The Psychological Outcome of Religious Coping with Stressful Life Events in a Swiss Sample of Church Attendees

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Introduction

A positive relationship between religiousness/spirituality (R/S) and mental health has been affirmed in numerous studies [1] . Currently, a burgeoning field of research, mainly conducted in the United States, aims to examine the relationship between R/S and psychological adjustment to stress. Quantitative studies into R/S and adjustment to stress (from daily life stress to traumatic events) have yielded mixed results, but tend to show a
buffering influence of R/S on negative consequences of stress on mental health and support the notion that R/S paves the way to posttraumatic growth.
It is suggested that this relationship is mediated by religious coping, i.e. the way in which patients actually draw on religion in a situation of crisis. Religious coping has been conceptualized as encompassing positive and negative religious coping styles. Examples of positive religious coping are attempts to find meaning, control,

comfort, closeness to God and to achieve a life transformation. Negative religious coping challenges these positive answers to stressful life events showing, for example, punishing reappraisal (the feeling God is punishing the person for their sins) or spiritual discontent. In this respect, positive religious coping strategies were found to be beneficial, whereas negative religious coping resulted in poorer psychological adjustment to stress [2–4] . We were interested in both the positive and negative consequences of R/S for psychological health following stressful life events, and analyzed associations of dispositional religiousness, religious coping and psychological outcome variables in a Swiss sample of church attendees in the aftermath of stressful events. In addition, for detailed information about the impact of differing stressful life events, we conducted separate analyses for the subgroups bereavement, social conflict, serious disease or physical trauma, and other stressful events. Although Americans are generally more involved in religious life [5] than the Swiss, we hypothesized that R/S and religious coping would also have a marked impact on adjusting to stressful life events in our Swiss sample of church attendees.

Method

Participants

A total of 1,500 self-assessment questionnaires were given to intermediaries. A segment of 610 questionnaires was handed out to counselors, pastors and ministers of Catholic (180), Protestant (60) and evangelical (370) denominations. A further 500 questionnaires were delivered to a catechetical facility, and the distribution of 390 questionnaires remained the responsibility of one of the authors U.W.). The distribution list, personal communication with the head of the catechetical facility and his own practice led U.W. to estimate that the questionnaire distribution was 730 (49%) to Catholics, 400 (27%) to Protestants and 370 (24%) to evangelicals. The intermediaries handed out the questionnaires to potentially troubled churchgoers, as well as to persons in need of support or help, and recommended participation in cases where a stressful life event had been experienced. Potential participants were asked at the beginning of the questionnaire if they considered themselves to have experienced a stressful life event within the last 3 years. With this set-up, 397 questionnaires were returned; 328 questionnaires were eligible and completed sufficiently for inclusion in all further analyses. Response rates of participants from the various religious denominations were similar: 20.1% for Catholics; 21.2% for Protestants and 22.1% for evangelicals. In our final sample of 328 participants, 243 (74.1%) were female; 85 (25.9%) were male. The mean age was 44.5 years (SD = 13.4, range = 19–85); 60.7% were married, 26.2% were single, 9.4% were divorced and 3.4% were widowed (missing martial status 0.3%). Concerning employment, 32.6% of participants were housekeepers, 23.2% nonexecutive employees, 18.9% executive employees, 10.1% students, 9.7% self-employed and 5.2% retirees (missing occupational status, 0.3%). Among all participants, 95.7% were Christians (44.8% Catholic, 25.9% Protestant, 25.0% evangelical free church), the remaining 4.3% of the sample were help-seekers of other religious denominations recruited by the catechetical facility. Pastoral experience of church services suggests that this sample, in particular the majority of women, is typical of Swiss churchgoers as a whole and of help-seekers in religious facilities. Of the 4 different categories of stressful life events, social conflicts were most often reported (32.6%), followed by serious disease or physical trauma (21.0%) and bereavement (15.9%). Social conflicts encompassed family crises (13.7%), separation/divorce (7.0%), conflicts with friends (4.9%), conflicts at workplace (4.9%), adultery (1.8%) and others (0.3%); serious disease or physical trauma comprised serious disease/physical injury to the own person (11.3%), serious disease in relatives (7.6%), and serious disease in a close friend (2.1%); bereavement encompassed death of a relative (6.1%), death of a close friend (4.3%), miscarriage/abortion (2.1%), death of a spouse (1.8%) and death of an own child (1.5%). Loss of job accounted for further 2.7%, financial problems for 0.9%, physical attack for 0.3% and other or unassignable stressful life events for 26.9% of the most stressful events.

Measures

Stressful life events, experienced in the 3 years prior to the study, were assessed by 17 items in 4 different categories: bereavement, social conflicts, serious disease or physical trauma, and others; these were selected from the 50 major and minor stressors comprised in the Leipzig Incidence and Psychological Stress Questionnaire (Leipziger Ereignis- und Belastungsinventar) [6] . A rating of the degree of stress on a 5-point Likert scale was requested. Religious coping was assessed by the measure of religious coping (RCOPE) [7–9] . This measure covers both the negative and the positive sides of religious/spiritual coping. Examples of positive religious coping styles are trying to find meaning (‘Tried to find a lesson from God in the event’), control (‘Worked together with God as partners’), comfort and closeness to God (‘Sought God’s love and care’) and to achieve a life transformation (‘Asked God to help me find a new purpose in life’). Negative religious coping challenges these positive answers to stressful life events. Examples are punishing reappraisal (‘Decided that God was punishing me for my sins’) or spiritual discontent (‘Wondered whether God had abandoned me’). The 3-item per sub-scale version consists of 63 questions to be answered on a 4-point Likert scale. As no validated German version of the RCOPE was available when this study was planned, the questionnaire was translated into German (U.W.) and then validated. Using confirmatory factor analysis we tested a 2-factor model designed on theoretical grounds consisting of positive and negative religious coping strategies. The fit of our proposed 2-factor model was good (n = 328; X^2 = 118.73; d.f. =n 83; p = 0.006; p (Bollen-Stine bootstrap) = 0.167, root mean square error of approximation = 0.036; Tucker-Lewis Index = 0.979) and served for further analysis. Internal consistency (Cronbach’s α) for the positive religious coping scale was α = 0.90, and for the negative religious coping scale α = 0.66. Dispositional religiousness was assessed using Huber’s Centrality Scale [10, 11] . The concept of centrality is related to the significance of religion in personality. The Centrality Scale investigates 5 religious dimensions (15 items using 5-point Likert scales). The as-

Table 1. Associations of religious coping with psychological outcome broken down by categories of religious- ness and stressful life events

	Positive religious coping			Negative religious coping		
	p	exp(1)$^{1-0}$	95% CI	p	exp(1)$^{1-0}$	95% CI
Total sample (n = 328)						
Stress-related growth	<0.01	2.68	1.52–4.71	<0.01	2.91	1.59–5.32
Well-being	0.81	0.93	0.51–1.70	0.05	0.52	0.27–0.99
Anxiety symptoms	0.51	1.18	0.72–1.95	0.02	1.94	1.10–3.39
Depressive symptoms	0.86	1.05	0.63–1.73	0.01	2.27	1.27–4.06
Highly religious subsample (n = 217)						
Stress-related growth	0.04	2.61	1.04–6.55	<0.01	3.64	1.78–7.43
Well-being	0.37	0.58	0.17–1.92	0.01	0.33	0.15–0.73
Anxiety symptoms	0.31	1.58	0.65–3.87	0.02	2.24	1.13–4.41
Depressive symptoms	0.72	0.86	0.36–2.02	0.01	2.43	1.25–4.73
Low-to-middle religious subsample (n = 111)						
Stress-related growth	0.10	2.85	0.81–10.05	0.35	1.82	0.52–6.38
Well-being	0.62	0.73	0.21–2.54	0.79	1.20	0.31–4.61
Anxiety symptoms	0.38	1.66	0.54–5.09	0.61	1.33	0.44–4.04
Depressive symptoms	0.34	1.87	0.52–6.69	0.18	2.30	0.67–7.88
Bereavement (n = 52)						
Stress-related growth	0.33	2.08	0.47–9.12	0.67	1.45	0.27–7.87
Well-being	0.12	0.20	0.03–1.52	0.01	0.12	0.03–0.52
Anxiety symptoms	0.65	1.31	0.41–4.23	0.25	2.24	0.57–8.84
Depressive symptoms	0.73	1.25	0.35–4.40	0.02	5.74	1.31–25.26
Social conflicts (n = 107)						
Stress-related growth	0.50	1.64	0.38–6.99	0.19	2.12	0.69–6.58
Well-being	0.44	1.57	0.50–4.92	0.98	0.99	0.25–3.94
Anxiety symptoms	0.61	1.23	0.56–2.70	0.13	2.22	0.78–6.30
Depressive symptoms	0.38	1.45	0.64–3.32	0.52	1.38	0.51–3.76
Disease or trauma (n = 69)						
Stress-related growth	0.01	5.62	1.55–20.40	0.10	3.14	0.82–12.07
Well-being	0.36	1.72	0.54–5.43	0.67	1.43	0.28–7.43
Anxiety symptoms	0.93	1.05	0.38–2.84	0.12	3.06	0.74–12.71
Depressive symptoms	0.55	0.74	0.28–1.99	0.31	1.96	0.54–7.20
Other stressful life events (n = 49)						
Stress-related growth	0 07	7.77	0.84–71.51	0.09	4.80	0.80–28.84
Well-being	0.60	1.39	0.41–4.77	0.68	0.77	0.21–2.74
Anxiety symptoms	0.63	1.37	0.38–4.93	0.54	0.67	0.19–2.42
Depressive symptoms	0.96	1.03	0.31–3.43	0.78	0.84	0.24–2.93

sessment of these dimensions is exemplified as follows: intellectual: 'How interested are you in learning more about religious ques- tions?'; ideological: 'In your opinion, how probable is it that there is life after death?'; devotional: 'How important is personal prayer for you?'; experiential: 'How often do you experience situations where you have the feeling that God wants to tell you something?'; public religious practice: 'How important is it to you to take part in religious services?' [12]. The total score of 60 can be divided into 3 categories: high (45–60), middle (16–44) and low (0–15) religious- ness. The Centrality Scale has been used since 1999, and the 15- item version has been validated in 8 studies and showed an internal consistency with Cronbach's a between $a = 0.92$ and 0.96 [13].

Outcome Measures

To assess stress-related growth we used the German translation of the 15-item short version of the Stress-Related Growth Scale (SRGS) [14, 15]. The SRGS is a uni-dimensional measure. Three-point Likert scales are used and higher values mark greater stress-related growth. The SRGS global score of the German version showed a very good internal consistency (Cronbach's $a = 0.94$), and a 2-week test-retest reliability of r = 0.81.

The Marburg questionnaire [16], a 7-item scale (6-point Likert scales), was used to examine well-being. In studies with chronic pain patients, the scale demonstrated a very satisfactory internal consistency, with Cronbach's $a = 0.91$, and a retest-reliability after

an interval of eight weeks of r_{tt} = 0.81. The scale has 1 factor ac- counting for 65% of the scale scores' variance. The 1-factor structure demonstrated good replicability [17]. General distress was assessed using the Brief Symptom Inventory [18, 19]. This instrument evaluates 9 symptom domains. The dimensions of anxiety and depression, each measured with 6 items on 5-point Likert scales, were used in our study. The Brief Symptom Inventory has norms for healthy adults in the United States and in Germany [18, 19].

Statistical Analysis

We used multiple imputation for missing data on the item level. Multiple imputation is a Monte Carlo technique in which the missing values of incomplete data sets are replaced by simulated versions [20]. We imputed the raw data set 25 times to create complete data sets. As we had a low variability of responses, we dichotomized negative and positive religious coping. The outcome variables were also dichotomized. Logistic regression models were used to examine associations of both positive and negative religious coping with psychological outcome variables, i.e. depressive symptoms, anxiety and subjective well-being. According to the dichotomization, the odds were calculated as follows: odds (Y (=outcome variable) = 1|E (=event) = 1 (i.e. positive/negative coping = yes))/odds (Y (=outcome variable) = 1|E (=event) = 0 (i.e. positive/negative coping = no)) = exp(β) (=exponent regression coefficient positive/negative coping). An exception was made for the outcome variable stress-related growth. With the exception of the 'bereavement' and 'social conflict' subsamples, this outcome variable was used as ordinal response variable. The cumulative logit model is suitable for the analysis of ordinal response data [21]. In this case, the odds were calculated as follows: odds (Y $\geq$ k (i.e. outcome $\geq$ 4 (=very much)|positive/negative coping = 1 (i.e. positive/negative coping = yes)/odds (Y $\geq$ k (i.e. outcome $\geq$ 4 (=very much)|positive/negative coping = 0) = [exp (=exponent (β)] $^{1\text{-}10}$ = exp (=exponent) (β). We included the subjective appraisal of distress in our model to check for the effect of the stressful event as an important con- founding factor. The results from our 5-point Likert scale rating of distress were regrouped into 4 categories: not at all (0), low (1 and 2), moderate (3) and severe (4 and 5). We performed separate logit analyses using each psychological outcome measure as the dependent variable and positive or negative religious coping as the independent variables. For each of the 4 dependent variables, 3 hypotheses were tested. Firstly, we examined the whole sample with respect to effects of positive or negative religious coping on psychological outcome. Secondly, we investigated the 'high religious' and 'low-to-middle religious' subsamples to illustrate similarities and differences of religious coping on psychological outcome between the sub- groups and in comparison to the total sample. Group differences between high religious and low/middle religious participants considering the use of positive or negative religious coping strategies were analyzed with nonparametric Mann-Whitney tests. Thirdly, we conducted the same analyses in subsamples with respect to the most stressful event, i.e. subsamples of bereavement, social conflict, serious disease or physical trauma and other events. Concerning the subsamples of the most stressful life events, their stratification was done by the confounders. Therefore, when conducting the analyses in subsamples with respect to the most stressful events, we did not include the subjective appraisal of distress in our models. The significance level for all statistical tests was set at p = 0.05.

Results

Mean centrality [10,11], the significance of religion in personality, was 43.03 ± 12.58 (mean ± SD, range 6-60), indicating middle to high religiousness. Positive religious coping [7-9] (2.61 ± 0.77, range 1-4) was often mentioned when asked for religious methods to cope with stressful life events. By contrast, negative religious coping (1.29 ± 0.42, range 1-4) was rarely used. Highly religious participants used positive (U = 2, 743.5, p<0.001) as well as negative (U=10, 712.0, p=0.028) coping strategies more often than low-to-middle religious subjects. The psychological outcome variables scores were as follows; personal growth [14, 15] (1.10 ± 0.45, range 0-2), well-being [16] (4.27 ± 1.05, range 1-6), anxiety [18, 19] (0.60 ± 0.56, range 0-3.33), and depressive symptoms (0.52 ± 0.61, range 0-2.83). In the total sample, positive religious coping was significantly associated with stress-related growth. By contrast, negative religious coping correlated significantly with lower subjective well-being, more depressive and anxiety symptoms, but also showed a significant association with stress-related growth. In highly religious participants, positive religious coping again showed an association with stress-related growth, but was once more unrelated to well-being, anxiety or depressive symptoms. Again, negative religious coping was positively associated with stress-related growth and anxiety and depressive symptoms, and negatively associated with subjective well-being. In our low- to-middle religious subsample, we found no significant associations with any outcome measures. Associations of positive and negative religious coping with psychological outcome variables in the total sample and the subsamples of highly religious and low-to-middle religious participants, and for subsamples of stressful life events, are presented in table 1.

Discussion

In contrast to other studies, the results of our study suggest that positive religious coping impacts only marginally on psychopathology, i.e. anxiety and depressive symptoms [4], but that it might serve as a strong promot-

er of stress-related growth, which, in turn, is consistent with previous findings [22] . Negative religious coping was associated with stress-related growth and poor psychological outcomes. This is in line with other studies, which have demonstrated that negative religious coping can be associated with stress-related growth [8] , but with negative outcomes as well [4, 23, 24] . The different categories of life events showed similar patterns of associations of positive or negative religious coping with psychological outcome. Even if bereavement and disease or physical trauma are uncontrollable events and social conflicts are highly influenceable, we suggest that in our sample the religious coping style rather than the stressful event itself influenced the association with the psychological outcome. This study has a number of limitations. Firstly, our sample consists of church attendees, whose lives may have been strongly influenced by religious values. In this group, religiousness may play an influential role to a degree that might not be representative of the general population.

Secondly, the cross-sectional design of the study warranted complex statistical methods to examine possible associations from religious coping with psychological outcome variables. A prospective follow-up study design

is certainly recommended for further research. However, our cross-sectional study allowed us to test the suitability of our instruments for further research, and enabled us to draw initial conclusions.

In summary, these preliminary results indicate that religious coping might be an important modulating factor for the psychological outcome following stressful life events. Positive effects were limited to stress-related growth, and negative religious coping seems to be strongly related to psychopathology in general. Prospective studies should be conducted to corroborate these findings.

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