

Article

# Reliance on God's Help in Patients with Depressive and Addictive Disorders is not Associated with Their Depressive Symptoms

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Abstract: Objective: Although there are several reports which support a (negative) association between depression and spirituality/religiosity, the specific nature of the relationships remains unclear. To address whether patients with depressive and/or addictive disorders use this resource at all, we focused on a circumscribed variable of intrinsic religiosity, and analyzed putative associations between intrinsic religiosity, depression, life satisfaction and internal adaptive coping strategies. Methods: We referred to data of 111 patients with either depressive and/or addictive disorders treated in three German clinics. For this anonym cross sectional study, standardized instruments were used, *i.e.*, the 5-item scale Reliance on God's Help (RGH), Beck's Depression Inventory (BDI), the 3-item scale Escape from Illness, the Brief Multidimensional Life Satisfaction Scale (BMLSS), and internal adaptive coping strategies as measured with the AKU questionnaire. Results: Patients with addictive disorders had significantly higher RGH than patients with depressive disorders (F = 3.6; p = 0.03). Correlation analyses revealed that RGH was not significantly associated with the BDI scores, instead depressive symptoms were significantly associated with life satisfaction and internal adaptive coping strategies (i.e., Reappraisal: Illness as Chance and Conscious Living). Patients with either low or high RGH did not significantly differ with respect to their BDI scores. None of the underlying dimensions of RGH were associated with depression scores, but with life satisfaction and (negatively) with Escape from illness. Nevertheless, patients with high RGH had significantly higher adaptive coping strategies. Regression analyses revealed that *Reappraisal* as a cognitive coping strategy to re-define the value of illness and to use it as a chance of development (*i.e.*, change attitudes and behavior), was the best predictor of patients' RGH (Beta = 0.36, p = 0.001), while neither depression as underlying disease (as compared to addictive disorders) nor patients' life satisfaction had a significant influence on their RGH. Conclusions: Although RGH was significantly higher in patients with addictive disorders than in patients with depressive disorders, depressive symptoms are not significantly associated with patients' intrinsic religiosity. Particularly those patients with high intrinsic religiosity seem to have stronger access to positive (internal) strategies to cope, and higher life satisfaction. Whether spirituality/religiosity is used by the patients as a reliable resource may depend on their individual experience during live, their expectations, and specific world-view.

**Keywords:** spirituality; religiosity; depression; addiction; patients; coping strategy; life satisfaction

## 1. Background

A recent 'concept mapping' of complementary and alternative medicine identified eight relevant cluster, among them "Self-assessment, Self-care, and Quality of Life" which addresses also the role of spirituality in individuals' lives [1]. Interestingly, individuals who would describe themselves as 'spiritual and religious' seem to use more often CAM approaches from the field of body-mind therapies in general, while 'religious' individuals are disinclined to use CAM [2]. In cancer survivors, Mao *et al.* found that increased spiritual importance was associated with CAM usage [3].

This unique topic 'spirituality' gained lot of attention during the last decades, particularly in conventional medicine, and thus it was evident to ask for clinical relevance of specific issues associated with spirituality and/or religiosity.

There are an increasing number of studies which indicate that patients with an explicit religious attitude or high spiritual well-being had lower depression and anxiety, or lower final despair [4–11]. Particularly in hospice patients with advanced cancer, most experienced their religious faith as an important source of comfort and strength [12]. In fact, spirituality/religiosity may be used to relieve stress, retain a sense of control and maintain hope and sense of meaning and purpose in life [13]. Moreover, spirituality/religiosity can be identified as a relevant coping strategy to deal with chronic stressors, even in a more secular society [14–19].

However, in a previous study enrolling female cancer patients recruited in East-Germany [16], intrinsic religiosity, as measured with the scale *Reliance on God's Help* (RGH), neither correlated with depression and anxiety (as measured with the Hospital Anxiety and Depression Scale; HADS: r < 0.01) nor with fatigue (as measured with the Cancer Fatigue Scale, CFS-D: r < 0.01), and correlated only weakly with SF-12's mental health component (r = -0.13). Also, in other German individuals, intrinsic religiosity was not associated with the mental health component of the SF-12 [20]. Of course one has to keep in mind that patients may be acutely engaged in specific religious practices as a reactive resource in times of need (*i.e.*, praying, church attendance, meditation *etc.*), but not necessarily all the time during

long-term courses of chronic illness. One could argue that most patients investigated in the respective studies have different courses of disease have different intensities of specific religious engagement, and were recruited in societies with different cultural backgrounds. Moreover, depressive symptoms in patients with advanced states of malignant disease are not necessarily psychiatric disorders.

A main argument refers to different underlying definitions of the multi-shaded concepts spirituality and religiosity on the one hand, and different measures of these constructs on the other hand [21]. When talking about spirituality/religiosity, one has to differentiate specific religious beliefs, spiritual well-being, and specific practices, either within a specific institutional context or highly individual approaches. Correctly, Harold G. Koenig raised concerns about measuring spirituality in research: Spirituality was traditionally "a subset of deeply religious people", while today it is "including religion but expanding beyond it" [22]. In fact, spirituality is often understood today as a broader and also changing concept which may overlap with secular concepts such as humanism, existentialism, and probably also with specific esoteric views [21].

The specific nature of the relationships between religious involvement and depressive symptoms remains to be clarified. An older review from 1999 would support the notion that religious involvement and intrinsic religious motivation are modestly associated with lower risk for depressive symptoms or disorders, while private religious activities and specific beliefs are not [23].

In contrast, a recent study enrolling primary care elders found that non-organizational, private religious involvement was associated with depressive symptoms [10]. In depressive elderly, Koenig and co-workers observed that "intrinsic religiosity was independently related to time to the remission of depressive disorders", while "church attendance and private religious activities" were not [7].

Thus, the evidence seems also to depend on the population investigated, and the respective measures, *i.e.*, religious/spiritual attitudes and practices. We thus intended to investigate whether German in-patients with either depressive and/or addictive disorders rely on this specific resource, and focused on circumscribed variables of intrinsic religiosity (*i.e.*, *Reliance on God's Help*, RGH). Here, we analyzed putative associations between patients' RGH, their depressive symptoms, life satisfaction and internal adaptive coping strategies.

# 2. Methods

## 2.1. Patients

We referred to an already existing data set of 111 patients with depressive and/or addictive disorders treated in three German clinics, *i.e.*, Oberberg Clinics Schwarzwald, Weserbergland, and Berlin/Brandenburg [24]. The private specialist emergency clinics within the Oberberg group offer comprehensive medical and psychotherapeutic treatment for individuals suffering from emotional, psychosomatic and psychiatric problems, such as addictive behavior patterns, depression, and burn-out. All subjects completed the anonym questionnaire, which did not ask for name or for initials, by themselves. The anonymous questionnaires were stored 470 km away from the clinics at the Witten/Herdecke University, and data were transferred into an electronic data pool. A later allocation of the data to concrete patients was thus impossible.

## 2.2. Measures

As a measure of intrinsic religiosity in response to illness, we used the 5-item scale *Reliance on God's Help* (RGH, Cronbach's alpha = 0.9) deriving from the AKU questionnaire (AKU is an acronym of the German translation of "adaptive coping with disease") [14,25]. The items address unconditional trust ("Whatever may happen, I trust in a higher power which carries me through"), awaiting belief ("I have strong belief that God will help me."), faith as a resource ("My faith is a strong hold, even in hard times"), an actional component ("I pray to become healthy again."), and a behavioral component ("I try to live in accordance with my religious convictions."). The specific term

'God' was just one time. The RGH items were scored on a 5-point scale from disagreement to agreement (0 - does not apply at all; 1 - does not truly apply; 2 - don't know (neither yes nor no); 3 - applies quite a bit; 4 - applies very much). All scores were transformed to a 100% level. Scores >60 indicate agreement, interest or usage, while scores <40 represent disagreement or disinterest; scores between 40 and 60 indicate indecisiveness (neither yes nor no).

To assess psychiatric symptoms, we used the German version of Beck's Depression Inventory (BDI), a self-report instrument intended to assess the existence and severity of symptoms of depression [26–28], and the 3-item scale *Escape from Illness* as an indicator of a depressive avoidance-escape strategy to deal with illness [14,24]. The Escape items were scored on a 5-point scale from disagreement to agreement (0 - does not apply at all; 1 - does not truly apply; 2 - don't know (neither yes nor no); 3 - applies quite a bit; 4 - applies very much). The sum scores were referred to a 100% level (transformed scale score). Scores >60% indicate positive attitudes / behaviors, while scores <40% indicate low expression of the respective attitudes / behavior; scores between 40 and 60 indicate indecisiveness (neither yes nor no).

Life satisfaction was measured with the Brief Multidimensional Life Satisfaction Scale (BMLSS) [29]. The generic 8-item instrument has a single-factor structure and addresses four main dimensions, *i.e.* intrinsic (myself, overall life), social (friendships, family life), external (work, where I live), and perspective (financial situation, future Prospects). All items were scored on a 7-point scale from dissatisfaction to satisfaction (0 - Terrible; 1 - Unhappy; 2 - Mostly dissatisfied; 3 - Mixed (about equally satisfied and dissatisfied); 4 - Mostly satisfied; 5 - Pleased; 6 - Delighted). The Life Satisfaction sum score was referred to a 100% level (transformed scale score). Scores >60% indicate high life satisfaction, while scores <40% indicate low satisfaction; scores between 40 and 60 indicate indecisiveness (about equally satisfied and dissatisfied).

The measures to assess internal adaptive coping strategies were taken from the AKU questionnaire [14,25], *i.e.*, *Positive Attitudes*, *Conscious and Healthy Way of Living* (= *Conscious Living*), and *Reappraisal: Illness as Chance* (= *Reappraisal*). *Conscious Living* and *Positive Attitudes* are highly interconnected and address active, cognitive-behavioral styles as a response to deal with illness, while *Reappraisal* refers to cognitive internal styles to cope with disease in terms of re-defining the value of illness (appraisal). The items were scored on a 5-point scale from disagreement to agreement (0 - does not apply at all; 1 - does not truly apply; 2 - don't know (neither yes nor no); 3 - applies quite a bit; 4 - applies very much). The sum scores were referred to a 100% level (transformed scale score). Scores >60% indicate positive attitudes / behaviors, while scores

<40% indicate low expression of the respective attitudes / behavior; scores between 40 and 60 indicate indecisiveness (neither yes nor no).

## 2.3. Statistical Analyses

Analyses of mean values  $\pm$  standard deviation (SD), analyses of variance, cross tabulation (Pearson's  $\chi^2$ ), correlation and regression analyses were performed with SPSS Statistics 20. We judged a significance level p < 0.01 as relevant. With respect to the correlation analyses, r > 0.5 was regarded as a strong correlation, an r between 0.3 and 0.5 as a moderate correlation, an r between 0.2 and 0.3 as a weak correlation, and r < 0.2 as no or a negligible correlation.

## 3. Results

#### 3.1. Patients

We referred to a sample of 111 individuals with a mean age of  $47.5 \pm 10.1$  years; 49% were women, 48% men, and 4% did not specify their gender. Most of them were married (44%) or were living not married with a partner (14%), 24% were living alone, and 17% were divorced. Patients with a high school education (Gymnasium) were predominating (63%), 19% had a secondary education (junior high; Realschule), 4% a secondary education (Hauptschule), and 14% other. Most had a Christian affiliation (68%), 31% none, and one individual other.

As primary diagnoses, 60% stated depressive disorders and 29% addictive disorders, while 11% did not specify (all were treated because of depressive and/or addictive disorders). The mean duration of disease was 46  $\pm$  64 months. Among the treated patients, 38.5% had BDI scores >15, and 61.5% BDI scores <15.

## 3.2. Reliance on God's Help and Depression

Gender had no significant influence on patients' RGH (F = 1.1; n.s.) or BDI scores (F = 1.9; n.s.), while patients with addictive diseases had significantly higher RGH (F = 3.6; p = 0.030) than patients with depressive (or unclear) disorders (Table 1). BDI scores were of course higher in treated patients with depressive disorders (F = 11.4; p < 0.0001).

|      | RGH                              | BDI                                                                                                                                                                                 |
|------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| mean | 45.8                             | 14.5                                                                                                                                                                                |
| SD   | 34.0                             | 10.5                                                                                                                                                                                |
|      |                                  |                                                                                                                                                                                     |
| mean | 41.2                             | 18.3                                                                                                                                                                                |
| SD   | 31.9                             | 10.5                                                                                                                                                                                |
| mean | 59.3                             | 8.8                                                                                                                                                                                 |
| SD   | 37.1                             | 9.0                                                                                                                                                                                 |
| mean | 36.9                             | 9.9                                                                                                                                                                                 |
| SD   | 29.8                             | 4.3                                                                                                                                                                                 |
|      | mean<br>SD<br>mean<br>SD<br>mean | mean         45.8           SD         34.0           mean         41.2           SD         31.9           mean         59.3           SD         37.1           mean         36.9 |

Table 1. Reliance on God's Help (RGH) and depression scores.

|              |      | <i></i> |          |
|--------------|------|---------|----------|
| F value      |      | 3.6     | 11.4     |
| p value      |      | 0.030   | < 0.0001 |
| Gender       |      |         |          |
| Women        | mean | 41.6    | 16.0     |
| w onnen      | SD   | 35.6    | 11.2     |
|              | mean | 48.6    | 13.1     |
| men          | SD   | 32.6    | 9.5      |
| F value      |      | 1.1     | 1.9      |
| p value      |      | n.s.    | n.s.     |
| Denomination |      |         |          |
| Christian    | mean | 57.5    | 12.2     |
| Christian    | SD   | 32.1    | 8.8      |
| Nono         | mean | 20.4    | 18.5     |
| None         | SD   | 23.6    | 11.6     |
| F value      |      | 18.2    | 7.5      |
| p value      |      | <0.0001 | 0.001    |

 Table 1. Cont.

Patients with no religious denomination showed significantly higher BDI scores than those with a Christian denomination (Table 1). However, this does not necessarily mean that a Christian affiliation may attenuate depressive symptoms—these patients were treated in hospital because of their depressive and/or addictive disorders. Moreover, although 77% of patients with addictive disorders (and 75% of patients with unspecified disorders) have a Christian affiliation, as compared to 63% of patients with depressive disorders, these differences are statistically not significant (p = 0.32;  $\chi^2$ ).

## 3.3. Correlation and Regression Analyses

Correlation analyses revealed that the RGH sum scores were not significantly associated with the BDI scores, instead, weakly (negative) with *Escape from Illness* and weakly (positive) with life satisfaction. Moreover, there was a moderate and significant (p < 0.001) correlation with *Reappraisal* and *Conscious Living* (Table 2). These positive associations were mainly due to the underlying attitude that "faith is a strong hold even in hard times" (a37) and the "strong belief that God will help" (a36) (Table 2). Nevertheless, none of the underlying RGH items correlated significantly with depressive symptoms (Table 2).

Interestingly, *Conscious Living* correlated best with the statement "Whatever may happen, I trust in a higher power which carries me through" (a35).

|                     | BDI Score | Escape    | Life<br>Satisfaction | Conscious<br>Living | Reappraisal:<br>Illness as<br>Chance |
|---------------------|-----------|-----------|----------------------|---------------------|--------------------------------------|
| Mental health       |           |           |                      |                     |                                      |
| Depressive Symptoms | 1         |           |                      | -0.393 **           | 0.045                                |
| Escape              | 0.562 **  | 1         |                      | -0.368 **           | -0.133                               |
| Life Satisfaction   | -0.641 ** | -0.551 ** | 1                    | 0.425 **            | 0.015                                |

|  | Table 2. | Correlation | analyses. |
|--|----------|-------------|-----------|
|--|----------|-------------|-----------|

| Adaptive Coping                                                                   |           |           |          |          |          |
|-----------------------------------------------------------------------------------|-----------|-----------|----------|----------|----------|
| Positive Attitudes                                                                | -0.360 ** | -0.473 ** | 0.462 ** | 0.721 ** | 0.359 ** |
| Conscious Living                                                                  | -0.393 ** | -0.368 ** | 0.425 ** | 1        |          |
| <b>Reliance on God's help – Items</b>                                             |           |           |          |          |          |
| RGH – Sum score                                                                   | -0.127    | -0.210 *  | 0.240 *  | 0.400 ** | 0.444 ** |
| a35 Whatever may happen, I trust in<br>a higher power which carries me<br>through | -0.112    | -0.243 *  | 0.208    | 0.452 ** | 0.389 ** |
| a36 I have strong belief that God<br>will help me                                 | -0.193    | -0.235 *  | 0.250 ** | 0.345 ** | 0.419 ** |
| a37 My faith is a strong hold even in hard times                                  | -0.140    | -0.223 *  | 0.256 ** | 0.363 ** | 0.442 ** |
| a38 I pray to become healthy again                                                | -0.050    | -0.096    | 0.179    | 0.303 ** | 0.409 ** |
| a39 I try to live in accordance with<br>my religious convictions                  | -0.031    | -0.089    | 0.149    | 0.318 ** | 0.354 ** |

Table 2. Cont.

\*\* p < 0.001; \* p < 0.05 (Pearson).

As shown in Table 3, although patients with high RGH had somewhat lower depressive symptoms and *Escape* scores than those with intermediate (scores between 40 and 60) or low RGH (scores < 40), these differences are statistically not significant. Similarly, while *Escape* was low in those with high RGH (scores > 60), those with low (scores < 40) or intermediate (scores between 40 and 60) RGH scores had moderate *Escape* scores indicating indecisiveness (Table 3); here, the results differed just in trend (p = 0.073). In line with these findings, the high RGH scorer had higher life satisfaction than those with low RGH (p = 0.053). However, the RGH groups differed significant with respect to adaptive coping strategies, *i.e.*, those with high RGH had the highest mean values for *Positive Attitudes*, *Conscious Living*, and *Reappraisal: Illness as Chance* as compared to those with low or intermediate RGH scores (Table 3).

Patients with BDI scores > 15 (indicating depression) or < 15 did not significantly differ with respect to RGH (F = 1.5; n.s.) or *Reappraisal* (F = 0.0; n.s.) (data not shown).

| Reliance on God's       | Depression | Life Escape |        | Positive     | Conscious | Illness as |         |
|-------------------------|------------|-------------|--------|--------------|-----------|------------|---------|
|                         | neip       | Depression  | Escape | Satisfaction | Attitudes | Living     | Chance  |
| RGH Score < 40          | Mean       | 16.1        | 51.6   | 58.3         | 68.0      | 62.0       | 51.0    |
| (n = 46)                | SD         | 10.2        | 31.1   | 19.6         | 18.1      | 20.1       | 26.3    |
| RGH Score 40–60         | Mean       | 15.1        | 52.9   | 62.4         | 67.8      | 69.6       | 61.7    |
| (n = 23)                | SD         | 12.3        | 23.1   | 22.2         | 15.4      | 20.3       | 17.1    |
| RGH Score > 60          | Mean       | 12.7        | 39.8   | 68.7         | 78.3      | 77.9       | 70.7    |
| (n = 41)                | SD         | 9.7         | 23.3   | 18.0         | 13.4      | 15.8       | 18.6    |
| RGH score all           | Mean       | 14.6        | 47.5   | 63.03        | 71.8      | 69.5       | 60.6    |
| individuals $(n = 110)$ | SD         | 10.5        | 27.2   | 20.0         | 16.6      | 19.8       | 23.4    |
| F value                 |            | 1.1         | 2.7    | 3.0          | 5.5       | 7.9        | 8.9     |
| p value                 |            | n.s.        | 0.073  | 0.053        | 0.006     | 0.001      | <0.0001 |

Table 3. Intensity of RGH and psychological variables / attitudes.

Regression analyses (Table 4) indicated that only patients' *Reappraisal* attitude, and in trend also *Conscious living*, had an influence on RGH, but neither the socio-demographic variables (*i.e.*, gender, age or the educational level) nor the underlying disease or the BDI scores ( $R^2 = 0.22$ ).

| Dependent variable:                              |        |        | Collinearity Statistics |           |       |
|--------------------------------------------------|--------|--------|-------------------------|-----------|-------|
| Reliance on God's Help (low, intermediate, high) | Beta   | Т      | р                       | Tolerance | VIF   |
| (constant)                                       |        | -0.730 | 0.468                   |           |       |
| Female gender                                    | 0.014  | 0.139  | 0.890                   | 0.898     | 1.114 |
| Age                                              | 0.049  | 0.431  | 0.668                   | 0.703     | 1.422 |
| Educational level                                | -0.034 | -0.338 | 0.736                   | 0.920     | 1.087 |
| Life Satisfaction                                | 0.108  | 0.780  | 0.438                   | 0.473     | 2.113 |
| Escape from Illness                              | 0.023  | 0.177  | 0.860                   | 0.525     | 1.905 |
| <b>Reappraisal: Illness as Chance</b>            | 0.356  | 3.319  | 0.001                   | 0.792     | 1.262 |
| Positive Attitudes                               | -0.133 | -0.825 | 0.411                   | 0.352     | 2.839 |
| Conscious Living                                 | 0.275  | 1.849  | 0.068                   | 0.411     | 2.432 |
| BDI Score                                        | 0.006  | 0.042  | 0.966                   | 0.427     | 2.339 |
| Underlying disease: Depression                   | -0.047 | -0.429 | 0.669                   | 0.748     | 1.337 |

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# 4. Discussion

In German in-patients we found that patients with addictive disorders had significantly higher RGH than patients with depressive disorders; their mean RGH scores would rather indicate that this resource was of lower relevance to them. Whether patients have high or low RGH, their BDI scores did not significantly differ. Similarly, patients with either high or low BDI scores did not significantly differ with respect to their RGH.

The RGH scale addresses patients' trust in a higher helping power, an awaiting belief that "God will help", that faith is used as a resource "even in hard times", and involves a actional ("praying to become healthy again") and a behavioral component aiming to "live in accordance with my religious convictions". Patients' mean RGH scores showed a large variability which is not simply due to gender effects, or could be fully explained by patients' religious denomination or an underlying depressive disease.

In healthy individuals within their 60<sup>th</sup> years of age, we observed RGH scores of  $53 \pm 35$ , in patients with chronic diseases (and similar age) RGH scores of  $53 \pm 34$ , and in patients with cancer (and similar age) RGH scores of  $59 \pm 34$  [20]. Thus, the RGH scores observed in the younger patients investigated herein are obviously lower ( $46 \pm 34$ ) and may indicate that intrinsic religiosity is not a strong resource to them, at least for patients with depressive disorders. On the other hand, those patients with high RGH had in trend lower *Escape from Illness* (which is a depressive escape-avoidance strategy), higher life satisfaction, and higher internal coping strategies (*i.e.*, *Reappraisal: Illness as a Chance*, which describes the ability to view illness as a chance to reflect and to change attitudes and behavior, and *Conscious Living* and *Positive Attitudes*). This means, although patients may suffer from their depressive/addictive symptoms, they seem to have access to positive (internal) strategies to cope—particularly those with high RGH.

A crucial point in the treatment of patients with depressive states is their motivation and how they may use their specific beliefs to deal with illness [30]. In case of patients with depressive states investigated herein, one may assume at least two relevant aspects to explain the findings: (1) a generally low interest in institutional religiosity found in Germany (*i.e.*, 40–50% of German patients with chronic diseases do not regard themselves as religious [15,17], and (2) low abilities and/or motivation to use spirituality as a resource because of their depressive state (in fact, they are in-patients with already diagnosed depressive disorders). So far we have not evidence that their intrinsic religiosity may or may not have influenced the development of their depressive and/or addictive problems.

It would be of importance to analyze these associations not only in Christian societies, but also in other religious traditions. Data from other societies which would fit to our findings came from North India. The authors reported that patients with either high or low religiosity did not significantly differ with respect to depression as measured with the BDI, Hamilton Depression Rating Scale and Beck Hopelessness Scale [31]. Also in Polish individuals (which are almost all Christians), depressive and non-depressive subgroups did not differ with respect to their religious engagement [32]. Moreover, Pokorski & Warzecha stated that "religiosity failed to influence the intensity of depressive symptoms or the strategy of coping with stress in either subgroup, although a trend was noted for better health expectations with increasing religious engagement in depressive subjects" [32]. A study from Switzerland investigating the relationship between psychopathology and religious commitment in psychiatric patients and healthy subjects found that there were no correlations between neuroticism and religiosity, while religious commitment was positively associated with life satisfaction [33]. Pfeifer & Waelti concluded that it "is not their personal religious commitment but their underlying psychopathology" [33].

These findings may support our results enrolling German patients. The note that better health expectations were found in patients with higher religious engagement could fit to our results that higher RGH was associated with higher scores for internal adaptive coping strategies. Nevertheless, these data are in contrast with findings from the USA. A recent study enrolling psychiatric individuals found that "less severe depression was related to more frequent worship attendance, less religiousness, and having had a born-again experience" [34]. The crucial point is that in secular societies particularly worship attendance is of low relevance at all [35] and that "born-again experiences" are rarely found in conventional populations. Moreover, one could also argue that patients within severe depressive states are not able to see "some light" (religion) within their "darkness" (depression), while patients with mild depression may have an easier access to this resource.

An important statement came from Miller and co-workers [36] who followed longitudinally adult offsprings of depressed and non-depressed parents. Their major finding was that self-reported importance of spirituality/religiosity had a "protective effect against recurrence of depression, particularly in adults with a history of parental depression", while neither religious attendance nor denomination had a significant predictive effect [36]. This means, the importance a person may ascribe to its spiritual attitude could be of relevance. It is obviously not regular church attendance which is preventing depression, but it could be that the intrinsic attitude to value the own spirituality as a resource to deal with life concerns and illness is the crucial variable—and this attitude, particularly when it is strong, can be associated in those with strong religious beliefs with church attendance and praying too.

However, this attitude cannot be prescribed; whether spirituality/religiosity can be used as a reliable resource is depending on the individuals' (positive or negative) experience, their expectations, and of course their world-view. It was of importance that particularly the patients' ability to view illness as a

'chance' to reflect and change attitudes and behavior was associated with intrinsic religiosity. Similar findings were observed in patients with cancer [37] and chronic pain conditions [17]. This unique point of view could be fostered during treatment of patients with depressive and/or addictive disorders, and patients' spirituality (either religious or secular) could be a supporting resource. Moreover, because 'punishment / guilt' and 'weakness / failure' were not associated with intrinsic religiosity [17], there is a rationale that less strict and fundamental religious views might be appropriate to support patients' struggle with disease and relapse.

#### **5.** Conclusions

Although RGH was significantly higher in patients with addictive disorders than in patients with depressive disorders, patients' depressive symptoms were not significantly associated with their intrinsic religiosity. Nevertheless, particularly those patients with high intrinsic religiosity seem to have stronger access to positive (internal) strategies to cope, and higher life satisfaction. This beneficial attitude cannot be prescribed; whether spirituality/religiosity is used by the patients in times of need as a reliable resource is depending on their individual experience in live, their expectations, and specific world-view.

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## **Competing Interests**

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