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Benefit finding as a moderator of the relationship between spirituality/religiosity and drinking

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Abstract

This study evaluated benefit finding as a moderator of the relationship between spiritual and religious attitudes and drinking. Previous research indicates that undergraduates who drink heavily experience negative alcohol-related consequences. Literature also suggests that spirituality and religiosity (S/R) is protective against heavy drinking (e.g., Yonker, Schnabelrauch, & DeHaan, 2012) and that finding meaning, which is conceptually related to benefit finding, is negatively associated with alcohol use (e.g., Wells, 2010). Seven hundred undergraduate students completed study materials including measures of drinking, benefit finding, and S/R. Based on previous research, we expected that S/R and benefit finding would be negatively associated with drinking. Furthermore, we expected that benefit finding would moderate the association between S/R and drinking, such that S/R would be more negatively associated with drinking among those higher in benefit finding. Consistent with expectations, a negative association between S/R and drinking was present, and was stronger among those high in benefit finding. These findings extend previous research by demonstrating that the protective effect of S/R on drinking appears to be particularly true among those who find benefit following traumatic experiences. This study extends previous research showing that S/R is negatively associated with drinking by evaluating benefit finding (measured via the Post-Traumatic Growth Inventory; Tedeschi & Calhoun, 1996) as a potential moderator of the relationship between S/R and drinking. This study contributes to the alcohol literature seeking to understand and identify individual factors in drinking and determine how S/R and benefit finding relate to drinking.

Keywords

alcohol; post traumatic growth inventory

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Contributors

Dawn Foster designed the study, wrote the protocol, conducted literature searches, provided summaries of previous research studies, conducted the statistical analysis, and assisted with writing the manuscript. Michelle Quist, Chelsie Young, Jennifer Bryan, and Mai-Ly Nguyen contributed by writing drafts and revisions of subsequent drafts of the manuscript. Clayton Neighbors contributed by assisting with conceptualizing theoretical bases, providing feedback, and edited the manuscript. All authors contributed to and have approved the final manuscript.

Conflict of Interest

All authors declare that they have no conflicts of interest.

1. Introduction

In 2009, the U.S. Surgeon General declared reducing heavy drinking among college students a major health goal for the nation (U.S. Department of Health and Human Services, 2009). Thus, research on undergraduate drinking behavior is a high priority. Although most U.S. college students are under the legal drinking age of 21, most drinkers report their heaviest drinking habits to be between the ages of 18-21 (Chen & Kandel, 1995). Additionally, research indicates that college students are more likely to drink heavily than their non-college peers (Johnston, O'Malley Bachman, & Schulenberg, 2012). An estimated 80% of college students drink (Johnson et al., 2006), and approximately 2 in 5 college students are heavy episodic drinkers (more than five drinks in a row during the past two weeks; Substance Abuse and Mental Health Services Administration [SAMHSA], 2009; Wechsler, Lee, Nelson, & Kuo, 2000). Heavy drinkers are more prone to a vast array of potential consequences such as academic difficulties, trouble with authorities, hangovers, injuries (Hingson, Heeren, Winter, & Wechsler, 2005; Hingson, 2010; Wechsler, Kuo, Lee, & Dowdall, 2000; Wechsler, Davenport, Dowdall, & Moeykens, 1994), antisocial behavior, health and psychosocial problems (Wechsler et al., 2000), depression (Geisner, Larimer, & Neighbors, 2004), eating disorders (Dunn, Larimer, & Neighbors, 2002), risky sexual behavior, and sexual assault (Abbey, Buck, Zawacki, & Saenz, 2003; Kaysen, Neighbors, Martell, Fossos, & Larimer, 2006; Koss & Gaines, 1993; Larimer, Lydum, Anderson, & Turner, 1999). Moreover, although 20% of undergraduates meet DSM-IV criteria for alcohol dependence or abuse, less than 5% seek alcohol treatment or counseling (NIAAA, 2007). Therefore, further research is needed to understand behaviors that protect against alcohol abuse in order to reduce drinking problems among this at-risk group.

1.1. Spirituality/Religiosity

Literature suggests that spirituality/religiosity (S/R) is protective against heavy drinking (e.g., Yonker, Schnabelrauch, & DeHaan, 2012). More specifically, religiosity has been associated with lower frequency and quantity of drinking among college students (e.g., Schall, Kemeny, & Maltzman, 1992; Slicker, 1997). Furthermore, higher reported religious faith has been shown to be associated with a decrease in the likelihood of alcohol-related problems (Strawser, Storch, Geffken, Killiany, & Baumeister, 2004). Religiosity is also generally associated with organized systems and group practices (Larson, Swyers, & McCullough, 1997), whereas spirituality has commonly been discussed in the context of an individual's perspective and journey for existential meaning or deferring to a higher power (Larson, Swyers, & McCullough, 1997; Miller & Thoresen, 1999; Pargament, 1997; Pargament & Park, 1997). Although separately defined, spirituality and religiosity are closely related and thus are frequently discussed in tandem.

Several factors have been evaluated in considering the protective effects of S/R on drinking. These factors include the impact of S/R on social influences that surround drinking behaviors, the promotion of specific beliefs or values that discourage drinking behaviors, and the positive effect of S/R on well-being, which protects against negative drinking behaviors (Gorsuch, 1995; Koenig et al., 2001; Miller, 1998). It is also possible that S/R provides individuals with coping mechanisms for dealing with stress, whereas individuals

low in S/R may turn to alcohol to help cope with stress (Johnson, Sheets, & Kristeller, 2008).

It is important to also note that although the majority of studies provide evidence that a negative relationship exists between S/R and drinking, a few studies have reported conflicting results (Koenig, King, & Carson, 2012). Part of this conflict might be attributed to extensive variance in the operationalization and evaluation of S/R (see Corwyn & Benda, 2000, for a review). Additionally, some studies have demonstrated that intrinsic S/R is negatively associated with alcohol use among college students, but this relationship was not evident for extrinsic S/R (Galen & Rogers, 2004; Templin & Martin, 1999). Furthermore, students' S/R has been shown to moderate the general use of alcohol and heavy episodic drinking in early college years, but the protective effect diminished as students reached upper-class levels, even as levels of S/R remained constant (Stewart, 2001). These findings underscore the importance of considering individual factors that might moderate the relationship between S/R and drinking behaviors.

1.2. Benefit finding

One such individual factor that warrants further research is benefit finding. Benefit finding is closely related to finding meaning and has been operationalized as a proclivity for perceiving positive outcomes following stressful or traumatic events (e.g., Steffen, 2011; Tedeschi & Calhoun, 1996). For example, benefit finding might manifest via seeing trials as opportunities for personal growth, building faith, practicing patience, or believing that all things work together for good. Benefit finding has previously been associated with various health-related outcomes, such as adaptive responses to cancer, positive affect, wisdom, spiritual well-being, and positive lifestyle changes (Costa & Pakenham, 2012). Prior research also demonstrates clear and positive associations between benefit finding and S/R. For example, benefit finding and S/R have been associated with decreased concern with body appearance and increased use of adaptive coping strategies in menopausal women (Steffen, 2011). Additionally, benefit finding and coping strategies have led to less feelings of isolation in women who have suffered childhood sexual abuse (Wright, Crawford, & Sebastian, 2007). Furthermore, benefit finding has served as a buffer against post-traumatic stress disorder in extended combat situations (Wood, Britt, Wright, Thomas, & Bliese, 2012).

Given these findings, individual differences in drinking might be explained by evaluating benefit finding as a moderator of the relationship between S/R and drinking behaviors. Benefit finding might be a key operationalization of spiritual practice in that low benefit finding may be characteristic of individuals who report high S/R but engage in risky alcohol use. Conversely, it is possible that high benefit finding may serve as a buffer against risky alcohol behaviors for those who are high in S/R. In other words, it is likely that the protective effect of S/R against drinking might be stronger among those high in benefit finding compared to those low in benefit finding. It stands to reason that individuals high in S/R and benefit finding might take on a more global perspective regarding traumatic or stressful events such that these events are viewed as learning opportunities or hurdles that can be overcome through reliance on a higher power.

Benefit finding may also be one particular coping mechanism available to individuals practicing S/R. Concurrently, religion often promotes benefit finding as a component of S/R practices, which may then mean these individuals do not feel the need to cope with stress by using alcohol or other substances. Religious coping has previously been shown to moderate the relationship between stress and alcohol use among female college students (Stoltzfus & Farkas, 2012), and benefit finding was shown to lower levels of stress and post-traumatic stress following the September 11th terrorist attacks (Poulin, Silver, Gil-Rivas, Holman, & McIntosh, 2009). Additionally, heavy drinkers often use alcohol to cope with negative emotions (Ostafin & Brooks, 2011). As such, it is likely that benefit finding may provide psychological relief following stressful events which might otherwise be associated with heavier drinking. Based on this rationale, and consistent with the literature, we expected that those high in S/R would drink less, and this would be especially true among those higher in benefit finding.

1.3. Current study

The present study extends previous research which shows that S/R is negatively associated with drinking by evaluating benefit finding as a potential moderator of the relationship between S/R and alcohol consumption. Based on previous research, we expected that S/R and benefit finding would be negatively associated with drinking. Furthermore, we expected that benefit finding would moderate the association between S/R and drinking such that S/R would be more negatively associated with drinking among those higher in benefit finding. The present study was designed to evaluate the relationship between S/R and drinking by considering benefit finding as a potential moderator. Thus, we hypothesized that: both S/R (1A) and benefit finding (1B) would be negatively associated with drinking, and (2) benefit finding would moderate the association between S/R and drinking such that the relationship between S/R and drinking would be negative, and this would be stronger among those high in benefit finding.

2. Method

2.1. Participants

Seven hundred undergraduate students (Mean age = 22.84, SD = 5.31, 83% female) from a large southern university completed a computer based assessment. The sample was ethnically diverse, consisting of 40.82% Caucasian, 18.77% Black/African American, 19.86% Asian, 0.55% Native Hawaiian/Pacific Islander, 5.34% Multi-Ethnic, 0.68% Native American/American Indian, and 13.97% Other. Additionally, 29.23% of the sample self-identified as Hispanic/Latino. Participants reported religious affiliation as follows: 65.49% Christian, 0.81% Jewish, 1.62% Hindu, 3.79% Buddhist, 8.25% Muslim/Islam, 4.60% Agnostic, 3.65% Atheist, 7.58% Non-Religious/Secular, and 4.19% Other.

2.2. Measures

2.2.1. Demographics—Participants reported demographic information such as age, gender, racial background, and year in school.

2.2.2. Alcohol use. The Quantity/Frequency Scale—(Baer, 1993; Marlatt et al., 1995) is a five item measure assessing the number of drinks and the number of hours spent drinking on a peak drinking event within the past month, as well as the number of days out of the month that alcohol was consumed (0 = *I do not drink at all*, 1 = *about once per month*, 2 = *two to three times a month*, 3 = *once or twice per week*, 4 = *three to four times per week*, 5 = *almost every day*, 6 = *I drink once daily or more*).

2.2.3. The Daily Drinking Questionnaire—(Collins et al., 1985; Kivlahan et al., 1990) asks participants to estimate the standard number of drinks consumed on every day of a typical week (Monday-Sunday) within the last three months. Drinks on each day of the week are added in order to derive the average number of drinks that are consumed over the course of each week. Compared with alternative drinking measures, weekly drinking has been shown to be a reliable index of problems related to alcohol among college students (Borsari, Neal, Collins, & Carey, 2001).

2.2.4. Spirituality/religiosity—Participants were asked to report their spiritual and religious behaviors and attitudes using six items. Items were on 7-point Likert scales and assessed the extent to which participants viewed themselves as religious and spiritual as well as their attitudes (i.e., approval) of spirituality, religion, attending services, and prayer. Anchors ranged from not at all to very much and from strong disapproval to strong approval ($\alpha = .86$).

2.2.5. Benefit finding—Participants completed the 21-item Post-Traumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996). Participants were asked to consider a specific traumatic or life-altering event that had occurred in their life (e.g., loss of a loved one; accident or injury; and chronic or acute illness) and were then asked to rate their responses to the event. Items included how the event impacted relating to others (e.g., “I have a greater sense of closeness to others,”; $\alpha = .94$), new possibilities (e.g., “I established a new path for my life,”; $\alpha = .90$), personal strength (e.g., “I discovered that I am stronger than I thought I was,”; $\alpha = .90$), spiritual change (e.g., “I have a better understanding of spiritual matters,”; $\alpha = .86$), and appreciation of life (e.g., “I have a greater appreciation for the value of my own life,”; $\alpha = .80$). Participant responses were based on a 6- point Likert scale ranging from 1 (*not at all*) to 6 (*a very great degree*).

2.3. Procedure

Participants were informed that the purpose of the study was to examine health behaviors in college students and were recruited on a rolling basis in classrooms, via email, and by flyers. Students had to be at least 18 years or older to participate. Interested students signed up for the study and subsequently received a unique personalized identification number (PIN) which they used to log in to the survey. Participants completed study materials online. In exchange for their involvement, participants received extra credit which could be applied towards their classes.

3. Results

3.1. Descriptives

Means, standard deviations, and correlations for all of the variables are presented in Table 1. The drinking variables (peak drinks, drinking frequency, and drinks per week) were significantly and positively correlated with each other. The five benefit finding subscales include: 1) relating to others; 2) new possibilities; 3) personal strength; 4) spiritual change; and 5) appreciation of life. These five subscales were positively associated with each other. Spiritual change was negatively associated with peak drinks, drinking frequency, and drinks per week, which supports our hypothesis (1A) that benefit finding would be negatively associated with drinking. This suggests that heavy drinkers reported less spiritual benefit in response to difficulty compared to light drinkers or abstainers. S/R was marginally and negatively correlated with peak drinks, and negatively associated with drinks per week, which was consistent with our hypothesis (1B) that S/R would be negatively associated with drinking. In addition, S/R was positively associated with each of the benefit finding subscales.

3.2. Primary analyses

We tested our second hypothesis that benefit finding would moderate the association between S/R and drinking such that S/R would be more negatively associated with drinking among those higher in benefit finding. To test this, we conducted multiple hierarchical regressions. Separate analyses were conducted for each of the five benefit finding subscales (see Table 2). All predictors were mean centered. In each of the five models, we evaluated drinks per week as a function of benefit finding and S/R at Step 1. At Step 2, we added the two-way product term between benefit finding and S/R. Results revealed significant two-way interactions between benefit finding (spiritual change and appreciation of life subscales) and S/R such that S/R was negatively associated with drinks per week, and this relationship was stronger among those higher in benefit finding (Figures 1 and 2). Interactions were graphed using parameter estimates from the regression equation where low and high values were specified as one standard deviation below and above their respective means (Cohen, Cohen, West, & Aiken, 2003). Simple slopes are provided in the graphs and indicate negative associations between religiosity and spirituality among those who were higher in benefit finding but not among those who were lower in benefit finding.

4. Discussion

The present study extends previous research by further emphasizing the importance of considering potential cognitive factors in drinking. Consistent with previous research, we found that S/R was negatively associated with drinking behavior such that individuals scoring high in S/R and benefit finding reported drinking less alcohol and experiencing fewer negative alcohol-related consequences. Moreover, while past research has found S/R to be protective against heavy drinking and drinking-related problems among young adults, this appears to be more true for some individuals (e.g., those high in benefit finding) than others.

This study evaluated the relationships among S/R, benefit finding, and alcohol consumption. There was evidence to support our first hypothesis that S/R and benefit finding would both be negatively associated with drinking (see Table 1). This is in line with prior research which has found that S/R serves as a protective mechanism against heavy drinking (Yonker et al., 2012), and extends current research suggesting that benefit finding may serve as a positive coping strategy that reduces dependence on alcohol for relief of stress. Our second hypothesis was that benefit finding would moderate the association between S/R and drinking such that S/R would be more negatively associated with drinking among those higher in benefit finding. Results revealed evidence to support this hypothesis as well. This suggests that those who are higher in S/R and are more likely to employ benefit finding as a coping strategy to reduce psychological distress are less likely to engage in heavy alcohol use.

There are several possible explanations for these findings. The first potential explanation is that benefit finding might provide the same coping benefit as drinking to cope. In other words, individuals who are higher in S/R and who cope through benefit finding may not feel the need to cope by turning to alcohol. Relatedly, benefit finding may decrease stress associated with perceived loss of control following traumatic events. Furthermore, benefit finding may provide psychological relief without seeking tension reduction or self-medication via alcohol. Therefore, psychological relief may be the underlying mechanism which reduces perceived stress and reduces the need to cope through drinking.

A second potential explanation for our findings is related to optimism. Studies show that optimism is positively related to both S/R (Ciarrocchi, Dy-Liacco, & Deneke, 2008) and benefit finding (Prati & Pietrantonio, 2009). This might indicate that optimism is protective against drinking to cope with stress. The optimism construct may be closely related to hope, another individual difference variable. Individuals high in S/R and benefit finding might also be higher in optimism and hope, which may exert a synergistic effect such that these individuals report drinking less. When combined, these individual difference factors may buffer the effects of stressful or traumatic life events that often lead people to rely on alcohol to cope. Future research can explore these associations by measuring individuals' levels of hope and optimism as well as S/R and benefit finding.

Another potential explanation is that those who are high in S/R may trust that events are divinely orchestrated for the long-term benefit of the individual. Therefore, traumatic/stressful events are viewed as temporary setbacks and potential opportunities for growth. Moreover, there is more likely to be an underlying trust that all things will work together for good, even if not immediately apparent based on present circumstances. The ability to trust in a loving God with one's best interest at heart may facilitate reflection and search for positive meaning in the face of negative circumstances which may, in turn, reduce stress. Contrarily, those high in S/R who are not high in benefit finding might feel as though their stress/traumatic life events are a form of punishment and may turn to alcohol as a coping mechanism.

It is important to note that significant interactions were found for two of the five benefit finding subscales; spiritual change and appreciation of life. The results for the three

remaining benefit finding subscales (personal strength, relating to others, and new possibilities) trended in the expected direction but were not significant. A potential explanation for why benefit finding regarding personal strength (e.g., “*I know better that I can handle difficulties.*”), relating to others (e.g., “*I put more effort into my relationships.*”), and new possibilities (e.g., “*I am more likely to change things which need changing.*”) did not moderate the effect of S/R on drinking may be related to these constructs being more localized and action-oriented with respect to the individual. This might be conceptualized as the individual engaging in behavioral or cognitive shifts in order to regain control of a situation in order to find meaning following perceived stressful experiences. In contrast, spiritual change (e.g., “*I have a stronger religious faith.*”) and appreciation of life (e.g., “*I have a greater appreciation for the value of my own life.*”) might be more closely related to religious ideals, global concepts of God, and one's relationship with God. Similarly, benefit finding related to spiritual change and appreciation of life may be conceptualized as deferring or relinquishing power or control to a higher being following perceived traumatic events. Because benefit finding related to spiritual change and appreciation of life might be functionally closer to operationalizations of S/R, it stands to reason that these two subscales moderated the effect of S/R on drinking whereas the other three did not.

Implications of the current study's findings are that future intervention efforts might, where appropriate, incorporate spiritual components which emphasize benefit finding as an effective coping strategy in place of drinking to cope. Benefit finding might be operationalized as a form of cognitive restructuring that could be incorporated into cognitive behavioral approaches for dealing with stressful and traumatic events in one's life. As Reinhold Niebuhr's Serenity Prayer, promoted by Alcoholics Anonymous, goes “God grant me the serenity to accept the things I cannot change, courage to change the things I can, and wisdom to know the difference.” The results from this study reflect this common adage, suggesting the importance of cognitively assessing life events and employing coping strategies within the bounds of situational constraints and personal resources.

A limitation of the current study is that our sample was drawn from a college student population at a large southern university. Therefore, our effects may not generalize to other problematic drinking populations. Another limitation is the use of self-report measures, particularly in reporting alcohol use, as these are subject to self-presentation biases (Sayette et al., 2000). A further limitation is the cross-sectional nature of the study, which does not allow for following drinking trajectories over time.

4.1. Future Directions

Future research might longitudinally test drinkers' S/R and benefit finding, as the influence of these factors on drinking behavior may change over time and with experience. Additionally, it is possible that controlling for coping drinking motives (Cooper, 1994) might provide further insight to the relationship between benefit finding and S/R in predicting drinking. This might be tested by assessing drinking motives and typical coping strategies to see whether the underlying protective factor in benefit finding is the use of effective coping that does not include alcohol use. Future research might also consider targeting benefit finding as a strategy to develop healthy coping skills and could implement

intervention programs promoting benefit finding as a coping strategy to mitigate coping through alcohol use.

4.2. Conclusion

This study contributes to the alcohol literature seeking to understand and identify individual factors in drinking and determine how S/R and benefit finding relate to alcohol consumption. The present study examined the moderating effect of benefit finding on the relationship between S/R and drinking in college students. Results supported our hypothesis in that S/R was negatively related to the number of drinks consumed per week. Also consistent with expectations, the association between S/R and drinking was stronger among those high in benefit finding.

Overall implications of these findings extend previous research emphasizing the importance of considering potential cognitive factors in the etiology and prevention of drinking. Moreover, individual differences in benefit finding may influence whether or not young adults high in S/R may engage in heavy drinking. This study expands the extant literature seeking to understand and identify individual factors in drinking and determine how S/R and benefit finding relate to alcohol consumption. Future intervention programs might include promotion of benefit finding as a coping strategy to mitigate coping through alcohol use.

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Highlights

- We evaluated benefit finding as a moderator of drinking
- Benefit finding and spirituality/religiosity interacted to predict drinking
- Low benefit finding and spirituality/religiosity is linked with increased risk

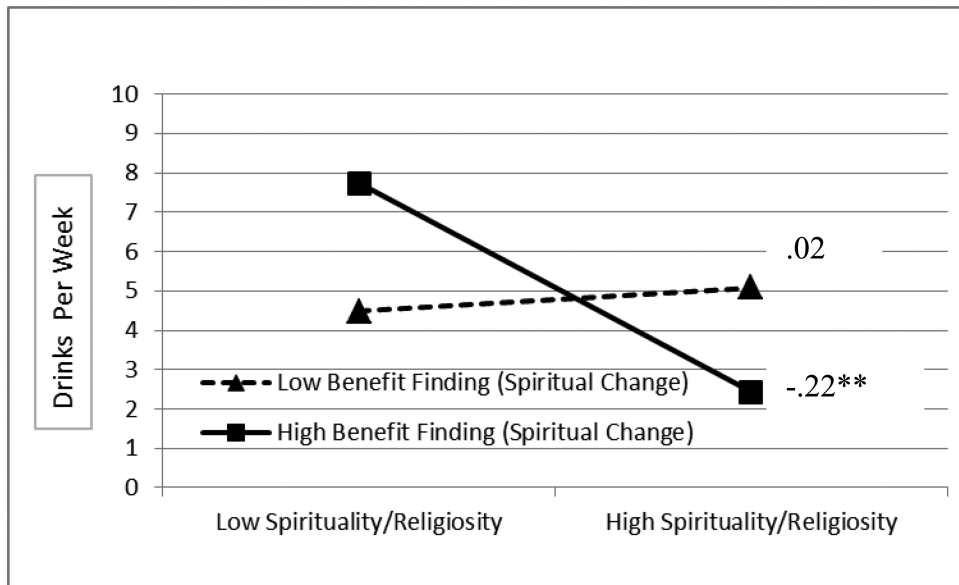


Figure 1.

S/R is associated with decreased drinks per week, especially among those high in benefit finding related to spiritual change

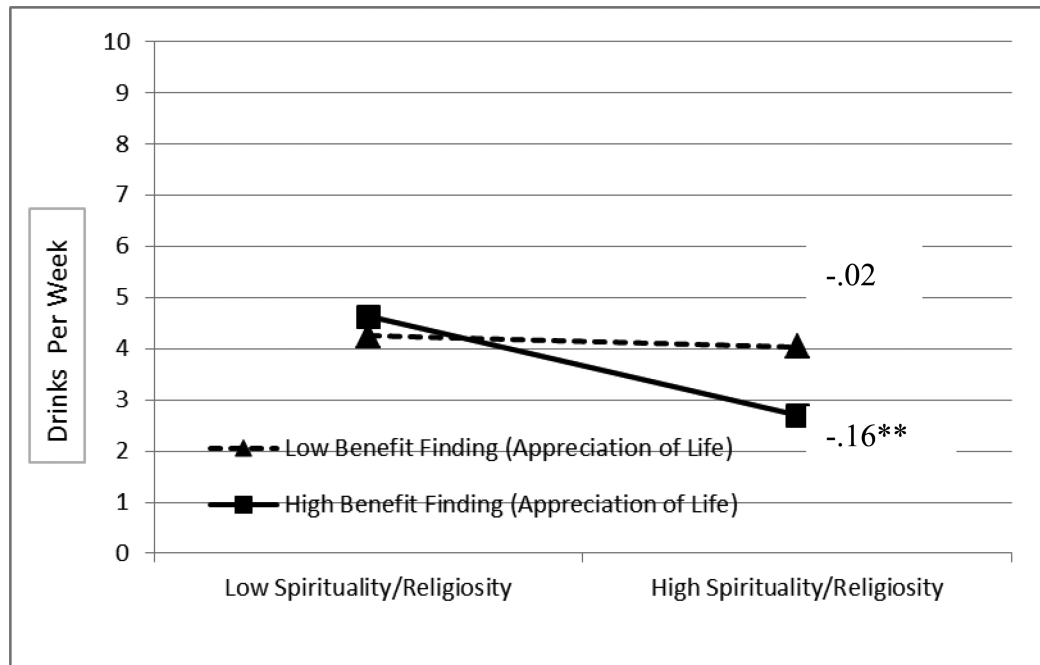


Figure 2.

S/R is associated with decreased drinks per week, especially among those high in benefit finding related to appreciation for life

Table 1

Means, Standard Deviations, and Correlations among Variables

	1	2	3	4	5	6	7	8	9
1. Peak Drinks	--								
2. Drinking Frequency	0.72***	--							
3. Drinks per Week	0.71***	0.67***	--						
4. Benefit Finding - Relating to Others	-0.03	-0.05	-0.03	--					
5. Benefit Finding - New Possibilities	-0.03	-0.06 [†]	-0.04	0.80***	--				
6. Benefit Finding - Personal Strength	0.02	0.005	-0.01	0.76***	0.86***	--			
7. Benefit Finding - Spiritual Change	-0.09*	-0.15***	-0.09*	0.63***	0.63***	0.63***	--		
8. Benefit Finding - Appreciation of Life	-0.03	-0.06 [†]	-0.04	0.72***	0.83***	0.79***	0.60***	--	
9. S/R	-0.07 [†]	-0.06	-0.08*	0.18***	0.11**	0.17***	0.48***	0.15***	--
Mean	3.28	3.01	3.90	3.99	4.13	4.32	3.89	4.30	5.99
Standard Deviation	3.63	2.66	6.13	1.33	1.29	1.29	1.68	1.30	1.30

Note. N = 700

 $p < .001$.**
 $p < .01$.*
 $p < .05$.[†]
 $p < .10$

Table 2

Hierarchical regression analysis for variables predicting drinks per week from benefit finding subscales (BFO, BFN, BFP, BFS, and BFA) and S/R

Benefit Finding		Predictor	B	SE B	β
Benefit Finding Relating to Others (BFO)	Step 1	BFO	-0.08	0.17	-0.02
		S/R	-0.37	0.18	-0.08*
	Step 2	BFO * S/R	-0.21	0.13	-0.33
Benefit Finding New Possibilities (BFN)	Step 1	BFN	-0.15	0.18	-0.03
		S/R	-0.36	0.17	-0.08*
	Step 2	BFN * S/R	-0.14	0.12	-0.22
Benefit Finding Personal Strength (BFP)	Step 1	BFP	0.02	0.18	0.004
		S/R	-0.38	0.18	-0.08*
	Step 2	BFP * S/R	-0.21	0.12	-0.33
Benefit Finding Spiritual Change (BFS)	Step 1	BFS	-0.25	0.16	-0.07
		S/R	-0.23	0.20	-0.05
	Step 2	BFS * S/R	-0.33	0.10	-0.64**
Benefit Finding Appreciation of Life (BFA)	Step 1	BFA	-0.15	0.17	-0.03
		S/R	-0.36	0.18	-0.08*
	Step 2	BFA * S/R	-0.24	0.12	-0.39*

Note. N=700

*** $p < .001$

** $p < .01$

* $p < .05$.