

## Article

# Centrality of Religiosity as a Resource for Therapy Outcome?

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**Abstract:** The present intervention study tested the following hypothesis: the influence of one's personal religious construct system is more intense and broader on therapy outcome if it stays central within the personality or becomes more central throughout psychotherapeutic in-treatment. The clinic concept included standard psychotherapy and religious contents. In a pre–post design, participants ( $N = 208$ ) completed measures of centrality of religiosity and mental health. The hypothesis was tested by treating centrality of religiosity as a categorical variable with reference to a typological distinction. The results indicate that therapy outcome is statistically significantly higher for the groups in which the religious construct system stayed or became more central throughout psychotherapeutic treatment in comparison to the groups with a subordinate position of the religious construct system. These results suggest that the importance and intensity of an individual's religiosity can play an important role in answering the question of whether religiosity is a resource for improved therapy outcome.

**Keywords:** centrality of religiosity; therapy outcome; intervention study; resource

## 1. Introduction

In the last decade, the number of studies in the field of religion and mental health has exploded. The integration of religiosity in psychotherapeutic treatment is currently discussed as a resource for improved therapy outcomes (Grom 2012; Paukert et al. 2011). Different from Anglo-American studies (Koenig and Larson 2001; Paukert et al. 2011; Worthington and Sandage 2002), the results of surveys in Germany are not that clear (Allemand and Znoj 2004; Danner 2010; Kirsten 2008; Kögler 2006). In general, stronger effects on mental health are found with intrinsically motivated religiosity. Due to its importance, it has an influence on an individual's perceptions, interpretations, and behavior (Koenig et al. 2012). This raises the question of whether it is the importance of an individual's religiosity that improves therapy outcomes and whether there would be a difference in therapy outcome if a patients' importance of religiosity increases throughout psychotherapeutic treatment. The main hypothesis of the presented paper is that improved therapy outcome depends on the importance and therefore on the centrality of an individual's religious construct system. The assumption is that if the religious construct system has a central position in the emotional and cognitive architecture of an individual's psychic systems, it has a broad and intense influence on experiences, behavior, and interpretations. Therefore, it is plausible that it could have an impact on change processes in therapy. For this reason, it is considered that the concept of centrality can help clarify the question of whether or not religiosity could be viewed as a resource for improved therapy outcome in the psychotherapeutic treatment.

## 2. Religiosity and Mental Health

There is increasing knowledge of the effects of religious beliefs and practices on mental health issues, with positive as well as negative evidence (Kennedy et al. 2015). The results show that there is a

greater prevalence of depression, anxiety, and mortality when negative aspects of religiosity, such as the fear of being abandoned or punished by God, as well as thoughts and feelings of guilt and shame, play a role in one's religious beliefs (Pargament et al. 2001; Stratta et al. 2012). Many empirical studies in the research area of religiosity and mental health indicate that religiosity can also be considered to be a benefit for mental health. Significant results and effects were demonstrated between religious factors and positive mental health characteristics (Kennedy et al. 2015), such as reduced levels of depression and anxiety and higher levels of well-being, hope and optimism, meaning and purpose, and positive coping skills (Koenig 2012; Mohr et al. 2011; Smith et al. 2003; Zenkert et al. 2014). Koenig et al. (2012) point out that the effects are strong sometimes but more often become moderate or weak. Stronger effects occur for intrinsically motivated religiosity, which forms an important part of individual personality. On the basis of a meta-analysis of 147 studies, Smith et al. (2003) reported that, all in all, religiosity coincides with less depression. In particular, intrinsically motivated religiosity and positive religious coping turned out to be helpful in reducing depression symptoms, whereas extrinsically motivated religiosity seemed to reinforce depression. Anxiety symptoms also showed negative correlations with intrinsically motivated religiosity (Davis et al. 2003). Because of its relevance, intrinsic religiosity has an impact on self-perception and permeates life practices (Hackney and Sanders 2003; Payman and Ryburn 2010; Ventis 1995). Further studies showed that the connotations of God-image and concept were also considered to be an important factor. If the God-image and concept were loving and caring, then people showed lower scores for anxiety; people with a distant God-image had higher scores for anxiety and mental stress (Bradshaw et al. 2008).

The assumption that centrality of religiosity in an individual's life leads to religious contents having an autonomous and broad influence on an individual's general experience and behavior and thus also on mental health—whether these be of positive or negative valence—seems reasonable (Huber 2007, 2008).

### 2.1. Religiosity and Therapy Treatment Outcome

A meta-analysis of 11 studies (Paukert et al. 2011) showed that psychotherapy that integrated religiosity was as effective in the treatment of depression and anxiety disorders as secular forms of psychotherapy (Grom 2012). In a further meta-analysis of intervention studies from McCullough (1999), he found the same effectiveness of religion-accommodative approaches as that of standard psychotherapy. Religion-accommodative approaches for example directly address religious beliefs and values and consider religious themes within the interpretation, allowing for religion-based solutions for patients' problems (e.g., recommending prayer). Koenig and Larson (2001) reported positive results of the effect of religious interventions (e.g., integrating religious beliefs into therapy strategies using religious imagery and religiously based challenges of irrational beliefs or prayer) for the treatment of depression. Prospective cohort studies and controlled therapy studies showed that especially religious patients benefitted from religious interventions (Koenig et al. 2012). In a study by Rosmarin et al. (2013), 159 patients participated in a cognitive behavioral therapy (CBT) day treatment program and went through treatment at a psychiatric hospital. The reported results show that a belief in God was significantly associated with improved psychiatric care outcomes and reduced levels of depression (Kennedy et al. 2015). Without a doubt, the integration of religiosity in therapeutic treatment proves to be effective. However, the question that remains is whether religiosity can be viewed as a strong resource in improving therapy outcomes.

The results of German studies show no evidence for better therapy outcomes regardless of whether religiosity was measured as religious coping, transpersonal confidence, or religious well-being (Allemand and Znoj 2004; Danner 2010; Kögler 2006; Schowalter et al. 2003; Kirsten 2008). However, reduced fears in a perceived relationship with God supported the improvement of mental health. Even though the reported increase of strength, help, love, and comfort within the perceived relationship to God during psychotherapeutic treatment did not seem to affect treatment outcome, it showed effects on spiritual and personal well-being (Murken 1998; Schowalter et al. 2003; Kirsten 2008).

## 2.2. Concept of Centrality

The concept of centrality by Huber (2003; Huber and Huber 2012) refers to the importance and intensity of religiosity within an individual's personality. Huber's approach is built on the idea of construct systems. In this approach, "the centrality defines the position of the religious construct system within the ensemble of all construct systems in a given personality" (S.118, Huber et al. 2011). The assumption is that a high centrality of the religious construct system has a broad influence on other personal construct systems. As a consequence, it influences a person's behavior and experiences.

Huber distinguishes three positions of the religious construct system (cf. Huber 2008):

Central position—highly religious:

The position of the religious construct system is central. Therefore, religious contents influence other psychological systems and show a broad impact on behavior and interpretations of situations and life events. The highly religious individual has some aspects in common with the *intrinsic* religious orientation as described by Allport and Ross (1967).

Subordinate position—religious:

The religious construct system has a subordinate position within the individual's cognitive architecture. Therefore, the influence of religious contents on other psychological systems is weaker. As a consequence, there is less impact on behavior and interpretation of situations and life events. The religious type has some aspects in common with the *extrinsic* religious orientation as described by Allport and Ross (1967).

Marginal position—non-religious:

It is not clear whether a religious construct system exists at all within this group. It is viewed as unstable because it is infrequently activated. Non-religious individuals barely show religious contents or practices in their life horizon.

## 2.3. Centrality of Religiosity and Mental Health

Müller (2008) investigated the relationship between the centrality of religiosity and the fear of death within patients with breast cancer. The results show that highly religious patients who had positive emotions towards God had fewer fears with respect to the process of dying and their own extinction than patients with an anxious, guilt, and shame-tainted relationship with God.

In a pre-post design, Schowalter et al. (2003) investigated 465 patients of two psychosomatic clinics (one with an integrated religious content in psychotherapeutic treatment and one with standard psychotherapeutic treatment). The results showed no evidence for highly religious patients (measured with the centrality of religiosity scale, Huber (2003)) having better therapy outcomes than moderate religious patients. However, both groups reported an increase of perceived closeness to God during therapeutic treatment. A similar result is reported by Stadtmüller et al. [2010] 2019. It is noteworthy that in both studies, the centrality of religiosity was exclusively measured at the beginning of treatment. No attention was given to the question of whether or not the centrality of religiosity changes throughout psychotherapeutic treatment and whether this would create a more differentiated image of its relation to improvement of mental health and therapy outcomes.

Interestingly, in a study from Switzerland, Hefti (2011) found that the strength of religiosity and its change during psychotherapy measured with the "Münchener Motivationspsychologisches Religiositäts-Inventar" (MMRI) (Grom et al. 1998) predicted a significant reduction of psychopathological symptoms and a significant improvement of subjective well-being.

## 2.4. Religious Interventions

As reported above, negative aspects of religiosity, such as thoughts of guilt, shame, punishment, or abandonment by God, are associated with higher scores of anxiety and depression. To counter these

results, strategies were developed in order to investigate whether the integration and stimulation of religious beliefs could help improve therapy outcome (Goncalves et al. 2015). The assumption is that religious interventions, such as identifying irrational and maladaptive religious thoughts and beliefs, stimulating existential questions, and prayer, can play an important role in changing an individual's thoughts, creating acceptance of difficulties and illness, and finding encouraging and positive aspects of their belief (Rosendahl et al. 2009). These changes are considered to influence patients' therapy outcomes (Goncalves et al. 2015).

### 3. Present Study

In line with the typology found in Hubers' model (Huber 2003, 2007), the assumption of the present study is the following: the more important religiosity is within an individual's cognitive and emotional architecture, the broader the influence of religious aspects, thoughts, beliefs, and interpretations on behavior and experiences. This influence can be of positive valence, such as feeling strengthened by prayer or experiencing God or something divine intervening and being interested in one's life. On the other hand, the influence can also be of negative valence, such as feeling that prayer is useless or wondering why God allowed one to develop a mental illness.

Therefore, if the centrality of the religious construct system is high, religiosity plays an important role in an individual's life. Due to the high centrality, those religious issues are highly present in an individual's life and are not taken lightly. It seems possible that negative religious contents, such as feeling guilty, lack of meaning in life, or fear of what happens after death, have a more significant influence on mental health when the centrality of the religious construct system is high. Furthermore, positive experiences, e.g., of orientation, God's intervention, and the feeling of being accepted by God, have a greater influence on mental health if the centrality of an individual's religious construct system is high. This assumption finds some support in the results of studies considering intrinsically motivated religiosity and mental health (Davis et al. 2003; Koenig et al. 2012; Payman and Ryburn 2010; Smith et al. 2003). Huber and Huber (2012) point out that the highly religious individual and the intrinsic religious orientation have some commonalities.

Arguably, high centrality of the religious construct system leads to a stronger effect of religiosity on the individual's mental health—in positive as well as in negative ways.

On the other hand, it is conceivable that, e.g., by solving religious struggles, the interest in religious themes could grow during psychotherapeutic treatment or that a sensibilization of positive religious aspects could encourage, e.g., more frequent prayer. Therefore, it is expected that the centrality of religiosity could change throughout the psychotherapeutic treatment. Taking these considerations into account, better therapy outcome is expected for patients whose centrality of religiosity is and stays high throughout therapeutic treatment and for patients whose centrality of religiosity changes to high centrality in contrast to patients whose centrality of religiosity is and stays moderate or decreases during therapeutic treatment. Taking these considerations into account, it is expected that the centrality of religiosity could help us understand if it is the importance of one's religiosity that makes a difference in therapy outcome. This, therefore, helps clarify the question of whether an individual's religiosity can be considered a resource for therapy outcome.

#### *Clinic Concept*

A clinic for psychotherapy and psychosomatics located in the Black Forest in the south of Germany was chosen in order to examine the explorative hypothesis of this study. The clinic combines standard psychotherapy with religious contents.

The clinic's program provides individual therapy once a week and group therapy several times a week. Beside music, movement and creative therapy, nordic walking, and sports are integrated elements of the clinic's concept. In addition to a predominantly behavioral and psychodynamic-oriented therapy, the clinic works with a Christian-integrative concept. Therefore, the clinic mainly addresses patients with a Christian orientation but not exclusively. The therapeutic team consists of professional

Christians from different denominations. The Christian-integrative concept addresses Christian beliefs, interpretations, and religion-based solutions of situations (e.g., prayer). The manner of understanding disease is reflected in the salutogenic as well as pathogenic religious aspects. Therefore, maladaptive religious thoughts and beliefs are challenged. Religious imagery is used as a part of trauma treatment.

Spiritual impulses are part of the daily framing program addressing, e.g., problematic God images (the punishing, distant God) or spiritual questions, e.g., life after death or eternal judgment, which could create religious fears. In line with resource activation (Grawe 1998), spiritual music therapy is integrated, and a sensibilization of positive and encouraging religious aspects, e.g., a God who is interested or intervenes in one's life, is supported. All religion-based offers are on a voluntary basis. Moreover, patients can bring religious questions and themes into the therapy process at any time.

Therefore, in the present study, the overall clinic concept is used as the intervention, including the above-reported Christian-integrative concept.

In previous studies, centrality of the religious construct system was measured at the beginning of psychotherapeutic treatment of inpatients and with respect to an improvement of mental health (Kirsten 2008; Stadtmüller et al. [2010] 2019). No significant difference with respect to the improvement of mental health was found between the highly religious and religious group. Therefore, in the present study, it is expected to replicate these findings when centrality of religiosity is measured upon admission to the clinic (t1).

It is possible that differences with respect to therapy outcome occur if the groups are differentiated regarding changes in centrality of the religious construct system throughout psychotherapeutic treatment. It is expected that patients with an increased centrality of religiosity as well as patients with a stable high centrality of religiosity show greater improvement of mental health throughout psychotherapeutic treatment. This consideration as described above corresponds with the assumption that a patient's religiosity has a broader influence on experience and behavior and therefore on mental health, if the religious construct system is in a central position in the individual's cognitive architecture.

As a first step in investigating this consideration, an explorative hypothesis was formulated in the present study. The assumption was that a larger proportion of patients, whose religious construct system became more central (group: religious (t1)—highly religious (t2)) or stayed central (group: highly religious) during psychotherapeutic treatment, would achieve a greater improvement of mental health than the expected improvements for the comparison group with unchanged, lower (religious), or decreased centrality (highly religious (t1)—religious (t2)). This hypothesis focuses on the importance of an individuals' religiosity in cognitive and emotional architecture. This focus is expected to help clear up the question of whether religiosity can be considered a resource in the improvement of therapy outcome.

## 4. Method

### 4.1. Sample and Procedure

The sample consisted of 211 inpatients (56 males and 155 females) from a clinic for psycho-therapy and psychosomatic in the Black Forest in the south of Germany, which combines standard psychotherapy with religious contents. The mean age of inpatients was 44.5 years ( $SD = 10.84$ ). Of the sample, 43.6% were Protestants, 18% were Catholics, 78% were from free churches, and 10.9% had no or other confessions. The main diagnostic groups were F 32–38 affective disorders (45.5%) and F 40–48 neurotic stress and somatoform disorders (40.3%). Small groups of patients had F5 behavioral syndromes associated with physiological disturbances and physical factors (5.2%), F6 personality and behavior disorders (5.7%), and diagnosed schizophrenia (F2; 2.3%). The last 1% of patients had attention deficit order (F 90) and difficulties in coping with life (Z 73). Twice, inpatients completed the questionnaires, which were integrated into the standard diagnostic questionnaires of the clinic on a computer. The first time they completed the questionnaire was upon admission to the clinic (t1) and the second time on discharge from the clinic (t2). One questionnaire included items of centrality of religiosity



(CRS, Huber 2003; Huber and Huber 2012); the other questionnaire was a widely used psychological symptom inventory called Symptom Checklist-90-R (SCL 90R, Derogatis 1983; German version Franke 2002) to measure current psychopathology. In the sample, only three inpatients (3.4% of the sample) were classified as non-religious (marginal religious construct system; classification procedure is described below). Because of the very small size of this group, it was excluded from the analysis. Both other groups (religious and highly religious) remained with sufficient sample sizes. The final sample size for the analyses consisted of 208 inpatients.

## 4.2. Measures of Mental Health

### 4.2.1. Questionnaire for Mental Distress (SCL-90-R)

The SCL-90-R (Franke 2002) is a 90-item multidimensional questionnaire describing psychological as well as somatic symptoms. Each of the 90 items is rated on a five-point Likert scale of distress. On a Likert scale from not at all (0) to extremely (4), the patients rate how much they suffered from a specific symptom in the last seven days. The 90 items are summarized in nine symptom dimensions: somatization, obsessive compulsive, interpersonal sensitivity, depression, anxiety, anger, hostility, phobic anxiety, paranoid ideation, and psychoticism. As a global index, the General Symptomatic Index (GSI) measures the overall psychological distress. The GSI is a valid global index for psychological distress ( $\alpha = 0.97$  for clinical samples, psychotherapy) and is known to be change sensitive. Therefore, it is useful for measuring symptom changes during psychotherapy. In the present study, the reliability coefficient (Cronbach's alpha) of the measure was  $\alpha = 0.96$ .

### 4.2.2. Classification of the Improvement of Mental Health

The focus of the present study was on the question of whether the centrality of religiosity as a categorical variable shows an effect on the improvement of mental health. Therefore, the decision was made to use Jacobson and Truax (1991) classification for the evaluation of the relevance of the improvement of one's mental health. In order to judge the relevance of one's improvement from psychological distress, it is necessary to distinguish between statistical and clinical significance of the improvement. Statistical relevance considers whether a change is significant, so that it could not have occurred coincidentally. As a reliable measure for statistical relevance, the Reliable Change Index (RCI) (Schauenburg and Strack 1998) is useful. However, the RCI for statistical relevance does not show whether the measured change is sufficient for clinical significance. On the other hand, the measure of clinical significance shows if the participant's scores, which were assigned to the dysfunctional population in the pre-measurement, changed sufficiently in order to be assigned to the functional population in the post-measurement. The dysfunctional population is defined as the distribution of mental distress, e.g., the population of patients. The functional population describes the distribution of a healthy norm population. The point where the two distributions overlap is set as the cut-off point, which divides the two areas (Geiser et al. 2000). The pre-post figurations of each scale are divided into one of the five categories (according to the criteria of statistical and clinical significance) based on Jacobson ((Jacobson and Truax 1991): test normal, unchanged, deteriorated, improved, recovered. (For the complex calculation procedure, see Geiser et al. 2000; Jacobson and Truax 1991). In the present study, the calculated cut-off point for the inpatient sample was  $c = 0.54$ .

**Test normal:** Pre and post scores are attributable to the functional population according to the cut-off criteria.

**Unchanged:** Pre-post difference is not statistically significant. There is a tendency of improvement.

**Improved:** Pre-post difference shows statistically significant improvement, but the post score is not attributable to the functional population.

**Recovered:** Pre-post difference is statistically significant, and the post score is attributable to the functional population.

**Deteriorated:** Pre-post difference shows statistically significant deterioration.

#### 4.2.3. Centrality of Religiosity

The Centrality Scale by Huber (2003; Huber and Huber 2012) considers five religious-sociological core dimensions of religiosity equally (each of them with two items): intellect, ideology, experience, private practice, and public practice (cf. Glock 1962; Stark and Glock 1968). Thereby, it is possible to receive a representative average of the activation of an individual's religious construct system. Activation is measured in two ways: the self-reported frequency and intensity of each of the core dimensions. The activation scores indicate the centrality of an individual's religious construct system within one's cognitive architecture.

For measuring the centrality of religiosity, the 10-item version of the Centrality Scale (CRS-10, Huber and Huber 2012) was used. Each of the five dimensions—intellect, ideology, experience, private practice, and public practice—was assessed by two items. These items were recorded on a Likert-type rating scale ranging from 1 (not at all/never) to 5 (very/very often). As an index for the centrality of the religious construct system, the mean of the 10 items was calculated. Higher scores reflect a higher activation of the religious construct system and thus a more central position of religiosity in one's life. Table 1 shows the five dimensions, including the reliability coefficients (Cronbach's  $\alpha$ ) and the items. In the present study, the reliability coefficient for the centrality scale was  $\alpha = 0.91$ .

**Table 1.** Dimensions, items, and reliability of the 10-item Centrality of Religiosity Scale (CRS-10) (by Huber and Huber 2012) for the present sample  $N = 211$ .

Dimension of Religiosity	Items	Reliability Coefficient
Private Practice	01 How often do you pray?	0.90
	02 How important is personal prayer for you?	
Public Practice	03 How important is it to take part in religious services?	0.87
	04 How often do you take part in religious services?	
Experience	05 How often do you experience situations in which you have the feeling that God or something divine wants to communicate with you?	0.86
	06 How often do you experience situations in which you have the feeling that God or something divine intervenes in your life?	
Intellect	07 How interested are you in learning more about religious topics?	0.81
	08 How often do you think about religious issues?	
Ideology	09 To what extent do you believe that God or something divine exists and is not only a human idea?	0.85
	10 To what extent do you believe in an afterlife of your soul?	

#### 4.2.4. Classification of Religiosity

The classification of the participants into categorical centrality groups was based on the mean values. Mean values higher than 4 represented the highly religious group, participants with mean values lower than 2 were classified into the non-religious group, and participants with mean values between 2 and 4 were classified as the religious group (Huber and Huber 2012). As mentioned above, in the highly religious group, the religious construct system indicates a central position, the religious group shows a subordinate position, and the non-religious group is characterized as not having a religious construct system at all.

### 5. Results

Frequency distributions for the investigated variables are depicted in Tables 2 and 3. In the following, descriptive analyses are shown for demographic variables of interest (gender and age). Because of the explorative character of the study, in the first step, frequency distributions for the religious and highly religious group with respect to therapy outcome were analyzed. In the second

step, changes in the centrality of religiosity within the groups (from admission to discharge from the clinic) with respect to therapy outcomes were analyzed and tested for statistical significance.

**Table 2.** Types of centrality of religiosity, position, and frequencies (t1, admission to clinic).

Centrality of Religiosity	Position of the Religious Construct System	N	%(n)
Highly religious	Central position	144	68.2
Religious	Subordinate position	64	30.3
Non-religious	No religious construct system	3 *	1.4 *

N = 211, \* excluded from further analysis due to the small number of patients.

Because of the very small size of the non-religious group, it was excluded from the analysis. The final sample size for the analyses consists of 208 inpatients.

To judge whether a patient's improvement of mental health in addition to statistical significance also shows clinical relevance, the patient's pre-post difference of the General Symptomatic Index was calculated. After calculating the Reliable Change Index and a special cut-off-score (Schauenburg and Strack 1998), which differentiates the functional from the dysfunctional population, the patient's score can be assigned to a grouping according to Jacobson and Truax (1991) for the assessment of improvement of mental health (therapy outcome). (For detailed and complex calculation procedures, see Friedrich-Killinger (2014, p. 391).

**Table 3.** Frequencies of therapy outcome groups N = 208 (by Jacobson and Truax 1991).

Therapy Outcome Groups	N	% (n)
Test normal	41	19.7
Deteriorated	9	4.3
Unchanged	61	29.35
Improved	36	17.3
Recovered	61	29.35
<b>Total</b>	<b>208</b>	<b>100</b>

### 5.1. Descriptive Analyses

The results showed an age effect, with highly religious inpatients being older than religious inpatients ( $M = 46.47$ ;  $SD = 10.15$  versus  $M = 40.69$ ;  $SD = 11.02$ ) on average. A one-way analysis of variance (ANOVA) illustrated a homogeneity in variances (Levene Test,  $p = 0.339$ ) and a medium-sized effect of the significant age difference between the religious and highly religious group ( $F(1, 206) = 13.65$ ,  $p = 0.000$ ;  $\eta^2 = 0.06$ ). No gender differences were found with respect to the centrality of religiosity for the religious and highly religious group ( $F(1, 198) = 2.35$ ,  $p = 0.126$ ).

The magnitude of psychological symptoms related to the General Symptomatic Index of the SCL 90-R (Derogatis 1983; German version Franke 2002) showed no effect for age but some differences for gender. On average, male inpatients showed lower psychological distress than women ( $M = 0.81$ ,  $SD = 0.47$  versus  $M = 1.04$ ,  $SD = 0.52$ ) at the beginning of psychotherapeutic treatment. The statistical effect was still low ( $F(1, 198) = 2.06$ ,  $p = 0.005$ ,  $\eta^2 = 0.04$ ).

### 5.2. Frequency Distributions

As expected, there was no significant difference with respect to the improvement of mental health found between the highly religious and religious group when the centrality of the religious construct system was measured only at the beginning of psychotherapeutic treatment (t1) (see Table 4).



**Table 4.** Frequency distributions of therapy outcome groups with respect to centrality of religiosity (admission to the clinic (t1)).

Therapy Outcome	Centrality of Religiosity			
	Religious <i>n</i> = 64		Highly Religious <i>n</i> = 144	
	<i>n</i>	% ( <i>n</i> )	<i>N</i>	% ( <i>n</i> )
Test normal	11	17.2	30	20.8
Deteriorated	5	7.8	4	2.7
Unchanged	18	28.1	44	30.6
Improved	12	18.8	24	16.7
Recovered	18	28.1	42	29.2

To determine the improvement of mental health, the groups improved and recovered were used. Within the highly religious inpatients who had indicated a central position of the religious construct system at the time of admission (t1), mental health improved statistically significantly for 45.9% (groups: improved and recovered). A total of 29.2% switched to the functional population at the end of treatment (recovered). For inpatients classified as religious at the beginning of treatment (t1), 46.9% achieved an improvement of mental health (groups: improved and recovered). A total of 28.1% were released as recovered at the end of treatment. Therefore, no significant difference was found between the religious and highly religious group with respect to their improvement of mental health. Hence, centrality of religiosity appeared at first sight to make no difference on therapy outcome. This finding corresponds with results from other studies, which did not take a change of centrality during psychotherapeutic treatment into account (Kirsten 2008; Stadtmüller et al. [2010] 2019).

According to the hypothesis to be examined, in a further step, the groups were differentiated in terms of change in centrality and unchanged centrality during the psychotherapeutic treatment. Subsequently, the change in mental health was analyzed. Frequency distributions were chosen for the calculation because some cells were not populated enough to differentiate the groups using the Chi-square method (cell frequencies < 5). At the end of the treatment, one inpatient changed to the non-religious group and was therefore excluded from the calculation. The final sample size for the analyses consists of 207 inpatients.

Table 5 gives an overview of the frequency distributions of the groups with unchanged centrality of religiosity and the groups with changed centrality from admission (t1) to discharge from the clinic (t2) regarding the assessment of therapy outcome.

**Table 5.** Frequency distributions of changers and non-changers with respect to the centrality of religiosity from t1 to t2 regarding therapy outcome.

Therapy Outcome	Combination and Changes in Centrality of Religiosity							
t1	Religious		Highly Religious		Highly Religious		Religious	
t2	Religious		Religious		Highly Religious		Highly Religious	
	<i>n</i>	(% <i>n</i> )	<i>n</i>	(% <i>n</i> )	<i>n</i>	(% <i>n</i> )	<i>n</i>	(% <i>n</i> )
Test normal	7	(26.9)	1	(9.1)	29	(22.2)	4	(10.5)
Deteriorated	4	(15.4)	0	(0.0)	4	(3.0)	1	(2.6)
Unchanged	7	(26.9)	7	(63.6)	37	(28.0)	11	(29.0)
Improved	5	(19.2)	2	(18.2)	22	(16.7)	7	(18.4)
Recovered	3	(11.5)	1	(9.1)	40	(30.3)	15	(39.5)
	<i>n</i> = 26		<i>n</i> = 11		<i>n</i> = 132		<i>n</i> = 38	

t1 = admission to the clinic; t2 discharge from the clinic.

To determine the improvement of mental health, the groups improved and recovered were used.

For 57.9% of inpatients whose religious construct system had become more central during the treatment (religious (t1)—highly religious (t2)) mental health improved statistically significantly (groups: improved and recovered). A large proportion (39.5%) of this group had the best therapy outcome, changing from the dysfunctional to the functional population (group: recovered).

The proportion of patients whose religious construct system remained less central (religious (t1)—religious (t2)) during the treatment was significantly lower (30.7%) with respect to statistically improved mental health (groups: improved and recovered). Only 11.5% of this group changed to the functional population (group: recovered) at the end of treatment (see Table 5). The statistical calculation of the percentage differences by Clauß and Ebner (1979) for the recovered inpatients between the group whose religious construct system had become more central (religious (t1)—highly religious (t2), 39.5%) and the group where religiosity remained less central (religious t1/t2, 11.5%) was significant ( $t = 1.5$ ,  $t < 1.96$ ;  $p \leq 0.05$ ).

Moreover, the group with a decreasing centrality of the religious construct system (highly religious (t1)—religious (t2)) showed a lower proportion of inpatients (27.3%) having strong therapy outcomes than the group in which centrality had increased (religious (t1)—highly religious (t2)) (57.9% groups: improved and recovered). The percentage differences were also significant ( $t = 1.6$ ,  $t < 1.96$ ;  $p \leq 0.05$ ).

A total of 47% of inpatients with a consistently high centrality of the religious construct system during the clinical stay (highly religious t1/t2) showed a good therapy outcome (group: improved and recovered). The percentage differences with respect to the group with consistently low centrality (religious t1/t2) (30.7%) was significant ( $t = 1.2$ ,  $t < 1.96$ ;  $p \leq 0.05$ ). The same result was shown for the group with a consistently high centrality (highly religious t1/t2; 46.9%) in comparison to the decentralized group (highly religious (t1)—religious (t2); 27.3%) ( $t = 1.0$ ,  $t < 1.96$ ;  $p \leq 0.05$ ).

In summary, as hypothesized, the centrality of the religious construct system did make a difference in therapy outcome.

## 6. Discussion

The present study addresses the relationship between the religious variable “centrality of religiosity” and therapy outcome. In current research findings, there are differences between German (Allemand and Znoj 2004; Danner 2010; Kögler 2006; Schowalter et al. 2003; Kirsten 2008) and Anglo-American studies (Paukert et al. 2011; McCullough 1999; Koenig and Larson 2001) concerning the question of whether religiosity can be viewed as a resource for therapy outcomes. In relation to this discussion, a new and explorative hypothesis was investigated in the present study. It was assumed that a stable high importance and an intensified importance of an individual’s religiosity during psychotherapeutic treatment could help clear up differences in the improvement of therapy outcomes.

In the first step of the study, whether the importance (centrality) of religiosity made a difference in therapy outcome when measured only at the beginning of psychotherapeutic treatment was investigated. The present study replicated findings of German clinical intervention studies that investigated the improvement of mental health with respect to the centrality of religiosity (Kirsten 2008; Stadtmüller et al. [2010] 2019). There were no significant differences found for therapy outcome with respect to the centrality of the patient’s religious construct system when measured upon admission to the clinic. Both groups (highly religious and religious) achieved a similar and good therapy outcome.

In the second step, the following explorative hypothesis was investigated: patients with an increased centrality of religiosity as well as patients with a consistently high centrality of religiosity during the psychotherapeutic treatment show greater improvement in mental health. This consideration (as described in Section 3) corresponds with the assumption that a patient’s religiosity has a broader influence on experience and behavior and therefore on mental health, if the religious construct system is in a central position in the individual’s cognitive architecture.

In line with this assumption, a statistically significantly larger proportion of patients whose religious construct system became more central during their clinical stay achieved statistically and

clinically relevant improvements of mental health (groups: improved and recovered) than patients with a subordinate or decentralized position of the religious construct system. The same outcome resulted in the proportion of patients who were assigned to the dysfunctional population in the beginning and at the end of psychotherapeutic treatment to the functional norm population (group: recovered).

According to the results of the present study, it seems helpful to consider individual changes in the centrality of religiosity during the psychotherapeutic treatment for more specific considerations about the relationship between intensified and greater importance of religiosity and the improvement of mental health. Following this new approach, the question of whether religiosity can be viewed as a resource for therapy outcomes can be answered with more differentiation. The results of studies that showed no evidence for better therapy outcome merely measured the centrality of religiosity at the beginning of psychotherapeutic treatment (Kirsten 2008; Stadtmüller et al. [2010] 2019; Danner 2010). Hefti's (2011) investigation—which was the same as the present study—took the change in religiosity into account, and as a result, religiosity was reported as a resource for therapy outcome.

Religious patients with a consistently high or intensified centrality of religiosity seem to profit from a clinic concept that integrates standard psychotherapy and religious interventions to a greater extent. On the one hand, it is conceivable that, e.g., questions and fears about what is coming after death could be more pressing for highly religious patients than for religious patients, because religious issues are more important in their lives. If such fears are faced and answered within a clinic concept, it is likely to have an effect on improving mental health, as reported in different studies (Rosendahl et al. 2009; Goncalves et al. 2015). On the other hand, positive experiences, e.g., of orientation and God's intervention in one's life, can create hope and optimism in patients when the importance of religiosity is high and thus have an effect on improving mental health. This assumption finds some support in the results of studies considering intrinsically motivated religiosity and mental health (Davis et al. 2003; Koenig et al. 2012; Payman and Ryburn 2010; Smith et al. 2003). It is also conceivable that multiple interactions may be taking place in a clinic with a concept that integrates standard psychotherapy and religious contents. If, e.g., depressive symptoms decrease, it is possible for religious words of comfort to be perceived again (Schowalter et al. 2003), which in turn could support the improvement of mental health.

Worthington and Sandage (2002) showed that a therapist's openness to religious questions was accompanied by positive expectations for highly religious patients regarding the psychotherapeutic treatment. This may also have an impact on therapy outcome. In addition, the therapist–client relationship is considered to be one of the most important factors influencing the therapeutic process (Orlinsky et al. 1994).

As expected, changes in the centrality of religiosity occurred during psychotherapeutic treatment. Moreover, a higher percentage of patients with an increase in centrality of religiosity or a consistently high importance of religiosity showed more improvement in mental health than patients with decreased or moderate centrality of religiosity. It is conceivable that, e.g., through the necessity of solving religious struggles, the interest in religious themes grows during psychotherapeutic treatment or a sensibilization of positive religious aspects encourages, e.g., more frequent prayer. It is also imaginable that spiritual music therapy as a form of resource activation (Grawe 1998) opens nonverbal ways and sensibilization for spiritual issues that intensify religiosity during psychotherapeutic treatment. This intensified religiosity showed an impact on the improvement of therapy outcome.

However, the question arises why patients with a lower or decreasing centrality of their religious construct system during their clinical stay do not experience an equally large improvement of mental health. On the one hand, it is conceivable that a treatment context in which standard professional psychotherapy and religious elements are offered at the same time can cause resistance in patients with a lower centrality of the religious construct system. If resistance precedes, it could impair the therapeutic process. However, the religious elements in the clinic concept exist on a voluntary basis of the patients, which in turn would be an argument against increased formation of resistance. However,

it cannot be excluded that expectations of religiosity can also be experienced through interactions with fellow patients.

It cannot be ruled out that uncontrolled third-party variables explain the differences in therapy outcomes. For example, the average severity of psychological distress (measured with the General Symptomatic Index, GSI) at the beginning of psychotherapeutic treatment could have an impact. The examination of the average psychological distress for the different religiosity groups at the beginning of treatment showed the following:

In the group in which the religious construct system was not very central, both at the beginning and at the end of the psychological treatment, the psychological distress was the least pronounced ( $M = 0.83$ ,  $SD = 0.55$ ) (religious (t1)—religious (t2)).

For the group with a consistently high centrality of the religious construct system ( $M = 0.99$ ,  $SD = 0.55$ ) (highly religious (t1)—highly religious (t2)) and the group in which the relevance of the religious construct system had decreased during the psychological treatment ( $M = 1.01$ ,  $SD = 0.44$ ) (highly religious (t1)—religious (t2)), the psychological distress at the beginning was almost identical. It is noteworthy that a higher proportion of the group with a consistently high centrality of the religious construct system achieved a good therapy outcome (recovered).

The highest psychological distress at the beginning of treatment was shown by the group whose religious construct system became more central during therapy treatment ( $M = 1.13$ ,  $SD = 0.50$ ) (religious (t1)—highly religious (t2)). In this group, the highest proportion improved their mental health at the end of treatment.

It is quite conceivable that patients with a high average of psychological distress have a greater sense of suffering. One possible consideration according to attachment theory could be that the behavioral attachment system is activated in times of need and stress. As a result of the activation, the increased search for closeness to the attachment figure begins in anticipation of finding comfort and help (Cassidy and Shaver 2018).

A core piece of a believer's religiosity, especially in monotheistic religions, is represented in a perceived relationship to God. Kirkpatrick (2005) argues that the believer's God can function as an attachment figure. As empirical studies have shown, believers' perceived relationships with God meet all scientific criteria of an attachment relationship (Granqvist and Kirkpatrick 2008). The believer turns to God in times of stress and harm (safe haven), the believer faces life lessons and stress with the felt security of his attachment to God (secure base), through prayer and symbols the believer seeks proximity to God (proximity seeking), and the believer feels distressed when separated from God, similar to a kind of psychologically felt abandonment from God (stress of separation) (Granqvist and Kirkpatrick 2008). Therefore, it is plausible that patients with a great deal of suffering increasingly turn to God or something divine. If they perceive an experience of protection, comfort, and support in the divine relationship, it would be understandable that the importance of their religiosity intensifies.

Huber (2003, 2007, 2008) proposed that religiosity can be understood as a function of the centrality and of the content of the personal religious construct system of the individual. The centrality of the personal religious construct system can be measured by the Centrality of Religiosity Scale. On the other hand, there are a lot of contents that may be relevant in a personal religious construct system. In addition to the image of God, religious emotions (Huber and Richard 2010) or the attitude of religious gratitude (Freund and Lehr 2019), as well as attachment to God, could be further contents of the personal religious construct system.

In monotheistic religions, the believer's perceived attachment to God is considered a core aspect of religiosity. Therefore, it would be plausible that the attachment to God could be an important aspect of an individual's religious construct system. If the centrality of one's religious construct system is high, the question arises if the believer's relationship to God as a content of the religious construct system will also be of high importance to the believer. Therefore, it would be conceivable that highly religious believers' relationships to God function similar to an attachment relationship. In consequence, God functions as an attachment figure to whom the believer turns in times of need and stress. If the

believer experiences love, comfort, or support in his attachment to God, this could have an impact on the improvement of mental health issues.

Nevertheless, the complex relationships between the two constructs (centrality of religiosity and attachment to God) have to be prepared theoretically as well as empirically.

On the other hand, if patients with a high average of psychological distress have a greater sense of suffering, the necessity to work on their problems may be high. If there are proposals in the clinic concept that suit the patients' needs and religious background, it is possible that patients with a higher level of suffering will use the offers frequently. If the offers are perceived as supportive and useful, they may create new paths to the religious background. As a result, questions could be answered, and positive aspects could be strengthened. Therefore, it would be understandable that the centrality of an individuals' religiosity increases, and mental health could be improved.

Because the consistently highly religious group also achieved a good therapy outcome in comparison to the groups with less centrality of the religious construct system, the results indicate that the postulated broader influence on the improvement of mental health corresponding to the centrality of religiosity is high.

### *Limitations of the Study*

Statistically, the investigation shows some limitations. First, the used measurements are both self-report questionnaires. Therefore, in further studies, social desirability should be controlled. It is possible that some patients have preconceptions of what an ideal Christian should be interested in or how often they should pray—these ideas may influence the answers given on the centrality of religiosity scale in a desirable way. Second, all statistical procedures are based on a categorical level; therefore, some loss of information is probable. On the other hand, the strong results on a categorical level show evidence for the assumptions that were made. In further studies, variables such as gender and age should be controlled. As reported in Section 5.1, there was an age effect for the centrality of religiosity scale, which showed that older patients rate the importance of religiosity more highly than younger patients. The gender effect for the severity of symptoms showed that male inpatients experienced lower psychological distress than women at the beginning of the treatment. Even though both effects were not that strong, further studies should take these differences into account.

Another limitation is the fact that the whole clinic concept and the setting was used as the intervention. In further studies, it could be helpful if special interventions, such as maladaptive religious thoughts and beliefs, which are challenged, as well as interpretations and religion-based solutions of situations (e.g., prayer), are used as special parts of the intervention in relation to the individuals' centrality of religiosity and therapy outcome. Designs with different groups, such as wait-list conditions, standard psychotherapy, and religious content psychotherapy, would also be useful in clarifying effects on the improvement of therapy outcome with respect to the centrality of religiosity variable. It would also be of interest to examine if there are differences in therapy outcome for different disorders, such as depression, anxiety disorders, and others related to the centrality of religiosity. In a meta-analysis containing 11 studies, [Paukert et al. \(2011\)](#) showed that psychotherapy that integrated religiosity was as effective in the treatment of depression and anxiety disorders as secular forms of psychotherapy.

In conclusion, the present study supports the idea that it is the importance and centrality of an individual's religiosity that influences whether religiosity can be viewed as a resource for therapy outcome. Regarding the limitations of this study and the diverse interaction relationships in a clinical setting involving standard psychotherapy and religious contents at the same time, further studies with improved designs are needed to shed light on this issue.

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