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MATURE RELIGIOSITY SCALE

Validity of a New Questionnaire

In order to validate a new questionnaire, the Mature Religiosity Scale (MRS), it was presented to a sample of 336 persons, of which 171 were parishioners and 165 outpatients of Christian mental health clinics. A first version of this questionnaire was designed by studying both psychiatric/psychological and theological literature. Validity and reliability were studied by including other questionnaires, among them the Spiritual Well-Being Scale (SWBS), the Duke Religion Index, the Religious/Spiritual Coping (RCOPE) and the State-Trait Anxiety Inventory (STAI). The results indicate that 16 items of the 19-item questionnaire make up one factor with good internal consistency, which is measured by Cronbach's alpha. This factor was used as the Mature Religiosity Scale in this study. Out of correlations with other validated scales and correlations with characteristics of known groups this scale proved to have good validity. The Mature Religiosity Scale is suitable for use in both mental healthcare and pastoral care. It is designed and validated for these two groups, giving direction to professional communication about faith and meaning of life.

Keywords: Mature Religiosity Scale, mature religiosity, spiritual well-being, construction of a questionnaire, validity, reliability, healthcare, pastoral care

Der Mature Religiosity Scale: Die Validität eines neuen Fragebogens: Zur Validierung des *Mature Religiosity Scale* (MRS) wurde das Messinstrument an einer Stichprobe von 336 Personen erprobt (171 Gläubige und 165 ambulante Patienten in christlichen Kliniken für Mentalhygiene). Die erste Fassung des Fragebogens wurde nach Durchsicht der psychiatrischen/psychologischen und theologischen Fachliteratur erstellt. Die Überprüfung der Validität und der Reliabilität erfolgte mittels weiterer Fragebögen wie dem *Spiritual Well-Being Scale* (SWBS), dem *Duke Religion Index* (DUREL), dem *Religious/Spiritual Coping* (RCOPE) und dem *State-*

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Trait Anxiety Inventory (STAI). Die Ergebnisse zeigen, dass 16 der 19 Items des Fragebogens – gemessen mit Cronbachs Alpha – einen Faktor mit einer guten internen Konsistenz ergeben. In der Untersuchung wurde dieser Faktor als *Mature Religiosity Scale* verwendet. Durch Korrelierung mit anderen, validierten Skalen sowie mit den Merkmalen der bekannten Gruppen konnte eine hohe Validität der Fragebogens gezeigt werden. Der *Mature Religiosity Scale* ist für den Einsatz sowohl in der mentalhygienischen Versorgung als auch in der Seelsorge geeignet. Er wurde für diese beiden Bereiche erstellt und validiert und stellt einen Wegweiser für professionelle Gespräche über den Glauben und den Sinn des Lebens dar.

Schlüsselbegriffe: Mature Religiosity Scale (MRS), reife Religiosität, spirituelles Wohlbefinden, Erstellung von Fragebögen, Validität, Reliabilität, Gesundheitswesen, Seelsorge

1. Introduction

In 1976, the World Health Organisation defined health as 'a state of physical, mental and social well-being, and not merely the absence of disease or infirmity'. However, the three distinct dimensions, the biological, the psychological and the social dimension do not sufficiently define the whole of 'well-being'. Therefore, ENGEL's famous biopsychosocial model (1977, 1980), which is generally used in healthcare, has to be broadened by the addition of a spiritual dimension, indicating integral 'well-being'. This fourth, spiritual dimension is an orientation regarding adherence to self-transcendent values of consistent quality, which provides meaning to life, namely a philosophy of life or, more specifically, religion (ALLPORT 1964; ELLISON 1983; RÜMKE 1947). We propose to speak henceforward of a biopsychosocial-spiritual model (also COAN 1977; CORR 1992; SULMASY 2002).

Also in mental healthcare, more attention is given to this spiritual dimension. During the last decade, there seems to be a more positive attitude towards spirituality and religion. It is important to speak openly about religion in clinical practice in order to discover together with the patients which aspects have a positive influence on their mental health and which might not. There are several ideas about the connection between (mental) health and religion. Depending on the definitions of mental health and religion, different kinds of relationships might be found. For instance, there is the possibility of discerning components of religion. KRISTENSEN, PEDERSEN and WILLIAMS (2001) analysed affective, conative and cognitive components of religious belief. Each component has a characteristic relationship with (mental) health. MINER (2008) concluded that, if mature religiosity is psychologically adaptive, it should not be associated with disorder but with health.

Since 1994, it has not been just a preference to involve religion as a subject in mental healthcare. In that year, the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) introduced the non-pathological category 'religious or spiritual problem' (LUKOFF et al. 1992; SCOTT et al. 2003).

Nevertheless, by the end of the last century the first author, while teaching trainee psychiatrists in their last year of internship, noticed that they had hardly

ever heard in their curriculum about the possible positive influence of religion on mental health. In the lessons they became aware that religion can be a source of strength for people, which helps them deal with their situation and their problems, whereas before they were more aware of the possible neurotic aspects of religious practices (FREUD 1927; ELLIS 1980). Because they had hardly ever had a role model, they usually left religion out of their conversations with patients, not knowing how to handle the subject. After the course, they were interested in assessing this positive side of religiosity in order to strengthen their patients' mental health. As such an assessment did not seem to exist, a study was undertaken from the perspective of psychiatry/psychology concerning the concept of 'healthy religiosity'. Theological literature about the concept of 'salutary faith' was also studied, as it seems that there is a need in pastoral care as well for a questionnaire that can help assess mature religious faith and personal growth in faith. It was an advantage for this study that the first author is both a psychiatrist and a theologian.

For defining 'healthy religiosity', we studied three main streams of literature: psychoanalytic studies (for instance Freud, Jung, Erikson and Fromm), studies by psychologists of religion (for instance James, Allport and Pargament), and studies from the humanistic and existential psychology schools (for instance Maslow, Yalom and Frankl).

For defining 'salutary faith', a combination of the Christian core concepts of faith, hope, love and the time dimensions as described by HEIDEGGER (1996) was chosen. Heidegger placed the phenomenon of time at the centre of human existence, with the dimensions of past, future and present. The Apostle Paul's triad of 'faith, hope and love' is an early Christian summary of the faith that also encompasses the whole of human existence. This corresponds with contemporary pastoral theology in which a hermeneutic relationship is supposed between biblical words and stories and daily existential experiences. In pastoral care, people's daily experiences are explored and connected to biblical words and stories.

The first version of the questionnaire, which should grasp the concept of 'mature religion' (a combination of healthy religiosity and salutary faith) consisted of 50 possible criteria of 'mature religion' derived from the literature of both psychiatry/psychology and of theology. This version was, according to the Delphi-method (CRISP et al. 1997; JONES & HUNTER 1995), presented to a panel of 49 experts, 25 of whom were psychologists and psychiatrists and 24 pastors/theologians. By incorporating their opinions and ideas, a new version of the questionnaire was developed. Consensus (main criterion was a percentage of agreement of at least 66.67%) was attained regarding 23 criteria in a second round. Using factor analysis, 21 of these 23 criteria could be clustered, in three factors with the labels 'Orientation to higher values out of a sense of inner freedom', 'Trust in God pervades the entire life', and 'Responsibility for fellow humans and creation'. In these three factors, all individuals' three possible relationships are present, namely with themselves, with God and with their fellow humans, as can be seen in the Biblical Gold-

en Rule. In this command, in which Jesus summarises all other commands, loving God with one's whole existence is essential, as is loving one's neighbour as oneself.

The 21 items can be used as criteria for giving direction to the assessment of a person's faith and can be developed into a diagnostic instrument for use by (mental) healthcare professionals and pastors. This is the purpose of the present study. The questionnaire was presented to patients in mental healthcare institutions and to parishioners, in order to test its validity in daily practice and also to investigate whether the same factor structure would be discernable. For comparison and validation, other validated questionnaires were included concerning both religious maturity and religious coping. This resulted in the following research questions:

1. Can the factor structure be replicated?
2. How valid is the questionnaire:

– What are the correlations with other validated questionnaires about mature religion (convergent validity)?
– What are the correlations with measures of well-being (convergent validity)?
– What are the correlations with Bible reading, church attendance and praying (known group validity)?
– Are the outcomes different in the subgroups: parishioners and Christian outpatients with mental health problems (known group validity)?

2. Method

2.1. Participants and procedures

Two groups participated in this study, one consisting of Christian outpatients and one consisting of parishioners. All participants were Protestant Christians, though belonging to different denominations. In total 367 inventories were handed out to outpatients, who were invited to participate in this study by the receptionists of three Christian mental health organisations. Of the outpatients, 165 filled in and returned the inventories to the receptionists, personally or by mail. This is a response rate of 45%. A subgroup of these outpatients consisted of 61 persons who attended an organisation that treats only less severe and less complex psychological problems. The response rate of this subgroup turned out to be slightly higher than that of the other subgroup, consisting of 104 persons treated for more severe psychological problems, namely a response rate of 48% versus 43%. Hence, we have two subgroups of outpatients: those with severe and those with less severe problems.

At the same time, 297 inventories were given to members of 9 different Protestant congregations. 17 inventories were sent by email, the others were handed out. This was done by the pastors, mainly during meetings of their congregations and Bible study groups. Of the parishioners, 171 filled in the list and returned it to their pastors. This is a response rate of 58%.

The differences in these response rates were as expected, as outpatients have more severe and complex problems than parishioners in general, which will lead to less energy and less concentration being needed for filling in a questionnaire. The more severe and complex the problems, the lower the response rate was.

In total, this study was based on 336 respondents: 49% outpatients and 51% parishioners. 55% of these respondents were treated for psychological problems (49% outpatients and 6% parishioners). The main reasons for treatment (several answers were possible) were depression (45%), relational problems (29%), anxiety (25%) and personality disorders (13%). The stage of the treatment of those treated was: 11.7% assessment, 25.7% start of treatment, 43.6% treatment going on and 19% near the end of treatment. 28% of them were male, 72% female, while 62.3% were married, 27.4% single, 7.3% divorced, 0.9% living together, and 2.1% widowed. The level of education was: 9.5% university, 28.6% higher professional education, 8% high school, 25.3% intermediate professional education; 25.6% lower professional education; 3% primary school. Lastly, this was a very religious population: 83% attended church every Sunday; 91% prayed every day; 70% read the Bible every day.

2.2. Measures

2.2.1. Mature Religiosity Scale (MRS)

In order to provide criteria for the assessment of a person's faith in both (mental) healthcare and pastoral care, this inventory was designed (VRIES-SCHOT et al. 2008). This inventory was based on a review of scientific literature, both from a psychiatric/psychological perspective and a theological perspective. As mentioned above, 21 criteria could be clustered in three factors: 'Orientation to higher values out of a sense of inner freedom', 'Trust in God pervades the entire life', 'Responsibility for fellow humans and creation'.

In the present research, the list of 21 criteria was reviewed and each criterion was evaluated for being unequivocal and simple. This procedure resulted in a list of 19 (sometimes partially revised) items.

2.2.2. Spiritual Well-Being Scale (SWBS)

The Spiritual Well-Being Scale (BUFFORD et al. 1991) is a specific indicator of a person's well-being, aimed at religious and existential well-being. It provides an overall measure of the perception of the spiritual quality of life, as well as subscale scores for Religious and Existential Well-Being. The Religious Well-Being subscale provides a self-assessment of one's relationship with God ('I believe that God loves me and cares about me'), while the Existential Well-Being Subscale gives a self-assessment of one's sense of purpose of life and life satisfaction ('For me life

is a positive experience'). It is composed of twenty items, ten assessing religious well-being, and ten assessing existential well-being.

2.2.3. Duke Religion Index

ALLPORT (1950; ALLPORT & ROSS 1967) made a distinction between intrinsic and extrinsic religiosity. Intrinsic religiosity means that people *live* their religion, while extrinsic religiosity means that people *use* their religion. For intrinsically religious believers, their faith on its own is a value and a purpose, even the highest, whereas for extrinsically religious people, their faith is a means to attain other goals like social support, comfort and security. A simple way to measure intrinsic religiosity is by using the three items about intrinsic religiosity in the Duke Religion Index (KOENIG et al. 1997). These items (for instance 'I experience the presence of God in my life') correlate highly with the original scale that consists of 10 items (HOGE 1972).

2.2.4. Brief RCOPE

The Brief RCOPE assesses, in 14 items, several methods of coping. This list addresses the extent to which patients engage in 7 types of positive religious coping ('In times of trouble I seek God's love and care') and 7 types of negative religious coping ('In times of trouble I wonder whether God has abandoned me') (PARGAMENT et al. 2000; PARGAMENT et al. 1998). Positive religious coping is linked with religious growth (PARGAMENT et al. 2000).

2.2.5. Receptive Coping Scale

ALMA, PIEPER and van UDEN (2003) have developed a new coping scale in which religious coping is considered to be more impersonal and implicit. The main characteristic of this problem solving style is an attitude of trust, in which individuals open themselves to solutions and are receptive. No explicit reference is made to an agent of these solutions, for instance God. However, this scale still has a relation to believing in a transcendent reality (UDEN et al. 2004). This scale consists of eight items, for instance: 'When I have troubles, I trust that a solution will be presented to me.'

2.2.6. STAI

As a general measure for health and well-being we used the Trait-Anxiety Scale of SPIELBERGER, GORSUCH and LUSHENE's (1970) State-Trait Anxiety Inventory (STAI). Trait-anxiety measures are expected to reflect relatively stable individual differences in anxiety proneness. This scale is the most widely used self-report measure of anxiety and consists of 20 items, like 'I feel nervous and agitated'.

3. Results

3.1. Standard instruments

The STAI (anxiety scale) has a range of 20 (low anxiety) to 80 (high anxiety). The scores, as expected, were higher the more severe the psychological problems: parishioners: 35.5; outpatients, less severe: 46.6; outpatients, severe: 49.6. The scale's Cronbach's alpha is 0.95.

The Spiritual Well-Being Scale consists of two parts: religious and existential well-being. The scores on the items range from 1 (totally agree) to 5 (totally disagree). The average scores on the religious part were: parishioners: 1.58; outpatients, less severe: 1.94; outpatients, severe: 2.02. This means that all groups had a positive relationship with God, but this relationship was even better the less psychological problems one had. The subscale's Cronbach's alpha was 0.91. The average scores on the existential part were: parishioners: 1.80; outpatients, less severe: 2.31; outpatients, severe: 2.58. This means that the existential well-being was less positive than the religious well-being, but still more positive than negative. Here also the well-being drops the more psychological problems one has. The subscale's Cronbach's alpha was 0.91.

The scores on the three items of the Duke Religion Index (intrinsic religiosity) were divided as follows: parishioners: 1.65; outpatients, less severe: 1.84; outpatients, severe: 1.94. The scores on the items range from 1 (totally agree) to 5 (totally disagree). This Christian population is highly intrinsically religious. Here again the scores were higher (more intrinsically religious) the less psychological problems one had. The scale's Cronbach's alpha is 0.81.

Factor analysis confirmed the two-factor structure of the RCOPE (positive and negative religious coping). However, one item measuring negative religious coping ('when I am in trouble I conclude: this is the work of the devil') did not end up in the negative factor. Hence, we constructed two scales: positive religious coping (7 items) and negative religious coping (6 items). The scores range from 1 (almost never) to 4 (almost always). The scales' Cronbach's alphas are 0.88 and 0.76, respectively. The average scores of the three groups for positive religious coping are: parishioners: 3.07; outpatients, less severe: 2.69; outpatients, severe: 2.73. The average scores of the three groups for negative religious coping are: parishioners:

1.34; outpatients, less severe: 1.46; outpatients, severe: 1.61. Positive religious coping prevails over negative religious coping. Negative religious coping is highest among the most severe outpatients.

The scores on the receptivity scale (Receptive Coping) range from 1 (never) to 5 (always). This scale's Cronbach's alpha is 0.87. The average scores on this scale are: parishioners: 3.61; outpatients, less severe: 3.39; outpatients, severe: 3.31. A receptive way of coping with problems is higher the less mentally ill the respondents are.

3.2. Factor structure of the Mature Religiosity Scale

In order to explore the multidimensionality of the Mature Religiosity Scale (MRS), we used exploratory factor analysis (EFA). EFA is used to investigate the underlying latent factors (or determinants) of the observed scores on the items of the MRS. Using EFA, we will be able to replace the heterogeneity of the items with homogeneity of some latent factors: these factors are (mainly) responsible for the scores on the items. In other words, we are looking for underlying patterns of associated items. We used EFA instead of Confirmatory Factor Analysis, because this was the first factor analytic study using the 19-item scale. This exploratory factor analysis using SPSS 16.0 (principal axis factoring, oblique rotation, eigenvalue > 1; factor loading > 0.40; missing listwise) revealed a factor structure of 4 factors. However, some items had high double loadings, one factor consisted of only 2 items, and the interpretation of the factors was difficult. Looking at the scree plot, a solution of two factors was justified. This two-factor solution (principal axis factoring, KMO = 0.941; Bartlett's test, significance: 0.000; oblique rotation, fixed factors = 2; factor loading > 0.40; missing listwise) revealed a perfect solution of one factor with 16 items and one factor with 3 items (explained variance 38.5% and 4.2%, respectively). The two factors' Cronbach's alphas were 0.92 and 0.38. Therefore, the conclusion is that the subdivision of mature religion into three factors by the experts (100% university graduates) was not replicated. For this non-expert population (10% university graduates) in practice, consisting of patients and parishioners, mature religion was not further differentiated. What we found was a stable factor (factor 1) that was highly applicable to the respondents. An analysis with a one-factor solution also revealed this factor of 16 items. The mean score of this factor on a scale from 1 (totally agree) to 5 (totally disagree) was 1.88 (SD, Standard Deviation: 0.50). Three items do not belong to this stable factor (factor 2: MRS item 14 'My personal freedom is limited by responsibility for God's creation'; MRS 15 'My behaviour is directed at both my own freedom and responsibility for others'; MRS 4 'I am looking for answers to existential questions about for example death, freedom, isolation, meaninglessness'). Typically, these were the items that were least applicable (mean score: 2.57). Because of its strong psychometric qualities, in the further analyses we use the first factor as an index for mature

religion: the Mature Religiosity Scale. The items of this scale are presented in a sequence of highest to lowest factor loading (see *Table 1*).

Table 1
Mature Religiosity Scale (MRS)

Code	Loading	Item
MRS 8	0.809	I have the idea that I entrust myself more and more to God
MRS 19	0.802	My religion supports my sense of self-esteem and identity
MRS 17	0.787	Knowing God's love is fundamental for my life
MRS 11	0.766	The meaning and significance of my life is in my relationship with God
MRS 13	0.757	The experience of God in my life motivates me to decide for the good, even if this is difficult
MRS 16	0.715	I believe sincerely, not mainly out of obligation or fear
MRS 1	0.701	In times of trial and tribulation I trust in God
MRS 6	0.676	I am willing to be accountable to God and my fellow humans about my way of life
MRS 12	0.647	My faith is oriented to values that transcend physical and social needs
MRS 9	0.645	Out of my sense that God loves human beings, I pursue to love my fellow man
MRS 7	0.621	My faith influences all areas of my life
MRS 3	0.599	The development of my personality and my faith influence each other mutually
MRS 5	0.561	As a person I am only fully complete in a relationship with God
MRS 18	0.547	For me, praying for and doing justice belong together inextricably
MRS 2	0.513	I pursue higher values such as love, truth and justice
MRS 10	0.447	My sense of self-esteem is connected to who I am and not so much to what I have

In the different groups (total, parishioners, outpatients less severe, outpatients severe) a similar factor structure was found. This is evidence of a stable structure of the MRS. The (acute/state/transient) mental health problems of the outpatients did not change the factor structure, which is often the case in psychiatric research.

The scale as a whole did not correlate with educational level or gender. It did correlate negatively with age, though. This means that the older one is, the more mature in religious faith one is.

4. Validity

4.1. Correlations with other validated questionnaires

First we looked at the correlations with the standard scales that measure healthy Christian religiosity and religious coping. The correlations (Pearson's r) are shown in *Table 2*.

Table 2
Mature Religiosity Scale correlated with measures for religiosity
and religious coping

Religious scales	Pearson's r
Duke	0.84*
RWBS	0.83*
RCOPE positive	0.72*
RCOPE negative	−0.40*
Receptive coping	0.64*

* sig. (here and further 2-tailed): 0.000
(n = 305–315)

Very high correlations were found with two other measures of healthy (Christian) religiosity: Duke and RWBS, 0.84 and 0.83 respectively. Also, a high correlation (0.72) was noted with a healthy religious way of dealing with problems: RCOPE positive. Other studies (KOENIG et al. 1998; TARAKESHWAR & PARGAMENT 2001; MYTKO & KNIGHT 1999; PARGAMENT et al. 1998; BUSH et al. 1999; LEWIS et al. 2005) show that positive religious coping is connected with psychological well-being. Therefore, it is considered to be a healthy religious way of dealing with problems. The opposite is the case for negative religious coping. The correlation between mature religion and negative religious coping was moderately negative (−0.40). This means that the higher one scores on the Mature Religiosity Scale, the less use is made of negative religious coping.

Finally, there was a reasonably high correlation between the Mature Religiosity Scale and receptive coping (0.64). Receptive coping is also considered to be a healthy way of dealing with problems (ALMA et al. 2003; UDEN et al. 2004). This scale is less related to a specific Christian way of religious coping. Hence, the correlations with the other scales support the supposition that the Mature Religiosity Scale is a valid measure of healthy Christian religiosity.

4.2. Correlations with measures of well-being

We also used two standard scales for measuring well-being: the STAI and the EWBS. We assume that a healthy way of being religious adds to a person's well-

being. In this study, the correlations were r = –0.48 and 0.61 respectively (sig. = 0.000). The correlation with existential well-being was slightly higher than the correlation with anxiety. Therefore, these correlations also appear to support the Mature Religiosity Scale as a valid measure of healthy Christian religiosity.

4.3. Known group validity

We first looked for correlations with individual/private rituals (such as Bible reading and praying) and with collective religious rituals (such as church attendance). This was based on the assumption that part of healthy religiosity is to put religious faith into practice. Therefore, groups that frequently practice rituals should score higher on the Mature Religiosity Scale than groups that practice rituals less regularly.

Church attendance correlated (r = 0.31) with the Mature Religiosity Scale. The more often one attends church, the higher the scores were on mature religion. The score however did not increase any further with the transition of 'going once every Sunday' to 'going twice every Sunday'.

Praying correlated (r = 0.44) with the Mature Religiosity Scale. The more often one prays, the higher the scores on mature religion were. However, it turned out that the increase in frequency of praying from 'a couple of times a week' through 'every day' to 'more than once a day' was not significant.

Bible reading correlated (r = 0.40) with the Mature Religiosity Scale. The more often one reads the Bible, the higher the scores on mature religion were. The score on mature religion did not increase any further with the transition of Bible reading 'every day' to 'more than once a day'.

These findings regarding the differences in scores between being religiously active (i.e. Bible reading, praying and church attendance) occasionally and being religiously active on a regular basis support the validity of the Mature Religiosity Scale.

Secondly, we compared groups in treatment with groups not in treatment. 55% of the respondents are currently in treatment (100% of the outpatients and 11% of the parishioners). The mean score of the respondents in treatment on the Mature Religiosity Scale was 2.02. The mean of those not in treatment was 1.72 (average was 1.88). This difference is significant (F = 24.48; df = 1; sig.: 0.000). Hence, people in treatment had lower maturity scores regarding their religion. Younger people were more often in treatment than older ones. We also know that younger people had lower scores on the Mature Religiosity Scale. Therefore, we did another analysis of variance, controlling for age. The differences were less marked but still significant. This finding can also be interpreted as evidence for the validity of the scale. Psychologically mature people are usually more mature in a religious sense than people with mental problems.

A final analysis looked at the stages of treatment. Four stages of treatment can be distinguished: assessment – beginning – middle – end. In the assessment stage,

mature religion scores were low (2.24), whereas at the end of treatment, mature religion scores had increased (1.83). The difference between these two groups is significant (F = 4.71; df = 1; sig.: 0.05). The differences from the other two groups (beginning and middle stages) were not significant. This finding can also be interpreted as evidence for the validity of the scale. At the end of treatment, in most cases mental well-being is increased.

5. Discussion

5.1. Theoretical implications

A new questionnaire, the Mature Religiosity Scale, has been tested in both a mental healthcare and a pastoral care setting. This questionnaire was initially developed theoretically and subsequently empirically, using a panel of experts: professionals in mental healthcare and in pastoral care. A three-factor structure could be distinguished, namely, 'Orientation to higher values out of a sense of inner freedom', 'Trust in God pervades the entire life', 'Responsibility for fellow humans and creation'.

In the present study, we have tried to replicate these findings. The factor structure of the original questionnaire, however, has not been replicated. The participants in this study appear to have reacted to the concept of mature religiosity as a whole. The explanation of these results could be that the experts, having received more training in this field and hence having more theoretical knowledge, were able to apply more fine-tuning. For that reason, they were able to discern different dimensions in the total entity of 'mature religion'.

Tested in practice, however, the scale as a whole turns out to be an applicable measure for mature Christian religiosity. The new questionnaire has good psychometric qualities, both for convergent validity and for known group validity. Its Cronbach's alpha (0.92) is also very good, which is a measure of reliability. The scale's validity was substantiated primarily through its high correlations with other scales measuring Christian adult religiosity. A particularly good example of this is its correlation with intrinsic religiosity. Since the introduction of this concept by Allport, intrinsic religiosity has been one of the most frequently investigated conceptualisations of mature religion. Furthermore, the scale's significant correlations with Ellison's RWBS indicate that it is measuring what it intends to measure.

The high correlations with measuring instruments mapping religious coping also support the assumption of the Mature Religiosity Scale being a valid way of measuring healthy Christian religiosity. And finally, our investigations regarding the known groups provide a convincing support for our scale's validity.

5.2. Clinical implications

Because of its good psychometric qualities, the Mature Religiosity Scale can be applied in practice. In mental healthcare, it can be used for the assessment of the non-pathological DSM-IV category 'religious or spiritual problem' in Christian patients. In pastoral care, this scale can be used for identifying strengths and problems in a person's religiosity. This can give direction in pastoral interventions. The scale can also be used for evaluating religious growth.

For healthcare in general and for pastoral care, this means that it is possible to give more attention to the spiritual dimension of the proposed biopsychosocial-spiritual model, at least with committed Christians. In conclusion, the Mature Religiosity Scale can be used in care settings, both (mental) healthcare and pastoral care, for assessing mature religiosity.

5.3. Limitations and future directions

The two groups, patients in mental healthcare and parishioners in pastoral care, consisted mainly of committed and practicing Christians. Therefore, it is unclear how far the results can be extrapolated to groups of less involved Christians. Further study is necessary for these groups. For now, we can safely say that our scale is adequate for a practising Christian population.

Especially for non-Christians or unbelievers it would be interesting to see whether we could change the concepts of God and religion in our scale into terms like, for example, higher force and worldview and then find out if we would be capable of measuring concepts like mature worldview or mature spirituality.

This study did not replicate the original three-factor structure. Because of the high theoretical value of these factors ('Orientation to higher values out of a sense of inner freedom', 'Trust in God pervades the entire life', and 'Responsibility for fellow humans and creation', with relations to oneself, to God and to our fellow humans respectively), a follow-up study could try to recover this factor structure. In this respect it is also interesting to see whether research among more profession-alised groups of respondents would again yield the original factor structures.

As the Mature Religiosity Scale consists of 16 items, it might be worthwhile to investigate in practice if a shorter version would have the same psychometric qualities. We have the impression that a shorter version of our Scale could function quite satisfactorily. For instance, if we take into account a factor loading > 0.60, the MRS consists of 11 items of which the Cronbach's alpha does not change and remains as good as 0.92. In that case, the Mature Religiosity Scale might be even more applicable in the practice of (mental) healthcare and pastoral care.

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