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Daily Variation in Religious Activities, Spiritual Experiences, Alcohol Use, and Life Satisfaction Among Emerging Adults in the USA

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Abstract
Research suggests that religious activity and spiritual experiences are associated with well-being among emerging adults. This research is primarily evaluated on the between-person level, leaving within-person effects largely unexplored. We examined relations between religious activity and spiritual experiences and their relation to life satisfaction and alcohol use among 383 college students at a moderately large university in the southwest USA. Participants completed daily reports of study measures. Multilevel regression indicated that daily religious activities and spiritual experiences were directly, and indirectly through moral emotions, associated with satisfaction with life. Results suggest that students who engage in regular religious activity and spiritual experience see a concomitant increase in life satisfaction.

Keywords Religious activity · Spiritual experiences · Emerging adulthood · Life satisfaction · Alcohol use

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Introduction

Multiple studies have explored the beneficial effects of college students engaging in religious activities and having spiritual experiences. Religious activities, such as attending church and praying, are separate from spiritual experiences, which focus on feelings of transcendence and connectedness with God (Hardy et al., 2014). Miller (1998) offers the following distinctions between spirituality and religion: (1) spirituality is typically understood at the level of individual experience, whereas religion is a social phenomenon, incorporating communal practices; (2) in focusing on the transcendent, spirituality tends to defy customary boundaries, whereas religion is defined by its boundaries (e.g., beliefs, practices, and forms of governance); (3) certain forms of religious practice may interfere with or distort one's spirituality. For example, hallucinogens such as psilocybin have been used by some communities to enhance spiritual experiences; however, others may proscribe their use for moral reasons (e.g., maintaining self-control). While religious activities and spiritual experiences are differentiated in the literature, they share associations. For instance, a national survey found engagement in religious activities created spiritual experiences (Smith & Snell, 2009).

Engaging in religious activities and spiritual experiences is linked to a number of benefits. One systematic review found numerous benefits of religious activities and spiritual experiences, including helping individuals cope with stressful situations improving well-being and happiness, providing meaning and purpose, and increasing self-esteem (Koenig, 2012). This study also found an inverse relation between religiosity and spiritual experiences and depression in 119 out of 178 studies (67%). These effects also showed high significance in other clinical outcomes, such as suicide attempts and completions.

Despite the evidence for direct associations, little is known about the mechanisms through which religious activity and spiritual experiences effect life outcomes. One possibility is through moral emotions, such as empathy (Batson et al., 2005), gratitude (Emmons & Kneezel, 2005), and forgiveness (McCullough et al., 1998). Specifically, prior research showed individuals with religious beliefs were more likely to be forgiving, with gratitude appearing to increase individuals' propensity to forgive (Neto, 2007). Gratitude and forgiveness have also been associated with psychological well-being (Peterson et al., 2007).

Religious activities and spiritual experiences are also linked to enhanced life satisfaction. Kashdan et al. (2012) found increased religious activities or spiritual experiences resulted in positive outcomes, such as higher life satisfaction, increased self-esteem, and optimism. Religious attitudes, beliefs, and activities were shown to be negatively associated with internalizing and externalizing problems (Kendler et al., 2003).

There is evidence that religiosity and spirituality show some protection against development of problems with substance use, especially among emerging adults. An inverse relation between religious activities and/or spiritual experiences and alcohol use is well established in the literature (Meyers et al., 2017), although some conflicting evidence has also been found (Foster et al., 2016). Identifying

as religious or spiritual (Burke et al., 2014), engaging in religious activities (Jessor et al., 2006), and having daily spiritual experiences have all been identified as protective factors against heavy, episodic drinking for young adults (Klassen & Grekin, 2017). Religious activities provide opportunities for prosocial behavior (Hardy & Carlo, 2005), which protects against heavy, episodic drinking (Jessor et al., 2006). And, incorporating aspects of religion and spirituality is a fundamental component to aspects of recovery from problematic substance use, such as mutual aid groups (e.g., Alcoholics and Narcotics Anonymous; Kelly & Eddie, 2020).

Daily Effects of Religious Engagement and Spirituality

The vast majority of the research in the field has examined relations at the between-subject level. Such research addresses questions such as the extent to which individuals who show greater engagement in religious activities experience greater life satisfaction compared to individuals who are not as engaged. In contrast to research on individual differences, research examining associations at the daily level addresses questions such as the extent to which on days individuals report more meaningful spiritual experiences, they also experience more satisfaction with life. Kashdan and Nezlek (2012) found that daily spirituality was related to many positive outcomes such as meaning in life, positive affect, and self-esteem, while Steger and Frazier (2005) showed daily religious activities increased well-being.

Most recently, Hardy et al. (2014) combined these factors to examine religious and spiritual activities and their relation to moral emotions, all experienced on the same day. Their results showed that daily religious involvement was positively related to daily moral emotions via daily spiritual experiences, and that the quality of the religious and spiritual experiences amplified the relationship, meaning that on days with higher quality religious experiences, the connections between religious activity, spiritual experiences, and moral emotions were stronger (Hardy et al., 2014). Research examining daily associations is more common in the literature on college student drinking (e.g., Henderson et al. 2020); however, to our knowledge, no previous studies have examined the effect of daily variation in religious activities/spiritual experiences on alcohol use and life satisfaction.

Description of the Present Study

The present study examined daily variation in religious activities, spiritual experiences, alcohol use, and satisfaction in life in a sample of 383 college students attending a moderately large university in the southwestern USA. It builds on and extends the work of Hardy et al. (2014) by examining the impact that daily, as well as usual (between-subjects), variation in religious activity and spiritual experiences is related to two outcome variables of developmental importance for emerging adults: satisfaction with life and alcohol use.

Based on the findings of Hardy et al. (2014), we hypothesized that on days when individuals engaged in more religious activities and reported more meaningful spiritual experiences, they would report increased satisfaction with life and less alcohol use. Further, we hypothesized that individuals who on average reported greater levels of religious involvement would report less alcohol use. Finally, we tested an exploratory mediation model examining the extent to which daily variation in religious activities/spiritual experiences and life satisfaction was mediated by moral emotions.

Method

Participants

The sample comprised 383 young adults enrolled in a moderately large public university in the Southwestern USA. Participants volunteered for this study in exchange for course credit through the Sona system run by the university's Psychology Department. Those identifying as female made up the majority of participants (71%). The racial breakdown was: White (57%), Hispanic/Latinx (25%), Black/African American (19%), Asian (2%), and Other (8%). Approximately 62% reported identifying as a Christian denomination, either Protestant or Catholic, 5% as agnostic or atheist, and 10% as no particular affiliation, but not agnostic. Thirty-five percent of the sample reported being classified as college freshmen, 18% as sophomores, 12% as juniors, 17% as seniors, and less than 1% as graduate students.

Procedure

We received approval from the IRB at the institution at which the research was conducted. All participants provided informed consent prior to participating in the study. After providing consent, participants received an initial baseline assessment that included a brief demographic questionnaire along with the measures discussed below. Participants entered the survey environment through the SONA system and were provided a link to an online Qualtrics survey. For the next 14 days, participants were sent emails containing links to the daily survey. To improve response rate, the research team sent out recurring daily text messages to participants' cell phones as motivational reminders to complete the tasks. Data were collected over five long semesters (i.e., excluding summer sessions) between Spring, 2018 and Spring, 2020.

Measures

The daily survey used in the present study consisted of all self-report measures containing multiple items. Participants were asked on each occasion to report on their behaviors, thoughts, or emotions during the "past 24 h." Participants who consented to participate completed the following measures:

Brief Demographic Questionnaire Participants provided demographic information including their sex, gender, ethnicity, race, level of education, and religious affiliation.

Daily Religious Activities (Hardy et al., 2014). This instrument comprises a broad range of behaviors typically included in measures of religious involvement (Hill & Hood, 1999). Hardy et al. also involved two scholars familiar with religious diversity to enhance the content validity of the measure and strive to incorporate wording that would be appropriate to participants from a wide range of religious backgrounds. Respondents were presented with a list of 16 religious activities (e.g., "prayed," "attended religious worship services," and "studied scriptures individually") and asked to select the activities they had participated in during the "past 24 h." For each of the selected activities, participants were asked to indicate the average value, significance, or impact of the time spent in each activity on a scale from "not at all valuable" to "extremely valuable." by: (1) indicating the approximate number of minutes spent in this activity over the "past 24 h," and (2) rating the quality of time spent in this activity during the "past 24 h." A variable representing time spent engaging in daily religious activities was created as a total sum over the 16 items.

Daily Theistic Intervention Inventory (Hardy et al., 2014). At the time the Hardy et al. study was conducted, there were no existing measures assessing daily spiritual experiences. Consequently, these researchers developed a list of 18 items adapted from existing measures of trait spirituality (Kashdan & Nezlek, 2012; Whitehead & Bergeman, 2011) or based on.

Classic works on the psychology of religion (e.g., James, 1958) and adapted them so that they assessed these experiences at the daily level. Participants were asked to select spiritual experiences (e.g., "I felt guided by God or the Spirit of God," "I felt comfort, calm release, or peace," and "I sensed an increase in emotional or spiritual strength") they had experienced during the "past 24 h." Consistent with Hardy et al. (2014), for each of the items the participants reported experiencing, participants then reported on how often they had had the experience in the during the "past 24 h" on a scale from 1 = "not at all significant" to 5 = "extremely significant." A summed score representing the number of times participants reported having each of the 18 spiritual experiences was then created and used in the present study.

Moral Emotions Scale (Hardy et al., 2014). The instrument was used to assess daily moral emotions using 9 items. Of the 9 items, each emotion had 3 items rated on a scale ranging from 1–5 assessing empathy (sympathetic, softhearted, and compassionate), gratitude (grateful, thankful, appreciative), and forgiveness (hateful, resentful, forgiving). Hardy et al. (2014) adapted procedures for the Positive and Negative Affect Schedule (Watson & Clark, 1999) to create the Moral Emotions Scale. This scale asked participants to "Indicate to what extent you felt the emotion during the last day on average on a scale from 'not at all' to 'extremely.'" Three scales representing empathy, gratitude, and forgiveness, all occurring at the daily level, were created by summing participants' responses over the items included in the specific scale (e.g., gratitude over the 3 items indexing gratitude).

Satisfaction with Life. Daily satisfaction with life was assessed using a single item from the Satisfaction with Life Scale (i.e., "I was satisfied with my life today;" Diener et al., 1985). In a previous daily diary study, Maher et al. (2013)

administered the complete 5-item Satisfaction with Life Scale and found that the construct was best represented by this single item. Participants rated the item on a rating scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Daily Alcohol Use. Alcohol use was measured by asking participants to respond to the following question: "Since yesterday, did you use alcohol?" along with a corresponding item that assessed the number of drinks consumed over the previous 24 h.

Data Analysis

Multilevel regression models with days nested within people (Snijders & Bosker, 1999) were used to test hypotheses regarding within- and between-person associations between spirituality/religious activity, moral emotions, life satisfaction, and alcohol use. Within-person associations represented variability across days for each individual, and between-person associations represented variability across individuals. Throughout the remainder of this paper, we refer to within-person associations as daily effects and between-person associations as usual effects. Study hypotheses were tested using the software package Mplus (version 8.2; Muthén & Muthén, 1998–2017). We used Full Information Maximum Likelihood (FIML) estimation to accommodate and reduce any potential bias due to missing data.

In the first step of the analysis, we examined distributions for spiritual experiences and religious activities and used log transformations to normalize the positively-skewed distributions for these variables. Next, we examined daily and usual spiritual experiences and religious activities in separate models as predictors of life satisfaction and alcohol use. Effect sizes were indexed by the standardized regression coefficient (ß), which are available in Mplus for multilevel models only with Bayes estimation. Therefore, as our data satisfied the assumptions of maximum likelihood estimation, separate models using Bayesian estimation were conducted with the purpose of estimating effect sizes. For the models using alcohol use as the criterion, we treated alcohol as count data assuming a negative binomial distribution for the alcohol data. In initial models, we included gender, race/ethnicity, and religious background as covariates; however, as they were not statistically significant in any model, we removed them from final models. We also examined models testing a random effect for relations between daily spiritual experiences and religious activities; however, in each case, conclusions remained the same as the fixed-effect models. Therefore, we opted to report the simpler fixed-effect model results. Finally, we examined a series of mediation models in which we first examined the extent to which life satisfaction mediated relations between spiritual experiences/religious activities and alcohol use, and subsequently, the extent to which variation in moral emotions mediated relations between spiritual experiences/religious activities and life satisfaction. We tested the mediation models following the multilevel structural equation modeling procedures specified by Preacher et al. and the Mplus syntax examples provided by these researchers (Preacher et al., 2010, 2011).

Results

Preliminary Analyses

The data comprise 4188 daily reports from 383 students. On average, participants provided reports on 10.3 ($SD = 2.8$) of the 14 days comprising the study period. Table 1 displays the demographic characteristics of the sample along with descriptive statistics for the major study variables. This table shows averages and variability around the averages for the daily means and standard deviations for all predictors and criterion variables.

Prior to examining multilevel models, we examined correlations among alcohol use, satisfaction with life, religious activities, spiritual experiences, and moral emotions (see Table 2). These correlations do not take the multilevel structure of the data into account, and therefore, should not be interpreted inferentially. Notably, as shown in Table 2, correlations between predictor variables, moral emotions, and satisfaction with life were moderate in magnitude, ranging between 0.22 for the bivariate relation between forgiveness and religious activities to 0.52 for the relation between forgiveness and satisfaction with life, with the majority of correlations being 0.30 or larger. The correlation between religious activities and spiritual experiences was large, but as shown in the following results, different patterns of results emerged when examining associations between these variables and satisfaction with life, supporting the distinctiveness of the measurement of the two constructs. Correlations with daily alcohol use were uniformly small and negative.

Next, we calculated the relative amount of between-person (usual) to within-person (daily) scores, indexed by the intraclass correlation coefficient (ICC). The ICC for life satisfaction was 0.483, indicating that almost half of the variance was due to between-person differences. ICCs for alcohol use could not be directly calculated, as we modeled alcohol use with a negative binomial specification, and such models do not calculate a within-person variance term. We approximated the ICC by modeling alcohol as being continuous and normally distributed, which led to a much smaller value of 0.143, suggesting that only 14% of the variance was due to between-person differences. This is presumably due to the low level of alcohol use reported in the sample (83% reported consuming no alcohol over the 2-week period).

Hypothesis Tests

Multilevel models for religious activities and spiritual experiences serving as predictors of satisfaction with life were analyzed separately from a model in which they were examined as predictors of alcohol use. Summary statistics for these models are included in Table 3. Starting with daily effects, both religious activities ($\beta = 0.27$) and spiritual experiences ($\beta = 0.13$) were significantly associated with satisfaction with life such that higher ratings of both predictor variables indicated greater satisfaction. Please note that these values will not perfectly align with those in the table, as the βs were derived using the Bayes estimator. For alcohol use, neither of

Table 1 Participant demographic characteristics and baseline descriptive statistics

	N (Total = 383)	Percentage
Sex		
Male	44	11.5
Female	271	70.8
Did not report	68	17.8
Ethnicity		
White/European American	218	56.9
Black/African American	61	15.9
Asian	9	2.3
AI or AN	4	1.0
NH or PI	2	.5
Other	20	6.4
Did not report	69	18.0
Hispanic		
Yes	95	24.8
No	220	57.4
Did not report	68	17.8
Classification		
Freshman	132	34.5
Sophomore	70	18.3
Junior	45	11.7
Senior	66	17.2
Graduate	1	0.3
Did not report	69	18.0
Residence		
Dormitory	150	39.2
Fraternity/Sorority house	4	1.0
Off-Campus	134	35.0
With parents	27	7.0
Did not report	68	17.8
Relationship status		
Single, not dating	124	32.4
Single, casual dating	45	11.7
Single, Exclusively Dating	129	33.7
Engaged/Married	17	4.4
Did not report	68	17.8
Religious affiliation		
None	38	9.9
Agnostic/Atheistic	20	5.2
Catholic	63	14.4
Protestant	174	45.4
Other	11	2.9
Did not report	68	17.8

Table 1 (continued)

	N (Total = 383)	Percentage
Daily life satisfaction	5.30	1.43
Daily minutes of religious behaviors	17.98	28.08
Daily intensity of spiritual experiences	10.18	10.73
Daily intensity of gratitude	3.85	0.92
Daily intensity of forgiveness	3.98	0.54
Daily intensity of empathy	3.02	0.92
Daily alcohol use	0.48	1.40
Number of days drank alcohol (previous 30 days)	2.38	1.41
Amount of alcohol consumed per drinking occasion (previous 30 days)	3.28	2.26

AI American Indian, *AN* Alaska Native, *NH* Native Hawaiian, *PI* Pacific Islander, *M* Mean, *SD* Standard Deviation

these predictor variables demonstrated significant associations (religious activities IRR = 1.01; spiritual experiences IRR = 1.06). With respect to usual effects, neither religious activities (β = -0.05) nor spiritual experiences (β = -0.10) were significantly associated with life satisfaction. However, religious activities was significantly associated with alcohol use such that engaging in more religious activities over the two-week assessment period was associated with less alcohol use (IRR = 1.29).

Mediation Effects

We first tested a mediation model in which life satisfaction mediated relations between religious activities/spiritual experiences and alcohol use. None of these relations were statistically significant (see supplementary table).

Mediation models of religious activities and spiritual experiences predicting satisfaction with life by way of moral emotions were fit separately for each moral emotion (see Tables 4 and 5). For the mediation model predicting satisfaction with life from religious activities and incorporating empathy as the moral emotion, daily religious activities significantly predicted daily empathy (β = 0.19), which in turn predicted daily satisfaction with life (β = 0.27). The indirect effect was also significant (b = 0.04).[1] Results indicated that on days in which individuals engaged in more religious activities and experienced more empathy, they also were more satisfied with their lives. As shown in Table 4, the pattern of relationships was identical at the usual level. Likewise, the pattern of relationships was the same when spiritual experiences were examined as the predictor variable. Namely, daily spiritual experiences significantly predicted daily empathy (β = 0.29), which in turn predicted daily satisfaction with life (β = 0.24).

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[1] As Mplus does not produce standardized estimates for parameters generated by nonlinear constraints, the estimate reported is the unstandardized estimate.

Table 2 Bivariate correlations between religious activities, spiritual, experiences, moral emotions, alcohol use and life satisfaction

	Spiritual experiences	Religious activities	Empathy	Gratitude	Forgiveness	Alcohol use	Life satisfaction
Spiritual experiences	1.00						
Religious activities	0.72***	1.00					
Empathy	0.38***	0.38***	1.00				
Gratitude	0.45***	0.49***	0.68***	1.00			
Forgiveness	0.22***	0.27***	0.52***	0.55***	1.00		
Alcohol use	−0.14***	−0.12***	−0.02	−0.01***	−0.08**	1.00	
Life satisfaction	0.34***	0.28***	0.35***	0.51***	0.52***	0.03	1.00

$^{*}p<.05$, $^{**}p<.01$, $^{***}p<.001$

Table 3 Multilevel model coefficients examining associations between religious activities and spiritual experiences as predictors of life satisfaction (Model 1) and predictors of alcohol use (Model 2)

Predictor	Model 1		Model 2	
	Coefficient	SE	Coefficient	SE
Intercept	4.94[***]	0.15	0.09	0.39
Fixed effects				
Daily SpE	0.23[***]	0.02	−0.01	0.07
Daily RA	0.07[***]	0.02	−0.06	0.04
Usual SpE	−0.04	0.08	0.02	0.21
Usual RA	−0.06	0.04	−0.26[**]	0.08
Random effects				
SpE	1.71[***]	0.06	1.71[***]	0.06
RA	3.58[***]	0.10	3.57[***]	0.13

RB Religious Activities, *SpE* Spiritual Experiences, *SE* Standard Error

[*]$p<.05$, [**]$p<.01$, [***]$p<.001$

Table 4 Multilevel model coefficients for the mediation models with religious activities as the predictor, life satisfaction as the criterion, and Model 1 including empathy as the mediator, Model 2 with forgiveness as the mediator and Model 3 with gratitude as the mediator

Predictor	Model 1		Model 2		Model 3	
	Coefficient	SE	Coefficient	SE	Coefficient	SE
Intercept						
Mediator	2.59[***]	0.09	3.85[***]	0.05	3.38[***]	0.09
Life satisfaction	4.12[***]	0.19	1.30[***]	0.38	3.08[***]	0.26
Fixed effects						
Daily[a]	0.09[***]	0.01	0.02[*]	0.01	0.08[***]	0.01
Daily[b]	0.48[***]	0.05	0.80[***]	0.05	0.61[***]	0.04
Daily[c']	0.08[***]	0.02	0.11[***]	0.01	0.08[***]	0.02
Daily[ab]	0.04[***]	0.01	0.01[*]	0.01	0.05[***]	0.01
Usual[a]	0.21[***]	0.03	0.06[**]	0.02	0.23[***]	0.03
Usual[b]	0.35[***]	0.06	0.97[***]	0.10	0.58[***]	0.07
Usual[c']	0.05	0.04	0.07	0.04	−0.01	0.04
Usual[ab]	0.07[***]	0.02	0.06[**]	0.02	0.13[***]	0.02
Random effect	2.00[***]	0.12	2.00[***]	0.12	2.00[***]	0.12

SE Standard Error

[a]Path from mediator to predictor

[b]Path from mediator to outcome

[c']Direct path from predictor to outcome when accounting for mediator

[ab]Indirect path from predictor to outcome via mediator

[*]$p<.05$, [**]$p<.01$, [***]$p<.001$

Table 5 Multilevel model coefficients for the mediation models with spiritual experiences as the predictor, life satisfaction as the criterion, and Model 1 including empathy as the mediator, Model 2 with forgiveness as the mediator and Model 3 with gratitude as the mediator

Predictor	Model 1		Model 2		Model 3	
	Coefficient	SE	Coefficient	SE	Coefficient	SE
Intercept						
Mediator	2.19***	0.10	3.76***	0.06	3.03***	0.12
Life satisfaction	4.13***	0.19	1.29***	0.38	3.09***	0.25
Fixed effects						
Daily[a]	0.20***	0.02	0.05***	0.01	0.17***	0.03
Daily[b]	0.44***	0.04	0.78***	0.05	0.58***	0.05
Daily[c']	0.19***	0.03	0.24***	0.03	0.20***	0.02
Daily[ab]	0.09***	0.01	0.04**	0.01	0.11***	0.01
Usual[a]	0.41***	0.04	0.10***	0.03	0.40***	0.05
Usual[b]	0.36***	0.06	0.96***	0.10	0.60***	0.07
Usual[c']	0.04	0.06	0.08	0.05	−0.06	0.06
Usual[ab]	0.15***	0.03	0.10***	0.03	0.24***	0.04
Random effect	1.02***	0.07	1.02***	0.07	1.02***	0.07

SE Standard Error

[a]Path from mediator to predictor

[b]Path from mediator to outcome

[c']Direct path from predictor to outcome when accounting for mediator

[ab]Indirect path from predictor to outcome via mediator

*$p<.05$, **$p<.01$, ***$p<.001$

The indirect effect was also significant ($b=0.09$). These patterns were replicated on the usual level (see Table 5).

Similar patterns of results were demonstrated when gratitude and forgiveness served as mediators. For the model including gratitude (see Table 4), daily religious activities significantly predicted daily forgiveness ($\beta=0.04$), which in turn predicted daily satisfaction with life ($\beta=0.34$). The indirect effect was also significant ($b=0.05$). As shown in Table 5, the associations at the usual level were also statistically significant, as they were when daily spiritual experiences served as the predictor. Finally, in the model including gratitude (see Table 4), daily religious activities significantly predicted daily gratitude ($\beta=0.17$), which in turn predicted daily satisfaction with life ($b=\beta=0.36$). The indirect effect was also statistically significant ($b=0.01$). Again, as shown in Table 5, the pattern was the same at the usual level and when spiritual experiences served as the predictor.

Discussion

The results partially support the hypotheses of the present study, the exception being that daily variation in religious activities and spiritual experiences were not associated with daily alcohol use. That said, we found a between-person association between religious activities and alcohol use. Finally, we found that the daily relation between religious activities/spiritual experiences and satisfaction with life could possibly be explained by increases in moral emotions. The results of mediation models were not significant with alcohol use as the outcome.

Positive daily associations between religion/spirituality and moral emotions is consistent with findings from Hardy et al. (2014); the current study extends these findings by examining associations with a meaningful outcome variable, satisfaction with life. It could be that most religious teachings encourage empathy and forgiveness, which involves making peace with others and the world. This in turn frees a person from negative thoughts and emotions that would otherwise weigh them down. Similarly, when a person engages in activities that enhance their spiritual well-being, this may have an impact on how they treat others—for example, with more empathy and understanding—and how satisfied they are with life. Likewise, Peterson et al. (2007) found that gratitude was a robust predictor of life satisfaction, in line with results from the current study suggesting that gratitude mediated the relationship between religious activities/spiritual experiences and life satisfaction.

With respect to alcohol use, we found no associations on the daily level. This is consistent with previous research (Burke et al., 2014). This could be due to historical theology of the predominant religious affiliations being Protestant Non-Denominational and Baptist, which have traditionally proscribed alcohol use. Further, religious activities likely take place in areas where alcohol is not readily available. It could be that students' spiritual experiences were more private and experienced outside of group settings.

Implications and Directions for Future Research

The current study extends the literature on the spirituality of young adults in several important ways. It is one of the few studies in the literature examining spirituality at the daily level, allowing us to address questions related to within-individual variability and heightening the focus of the time scale with respect to the impact of spiritual engagement on individual well-being. By focusing on life satisfaction and alcohol use, we focused on meaningful outcomes for emerging adults. This is a period of life in which individuals assign greater meaning to their life courses and begin to solidify activities that lead into the adult years. During these years, individuals develop character and establish habits that lead to important developmental transitions such as establishing relationships with life partners and securing careers. Presumably, those who are satisfied with their lives will be able to make these transitions more successfully.

Although our research design does not allow us to make statements on the causality of the associations found in the current study, by examining mediators of

associations, the results point to possible explanatory factors for the associations we found. Namely, our findings illustrate the importance of religious engagement/spirituality on enhancing moral emotions, and, in turn, the impact moral emotions have on young adults experiencing satisfaction with their lives. Future research should investigate other potential mediators using research designs that strengthen evidence for causal associations.

Limitations

Notwithstanding these strengths, the current study also has several limitations. First, although we have sampled a group of emerging adults, college students have access to resources, including leisure time that other emerging adults do not. Therefore, conclusions regarding developmental outcomes should be conscribed to that specific portion of the young adult population. Along a similar line, our sample is mostly female and predominantly White, Non-Hispanic. Each of these factors limit the generalizability of the current study's findings. Second, we examined alcohol use as a potentially relevant outcome variable for this population. Although the college years are a period of development in which habits regarding alcohol consumption start to establish, ours was a fairly low-drinking sample, and, this in part, may be responsible for the null findings we observed with respect to alcohol use. The low self-reported rates of alcohol use may have been influenced by issues such as priming (e.g., assessing daily alcohol use in the context of daily religious activities and spiritual experiences), geography (the university setting was located in the historical "Bible belt", and sample characteristics. Although age was not directly assessed in the present study, 53% of the sample were classified as freshman or sophomores; many of these students were likely younger than the legal drinking age of 21 years. Researchers may desire to continue to include alcohol use in future studies, especially those designed to sample wider variation in participant demographics such as age, as well as alcohol use. Some research suggests that the beginning of school semesters is a time of higher alcohol consumption (Tremblay et al., 2010). Third, there is potential for unaccounted for "third variable" associations, most notably a daily measure of mental health. The potential for bias is mitigated by accounting for relations with moral emotions (which also conceptually overlaps with mental health); however, future investigations would benefit from including daily assessments of mental health as well. Finally, results are based on participants' self-reported data and is subject to that bias. However, this is mitigated to some extent by data being gathered at the daily level.

Conclusion

Findings from the current study suggest some developmental and programmatic implications. The college years are a developmentally transformative period in which young adults assigning deeper levels of meaning to their self-identities and begin embarking on new directions in life. Doing so in a context of greater

satisfaction with life sets the foundation for a stronger transition to the post-college adult years. Similarly, from the standpoint of spiritual development, as individuals experience greater depth in their moral emotions and the associated life satisfaction, it is likely that they continue to engage in the religious activities and open themselves to the spiritual experiences that are connected to these occurrences. This is notable, as trends over recent years show increasingly more young adults are leaving behind religious traditions in which they were raised.

From a programmatic standpoint, university administrators may consider supporting and investing in campus activities related to religion and spirituality, as doing so seems to positively impact the well-being of their students. At state-based institutions such as our own, this support may take the form of supporting the development of student organizations in general, which will positively impact faith-based organizations along with other student-focused, affiliative groups. Connecting with faith-based student networks and offering resources such as meeting space, mentoring, funding, and teaching leadership skills designed to establish the development and sustainment of strong student organizations will likely positively impact student well-being and offer a means for students to affiliate with others who share similar worldviews. In turn, such affiliation provides a context in which moral emotions such as forgiveness, empathy, and gratitude, are experienced toward others. Although our data do not suggest that these factors exert a protective effect on risky alcohol use, a student body experiencing greater life satisfaction seems a net positive benefit to campus life. We hope that the findings from this study motivate others to conduct additional studies on daily experiences of religion and spirituality, remedy some of the limitations of the current study, and expand the range of inquiry to investigate other relevant variables related to the experience of college students.

Declarations

Conflict of interest The authors declare that no funds, grants, or other support were received during the preparation of this manuscript. The authors have no relevant financial or non-financial interests to disclose.

Informed Consent Informed consent was obtained from all individual participants included in the study.

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