerful social forces affecting personal lives and societies from a sociological point of view (Emmons & Paloutzian, 2003). Traditionally, R/S have thus been considered to reflect feelings, thoughts, behaviors, relationships and consequences for future actions related to the divine.

Several features are characteristic for this traditional approach. The first feature is that R/S could be understood from both substantive and functional perspectives. Whereas substantive approaches examine these thoughts, emotions, behaviors and relationships that are related to the sacred, functional approaches investigate the purpose these dimensions serve in an individual's life (Emmons, 1999; Pargament, 1997). The second feature is that both individual and institutional aspects of R/S were recognized, emphasizing the importance of their influence in personal and social life (James, 1902/2002). The third feature is that R/S could take on both positive and negative forms (Hill et al., 2000). The traditional understanding thus regarded both terms to be similar and used R/S interchangeably to refer to these characteristics when explaining its meaning.

A modern understanding, however, divided R/S into separate constructs. Although there was agreement about the multidimensional nature of both constructs, religion was

regarded as a negative form of expression being substantive, institutional and belief-based. According to the modern approach, religion needed to be transformed into something that fitted with a secular worldview (Hunter, 1983). Spirituality was therefore used to refer to a functional, individual and emotional-based expression that was viewed as positive. This may seem like a temping alternative in fulfilling a crucial part of human experience, but there is a great danger in the tendency to polarize R/S. Hill et al. (2000) pointed out that as a result of this development the psychology of religion might lose what distinguishes it from other fields of research: the sacred. To prevent this from happening, they proposed some criteria for defining and measuring R/S, which acknowledge their similarities and dissimilarities. According to them, both constructs include "feelings, thoughts, experiences and behaviors that arise from a search for the sacred (p. 66)." They refer to the "sacred" as "a divine being, divine object, Ultimate Reality or Ultimate truth as perceived by the individual (p. 66-67)." The term "search" is referred to as "attempts to identify, articulate, maintain and/or transform the sacred (p. 67-68)." Religion only can also facilitate a search for non-sacred goals, although the primary objective is searching for the sacred using certain means and methods that are validated by an identifiable group. An appropriate application of these criteria can be found in the definitions of Koenig, King, and Carson, 5-47 (2012). According to these authors, spirituality involves those feelings, thoughts, behaviors and experiences that derive from searching for and having a connection with the sacred. This search for and connection with the sacred takes place in a religious context, which consists of beliefs, practices, rituals, symbols and ceremonies that are related to the sacred and are practiced within a private setting or a community. The sacred can refer to concepts such as God, the divine, the transcendent, Ultimate Truth. These definitions will be used as a starting point for the conceptualization of R/S in this study, because they reflect the multidimensional nature of R/S, consisting of a cognitive, affective, behavioral, social and consequential dimension, and of their capability to integrate R/S into the research of mental health.

Concepts of R/S related to mental health

Hill and Pargament (2008) outline several concepts of R/S that are considered to be theoretically and empirically related to mental health. The first concept is the idea of Allport and Ross (1967) who suggest that R/S serve as orienting and motivating forces giving a direction for living. Whether this in fact contributes to a better health depends on people's attitude towards R/S. An empirical study of Power and McKinney (2013) shows that

individuals who internalize their faith viewing it as an end unto itself, experience a better health than people who use R/S for their personal gain. Emmons (1999) suggests that, because of the sacred character of these goals, intrinsic believers are more determined to persevere in their striving to reach these ultimate destinations providing them with stability and support when life gets hard in contrast to extrinsic believers. In their pursuit of these goals, intrinsic believers also use a wider range of religious coping methods and avoid vices.

The second concept is that of religious support, which emphasizes the importance of human relationships within the religious congregation for better health outcomes. Religious support can serve as a constant source of positive cognitions and emotions (Thoits, 1982) or can offer instrumental, informational and emotional support functioning as a temporary buffer in times of stress (Cohen & Wills, 1985). It is again the religious content, such as the awareness of God's presence through members of the congregation or praying with a member in times of sorrow, that can strengthen the effects of the support causing extra benefits (Hill & Pargament, 2008).

The third concept that is related to mental health is the relationship with the transcendent. It can be said that everything related to R/S serves as a mean in order to achieve this ultimate purpose. A theoretical explanation for the link between the personal experienced relationship with the transcendent and mental health is offered by the object relations perspective. This theory conceptualizes the perceived relationship with the transcendent as a mental representation that is shaped by the representations from significant others in interaction with the socio-cultural environment (Corveleyn & Luyten, p. 85). These representations reflect the subjective experiences and objective beliefs of an individual about the transcendent, which are developed through a relational and unconscious process as well as a more conscious process related to cultural doctrines (Schaap-Jonker, Eurelings-Bontekoe, Zock & Jonker, 2008). Empirical studies have tied more positive representations to a better mental health, whereas more negative representations were linked to a worse psychological condition (Braam et al., 2008; Eurelings-Bontekoe, Hekman-van Steeg & Verschuur, 2005). Not all concepts discussed here can thus be linked to positive health outcomes.

The fourth concept that is integrated in the health research is religious struggle. According to Exline, Pargament, Grubbs & Yali (2014), religious struggle occur when certain beliefs, practices or experiences of R/S become the focus of concern, conflict or negative thoughts or emotions that are centered on the relationship of the individual with himself,

others or a deity. Many religious individuals perceive these struggles as tormenting, because they challenge their orientation to life and deepest values (Hill & Pargament, 2008). Although there is a strong connection between religious struggles and poor health, it is possible that people struggling with their faith experience growth in the long term. Abu-Raiya, Pargament & Exline (2015) assume that believers with stable religious resources, beliefs, practices and experiences, also referred to as the religious orienting system (ROS), are more likely to resolve their struggles leading to positive health outcomes, whereas believers with a weaker ROS experience a decline overtime.

Research issues

These studies show the promoting and/or damaging implications R/S have on mental health, which can potentially affect the outcome of treatment by causing an improvement or deterioration of psychiatric complaints over the course of treatment in believers (Weber & Pargament, 2014). This calls for an integrated approach in the treatment of psychopathology of religious patients where there is not just attention for complaints, but also for the faith experience of the patient and the way in which this relates to the complaints. In the Netherlands, however, there is no attention in ROM to faith and faith-experiencing of the patient, not even an instrument to measure R/S as a health-related variable fitting with the theoretical and empirical background exists. This in contrast to, for example, the United States were the Fetzer Institute/National Institute on Aging Working Group (1999) published the Multidimensional Measurement of Religiousness/Spirituality for Use in Health Research. This report was developed as a resource providing researchers with a list of religious and spiritual questions, which have been theoretically and empirically related to health outcomes. It is necessary that religious and spiritual items are included in ROM, so that 1) it is possible to measure change in R/S over the course of treatment and whether or not this relates to changes in complaints, 2) the therapist can provide feedback about the relation of (struggling with) faith and complaints and 3) information can be given on the relationship between R/S and psychiatric complaints.

Aim of the study

Ultimately, the goal is to develop a reliable and valid questionnaire of twenty items fitting with the theoretical background that provides clinicians with a tool for assessing R/S along multiple dimensions in ROM, so that care for religious patients suffering from psychiatric disorders can be improved. As an important first step, items measuring concepts of R/S

related to mental health were added to ROM. These items were derived from already existing instruments. The aim of this study is to refine this item pool and generate a provisional version of the questionnaire. To be able to do so, the following research question will guide the present study: '*which items are best for measuring religion and spirituality in a multidimensional way in the context of Routine Outcome Monitoring?'* Three subquestions will be addressed for answering the research question:

1. *Which dimensions of R/S can be identified based upon the set of items?*
2. *Which items are most sensitive for measuring change over a three month period?*
3. *Which particular profiles of types of persons can be differentiated based on the answers patients give on religious and spiritual items? Is there a difference between these profiles on domains of functioning as measured by the OQ-45?*

Method

Procedure

The ReliROM was included in the procedure of clinical assessment at De Hoop, a Christian mental health care institution. People who signed up for treatment received information about the aim of the study and were asked to fill in the questionnaire besides completing the OQ-45. In order for their data to be used, participants had to sign an informed consent. If they gave their permission, participants were approached again after three months of treatment by their therapists and asked to fill in both the ReliROM and OQ-45 for a second time. A total of 366 patients agreed to participate in this study. Forty of them also returned a second measurement.

Participants

A total of 366 psychiatric patients participated in this study, which consisted of 210 males (57%) and 92 females (25%). Their age varied from 19 to 76 (M = 39, SD = 12). For 64 individuals (18%) sex and age was unknown. Of the sample, 206 participants (56%) had a primary DSM-IV diagnosis related to substance abuse and 131 participants (36%) had other primary Axis I and II diagnoses. Twenty-nine patients (8%) did not want to reveal their diagnosis.

The sample consisted of 288 subjects (79%) belonging to Christianity. Of these individuals, 20 (7%) were Roman Catholics, 49 (17%) attended the Protestant Church of the Netherlands, 33 (11%) an orthodox-reformed church, 136 (47%) were Evangelicals, Baptists

and Pentecostals and 50 (17%) reported attending other denominations or did not provide data. Of the remaining 78 participants, 6 (2%) belonged to Islam, 1 (0.3%) to Judaism, 1 (0.3%) to the Humanistic covenant, 1 (0.3%) to the New Age movement and 12 (3%) to another religion. Forty-five individuals (15%) reported not belonging to any religion and for 12 (3%) it was unknown.

Instruments

Overall self-ranking. One item of the domain of overall self-ranking of the Brief Multidimensional Measurement of Religiousness/Spirituality (BMMRS; Fetzer Institute and the National Institute on Aging Working Group, 1999) was used to measure to what extent people consider themselves as religious. Answers were scored on a five-point scale, ranging from 1) "not religious" to 5) "very religious".

Religious preference. Based on the domain of religious preference of the BMMRS (Fetzer Institute and the National Institute on Aging Working Group, 1999), two items were added in order to ask participants what religious tradition they currently preferred. Answer options included 1) "None", 2) "Christianity", 3) "Islam", 4) "Judaism", 5) "Humanistic covenant", 6) "New Age movement" and 7) "Other religion", which gave participants the opportunity to fill in an answer if their preferred religious tradition was not mentioned. If people answered with Christianity, they were asked to specify which of the following denomination they attended: 1) "Roman Catholic Church", 2) "Protestant Church of the Netherlands", 3) "an orthodox-reformed church", 4) "Evangelical, Baptist or Pentecostal church" and 5) "Other denomination".

Public and private religious practices. Using one item of the organizational religiousness domain and one of the private religious practices domain of the BMMRS (Fetzer Institute and the National Institute on Aging Working Group, 1999), people were asked about the frequency with which they prayed/meditated, rated from "never" (1) to "many times a day" (6) and the frequency with which they attended religious ceremonies, rated from "never" (1) to "two times a week" (6).

Meaning in life. The Meaning in Life Questionnaire (MLQ) is a measurement that is designed to assess meaning in life (Steger, Frazier, Oishi, & Kaler, 2006). The questionnaire differentiates two dimensions: Presence of Meaning (e.g. "I understand my life's meaning) and Searching for Meaning (e.g. "I am seeking a purpose or a mission in my life"). A shortened version of the questionnaire of three items for each dimension was used. Answers

were scored on a five-point scale, ranging from “not at all applicable” (1) to “completely applicable” (5). Cronbach alpha’s of α = 0.86 and α = 0.87 are found for respectively the presence of meaning and the searching for meaning dimension.

Spiritual needs. Spiritual needs were measured along four dimensions using the Spiritual Needs Questionnaire (SpNQ) of Büssing, Balzat and Heusser (2010): Religious Needs (α = 0.90), Inner Peace (α = 0.83), Existential Needs (α = 0.84) and Actively Giving (α = 0.82). Seven items that reflect all the dimensions were used and scored from “not at all” (1) to “very much” (5). Example questions include “Praying myself/with someone” (Religious Needs), “Talking/being together with other believers” (Inner Peace), “Find meaning in illness and/or suffering” (Existential Needs) and “Can mean something for someone else” (Actively Giving).

Religious support. Four items of the religious support domain of the BMMRS (Fetzer Institute and the National Institute on Aging Working Group, 1999) were used for measuring religious support: two items for Positive Religious Support (e.g. “I get support from people from my community,” α = 0.96) and two items for Negative Religious Support (e.g. “People from my community are critical about me and the things I do,” α = 0.77). Answers were scored on a five- point scale from “not at all applicable” (1) to “completely applicable” (5).

Religious salience. Religious salience was assessed using three items of a questionnaire developed by Eisinga, Felling, Peters, Scheepers & Schreuder (1992). An example question includes the following: “My religion is important to me” and ranges from “not at all applicable” (1) to “completely applicable” (5). The questionnaire shows good internal consistency (α = 0.85).

Intrinsic/Extrinsic religiosity. The Intrinsic/Extrinsic Religiousness scale of Gorsuch and McPherson (1989) is a questionnaire that measures motivation for religion and spirituality. Three items were used for measuring the two dimensions that are differentiated by the Intrinsic/Extrinsic Religiousness scale: one for the dimension Intrinsic Religiousness (“My whole approach to life is based upon my religion”) and two for the dimension Extrinsic Religiousness. The dimension Extrinsic Religiousness consists of two subscales, namely Extrinsic-Social Benefits (“I go to church mainly because I enjoy seeing people I know there,” α = 0.77) and Extrinsic-Personal Benefits (“What religion offers me most is comfort in

times of trouble and sorrow," α = 0.77). Answer options ranged from "not at all applicable" (1) to "completely applicable" (5).

God representations. All 22 items of the Short Questionnaire God Representations (S-QGR) were used for measuring representations of the transcendent (Schaap-Jonker, Egberink, Braam, & Corveleyn, 2016). The questionnaire has two dimensions: an affective dimension, which assesses feelings towards God ("When I think about God, I experience…") and a cognitive dimension, which assesses perceptions of God's actions. In the affective dimension, three subscales are differentiated: Positive Feelings (e.g. "thankfulness", α = 0.93), Anxiety (e.g. "fear of being rejected", α = 0.94) and Anger (e.g. "dissatisfaction", α = 0.75). The cognitive dimension also differentiates three subscales, namely Supportive Actions (e.g. "God protects me", α = 0.94), Ruling and/or Punishing Actions (e.g. "God punishes", α = 0.79) and Passivity (e.g. "God lets everything takes its course", α = 0.71). Answers are scored on a five-point scale, ranging from "not at all applicable" (1) to "completely applicable" (5).

Religious coping. In order to measure religious coping, the Brief RCOPE of Pargament (1999) was used. The Brief RCOPE is an 11 item questionnaire that consists of two subscales: Positive Religious Coping and Negative Religious Coping. Answers ranged from "not at all applicable" (1) to "completely applicable" (5). Validation of the Dutch translation of the Brief RCOPE (Braam et al., 2008) shows good internal consistency for the positive dimension of religious coping (α = 0.89), but a poor internal consistency for the negative dimension (α = 0.57). Example questions include "I confess my sins and ask for forgiveness" (Positive Religious Coping) and "I wondered whether God had abandoned me" (Negative Religious Coping).

Furthermore, four items of the religious conversion subscale of the RCOPE of Pargament (1999) were added for meausring this specific way of religious coping (e.g. "I pray for a radical change in my life", α = 0.94) with answer options ranging from 1) "not at all applicable" to 5) "completely applicable".

Forgiveness. Forgiveness was assessed using the forgiveness domain of the BMMRS (Fetzer Institute and the National Institute on Aging Working Group, 1999). This domain consists of three dimensions: forgiveness of self ("I have forgiven myself for things that I have done wrong"), forgiveness of others ("I have forgiven those who hurt me") and forgiveness by God ("I know that God forgives me"). Answers are scored on a five-point scale, ranging from "not at all applicable" (1) to "completely applicable" (5).

Surrender to God. Two items of the Surrender Scale (Wong-McDonald & Gorsuch, 2000) were used ("When my solutions to problems are in conflict with God's alternatives, I will submit to God's way", "I will select God's solution to a problem even if it requires self-sacrifice from me"). Answers are scored on a five-point scale, ranging from "not applicable" (1) to "applicable" (5).

Clinical outcomes. The Outcome Questionnaire (OQ-45) is a self-report scale and is one of the most frequently used instruments in clinical outcome research. The Dutch version of the OQ-45 (de Jong et al., 2007) consists of 45 items that are measured on a five-point scale with answers ranging from "never" (0) to "almost always" (4). Validation of the Dutch version of the questionnaire showed the existence of an additional domain of functioning besides the three original domains, namely Anxiety and Somatic Distress. This domain consists mainly of items that originate from the Symptom Distress scale. Each domain showed acceptable to excellent internal consistency and acceptable to good test-retest reliability: Symptom Distress (SD) (25 items, $\alpha = 0.95$, $r = 0.76$), Anxiety and Somatic Distress (ASD) (13 items, $\alpha = 0.89$, $r = 0.70$), Interpersonal Relations (IR) (11 items, $\alpha = 0.84$, $r = 0.83$) and Social Role (SR) (9 items, $\alpha = 0.72$, $r = 0.74$). For total scores, a Cronbach's alpha of 0.96 and a correlation coefficient of 0.79 were found. Example questions include the following: "I am irritated" (SD), "I get easily tired" (ASD), "I find it hard to deal with friends and acquaintances" (IR) and "I have the feeling that all is not well with work/school" (SR).

Statistical analyses

Prior to the analyses, descriptive statistics were examined. For measuring the internal consistency, Cronbach alphas were investigated for the scales of the different questionnaires. As a first exploration of the data, a principal component analysis (PCA) was conducted using Varimax Rotation, eigenvalues > 1, factor loadings > 0.40 and communalities > 0.40. This rendered it possible to see if the data could be reduced and a factor structure could be distinguished.

Furthermore, the sensitivity for change, also called the responsiveness, was explored. There is no agreement in the literature on what the best method is for measuring responsiveness (Norman, Wyrwich, & Patrick, 2007). Therefore, different indices were used for determining which scales were most sensitive for change. The indices that were used, were the ones recommended by Norman, Wyrwich and Patrick (2007) and are also used by de

Jong et al. (2007), de Beurs et al. (2012) and Pijck, Deen, van den Berg, Huijbrechts, and Korrelboom (2014).

Cohen's d: the effect size index of Cohen. The effect size can be defined as the difference resulting from treatment (Cohen, 1988) and can be calculated with the following formula: $ES = (M_{posttest}-M_{pretest})/SD_{baseline}$.

Standardized Response Mean (SRM.) The SRM is almost the same as the Cohen's d, but instead of the standard deviation of the baseline scores, the standard deviation of change is used: $SRM = (M_{posttest}-M_{pretest})/SD_{change}$. Criteria for Cohen's *d* and SRM are the same as 0.20 was considered to be a small effect size, 0.50 a medium effect size and 0.80 a large effect size.

Paired t-test. Besides calculating the effect size, it is also important to measure responsiveness in terms of statistical significance. Therefore, a paired t-test was performed. Because of the danger of multiple testing, a p-value of .05/14 = .003 was considered a significant change.

At last, the different scales were included in a hierarchical cluster analysis. In contrast to factor analysis, hierarchical cluster analysis is a method that groups cases of data based on the similarity of their responses to several variables instead of forming groups of variables based on people's responses to those variables (Field, 2000). Hierarchical cluster analysis was performed, because there was no a priori knowledge about the number of clusters that were likely to exist (Borgen & Barnett, 1987). There is a variety of methods that can be used to group cases. After trying the different methods, Wards method gave the most interpretable solution. Subsequently, the subscales of the OQ-45 were included in a MANOVA with the clusters as grouping variables. This was done in order to investigate if there was a difference between participants from the clusters on the domains of functioning of the OQ-45.

Results

Preliminary analysis

Descriptive statistics and distributions were examined prior to the analysis. Except for one item measuring Negative Religious Support from the scale of Religious Support ("People in my congregation make high demands on me"; Skew = 1.18), all items had relatively normal distributions. The internal consistency of all the scales was good to excellent with Cronbach's alpha ranging from .71 to .95.

Exploratory analyses

Principal component analysis. The first PCA that was performed to investigate the factor structure of the items yielded eleven components with eigenvalues greater than one. Because a closer look at the scree plot revealed the point of inflexion to be at three components, additional PCAs were performed with the fixed number of factors being two. Items showing cross-loadings or factor loadings below .40 were deleted from further analysis. The final PCA resulted in a solution of two components explaining 58.9% of the variance (Table 1).

Most items loaded on the first component and were derived from the scales Spiritual Needs, Positive Religious Support, Religious Salience, Intrinsic/Extrinsic Religiosity, Positive Feelings, Supportive Actions, Ruling and/or Punishing Actions, Positive Religious Coping, Conversion, Forgiveness and Surrender. This dimension consisted of 33 items explaining 45.2% of the variance and it reflected people's orientation towards religion as being more relationship-centered and an end unto itself. The dimension was therefore labelled as intrinsic religiosity. Reliability analysis found the internal consistency of this dimension to be $\alpha = .98$. The items that loaded on the second component came from the scales Anxiety, Anger, Ruling and/or Punishing Actions, Passivity and Negative Religious Coping. This dimension was labelled as divine struggle, because it reflected people's negative emotions and/or conflict centered on beliefs about the transcendent or the perceived relationship with the transcendent. The dimension consisted of 16 items and explained 13.7% of the variance. The internal consistency was found to be $\alpha = .91$.

Responsiveness. As shown in Table 2, Searching for meaning (ES = 0.20, SRM = 0.18), Anxiety (ES = 0.27, SRM = 0.34) and Passivity (ES = 0.36, SRM = 0.31) were most sensitive for measuring change over a period of three months. No significant differences in pre- and posttest scores were found for any of the scales that were included in the study.

Hierarchical cluster analysis. The hierarchical cluster analysis yielded seven clusters. Closer examination of the cluster profiles revealed that these could be reduced to five clusters. To be able to compare the cluster profiles with each other, average scores for the scales were calculated which are represented in Figure 1.

Profile one represents 30.5% (n = 54) of participants. These people report the highest scores on all the scales, except for the ones measuring negative aspects of R/S (Negative Religious Support, Anxiety, Anger, Passivity and Negative Religious Coping). Due to the

Table 1. *Factor analysis: varimax-rotated components of religious and spiritual items*

R/S items	Components		
	Intrinsic Religiosity	Religious Struggle	h^2
When I have to make important decisions, my faith plays a major part in it	0.90		0.82
Thankfulness	0.90		0.81
Turn to God for comfort and strength	0.89		0.82
Love	0.88		0.78
God protects me	0.88		0.78
God guides me	0.88		0.78
My faith is very important to me	0.88		0.80
Closeness	0.87		0.76
Because of my religious or spiritual beliefs, I know that God forgives me	0.87		0.75
God frees me from my guilt	0.86		0.74
I look to God for strength, support and guidance	0.85		0.74
I confess my sins and ask for God's forgiveness	0.85		0.75
What religion offers me most is comfort in times of trouble and sorrow	0.84		0.72
My whole approach to life is based upon my religion	0.84		0.71
Pray with myself or with someone	0.84		0.71
When my solutions to problems are in conflict with God's alternatives, I will submit to God's way	0.84		0.70
I work together with God as partners to get through hard times	0.83		0.70
God has patience with me	0.83		0.71
God is unconditionally open to me	0.83		0.69
I could not live without my faith	0.83		0.70
I will select God's solution to a problem even if it requires self-sacrifice from me	0.82		0.68
Affection	0.82		0.68
Security	0.81		0.66
I try to find the lesson from God in crises	0.81		0.69
My life is renewed by God	0.81		0.65
Being together with other believers	0.78		0.61
I prayed for a complete transformation in my life	0.77		0.62

Because of my religious or spiritual beliefs, I have forgiven those who hurt me	0.75		0.57
I looked to God for a total spiritual reawakening	0.75		0.61
God rules	0.73		0.59
Because of my religious or spiritual beliefs, I have forgiven myself for the things that I have done wrong	0.71		0.51
I tried to find a completely new life through religion	0.70		0.54
People in my congregation help me out	0.69		0.47
People in my congregation are willing to give me comfort when I am faced with a difficult situation	0.68		0.46
Read religious books	0.66		0.45
I go to church mainly, because I enjoy seeing people I know there	0.60		0.38
I think about my life is part of a larger spiritual force	0.58		0.40
Experiencing forgiveness	0.56		0.33
God exerts power	0.45		0.33
I wonder whether God has abandoned me		0.79	0.64
Abandonment		0.78	0.61
Dissatisfaction		0.77	0.59
I question God's love for me		0.73	0.54
I express anger at God for letting terrible things happen		0.71	0.50
Anger		0.69	0.48
Disappointment		0.69	0.48
I question whether God really exists		0.67	0.46
Fear of being rejected		0.66	0.48
Fear of being punished		0.65	0.44
Fear of being not good enough		0.62	0.47
I feel that stressful situations are God's way of punishing me for my sins or lack of spirituality		0.59	0.43
God leaves people to their own devices		0.53	0.29
God punishes		0.51	0.33
God lets everything take its course		0.51	0.27
I try to make sense of the situation and decide what to do without relying on God		0.46	0.21

Notes. Extraction method: principal component analysis. Rotation method: varimax with Kaiser normalization.

[a] Rotation converged in seven iterations.

importance of internalized, positive aspects of R/S, this profile is labelled as a Highly religious. The second profile shows people who have the lowest scores on almost all of the scales. This profile is labelled as Minimally religious, because of the absence of aspects of R/S. Overall, they represent 15.8% (n = 28) of the total group participants. The third profile represents 22.0% (n = 39) of participants and is characterized by people who have the highest levels of negative feelings (Anxiety and Anger) and negative coping (Negative Religious Coping). In addition, they report moderate levels of internalized, positive aspects of R/S (Positive Religious Support, Intrinsic/Extrinsic Religiosity, Positive Feelings, Supportive Actions, Positive Religious Coping, Conversion, Forgiveness and Surrender). Because of the

Table 2. *Responsiveness: comparison of scale scores at pre- and posttest*

	Pretest		Posttest		Cohen's d	SRM	T_{paired}
	M	SD	M	SD			
Searching for meaning	10.59	2.80	10.00	2.99	0.20	0.18	1.22
Presence of meaning	9.18	3.08	9.52	2.88	0.11	0.10	-.68
Spiritual needs	23.48	7.07	23.30	6.96	0.03	0.04	.25
Positive religious support	5.93	3.0	6.34	2.83	0.14	0.15	-.96
Negative religious support	3.93	2.15	3.70	1.86	0.11	0.10	.66
Religious salience	10.27	4.04	10.30	4.08	0.01	0.02	-.08
Intrinsic/Extrinsic religiosity	8.39	3.42	8.39	3.31	0.00	0.00	.00
Positive feelings	16.70	5.85	16.70	6.35	0.00	0.00	.00
Anxiety	7.36	3.67	6.36	3.71	0.27	0.34	2.26
Anger	8.23	3.56	7.93	3.90	0.08	0.08	.51
Supportive actions	17.70	6.39	17.43	7.06	0.04	0.09	.62
Ruling/Punishing actions	8.25	3.32	8.16	3.45	0.11	0.16	.26
Passivity	4.09	2.10	3.41	1.63	0.36	0.31	2.07
Positive religious coping	15.64	6.00	15.91	5.87	0.05	0.07	-.49
Negative religious coping	12.59	4.73	12.30	4.44	0.06	0.08	.51
Religious conversion	12.75	5.21	12.75	5.61	0.00	0.00	.00
Forgiveness	9.36	3.65	9.25	4.02	0.03	0.05	.33
Surrender to God	5.91	2.66	5.80	2.39	0.04	0.07	.48

presence of both positive and negative aspects of R/S, this profile is labelled as Struggling with divine. Just like profile one, the fourth profile includes people with relatively high scores on the scales measuring intrinsic and positive aspects of R/S and low scores on the scales measuring negative aspects of R/S. However, their scores on Presence of Meaning, Positive Religious Support, Positive Feelings, Ruling and/or Punishing Actions, Positive Religious Coping, Conversion, Forgiveness and Surrender are considerably lower compared to people from profile one. This cluster is therefore labelled as Moderately religious. Together they represent 16.9% (n = 30) of participants. The fifth profile represents 14.7% (n = 26) of participants and includes people who report the highest level of Passivity. Also, their score on Searching for Meaning is relatively high compared to their score on Presence of Meaning. Therefore, this cluster is labelled as Struggling with meaning.

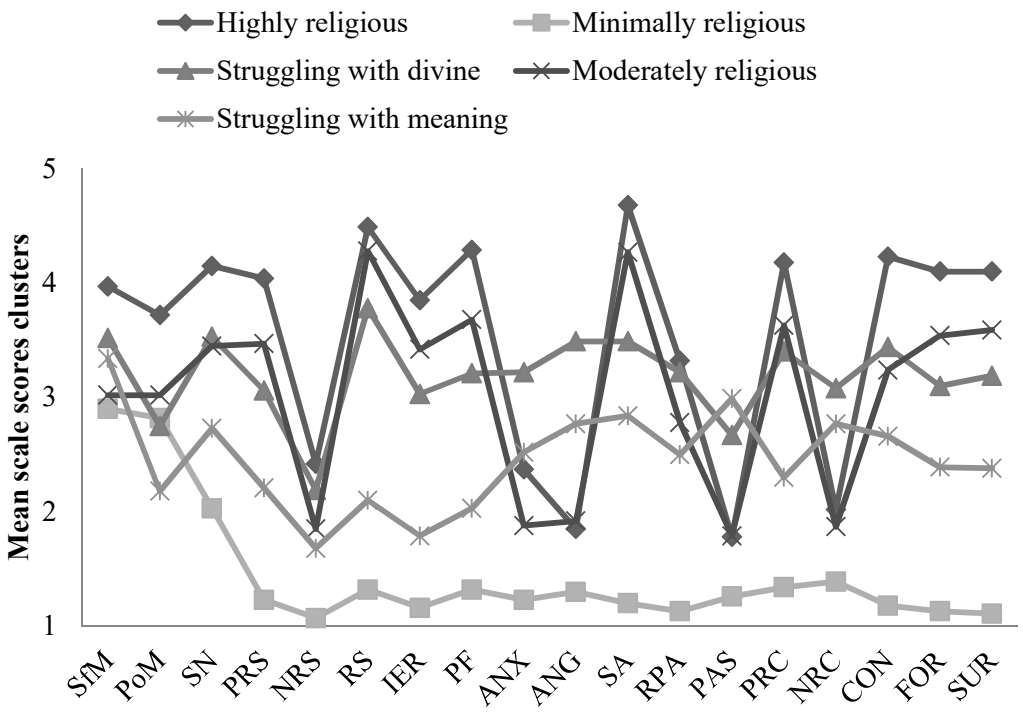

Figure 1. *Religious profiles of ReliROM*

Note. SfM = Searching for Meaning; PoM = Presence of Meaning; SN = Spiritual Needs; PRS = Positive Religious Support; NRS = Negative Religious Support; RS = Religious Salience; IER = Intrinsic/Extrinsic Religiosity; PF = Positive Feelings; ANX = Anxiety; ANG = Anger; SA = Supportive Actions; RPA = Ruling/Punishing Actions; PAS = Passivity; PRC = Positive Religious Coping; NRC = Negative Religious Coping; CON = Conversion; FOR = Forgiveness; SUR = Surrender

MANOVA. Box's *M* test showed a nonsignificant result, indicating multivariate homogeneity of variances (p = .479). Therefore, Wilks' lambda was used to examine the multivariate main effect of the different religious clusters: Λ = .791, $F(16, 517) = 2.57$, p = .001. Separate analyses for each dependent variable showed a significant result for IR, [$F(4, 217) = 4.553$, p = .002]. Results for SD [$F(4, 590) = 2.17$, p = .074], AS [$F(4, 164) = 2.24$, p = .066] and SR [$F(4, 63) = 2.09$, p = .084] were found to be nonsignificant. A simple contrast revealed significant differences on IR (p = .028 and p = .001) and SR (p = .026 and p = .027) for respectively profiles two and five when compared to profile one.

Discussion

This study served as a stepping stone for further development and validation of the ReliROM. The aim of the present study was to refine the item pool and generate a provisional version of the questionnaire by identifying the dimensions that underlie the set of items (subquestion 1), measuring the sensitivity to change of the items over a three month period (subquestions 2) and differentiating particular profiles of types of persons based on the answers participants gave on the religious and spiritual items and to see if there was a difference between these profiles on domains of functioning as measured by the OQ-45 (subquestion 3). To be able to see which of religious and spiritual items could best be used for measuring religion and spirituality in the context of ROM, 70 religious and spiritual items were filled in by 366 clinical and non-clinical patients.

Dimensions of religion and spirituality

The PCA resulted in 55 items loading uniquely on the factors *intrinsic religiosity* and *divine struggle*. These results suggest that there are two aspects to R/S measuring its multidimensional nature: 1) internalized, positively valued R/S and 2) negatively experienced R/S. Both dimensions showed alphas values above .90 suggesting some items to be redundant (Tavako & Dennick, 2011). The dimension of intrinsic religiosity corresponds with most of the content included in the first dimension found by Johnson, Sheets and Krsiteller (2008) who interpreted their dimension as an involvement in R/S. This different interpretation might be due to the fact that they included more general R/S items, such as frequency of prayer and church attendance, instead of items regarding the measurement of conversion and forgiveness. They also obtained a dimension of religious struggle. Likewise, the factor analytic studies of Johnstone, Yoon, Franklin, Schopp and Hinkebein (2009) and Stewart and Koeske (2006)

found similar dimensions labelling them as respectively negative spiritual experience and guilt. Just as in this study, these dimensions were all based upon items of the negative religious coping scale of Pargament (1999), measuring a general belief that one is being punished or abandoned by the transcendent. Although this confirms the reliability and validity of this scale for assessing religious struggle, this study additionally showed the prominent role negative feelings towards the transcendent have in this struggle. Schaap-Jonker et al. (2008) recognized two kinds of negative emotions, those directed towards the transcendent, such as anger, dissatisfaction, disappointment, and those concerning the self in relation to the transcendent, such as fear. Both these types of emotions also have been found in this study, emphasizing the importance of including these in the measurement of religious struggle. Zahl, Sharp and Gibson (2013) argue one should be aware of the distinction between "head", what the believer rational and theological knows about the transcendent or the relationship with the transcendent, and "heart" knowledge, what a believer personally experiences in the relationship with the transcendent, when measuring religious emotions. For example, a religious individual in his head knows that the transcendent will not reject him, but in his heart experiences a fear of being rejected by the transcendent for whatever reason. For adequately assessing religious emotions, it is thus necessary to account for this difference.

Sensitivity to change

Searching for Meaning, Anxiety and Passivity were the scales that showed to be the most sensitive for measuring change over a three month period. However, changes were found not to be statically significant for any of the scales. These findings cannot be compared to other studies, because the responsiveness of these scales has not been examined before. It is however possible to say something about the size of the different indices when comparing them to the responsiveness of some ROM instruments that are used in Dutch mental healthcare institutes. Compared to the findings of de Beurs (2012) and Pijck et al. (2014), the sizes of the indices found in this study were the lowest. This could be a result of conducting the second measurement after only three months of treatment, which was the shortest period of these studies.

Profiles of religion and spirituality and differences in functioning

The hierarchical cluster analysis suggested five different types of R/S for patients suffering from psychiatric disorders. Comparison of the Highly religious profile, which was the most representative profile, with the Struggling with meaning and Minimally religious

profiles showed that these individuals were more satisfied with and experienced less problems in their interpersonal relationships with spouses, family and friends. Also, they functioned better in their work and enjoyed their leisure more than individuals from these other profiles.

Two profiles were found that included individuals for whom their faith is a very important part of their daily life: Highly religious and Moderately religious. Although individuals from both profiles reported intrinsic, positively valued religiosity, the importance of these aspects was less outspoken for individuals from the Moderately religious profile compared to those from the Highly religious profile. An explanation for this difference can be found in the studies of Klemmack et al. (2007) and Park et al. (2013) that found highly religious individuals more often to be older, female, married and/or having a higher socio-economic status than moderately religious individuals. To be able to account for the difference between these two groups of individuals when assessing intrinsic religiosity, which was found to be a dimension of R/S in this study, items measuring positive religious support, positive feelings towards the transcendent, perceptions of the behaviour of the transcendent as being ruling, positive religious coping, conversion, forgiveness and surrender need to be included in the ReliROM.

Two other profiles were identified that consisted of individuals who seem to struggle with certain aspects of R/S. The first, struggling with divine, is characterized by individuals who state that their faith is of importance to them, but experience a conflict between positive and negative aspects of R/S. This conflict is centered on their beliefs about the transcendent and/or their perceived relationship with the transcendent. The second, struggling with meaning, is represented by individuals who seem to be familiar with R/S, but faith plays no particular role in their daily life, which lacks a perceived deep meaning. They are searching for this meaning, but cannot find it. Although meaning does not have to imply beliefs about the divine, this finding supports the view of R/S as orienting and motivating forces providing people with a purpose. For measuring R/S it can thus be valuable to add some items for assessing searching for meaning. The interpretation of the profiles is consistent with the findings of Exline et al. (2014) and Kristeller, Sheets, Johnson and Frank (2011). The finding that individuals who are struggling with meaning had lower levels of functioning compared to highly religious individuals is consistent with other research showing the relieving effect a sense of meaning can have on psychological burden (Steger et al., 2006).

The last profile, Minimally religious, included individuals for whom R/S is no part of their daily life. These individuals consider themselves as secular; they do not belong to a specific religion. The existence of a group of minimally religious individuals is consistent with the findings of Klemmack et al. (2007), Kristeller et al. (2011) and Park et al. (2013). However, the fact that they report to dysfunction more in interpersonal relationships and at work compared to individuals from the high R/S type is conflicting with the results of these studies. It is likely that this group consists mainly of addicted individuals, because problems in these areas are very common among people who suffer from an addiction.

Limitations and future directions

There are some limitations that need to be considered. First, data was collected using a self-report instrument, so response biases cannot be ruled out. Second, the study was carried out within a Christian mental healthcare institute. This led to a sample that consisted of mostly Protestant Christians suffering from psychiatric complaints. The results of this study therefore cannot be generalized. Conducting the questionnaire among other populations or with a more heterogeneous sample may lead to different dimensions of R/S and/or different religious profiles. This should be addressed in future studies. Third, this study only made use of quantitative research methods. The lack of a qualitative research method is a disadvantage in the design of this study as its purpose is to describe and interpret the thoughts, feelings, interactions and actions of a person in a particular context in such a way that it captures their richness and the meaning these have for an individual (Kazdin, 2014, p. 333). This could have deepened the understanding of R/S and the way in which certain aspects are related to mental health. For further development of this questionnaire, it is recommended to include some form of qualitative research. Fourth, the responsiveness of the scales, instead of the items, had to be calculated due to the low number of participants that filled in a second measurement. The responsiveness indices therefore should be interpreted as an indication on which no premature conclusions can be drawn. In future work, the responsiveness of items should be measured with duration of at least six months between measurements. Fifth, many patients filled in their questionnaire spread over a few days. This could have led to the possibility that events outside and inside the patients affected the way in which they answered the questions. Future research should aim at assessing a patients' condition at a single point of time as far as this is possible.

Conclusion

This study was the first step in developing a questionnaire for measuring R/S in the context of ROM. Through a series of analyses, more insight was gained in which items of R/S needed to be included for constructing the questionnaire. Overall, items were selected on bases of the following three general areas: 1) internalized, positively valued R/S, which consists of items measuring positive religious support, positive feelings towards the transcendent, perceptions of the behaviour of the transcendent as being ruling, positive religious coping, conversion, forgiveness and surrender; 2) negative experienced R/S in which items measuring negative representations of the transcendent and negative religious coping are included; and 3) the search for meaning in life. Further validation of the preliminary questionnaire, which can be found in the Appendix, is necessary. It would be interesting to see if this results in strong psychometric properties, so that clinicians can assess the role R/S plays in the progress of a patients' condition and researchers can learn more about the complex relationship between R/S and health.

References

Abu-Raiya, H., Pargament, K. I., & Exline, J. J. (2015). Understanding and addressing religious and spiritual struggles in health care. *Health and Social Work*, *40*, 126-134. doi: 10.1093/hsw/hlv055

Allport, G. W., & Ross, J. M. (1967). Personal religious orientation and prejudice. *Journal of Personality and Social Psychology, 5,* 432–443. doi: 10.1037/0022-3514.5.4.432

Bergin, A. E. (1983). Religiosity and mental health: A critical reevaluation and meta-analysis. *Professional Psychology: Research and Practice*, *14*, 170–184. doi: 10.1037//0735-7028.14.2.170

Beurs, E. de, Barendregt, M., Flens, G., Dijk, E. van, Huijbrechts, I., & Meerding, W. J. (2012). Vooruitgang in de behandeling meten – Een vergelijking van vragenlijsten voor zelfrapportage. *Maanblad Geestelijke Volksgezondheid*, *67*, 259-265. Retrieved from http://researchgate.net/

Beurs, E. de, Hollander-Gijsman, M. E. den, Rood, Y. R. van, Wee, N. J. van der, Giltay, E. J., Noorden, M. S. van, ... & Zitman, F. G. (2011). Routine outcome monitoring in the Netherlands: practical experiences with a web-based strategy for the assessment of treatment outcome in clinical practice. *Clinical Psychology and Psychotherapy*, *18*, 1-12. doi: 10.1002/cpp.696

Bonelli, R. M., & Koenig, H. G. (2013). Mental disorders, religion and spirituality 1990 to 2010: a systematic evidence-based review. *Journal of Religion and Health*, *52*, 657-673. doi: 10.1007/s10943-013-9691-4

Borgen, F. H., & Barnett, D. C. (1987). Applying cluster analysis in counseling psychology research. *Journal of Counseling Psychology*, *34*, 456-468. doi: 10.1037//0022-0167.34.4.456

Braam, A. W., Schaap-Jonker, H., Mooi, B., Ritter, D., Beekman, A. T. de, & Deeg, D. J. (2008). God image, religious coping, and mood in old age. *Mental Health, Religion and Culture*, 11, 547-559. doi: 10.1080/13674670701245274

Büssing, A., Balzat, H. J., & Heusser, P. (2010). Spiritual needs of patients with chronic pain diseases and cancer – Validation of the Spiritual Needs Questionnaire. *European Journal of Medical Research, 15*, 266-273. doi: 10.1186/2047-783X-15-6-266

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98,* 310-357. doi: 10.1037/0033-2909.98.2.310

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Lawrence Earlbaum Associates. doi: 10.1016/B978-0-12-179060-8.50012-8

Corvelyn, J. & Luyten, P. (2005). Psychodynamic psychology and religion. In R. F. Paloutzian & C. L. Park (Eds.), *Handbook of the psychology of religion and spirituality* (pp. 80-100). New York, NY: Guilford Press.

Dew, R. E., Daniel, S. S., Armstrong, T. D., Goldston, D. B., Triplett, M. F., & Koenig, H. G. (2008). Religion/spirituality and adolescent psychiatric symptoms: A review. *Child Psychiatry and Human Development*, *39*, 381-398. doi: 10.1007/s10578-007-0093-2

Eisinga, R., Felling, A., Peters, J., Scheepers, P., & Schreuder, O. (1992). *Religion in Dutch Society 90: Documentation of a national survey on religious and secular attitudes in 1990*. Retrieved from http://researchgate.net/

Emmons, R. A. (1999). *The psychology of ultimate concerns: Motivation and spirituality in personality.* New York: Guilford Press.

Emmons, R. A., & Paloutzian, R. F. (2003) The psychology of religion. *Annual Review of Psychology, 54,* 377-402. doi: 10.1146/annurev.psych.54.101601.145024

Engel, G. L. (1977). The need for a new medical model: a challenge for biomedicine. *Science*, *196*, 129-136. doi: 10.1126/science.847460

Eurelings-Bontekoe, E. H. M., Hekman-van Steeg, J., & Verschuur, M. J. (2005). The association between personality, attachment, psychological distress, church denomination and the God concept among a non-clinical sample. *Mental Health, Religion and Culture, 8*, 141-154. doi: 10.1080/13674670412331304320

Exline, J. J., Pargament, K. I., Grubbs, J. B., & Yali, A. M. (2014). The Religious and Spiritual Struggles Scale: Development and initial validation. *Psychology of Religion and Spirituality*, *6*, 208-222. doi: 10.1037/a0036465

Fetzer Institute and National Institute on Aging Working Group. (1999). *Multidimensional measurement of religiousness/spirituality for use in health research*. Kalamazoo, MI: Fetzer Institute.

Freud, S. (1927). *The future of an illusion*. Transl. J. Strachey, 1961. New York: Norton

George, L. K., Ellison, C. G., & Larson, D. B. (2002). Explaining the relationships between religious involvement and health. *Psychological Inquiry*, *13*, 190-200. doi: 10.1207/S15327965PLI1303_04

Gorsuch, R. L., & McPherson, S. E. (1989). Intrinsic/Extrinsic Measurement: I/E-revised and

single-item scales. *Journal for the Scientific Study of Religion*, *28*, 348-354. doi: 10.2307/1386745

Granqvist, P. (2014). Mental health and religion from an attachment viewpoint: Overview with implications for future research. *Mental Health, Religion and Culture, 14,* 777-793. doi: 10.1080/13674676.2014.908513

Hall, G. S. (1904). *Adolescence: Its psychology and its relations to physiology, anthropology, sociology, sex, crime, religion, and educations* (Vol. 2). New York, NY: Appleton.

Hill, P. C., & Pargament, K. I. (2008). Advances in the conceptualization and measurement of religion and spirituality: Implications for physical and mental health research. *Psychology of Religion and Spirituality*, *58*, 3-17. doi: 10.1037/0003-066X.58.1.64

Hill, P. C., Pargament, K. I., Hood, R. W., McCullough, M. E., Swyers, J. P., Larson, D. B., & Zinnbauer, B. J. (2000). Conceptualizing religion and spirituality: Points of commonality, points of departure. *Journal for the Theory of Social Behaviour*, *30*, 51-77. doi: 10.1111/1468-5914.00119

Hunter, J. D. (1983). *American evangelicalism: Conservative religion and the quandary of modernity*. New Brunswick, NJ: Rutgers University Press.

James, W. (2002). *The varieties of religious experience*. London, England: Routledge. (Original work published in 1902)

Johnson, T. J., Sheets, V. L., & Kristeller, J. L. (2008). Empirical identification of dimensions of religiousness and spirituality. *Mental Health, Religion and Culture*, *11*, 745-767. doi: 10.1080/13674670701561209

Johnstone, B., Yoon, D. P., Franklin, K. L., Schopp, L., & Hinkebein, J. (2009). Re-conceptualizing the factor structure of the Brief Multidimensional Measure of Religiousness/Spirituality. *Journal of Religion and Health*, *48*, 146-163. doi: 10.1007/s10943-008-9179-9

Jong, K. de, Nugter, M. A., Polak, M. G., Wagenborg, J. E., Spinhoven, P., & Heiser, W. J. (2007). The Outcome Questionnaire (OQ-45) in a Dutch population: A cross-cultural validation. *Clinical Psychology and Psychotherapy*, *14*, 288-301. doi: 10.1002/cpp.529

Jung, C. G. (1969). Psychology and religion: West and east. In *Collected works* (2nd ed., Vol. 11, pp. 3–105). New Jersey, NJ: Princeton University Press. (Original work published in 1938)

Kazdin, A. E. (2014). *Research design in clinical psychology* (4th edition). Harlow, England: Pearson Education Limited.

Klemmack, D. L., Roff, L. L., Parker, M. W., Koenig, H. G., Sawyer, P., & Allman, R. M. (2007). A cluster analysis typology of religiousness/spirituality among older adults. *Research on Aging*, *29*, 163-183. doi: 10.1177/0164027506296757

Koenig, H.G. (2009). Research on religion, spirituality, and mental health: A review. *Canadian Journal of Psychiatry*, *54*, 283-291. doi: 10.1177/070674370905400502

Koenig, H. G., King, D. E., & Carson, V. B. (2012). *Handbook of Religion and Health*. New York, NY: Oxford University Press.

Kristeller, J. L., Sheets, V., Johnson, T., & Frank, B. (2011). Understanding religious and spiritual influences on adjustment to cancer: Individual patterns and differences. *Journal of Behavioral Medicine*, *34*, 550-561. doi: 10.1007/s10865-011-9335-7

Koenig, H. G., & Larson, D. B. (2001). Religion and mental health: Evidence for an association. *International Review of Psychiatry*, *13*, 67-78. doi: 10.1080/09540260120037290

Larson, D. B., Pattison, E. M., Blazer, D. G., Omran, A. R., & Kaplan, B. H. (1986). Systematic analysis of research on religious variables in four major psychiatric journals, 1978–1982. *American Journal of Psychiatry, 143,* 329–334. doi: 10.1176/ajp.143.3.329

Levin, J. S. (1996b). How religion influences morbidity and health: Reflections on natural history, salutogenesis and host resistance. *Social Science and Medicine*, *43*, 849–864. doi: 10.1016/0277-9536(96)00150-5

Moreira-Almeida, A., Lotufo Neto, F., & Koenig, H. G. (2006). Religiousness and mental health: A review. *Revista Brasileira de Psiquiatria*, *28*, 242-250. doi: 10.1590/1516-44462006005000006

Norman, G. R., Wyrwich, K. W., & Patrick, D. L. (2007). The mathematical relationship among different forms of responsiveness coefficients. *Quality of Life Research*, *16*, 815-822. doi: 10.1007/slll36-007-9180-x

Paloutzian, R. F. & Park, C. L. (2005). Integrative themes in the current science of the psychology of religion. In R. F. Paloutzian & C. L. Park (Eds.), *Handbook of the psychology of religion and spirituality* (pp. 3-20). New York, NY: Guilford Press.

Pargament, K. I. (1997). *The psychology of religion and coping.* New York: Guilford Press.

Pargament, K. I. (1999). Religious/Spiritual Coping. In Fetzer Institute and National Institute on Aging Working Group (Eds.), *Multidimensional measurement of religiousness/spirituality for use un health research* (pp. 43-55). Kalamazoo, MI: Fetzer Institute.

Pargament K. I., Koenig H. G., & Perez L. M. (2000). The many methods of religious coping: Development and initial validation of the RCOPE. *Journal of Clinical Psychology, 56*, 519-543. doi: 10.1002/(SICI)1097-4679(200004)56:4<519::AID-JCLP6>3.0.CO;2-1

Park, N. S., Lee, B. S., Sun, F., Klemmack, D. L., Roff, L. L., & Koenig, H. G. (2013). Typologies of religiousness/spirituality: Implications for health and well-being. *Journal of Religion and Health*, *52*, 828-839. doi: 10.1007/s10943-011-9520-6

Pijck, L., Deen, M., Berg, J. van den, Huijbrechts, I., & Korrelboom, K. (2014). De veranderingsgevoeligheid van OQ-45 en KKL bij ROM. *Maandblad Geestelijke Volksgezondheid*, *69*, 31-36. Retrieved from http://researchgate.net/

Power, L., & McKinney, C. (2014). The effects of religiosity on psychopathology in emerging adults: intrinsic versus extrinsic religiosity. *Journal of Religion and Health*, *53*, 1529-1538. doi: 10.1007/s10943-013-9744-8

Schaap-Jonker, H., Egberink, I. J. L., Braam, A. W., & Corveleyn, J. M. T. (2016). An item response theory analysis of the questionnaire of God representations. *The International Journal for the Psychology of Religion*, *26*, 152-166. doi: 10.1080/10508619.2014.1003520

Schaap-Jonker, H., Eurelings-Bontekoe, E. H. M., Zock, H., & Jonker, E. (2008). Development and validation of the Dutch Questionnaire God Image: Effects of mental health and religious culture. *Mental Health, Religion and Culture, 11*, 501-515. doi: 10.1080/13674670701581967

Stark, R., & Glock, C. Y. (1968). *American piety: The nature of religious commitment*. Berkely, CA: University of California Press.

Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The Meaning in Life Questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology, 53*, 80-93. doi: 10.1037/0022-0167.53.1.80

Stewart, C., & Koeske, G. F. (2006). A preliminary construct validation of the

multidimensional measurement of religiousness/spirituality instrument: A study of southern USA samples. *The International Journal for the Psychology of Religion*, *16*, 181-196. doi: 10.1207/s15327582ijpr1603_3

Thoits, P. A. (1982). Conceptual, methodological, and theoretical problems in studying social support as a buffer against life stress. *Journal of Health and Social Behavior, 23,* 145-159. doi: 10.2307/2136511

Weber, S. R., & Pargament, K. I. (2014). The role of religion and spirituality in mental health. *Current opinion in psychiatry*, *27*, 358-363. doi: 10.1097/YCO.0000000000000080

Wong-McDonald, A., & Gorsuch, R. L. (2000). Surrender to God: An additional coping style? *Journal of Psychology and Theology*, *28*, 149-161. Retrieved from http://www.researchgate.net/

Zahl, B. P., Sharp, C. A., & Gibson, N. J. S. (2013). Empirical measures of the religious heart. In F. N. Watts & G. Dumbreck (Eds.), *Head and Heart: Perspectives from Religion and Psychology*. Retrieved from http://www.researchgate.net/

Appendix

Scale 1. Intrinsic, positively valued R/S (10 items, α = 0.95)

- People in my congregation help me out
- My faith is very important to me
- My whole approach to life is based upon my religion
- Thankfulness
- God rules
- I look to God for strength, support and guidance
- I confess my sins and ask for God's forgiveness
- My life is renewed by God
- Because of my religious or spiritual beliefs, I know that God forgives me
- I will select God's solution to a problem even if it requires self-sacrifice from me

Scale 2. Negatively experienced R/S (7 items α = 0.84)

- Dissatisfaction
- Disappointment
- Fear of being rejected
- Fear of being punished
- God leaves people to their own devices
- I wonder whether God has abandoned me
- I express anger at God for letting terrible things happen

Scale 3. Searching for meaning (3 items, α = 0.71)

- I am always looking to find my life's purpose
- I am always searching for something that makes my life feel significant.
- I am searching for meaning in my life.