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Fatalism and Depressive Symptoms: Active and Passive Forms of Fatalism Differentially Predict Depression

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Abstract

Classic fatalism is the belief that regardless of actions, events are predestined to occur (Straughan and Seow 1998). Researchers have found that fatalism is positively correlated with depression symptoms and higher endorsement of an external locus of control. Although fatalism is thought to be a unitary construct, based on the current literature, we hypothesized fatalism may take on other forms. We defined active fatalism as the belief in a predestined personal and global future, combined with the belief that one must do their part to bring this predestined future into fruition. Therefore, we predicted that active fatalism will be negatively correlated with depression symptoms, external locus of control, and negative coping skills. We recruited a sample of religious participants online ($n = 282$; 49.3% female) who completed self-report scales measuring depression symptoms, classic fatalism, active fatalism, coping skills, and locus of control. We found that while classic fatalism was significantly and positively associated with depression and negative coping, active fatalism was positively correlated with positive coping skills, and negatively correlated with depression and external locus of control. Finally, the present study found that active fatalism explained variance in both depression and anxiety symptoms above and beyond the classic form of fatalism. This confirmed our hypotheses and suggested that there may be several forms of fatalism, each differentially predicting mental health processes and outcomes. The significant positive correlation of positive coping and negative correlations of depression and external locus of control with active fatalism offer evidence in support of the notion that this form of fatalism may in fact be associated with protective mechanisms against depression. Differential assessment of these varying concepts may be appropriate for assessment and psychotherapy.

Keywords Fatalism · Locus of control · Depression · Active fatalism · Coping skills

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Relationship Between Active Fatalism and Depression

Depression is a prevalent mental health condition, affecting approximately 10–19% of people in the Western world at some point in their life (Kessler and Bromet 2013; Patten et al. 2015). Knoll and Maclennan (2017) report the lifetime prevalence rate of major depressive disorder to be 11.2% in Canada with females being 1.8 times as likely to experience major depressive disorder compared to males. In 2011 and 2012, an estimated 28.7% of adults in the USA with depressive symptoms were undiagnosed or untreated (Olfson et al. 2016). The Diagnostic and Statistical Manual 5th edition (DSM-5) defines major depressive disorder as a depressed mood or loss of interest or pleasure in daily activities for more than 2 weeks (American Psychiatric Association 2013). Unfortunately, even when successfully treated, depression may continue to negatively affect an individual's life. On average, individuals with a history of depression will have five separate depressive episodes in their lifetime (Kessler and Walters 1998). While the rate of recurrence may be debilitating, Lépine and Briley (2011) suggest that the burden of depressive disorder extends beyond the disorder itself to influence the mortality risk of the patient. In fact, the mortality risk for suicide in depressed patients is twenty times higher than the general population (Harris and Barraclough 1997). Accordingly, identifying the factors that protect against or exacerbate depression is important.

A meta-analysis by Cairns et al. (2014) identified substance abuse, dieting, negative coping strategies, and weight as modifiable risk factors and healthy diet and sleep as modifiable protective factors for the development of depression in adolescence. Several researchers have also sought to examine the relationship between religiosity and depression, with some finding that religiosity functions as a protective factor (Miller et al. 1997, 2012; Miller and Gur 2002; Ronneberg et al. 2014), while others suggest a more complex relationship (Hackney and Sanders 2003; Strawbridge et al. 1998), as some aspects of religion appear to exacerbate the disorder and its symptoms.

Fatalism is a closely related construct to religiosity. Fatalism is the belief that regardless of intentions or behaviors, events in life are predestined to occur (Straughan and Seow 1998). To date, relatively little research has focused on the potential risk or benefit of religious fatalism for depression. Fatalism is typically presented to be a passive and potentially harmful construct (Espinosa de los Monteros and Gallo 2011; Farmer et al. 2007; Powe et al. 2005; Smith-Howell et al. 2011). However, recent research suggests the need for a multifaceted understanding of fatalism (Flórez et al. 2009; Harandy et al. 2010; Morgan et al. 2008). The authors use classic fatalism and passive fatalism interchangeably as the classic form of fatalism is typically viewed as passive. However, the authors would like to submit that at least two forms of fatalism may exist. Active fatalism may be described as fatalism that includes an element of individual agency. In the present study, we empirically investigated the complex relationships between depression, fatalism, locus of control, and coping skills.

Link Between Religion/Religiosity and Depression

Research on religiosity and its effects on depression are mixed. McCullough and Larson (1999) found that individuals who were frequently involved in organized religion and valued their religious faith for intrinsic reasons were at a reduced risk of depressive disorder and symptoms, recovered more quickly from depressive episodes, and were less likely to become depressed over time. Furthermore, Barton et al. (2013) reported that frequent religious attendance may protect against major depression independent from the effects of social adjustment. Levin (2010) suggested that the weight of evidence in research on religion and mental health supports the notion that religion is a protective factor against mental illness.

Despite such research pointing to the protective effects of religiosity on depression, other researchers have argued for a more nuanced relationship between the variables. For example, Schafer (1997) suggested a complicated relationship between religion and mental health in which an individual's rating of the importance of religion had a positive association with personal mental distress, belief in the existence of God a curvilinear relationship with distress, and having a sense of meaning and direction an inverse association with distress. Strawbridge et al. (1998) provided further support in favor of the complex relationship between religiosity and depression, as their data indicated that religiosity buffered the effects of non-family stressors but exacerbated depression for individuals experiencing family stressors. In a meta-analysis, Hackney and Sanders (2003) found that differing definitions of religiosity and psychological adjustment only partially explain the contradictory findings of the relationship between religiosity and mental health. As a whole, it seems that religiosity may be protective against depression; however, some aspects of religion and religiosity appear to intensify the disorder and its symptoms.

Fatalism, Religiosity, and Depression

Belief in divine control, as an external locus of control, is conceptualized as a fundamental element of fatalism (Morgan et al. 2008). An adoption of an external locus of control and employment of dysfunctional coping strategies are inherent in fatalism, and so classic fatalism has been found to associate with depression (Craig et al. 2017; Samani et al. 2017, Yu and Fan 2016). Locus of control refers to the extent an individual attributes personal influence over life events, whether an outcome is independent or contingent on their own behavior (Rotter 1966). Individuals with an internal locus of control believe that events are contingent on their behavior, attitude, or attributes. On the other hand, individuals with an external locus of control believe that events occur due to luck, chance, fate, or other external events or sources (Rotter 1966).

In addition to an external locus of control, dysfunctional coping skills have been associated with classic fatalism. Folkman and Lazarus (1985) define coping as the "cognitive and behavioral efforts to manage (master, reduce, or tolerate) a troubled person-environment relationship" (p. 152). Roberts et al. (2000) suggested that classic fatalism increases an individual's vulnerability to depression by reducing the will

and ability to cope with overwhelming situational demands. Researchers found that fatalistic beliefs were positively linked to depression, pessimism, lower self-esteem, less social support, and more passive coping (Roberts et al. 2000). Classic fatalism has also been found to be a risk factor for hopelessness, depression, and possible suicide attempts (Spann et al. 2006). Furthermore, Gonzales et al. (2016) found fatalism served as a coping mechanism for female breast cancer survivors and was negatively associated with emotional well-being. Accordingly, fatalism has consistently been found to be positively associated with symptoms of depression.

To date, few studies have examined a multifaceted definition of fatalism. Endorsing the notion of an active counterpart to cancer fatalism, Morgan et al. (2008) termed the phrase "cancer activism" as the "strong action and motivation to overcome negative views of cancer, and to achieve the goal of addressing cancer issues." Morgan et al. (2008) posed cancer activism as the opposite of cancer fatalism in which an individual takes an active part in prevention, maintains hope, and faith supersedes fear. "Fatalistic voluntarism" is another concept arising from broader conceptualizations of fatalism. Cheng et al. (2013) investigated the role of fatalism in cancer survivorship for Chinese women. Researchers found that participants engaged in both active emotion- and problem- focused coping with survivorship while simultaneously holding a passive cognitive appraisal of cancer that integrated the notion of *Ming,* the ultimate supernatural power beyond human control. Cheng et al. note that these seemingly contradictory cognitive and behavioral coping strategies suggest a complex belief system supporting the emerging concept of "fatalistic voluntarism." Fatalistic voluntarism is described as the combination of the fatalistic acceptance of the way things are and the exertion of personal efforts to change the situation (Lee 1995, as cited by Cheng et al. 2013). Previous research has reported a strong significant correlation between fatalistic voluntarism and life happiness in a Chinese population (Liu and Mencken 2010). Even so, fatalistic voluntarism has been intrinsically tied to explorations of Chinese populations and cultural concepts, such as *Ming*. Likewise, the concept of cancer activism is narrowly associated with cancer health-seeking behaviors. Considering the gap in the current literature, it remains unclear how individual agency impacts religious fatalism and its implications to the traditional notion of passive fatalism. In turn, active and classic fatalism may have distinct implications to health and by extension, depression symptoms.

Fatalism and Health-Seeking Behaviors

Previous research regarding fatalism has focused on its influence on health-seeking behaviors. There is extensive research on cancer fatalism, a belief that death is inevitable after a cancer diagnosis (Powe and Finnie 2003). Patients with cancer fatalism are less likely to seek treatment and more likely to avoid preventative screening (Espinosa de los Monteros and Gallo 2011; Farmer et al. 2007; Powe et al. 2005; Smith-Howell et al. 2011). These studies present fatalism to be a passive and potentially harmful construct with negative connotations; however, recent research by Flórez et al. (2009) suggests that this may be too simplistic an understanding of fatalism. Contrary to expectations that Latino women would endorse a simplistic

notion of fatalism, researchers found that respondents held complex notions of locus of control that included both internal and external forces to shape their breast cancer prevention efforts. These patients held beliefs of a role of the divine in shaping their life alongside the belief that their cancer outcome could be changed by their own actions and the actions of medical professionals. Similar results were reported by Harandy et al. (2010) in a group of Iranian breast cancer patients that were religiously fatalistic but actively engaged in medical treatment. Due to these contradictory findings on the impact of fatalism for health-seeking behaviors, we believe that there may be several forms of fatalism. Classic fatalism may be viewed as a cognitive disposition that does not empower an individual to cope with life's adversities. For example, cancer fatalism may be viewed as a passive form of fatalism. Arguably, an active form of fatalism may exist, which is different from classic or passive fatalism. Active fatalism may be described as fatalism that includes an element of individual agency with the opportunity for an individual to actively impact their future. Active fatalism encompasses a combination coping strategy in which an individual accepts their situation and is resilient rather than hopeless about the outcome.

Present Study

The present study examined whether different forms of fatalism, passive and active, exist and their relation to factors associated with depression. It was theorized that passive fatalism and active fatalism exist on a continuum with opposite associations with locus of control, coping skills, and depression. Therefore, we hypothesized that active fatalism would be negatively correlated with an external locus of control, depression, and negative coping skills. The construct of passive fatalism most closely aligns with the classic construct of fatalism. Consequently, we hypothesized that passive fatalism would be positively associated with external locus of control, depression, and negative coping skills, as consistent with the previous literature on fatalism. The present study sought to provide empirical evidence supporting the concept of active fatalism and to clarify its relationship with depression.

Methods

Participants and Procedure

We recruited 427 participants from English-speaking countries (i.e., Australia, Canada, New Zealand, UK, and USA) through the online crowdsourcing platform, CrowdFlower. Of these, 282 participants identified as religious, and so, given the nature of the questions asked in this investigation, only this subset of religious participants were retained in our analyses. CrowdFlower is an online, crowdsourcing platform that has been used extensively in psychology research (Beshai et al. 2017; King et al. 2018). Participants were provided with a link to the study hosted on Qualtrics, which is an Internet-based data collection platform for presenting questionnaires and surveys. After providing their consent, participants completed a series

of measures in randomized order (a) demographic information (a summary of pertinent demographics is presented in Table 1), (b) a measure of depression symptoms (Depression, Anxiety and Stress Scale), (c) a measure of the locus of control (Rotter's Scale of Locus of Control), (d) a measure of passive fatalism (Fatalism Scale),

Table 1 Demographic characteristics of the entire participant sample

Characteristic	($N=282$)	*M*	SD
Age		35.68	12.30
Gender			
Female	$n=139$ (49.30%)		
Male	$n=142$ (50.40%)		
Gender neutral	$n=1$ (.40%)		
Ethnicity			
Caucasian/White	$n=229$ (81.20%)		
Asian	$n=15$ (5.30%)		
Aboriginal	$n=2$ (.70%)		
Black	$n=21$ (7.40%)		
Other	$n=15$ (5.30%)		
Marital status			
Single, never married	$n=128$ (45.40%)		
Married	$n=132$ (46.80%)		
Separated/divorced	$n=19$ (6.70%)		
Widowed	$n=3$ (1.10%)		
Religion or belief system			
Christianity	$n=260$ (92.20%)		
Islam	$n=12$ (4.30%)		
Judaism	$n=6$ (2.10%)		
Buddhism	$n=4$ (1.40%)		
Spirituality/religiosity			
Spiritual	$n=106$ (37.60%)		
Religious	$n=176$ (62.40%)		
AF		19.19	7.95
NCoping		14.80	4.45
PCoping		38.21	8.12
Fatalism		7.62	4.61
Depression		13.12	5.00
Anxiety		12.39	4.65
Stress		14.65	4.29
LOC		11.72	3.87

AF = active fatalism; NCoping = negative coping; PCoping = positive coping; Depression = Depression Anxiety and Stress Scale—Depression Subscale; Anxiety = Depression Anxiety and Stress Scale—Anxiety Subscale; Stress = Depression Anxiety and Stress Scale—Stress Subscale; LOC = Locus of Control (higher scores are indicative of external locus of control, while lower scores are indicative of internal locus of control)

(e) a measure of general coping skills (Brief COPE), and (f) a measure of active fatalism (designed by the authors). At the end of the study, participants were given a written debriefing outlining the background and purposes of the study. This study was approved by the University of Regina's Research Ethics Board (File #2016-190). All participants were compensated $1.25 USD for completing the study tasks, which is commensurate with compensation rates for crowdsourcing studies (Chandler and Shapiro 2016).

Measures

The Depression Anxiety Stress Scales (DASS) (Wong et al. 2013) is a 21-item, self-report questionnaire designed to measure the severity of a range of depression (e.g., "I felt down-hearted and blue") and anxiety symptoms (e.g., "I was worried about situations in which I might panic and make a fool of myself"), as well as stress (e.g., "I found it hard to wind down"). DASS is sensitive and specific for detecting clinical levels of stress, anxiety, and depression (Wong et al. 2013). Each item of the DASS corresponds to one of the three subscales (depression, anxiety, and stress) with 7 items per subscale. Participants are asked to rate how often each of the provided symptoms has occurred over the past week, using a 4-point Likert scale from 0 (*never*) to 3 (*almost always*). Summed scores for each category multiplied by 2 provides the severity of those symptoms, whereby higher numbers indicate a greater degree of distress.

DASS is a suitable measure for the purposes of this study because it has clinimetric properties but can be used in non-clinical populations as well (Partkitny and McAuley 2010). Internal consistency and validity of DASS items are high, and it is best used in normative and non-clinical populations (Henry and Crawford 2005). DASS evidenced excellent validity and test–retest reliability ($r = .99$) among clinical and general population samples (Akin and Cetin 2007). Among the current sample, the DASS-21 subscales evidenced a Cronbach's alpha of $\alpha = .88$ for depression and $\alpha = .86$ for both stress and anxiety.

Rotter's LOC Scale (Ogunyemi 2013) consists of 23 pairs of questions that assess the degree of internality or externality of the respondent's LOC (e.g., "People's misfortunes result from the mistakes they make"). Participants are asked to choose one of the two statements (i.e., an external locus response and an internal locus response) that best apply to them. Scores are assigned based on a key and the sum of scores determines the LOC, where a high score corresponds to an external LOC and a low score corresponds to an internal LOC. Rotter's LOC Scale appraises controlling one's environment, control of self, influence over others, and motivation and achievement (Ogunyemi 2013) providing an overview of all major aspects of LOC.

Rotter's LOC Scale has been used in initiative-taking studies. For example, McGee (2016) used it in a job search initiative study. Rotter's LOC Scale also has good cultural and ethical sensitivity (Ogunyemi 2013), which makes it suitable for our study involving religiosity. Shapurian and Hojat (1987) found excellent test–retest reliability and construct validity of Rotter's LOC Scale. Among the current sample, the Rotter's LOC Scale evidenced a Cronbach's alpha of $\alpha = .57$.

Fatalism Scale (Shen et al. 2009) is a 20-item scale that encompasses the dimensions of predetermination (e.g., "If someone is meant to get a serious disease, they will get it no matter what they do"), pessimism (e.g., "There is really no way I can solve some of the problems I have"), and luck (e.g., "I will get diseases if I am unlucky"). Participants were asked to respond on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly disagree*). Higher scores correspond to higher fatalistic cognitions (Shen et al. 2009).

Compared with other fatalism scales like the Powe Fatalism Inventory, Fatalism Scale is less culturally bound to North America (Shen et al. 2009). The Fatalism Scale includes the dimension of pessimism, which is an important construct of classic or passive fatalism. Shen et al. (2009) found that the Fatalism Scale possessed excellent reliability and the validity coefficients. Among the current sample, the Fatalism Scale evidenced a Cronbach's alpha of $\alpha = .82$.

Brief COPE (Cooper et al. 2008) is comprised of subscales (rating questionnaire) that measure the use of coping strategies such as emotion focused (e.g., "I've been getting emotional support from others"), problem focused (e.g., "I've been concentrating my efforts on doing something about the situation I'm in"), and dysfunctional coping (e.g., "I've been using alcohol or other drugs to help me get through it"). Brief COPE consists of 28 items that the participants are asked to rate on a 4-point Likert scale from 1 (*never done this*) to 4 (*always do this*). High scores for the three subsets correspond to higher tendency to use that coping skill.

Brief COPE is a valid and reliable measure of coping skills for both clinical and non-clinical populations (Cooper et al. 2008). Among the current sample, the Brief COPE evidenced a Cronbach's alpha of $\alpha = .82$ for items pertaining to positive coping and $\alpha = .68$ for items pertaining to negative coping.

Active Fatalism Scale was developed by the authors and consists of statements designed to measure participants' level of active fatalism. Accordingly, active fatalism (much like passive forms of fatalism) was conceptualized as existing on distinct continuums. There are currently no active fatalism scales in the literature, which is why we had to create one but further research is needed to validate this scale. The scale comprised a 5-point Likert scale, whereby participants were asked to rate their agreement with statements from 0 (*strongly disagree*) to 4 (*strongly agree*). An overall higher score corresponded to high active fatalism. The authors originally created and administered a 13-item scale; however, 7 items were eliminated based on best practices for exploratory factor analyses (Costello and Osborne 2005). Items were retained if they demonstrated (a) communalities of .4 and above; (b) loadings of .4 and above; and (c) loading on no more than one factor. Accordingly, we retained 6 items for the final active Fatalism Scale, which were captured by a single-factor solution.

The 6-item active Fatalism Scale assessed how people react to difficult situations. For example, participants were asked to rate their agreement with the statement "Even though everything is in God's will, I need to pray/meditate etc. if I am to improve my circumstances." Further, other items assessed any efforts that reflect an active approach to dealing with difficult circumstances, while acknowledging an ultimate celestial plan. For example, items assessed whether a person takes it upon themselves to pray to alter their circumstances (e.g., "Hard times are a test from

God, and I need to do what I can (prayer, fasting, meditation, etc.) to be ready for them"), or engage in more acts of charity or attending a religious ceremony ("Even though everything is in God's will, I need to be more righteous if I am faced with hard times"). Among the current sample, the 6-item active Fatalism Scale evidenced a Cronbach's alpha of $\alpha = .88$.

Statistical Analysis

We used SPSS 23 to analyze data collected from Qualtrics. The data were initially checked for accuracy and completeness. This preliminary check included exploring data for any missing values. There was only one participant who did not provide complete responses. This participant's data were deleted and not included in the final analyses. As mentioned, we retained a subsample of 282 participants out of 427 who self-declared to be religious. We conducted an exploratory factor analysis on the 13-item active Fatalism Scale, with principal axis factoring, and direct oblimin rotation to determine which items of the scale should be retained. After determining the final number of scale items, items were reverse-scored where appropriate, and scale totals were calculated. Our initial hypotheses were addressed using a Pearson's product–moment correlation analysis to determine the relationship between variables of interest (active fatalism, passive fatalism, locus of control, positive and negative coping skills, and depression symptoms). Pearson's product–moment correlations (r) were calculated for each of these variables, and a cutoff alpha of 0.05 was used to determine significance. Finally, to address whether passive and active fatalism scores uniquely predicted variance in depression and anxiety symptoms, two sequential regression analyses were conducted. Accordingly, passive fatalism was entered in the first block, while scores on the active Fatalism Scale were entered in the second block of the equation, and DASS Depression and Anxiety Subscale scores were used as dependent variables, respectively.

Results

Demographic variables and means and standard deviations for study measures are summarized in Table 1. A total of 282 ($M_{age} = 35.68$; SD = 12.29; 49.3% female) people were included in the final analyses. A total of 81.2% of the subsample was White and 92.2% identified as Christian. As planned, we conducted a Pearson product–moment correlation analysis on the subsample (282) of religious participants only (see Table 2). Results of this analysis revealed that passive fatalism was positively and significantly correlated with depression, $r = .30$, $p < .001$ and an external LOC, $r = .33$, $p < .001$. Further, we found that active fatalism was negatively correlated with depression symptoms (DASS—depression), $r = -.12$, $p < .001$. Further, scores on the active Fatalism Scale were also negatively and significantly correlated with external LOC, $r = -.19$, $p < .001$. Finally, active fatalism scores were positively and significantly correlated with scores on positive coping, $r = .34$, $p < .001$.

Table 2 Correlations among scale scores for the religious participant sample

	AF	NCoping	PCoping	Fatalism	Depression	Anxiety	Stress	LOC
AF	–							
NCoping	.12	–						
PCoping	.34**	.11	–					
Fatalism	.11*	.31**	− .04	–				
Depression	− .12**	.60**	− .01	.30**	–			
Anxiety	− .13*	.64**	.09	.33**	.72**	–		
Stress	− .13*	.57**	.10	.30**	.73**	.75**	–	
LOC	− .19**	.14*	− .29**	.33**	.26**	.15*	.18**	–

AF = active fatalism; NCoping = negative coping; PCoping = positive coping; Fatalism = Fatalism Scale; Depression = Depression Anxiety and Stress Scale—Depression Subscale; Anxiety = Depression Anxiety and Stress Scale—Anxiety Subscale; Stress = Depression Anxiety and Stress Scale—Stress Subscale; LOC = Locus of Control (higher scores are indicative of external locus of control, while lower scores are indicative of internal locus of control)

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

Together, these results suggest that active fatalism is associated with depression and LOC in a different manner than passive fatalism.

Results of the first sequential regression analysis (summarized in Table 3) revealed that active fatalism accounted for a significant portion of variance in DASS Depression Subscale scores, even after accounting for variance contributed by passive fatalism ($\Delta R^2 = .041$, $p < .001$). Finally, results of the second sequential regression analysis (summarized in Table 4) demonstrated that active fatalism accounted for a significant portion of variance in DASS Anxiety Subscale scores, even after controlling for variance accounted for by passive fatalism ($\Delta R^2 = .009$, $p < .05$).

Discussion

The aim of this study was to explore the possibility of multiple forms of fatalism, both active and passive, to help reveal the nature of the complexity of the relationship between religiosity and mental health. In this study, active fatalism was defined

Table 3 Active fatalism as a predictor of DASS Depression Subscale over and above passive fatalism

	B	SE	*β*	*t*
Step 1: $R = .39$, $R^2 = .152$*				
Passive fatalism	.422	.060	.390	7.08***
Step 2: $R = .41$, $\Delta R^2 = .013$*				
Active fatalism	− .071	.034	− .113	− 2.06***

DASS Depression, Anxiety, Stress Scale

*$p < .05$; **$p < 0.01$; *** $p < .001$

Table 4 Active fatalism as a predictor of DASS Anxiety Subscale over and above passive fatalism

	B	SE	*β*	*t*
Step 1: $R = .33$, $R^2 = .105$***				
Passive fatalism	.3.25	.057	.325	5.74***
Step 2: $R = .35$, $\Delta R^2 = .016$*				
Active fatalism	− .074	.033	− .127	− 2.25*

DASS Depression, Anxiety, Stress Scale

*$p < .05$; **$p < 0.01$; *** $p < .001$

as a combination coping strategy that includes an acceptance of fate/God's plan alongside belief in individual agency. The present study also investigated how this concept of active fatalism relates to constructs that are associated with passive forms of fatalism, such as external locus of control, negative coping skills, and depression. Health-oriented researchers of cancer fatalism have demonstrated that passive fatalism may be harmful to cancer treatment and preventative screening (Espinosa de los Monteros and Gallo 2011; Farmer et al. 2007; Powe et al. 2005; Smith-Howell et al. 2011); however, recent research has emphasized the need to reexamine this conception of fatalism (Flórez et al. 2009; Harandy et al. 2010; Morgan et al. 2008). The results of this study support that there may be several forms of fatalism (e.g., active and passive) that differentially predict depression and its concomitants.

Consistent with previous research, we found support for hypotheses that passive fatalism is associated with depressive symptoms, negative coping skills, and external locus of control. The results are consistent with those obtained by Roberts et al. (2000), who found fatalistic beliefs to be positively related to depression symptoms and passive coping. These researchers suggested that fatalism may reduce people's will and ability to cope with stressors. Consistent with this interpretation, Joiner et al. (2001) suggested that negative cognitive style, rather than fatalism, may be directly implicated in depression. Pargament (1997) (as cited by Elumelu et al. 2014) proposed that an individual's perception of God determines their coping style, which the author categorized as "positive" or "negative." An individual working with God to overcome hard times or illness alongside the belief in God as a loving being was defined as positive religious coping. In contrast, negative religious coping is characterized by feelings of punishment or abandonment by God and the belief that illness is a result of sin. Results from Pargament's (1997) study indicate positive religious coping to be associated with positive health outcomes, while negative religious coping may in fact increase depression and anxiety. It seems that fatalism may be related to depression by influencing coping style.

Alternatively, it is possible that rather than fatalism influencing coping style, negative coping activates fatalistic beliefs. Considering that previous research often focuses on cancer fatalism, fatalistic beliefs may be primarily activated under times of stress and negative coping. If so, passively fatalistic beliefs and its association with depression symptoms may be mitigated if habitual negative thoughts and coping are substituted with more adaptive and resilient responses. Regardless of its direction, delineating the relationship between coping styles and fatalism is

critical to understanding the mechanisms underlying its association with depressive symptoms.

The present study extends Lee's (1995) (as cited by Cheng et al. 2013) construct of "fatalistic voluntarism" by exploring a multifaceted construct of fatalism in a multicultural sample. It was hypothesized that active fatalism would be inherently different than classic fatalism, which is generally presented as passive. We hypothesized that active fatalism would be positively correlated with coping skills and negatively correlated with depression and external locus of control. This hypothesis was also supported by data in the present study. These findings support our overarching hypothesis that there may be different forms of fatalism. It is possible that fatalistic voluntarism and active fatalism represent the same latent concept; therefore, an aggregation of these constructs may be warranted.

The results of the study suggest that active fatalism is different from the classic definition of fatalism. Furthermore, the present study found that active fatalism explained variance in both depression and anxiety symptoms above and beyond passive fatalism. Given its association with positive coping, active fatalism may be an adaptive strategy that protects religious individuals against depression by granting people a sense of personal control, which has been associated with decreased risk of depression. For example, Zautra et al. (2012) found that phone-based interventions of mastery and mindfulness/acceptance techniques, which increased perceptions of control, led to improvements in depression symptoms and negative effect in an elderly sample. Yet, due to the nature of the present study, the directionality of the relationship between internal locus of control and coping skills with active fatalism cannot be ascertained. That is, it is possible that positive coping skills inherently implicate a sense of personal control in one's life. Nonetheless, these findings suggest that active fatalism may directly or indirectly buffer against depressive symptoms.

The present study contributed to the existing literature in several ways. First, this study addresses the need for multifaceted explorations of fatalism in research. Results suggest that more than one form of fatalism exists. We conceptualized active fatalism as a complex mental construct that involves an individual's belief in a supernatural power that determines their destiny while simultaneously believing that their actions, such as prayers, play a role in shaping their future in alignment with this ultimate plan. In other words, these individuals believe in predetermination while also believing that their actions can transpire alternative consequences. What is more, the data indicate that, in comparison with passive fatalism, active fatalism is negatively correlated with depression symptoms and external locus of control, and positively correlated with the use of positive coping strategies. These robust effects were examined over a large sample size. Contrasting relationships between active and classic fatalism to factors associated with depression symptoms suggest that unique forms of fatalism differentially predict mental health processes. The distinction between forms of fatalism offers a better understanding of the complex relationship of religiosity with mental health.

The role of active fatalism as a protective factor for depressive symptoms serves to provide further evidence in the debate whether religiosity is protective or harmful to mental health. The findings of the current study demonstrating active and classic

fatalism differentially predicting depression supports previous inconclusive results concerning the relationship between religiosity and depression. These results suggest that research should focus on specific aspects of religiosity, in this case fatalism, rather than religiosity as a whole to better understand complexities of this relationship.

Limitations and Future Directions

Despite the strengths outlined above, the present study also suffered from several limitations that pave the way for future research. First, the cross-sectional nature of our design does not allow inferences into the causal relationships between active fatalism, locus of control, coping styles, and depressive symptoms. Future studies should attempt to establish causality between these associated variables using longitudinal and experimental designs. What is more, the present study's community sample somewhat limits the generalizability of our results. While crowdsourced, convenience samples have been found to be more representative of the general population than university student samples, they also tend to be younger, less religious, and more liberal than the general population (Berinsky et al. 2012). Researchers have noted that these biases reflect differences between Internet and non-Internet users (Paolacci and Chandler 2014). As noted by Liu and Mencken (2010), religiosity and fatalism are in part rooted in culture. Accordingly, the scope of primarily Caucasian and Christian participants in the present sample limits the generalizability of the current study's findings. Consequently, future research investigating cross-cultural comparisons of the relationship between religious fatalism and depression is warranted. Furthermore, using an online sample limited the feasibility of utilizing gold standard diagnostic interviewing for the assessment of depression diagnoses, instead relying on self-report measures of depression. Future studies comparing individuals clinically diagnosed with depression to controls would emphasize the implications of the relationships investigated in the current study in a clinical perspective.

Additionally, the measure of active fatalism created for this study is not yet validated, beyond preliminary evaluation done in the context of this study. Further validation of this measure would support the replicability of the findings. Future studies should also consider examining the role of religious conviction in the relationship between fatalism and depression symptoms. Further, it remains unknown whether passively fatalistic individuals are simply more intense in their religious convictions compared to actively fatalistic individuals. Level of religious conviction, rather than fatalistic beliefs, may be more critical in conceptualizing the link between fatalism and depressive symptoms. Inclusion of a measure of religious conviction will serve to further delineate these relationships.

Conclusions

The present study sought to clarify the relationship between fatalism and depression by examining two different forms of the former construct. Results provide evidence in support of multiple forms of fatalism. Passive fatalism, which is aligned

with classic definitions of fatalism as a construct, was found to be positively and significantly correlated with depression, negative coping, and an external locus of control. On the other hand, active fatalism was found to be significantly and positively correlated with the use of positive coping strategies and negatively correlated with depression symptoms and external locus of control. That is, this study offers evidence that certain forms of fatalism may in fact be associated with protective mechanisms in depression. Future research will further explore this new construct of active fatalism to delineate the complex relationship between different forms of religious belief and depression, and the implications of this relationship for treatment.

References

Akin, A., & Cetin, B. (2007). The Depression Anxiety and Stress Scale (DASS): The study of validity and reliability. *Educational Sciences: Theory and Practice, 7*(1), 260–268.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.

Barton, Y. A., Miller, L., Wickramaratne, P., Gameroff, M. J., & Weissman, M. M. (2013). Religious attendance and social adjustment as protective against depression: A 10-year prospective study. *Journal of Affective Disorders, 146*(1), 53–57.

Berinsky, A. J., Huber, G. A., & Lenz, G. S. (2012). Evaluating online labor markets for experimental research: Amazon.com's Mechanical Turk. *Political Analysis, 20*(3), 351–368.

Beshai, S., Mishra, S., Meadows, T. J., Parmar, P., & Huang, V. (2017). Minding the gap: Subjective relative deprivation and depressive symptoms. *Social Science and Medicine, 173,* 18–25.

Cairns, K. E., Yap, M. B. H., Pilkington, P. D., & Jorm, A. F. (2014). Risk and protective factors for depression that adolescents can modify: A systematic review and meta-analysis of longitudinal studies. *Journal of Affective Disorders, 169,* 61–75.

Chandler, J., & Shapiro, D. (2016). Conducting clinical research using crowdsourced convenience samples. *Annual Review of Clinical Psychology, 12,* 53–81.

Cheng, H., Sit, J. W. H., Twinn, S. F., Cheng, K. K. F., & Thorne, S. (2013). Coping with breast cancer survivorship in Chinese women: The role of fatalism or fatalistic voluntarism. *Cancer Nursing, 36*(3), 236–244. https://doi.org/10.1097/NCC.0b013e31826542b2.

Cooper, C., Katona, C., & Livingston, G. (2008). Validity and reliability of the brief COPE in carers of people with dementia: The LASER-AD study. *The Journal of Nervous and Mental Disease, 196*(11), 838–843. https://doi.org/10.1097/NMD.0b013e31818b504c.

Craig, J., Miner, D., Remtulla, T., Miller, J., & Zanussi, L. (2017). Piloting a coping skills group intervention to reduce depression and anxiety symptoms in patients awaiting kidney or liver transplant. *Health and Social Work, 42*(1), E44–E52.

Costello, A. B., & Osborne, J. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research, and Evaluation, 10*(1), 7.

Elumelu, T. N., Asuzu, C. C., & Akin-Odanye, E. O. (2014). Impact of active coping, religion and acceptance on quality of life of patients with breast cancer in the department of radiotherapy, UCH, Ibadan. *BMJ supportive & palliative care*, bmjspcare-2012.

Espinosa de los Monteros, K., & Gallo, L. C. (2011). The relevance of fatalism in the study of Latinas' cancer screening behavior: A systematic review of the literature. *International Journal of Behavioral Medicine, 18*(4), 310–318.

Farmer, D., Reddick, B., D'Agostino Jr., R., & Jackson, S. A. (2007). Psychosocial correlates of mammography screening in older African American women. In *Oncology nursing forum* (Vol. 34, No. 1, p. 117). Oncology Nursing Society.

Flórez, K. R., Aguirre, A. N., Viladrich, A., Céspedes, A., De La Cruz, A. A., & Abraído-Lanza, A. F. (2009). Fatalism or destiny? A qualitative study and interpretative framework on Dominican women's breast cancer beliefs. *Journal of Immigrant and Minority Health, 11*(4), 291–301.

Folkman, S., & Lazarus, R. S. (1985). If it changes it must be a process: Study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology, 48*(1), 150.

Gonzales, F. A., Hurtado-de-Mendoza, A., Santoyo-Olsson, J., & Nápoles, A. M. (2016). Do coping strategies mediate the effects of emotional support on emotional well-being among Spanish-speaking Latina breast cancer survivors? *Psycho-Oncology, 25,* 1286–1292. https://doi.org/10.1002/pon.3953.

Hackney, C. H., & Sanders, G. S. (2003). Religiosity and mental health: A meta-analysis of recent studies. *Journal for the Scientific Study of Religion, 42*(1), 43–55.

Harandy, T. F., Ghofranipour, F., Montazeri, A., Anoosheh, M., Bazargan, M., Mohammadi, E., et al. (2010). Muslim breast cancer survivor spirituality: Coping strategy or health seeking behavior hindrance? *Health Care for Women International, 31*(1), 88–98. https://doi.org/10.1080/07399330903104516.

Harris, E. C., & Barraclough, B. (1997). Suicide as an outcome for mental disorders: A meta-analysis. *The British Journal of Psychiatry, 170*(3), 205–228.

Henry, J., & Crawford, J. (2005). The short-form version of the depression anxiety stress scales (DASS-21): Construct validity and normative data in a large non-clinical sample. *British Journal of Clinical Psychology, 44,* 227–239. https://doi.org/10.1348/014466505X29657.

Joiner, T. E., Jr., Perez, M., Wagner, K. D., Berenson, A., & Marquina, G. S. (2001). On fatalism, pessimism, and depressive symptoms among Mexican-American and other adolescents attending an obstetrics-gynecology clinic. *Behaviour Research and Therapy, 39*(8), 887–896.

Kessler, R. C., & Bromet, E. J. (2013). The epidemiology of depression across cultures. *Annual Review of Public Health, 34,* 119–138.

Kessler, R. C., & Walters, E. E. (1998). Epidemiology of DSM-III-R major depression and minor depression among adolescents and young adults in the national comorbidity survey. *Depression and Anxiety, 7*(1), 3–14.

King, N. B., Harper, S., Young, M., Berry, S. C., & Voigt, K. (2018). The impact of social and psychological consequences of disease on judgments of disease severity: An experimental study. *PLoS ONE, 13*(4), e0195338.

Knoll, A. D., & MacLennan, R. N. (2017). Prevalence and correlates of depression in Canada: Findings from the Canadian Community Health Survey. *Canadian Psychology/Psychologie Canadienne, 58*(2), 116.

Lépine, J. P., & Briley, M. (2011). The increasing burden of depression. *Neuropsychiatric Disease and Treatment, 7*(Suppl 1), 3.

Levin, J. (2010). Religion and mental health: Theory and research. *International Journal of Applied Psychoanalytic Studies, 7,* 102–115. https://doi.org/10.1002/aps.240.

Liu, E. Y., & Mencken, F. C. (2010). Fatalistic voluntarism and life happiness in post-socialist china. *Sociological Spectrum, 30*(3), 270–288. https://doi.org/10.1080/02732171003635455.

McCullough, M. E., & Larson, D. B. (1999). Religion and depression: A review of the literature. *Twin Research and Human Genetics, 2*(2), 126–136.

McGee, S. (2016). *Evidence-based physical diagnosis E-book*. Elsevier Health Sciences.

Miller, L., & Gur, M. (2002). Religiosity, depression, and physical maturation in adolescent girls. *Journal of the American Academy of Child and Adolescent Psychiatry, 41*(2), 206–214.

Miller, L., Warner, V., Wickramaratne, P., & Weissman, M. (1997). Religiosity and depression: Ten-year follow-up of depressed mothers and offspring. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*(10), 1416–1425.

Miller, L., Wickramaratne, P., Gameroff, M. J., Sage, M., Tenke, C. E., & Weissman, M. M. (2012). Religiosity and major depression in adults at high risk: A ten-year prospective study. *American Journal of Psychiatry, 169*(1), 89–94.

Morgan, P. D., Tyler, I. D., & Fogel, J. (2008). Fatalism revisited. *Seminars in Oncology Nursing, 24*(4), 237–245. https://doi.org/10.1016/j.soncn.2008.08.003.

Ogunyemi, K. (2013). Ethics education and locus of control: Is Rotter's scale valid for Nigeria? *African Journal of Business Ethics, 7*(1), 1–10.

Olfson, M., Blanco, C., & Marcus, S. C. (2016). Treatment of adult depression in the United States. *JAMA Internal Medicine, 176*(10), 1482–1491.

Paolacci, G., & Chandler, J. (2014). Inside the Turk: Understanding Mechanical Turk as a participant pool. *Current Directions in Psychological Science, 23*(3), 184–188.

Partkitny, L., & McAuley, J. (2010). The Depression Anxiety Stress Scale (DASS). *Journal of Physiotherapy, 56*(3), 204.

Patten, S. B., Williams, J. V., Lavorato, D. H., Wang, J. L., McDonald, K., & Bulloch, A. G. (2015). Descriptive epidemiology of major depressive disorder in Canada in 2012. *The Canadian Journal of Psychiatry, 60*(1), 23–30.

Powe, B., Daniels, E., & Finnie, R. (2005). Comparing perceptions of cancer fatalism among African American patients and their providers. *Journal of the American Academy of Nurse Practitioners, 17*(8), 318–324.

Powe, B. D., & Finnie, R. (2003). Cancer fatalism: The state of the science. *Cancer Nursing, 26*(6), 454–467.

Roberts, R., Roberts, C., & Chen, I. (2000). Fatalism and risk of adolescent depression. *Psychiatry-Interpersonal and Biological Processes, 63*(3), 239–252. https://doi.org/10.1080/00332747.2000.11024917.

Ronneberg, C. R., Miller, E. A., Dugan, E., & Porell, F. (2014). The protective effects of religiosity on depression: A 2-year prospective study. *The Gerontologist, 56*(3), 421–431.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological monographs: General and applied, 80*(1), 1.

Samani, R., Maroufizadeh, S., Navid, B., & Amini, P. (2017). Locus of control, anxiety, and depression in infertile patients. *Psychology, Health & Medicine, 22*(1), 44–50. https://doi.org/10.1080/13548506.2016.1231923.

Schafer, W. E. (1997). Religiosity, spirituality, and personal distress among college students. *Journal of College Student Development, 38*(6), 633–644.

Shapurian, R., & Hojat, M. (1987). Descriptivve statistics, reliability and validity of a short form of Rotter's locus of control scale given to Iranian college students. *Perceptual and Motor Skills, 65*(1), 229–230.

Shen, L., Condit, C. M., & Wright, L. (2009). The psychometric property and validation of a fatalism scale. *Psychology & Health, 24*(5), 597–613. https://doi.org/10.1080/08870440801902535.

Smith-Howell, E. R., Rawl, S. M., Champion, V. L., Skinner, C. S., Springston, J., Krier, C., et al. (2011). Exploring the role of cancer fatalism as a barrier to colorectal cancer screening. *Western Journal of Nursing Research, 33*(1), 140–141.

Spann, M., Molock, S. D., Barksdale, C., Matlin, S., & Puri, R. (2006). Suicide and African American teenagers: Risk factors and coping mechanisms. *Suicide and Life-Threatening Behavior, 36*(5), 553–568.

Straughan, P. T., & Seow, A. (1998). Fatalism reconceptualized: A concept to predict health screening behavior. *Journal of Gender, Culture and Health, 3*(2), 85–100.

Strawbridge, W. J., Shema, S. J., Cohen, R. D., Roberts, R. E., & Kaplan, G. A. (1998). Religiosity buffers effects of some stressors on depression but exacerbates others. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 53*(3), S118–S126.

Wong, D., Dahm, J., & Ponsford, J. (2013). Factor structure of the depression anxiety stress scales in individuals with traumatic brain injury. *Brain Injury, 27*(12), 1377–1382. https://doi.org/10.3109/02699052.2013.823662.

Yu, X., & Fan, G. (2016). Direct and indirect relationship between locus of control and depression. *Journal of Health Psychology, 21*(7), 1293–1298. https://doi.org/10.1177/1359105314551624.

Zautra, A. J., Davis, M. C., Reich, J. W., Sturgeon, J. A., Arewasikporn, A., & Tennen, H. (2012). Phone-based interventions with automated mindfulness and mastery messages improve the daily functioning for depressed middle-aged community residents. *Journal of Psychotherapy Integration, 22*(3), 206.