

Social Media and Psychological Adjustment in College Students: Does Religiosity Play a
Role?

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A Thesis Submitted to the Graduate Faculty of Auburn University Montgomery in Partial
Fulfillment of the Requirements for the Degree of Master of Science

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STUDENTS: DOES RELIGIOSITY PLAY A ROLE?

by

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[Social Media, Religiosity, Psychological Adjustment, Anxiety, Stress, Depression]
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Abstract

Previous research indicates that there are strong correlational relationships between social media intrusion and psychological adjustment. The present study investigated whether or not religiosity mediated the already established relationship between social media intrusion and psychological adjustment. It was hypothesized that high social media use would be associated with lower levels of spiritual well-being and religious commitment, which in turn would be associated with higher levels of stress, depression, and anxiety. Participants completed a demographic questionnaire, Religious Commitment Inventory-10, Spirituality Index of Well-Being, the DASS-21 scales, and the Facebook Intrusion Questionnaire, which was altered slightly to include all types of social media. Results revealed that social media intrusion was significantly negatively correlated with spiritual well-being and the self-efficacy component of spiritual well-being. Furthermore, spiritual well-being, and the self-efficacy dimension of spiritual well-being, at least partially mediated the association between social media intrusion and psychological indices. From these results, it may be inferred that higher social media intrusion may have the ability to decrease spirituality, which may, in turn, negatively impact psychological adjustment.

Keywords: Social media, religiosity, psychological adjustment

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Table of Contents

Abstract	5
Acknowledgements	6
List of Tables	9
Chapter 1, Review of Literature	10
Introduction	10
Social Media and Psychological Adjustment	10
Social Media and Religiosity	13
Religiosity and Mental Health	14
Chapter 2, Methods	16
Participants	16
Procedure	17
Measures	17
Chapter 3, Results	18
Preliminary Analysis	18
Mediational Analysis	19
Stress	20
Chapter 4, Discussion	21
General Discussion of Results	21
Limitations	23
Future Research	24

References	26
Appendix A	35

List of Tables

Table 1. Descriptive Statistics for Social Media Intrusion, Religiosity, and DASS-21	30
Table 2. Correlations among Social Media Intrusion, Religiosity, and DASS-21	31
Table 3. Spiritual Well-Being and Self-Efficacy Mediators in the Association between Social Media Intrusion and Stress	32
Figure 1. Mediational Model	33

Introduction

The role of social media and its effects on the well-being of individuals has been researched by academics in the social sciences for a little over a decade. However, very little attention has been paid towards the role of religion as a mediating variable in regards to social media and psychological adjustment. It has been found in previous studies that the largest population of heavy social media users is college students (O'Dell, 2011). Furthermore, recent studies have found that the millennial generation, more than any previous generation, now self-identifies as nonreligious (Foley, 2015). For researchers to better understand how social media use correlates with students' rates of anxiety and depression, more research needs to be done into variables that have a mediating effect, such as religious commitment. In this study, the researchers attempted to determine if religious commitment and spiritual well-being mediate the association between social media intrusion, which is conceptualized as how social media interferes with participants' daily lives, and psychological adjustment.

Social Media and Psychological Adjustment

Since the inception of Facebook in 2004, research has been done on the potential effects of social media on the mental health and well-being of users, with particular attention being paid to anxiety and depression. It has been found that time spent online is significantly associated with depression and anxiety (Labrague, 2014). Furthermore, it has been found that passive social media use, defined as browsing Facebook, scrolling through newsfeeds, looking at friends' pictures and pages, etc., leads to a decline in affective well-being over time (Verduyn, et. al., 2015). Tandoc, Ferrucci, and Duffy (2015), however, found that Facebook itself might actually lessen depression unless

mediated by the social rank theory of depression, which was operationalized as envy of participants' Facebook friends. Blease (2015) hypothesizes why these differing conclusions have been supported in the field of psychology by stating, "The failure by research to specify the nature of the online interactions and the content that might elicit negative affect presents a serious impediment in the determination of the relationship between psychological well-being (specifically, depression) and Facebook usage." The present study attempts to circumvent this predicament by examining social media intrusion as an index of social media use (Elphinston & Noller, 2011). It has been found that social media intrusion rates are associated with depression, as well as time spent online, especially for adolescent males (Blachnio, Przepiórka, & Pantic, 2015). Based on these findings, it is expected that greater levels of social media intrusion will be associated with higher rates of depression in the present study.

Another aspect of social media use and depression that has been studied is the support system that this form of social media either provides or minimizes when participants are going through a personal struggle. It was found that when compared to face-to-face social support, Facebook has less of a positive effect on self-reported depression, but can still be effective in lessening depressive symptoms when coupled with face-to-face emotional support systems (Wright et al., 2013). Similarly, Nabi, Prestin, and So (2013) found that undergraduate Facebook users with a higher number of Facebook friends also reported lower rates of stress, less physical illness, and greater psychological well-being. This study also found that for users who had experienced more objective life stressors, a higher number of Facebook friends is a stronger predictor of perceived social support than their physical interpersonal network size. However, a

separate study found that giving social support through Facebook did not always translate into received social support for the user, and therefore was not significantly related to perceived social support (Li, Chen, & Popiel, 2015). Thus, we hypothesize that the way Facebook is used to receive social support may have a more significant role in reducing depression than simply the number of Facebook friends a user has.

Studies also are beginning to examine the relationship between Facebook and anxiety. A study that examined Facebook-specific anxiety found that users' higher rates of social anxiety and Facebook-specific anxiety are strongly correlated to role conflicts, and that social anxiety in itself is significantly correlated to Facebook-specific anxiety (Farquhar & Davidson, 2014). Another study found that if users perceived online social networking as dangerous, they were more likely to experience online social anxiety, and also less likely to interact with other individuals through Facebook over a long period of time (Hong et al., 2015). It has also been found that the levels of anxiety for females who suffer from high social anxiety were not lessened when meeting new people after they had already been "introduced" through Facebook (Rauch et al., 2014). Both of these studies support the hypothesis that Facebook as a social platform can increase anxiety for those who are already prone to higher levels of anxiousness.

An even better predictor of anxiety associated with Facebook use is the concept of active versus passive interaction with the social networking site (SNS). One study that examined anxious versus avoidant attachment styles, found that Facebook viewers with avoidant attachment styles are less likely to create meaningful bonds (use Facebook actively) and relationships than those with anxious attachment styles (Lee, 2013). Shaw, Timpano, Tran, and Joormann (2015) delved a little deeper into this issue by looking at

users who not only spent more time on Facebook overall, but used it in a more passive manner, and found they were more likely to experience greater anxiety. Similarly, social anxiety has been found to be positively associated with anxiety experienced during active Facebook use (McCord, Rodebaugh, & Levinson, 2014). This study's first hypothesis is that anxiety will be positively associated with Facebook intrusion, following along with previous research.

Social Media and Religiosity/Spirituality

The relationship between religiosity and social media is also a topic that needs more attention, as the millennial generation is identifying as less religious, while use of social networking sites continues to increase. Previous research has found that those who read the Bible more frequently are less likely to use SNSs (Miller, Munday, & Hill, 2013). Baesler and Chen (2013) found that frequency of petitioning for prayers using Facebook was not significantly correlated to participants having a sense of social support (i.e. "feeling loved"). It was discovered that the majority of the participants preferred to seek prayer and support in personal one-on-one situations, as opposed to through digital media. These findings suggest that use of social media and religious commitment may be antithetical; it is possible that those who heavily utilize social networking sites may be less involved with religion/spirituality. The main question addressed in this study is: Has immersion in social networking use supplanted strong religious commitment and spiritual contentment, leading to poor psychological adjustment?

Religiosity/Spirituality and Mental Health

Religiosity in the present study is measured by the self-perceived quality of the participants' spiritual lives as well as the degree to which they are committed to their religion. It is expected in the present study that those who are more spiritually content and more committed to their religion will experience lower levels of depression and anxiety. Previous research has suggested that religious people often have a higher sense of meaning than non-religious people, and therefore struggle less with suicidal ideation and substance abuse when diagnosed with Major Depressive Disorder (Sorenson, 2013). Similarly, Sternthal and colleagues (2010) found that out of five possible factors of religiosity, having a sense of purpose was the only mediating variable that had a significant relationship to positive mental health. These studies, however, focused primarily on Christian religious beliefs and practices.

Krumrei, Pirutinsky, and Rosmarin (2013) found that, for Jewish participants, a distrust in God and negative religious coping strategies were significantly associated with higher levels of depressive symptoms. Also, being high on intrinsic religiosity was found to be a statistically significant moderator in regards to depressive symptoms for Jewish individuals utilized positive religious coping. This means that for Jewish participants who fell into the trust of God and positive religious coping categories only those high on intrinsic religiosity showed significantly fewer depressive symptoms. For those of the Orthodox Jewish sect, it was found that their particular religious beliefs and practices were also linked to lower levels of depression than even the non-Orthodox Jewish sects (Rosmarin et al., 2009). In a separate study, it was found that there was a significant positive correlation between religious commitment and satisfaction with life for self-

reported Mormon participants; however, high scores for religious obsessive-compulsive symptoms and maladaptive perfectionism were associated with decreased satisfaction with life as well as higher depression and anxiety (Allen & Wang, 2014). Abdel-Khalek (2012) discovered that for Muslim Kuwaitis across age groups high levels of religiosity were significantly correlated with subjective well being. For Japanese monks training in the art of mindfulness-based stress reduction (MBSR), an offshoot of traditional Buddhist Zen meditation, their overall health-related quality of life (HRQOL) was higher the longer they had trained in this particular type of meditation (Shaku, Tsutsumi, Goto, & Arnoult, 2014). As for those who identify as nonreligious, research has not found conclusive evidence as to whether or not they experience more or less emotional and mental distress than those who identify as religious (Weber et al., 2012). We can conclude from this body of research that religious beliefs and practices that are firmly proselytized into an individual, no matter what the particular beliefs are, are strongly related to lower rates of depression and higher quality of life for these individuals. (see Figure 1).

The objectives of the present study are twofold: 1) to determine if social media intrusion is associated with psychological adjustment indices; and 2) to determine if religious commitment and spiritual well-being mediate the association between social media intrusion and psychological adjustment indices. It is expected that: 1) social media intrusion will be associated with higher levels of stress, anxiety, and depression; and 2) social media intrusion will be associated with lower levels of religious commitment and spiritual well-being, which will, in turn, be associated with higher levels of stress, anxiety, and depression (see Figure 1 for mediation model).

Methods

Participants

For this study, the sample (n= 209) consisted of undergraduate students at a midsize southeastern university, with 27.3% of the sample was male while 72.2% was female. Only .5% of the demographic data was left incomplete. The ethnic breakdown of the sample was as follows: 46.4% White, 42.6% Black, 5.3% Asian, .5% American Indian/Alaskan Native, .5% Native Hawaiian/ Pacific Islander, and 4.3% biracial with .5% missing data. The class-ranking breakdown of participants was 57.9% freshmen, 23.0% sophomores, 11.5% juniors, 2.9% seniors, and 4.8% of missing data. Most of the participants were single with this demographic making up 92.3% of the sample. 5.7% of the sample was married, .5% of the sample was divorced, .5% of the sample was separated from their partner, and 1.0% of data was missing. The household family income of participants was broken down across the following percentages: 18.7% making \$20,000 or less annually, 23.9% making between \$20,001 and \$40,000 annually, 17.2% making between \$40,001 and \$60,000 annually, 12.4% making between \$60,001 and \$80,000 annually, 9.1% making between \$80,001 and \$100,000 annually, and 9.1% making above \$100,000 annually with 9.6% of data was missing. The last demographic information that was collected was religious affiliation, which was dispersed as follows: 4.3% Catholic, .5% Protestant, 41.6% Baptist, 9.6% Methodist, .5% Evangelical, 1.9% Episcopal, 11.0% Other Christian, .5% Jewish, 2.4% Buddhist, 1.0% Muslim, .5% Mormon, 4.8% Atheist/Agnostic, 1.0% Other faith tradition, 17.7% Nondenominational, and 2.9% unspecified.

Procedure

Participants were brought into the psychology lab at Auburn University Montgomery and were given a set of five questionnaires to answer. Each participant was briefed on the nature of the questionnaires and was told that their participation was entirely voluntary and therefore they could withdraw from the study at any time. Participants were also granted one research credit for their undergraduate Introduction to Psychology course at Auburn University Montgomery.

Measures

Religious Commitment Inventory-10: This questionnaire was used to assess the degree to which a participant is religious. *Ex: I spend time trying to grow in understanding of my faith.* This measure is a 10-item format on a Likert-type 5-point scale (e.g. Not at all=1 to Totally=5). This scale has a reliability of .93 (Worthington et al., 2003).

Spirituality Index of Well Being: This scale measures perception of spiritual quality of life, with spirituality defined as a sense of meaning or purpose from a transcendent source. *Ex: I don't know how to begin to solve my problems.* This scale is a 12-item format using a 5-point scale for assessment (e.g. 1= Strongly Agree to 5= Strongly Disagree). It is also divided into two subscales: Self-Efficacy Subscale & Life Scheme Subscale. This scale had a total reliability of .91, while the Self-Efficacy subscale had a reliability of .86 and the Life Scheme subscale had a reliability of .89 (Daaleman & Frey, 2004).

Social Media Intrusion Questionnaire: This is an 8-item scale used to measure how much social media interferes with participants' daily lives. *Ex: I often think about SNSs when I am not using them.* These items are scored on a seven-point scale (e.g. 1= Strongly Disagree to 7= Strongly Agree). This questionnaire has a reliability of .85 (Elphinston & Noller, 2011).

Depression Anxiety Stress Scales-21: This is a 21-item self-report questionnaire that was used to assess levels of depression, anxiety, and stress in the participants. It is a short-form version of the full-length 42-item DASS scale. *Ex: I find it difficult to work up the initiative to do things.* These items are scored on a 4-point scale (e.g. 0= Did not apply to me at all to 3= Applied to me very much, or most of the time). Each variable is a different subscale on the questionnaire. The reliability of the subscales is as follows: Depression: .93, Anxiety: .95, Stress: .97 (Crawford & Henry, 2003).

Participant Demographic Questionnaire: This questionnaire assessed the participants' age, race, sex, marital status, religious affiliation, and academic class.

Results

Preliminary Analyses

Bivariate correlational analyses were performed to analyze first-order associations among social media intrusion, spiritual well-being, depression, anxiety, and stress. All correlations presented in Table 2 represent Pearson coefficients.

As evident in Table 2, social media intrusion was significantly positively associated with depression, anxiety, and stress. Social media intrusion was significantly negatively associated with spiritual well-being, as well as with the self-efficacy subscale of spiritual well-being, but not with the life scheme subscale of spiritual well-being.

Social media intrusion also was not significantly associated with religious commitment. Finally, spiritual well-being, and both the self-efficacy and life scheme dimensions, were significantly negatively associated with depression, anxiety, and stress.

Associations among demographic variables and the three dependent variables- depression, anxiety, and stress- were examined using bivariate correlational analyses. Demographic variables with more than one category were converted into dichotomous variables prior to analysis. Marital status was recoded into not married (“0”)/married (“1”); race was recoded into white (“0”)/non-white (“1”); and religious affiliation was recoded into Christian (“0”)/Other Faith Tradition (“1”). Family income was assessed as a categorical variable (0 = \$20,000/year through 5 = >\$100,000); this variable was not recoded into a dichotomous variable, since higher categorical values indicate higher income brackets. Academic class was also assessed as a categorical variable, with higher values indicating higher class (0 = freshman; 1 = sophomore; 2 = junior; 3 = senior). All demographic variables significantly associated with a dependent or mediator variable were controlled for in regression analyses.

Mediation Analyses

Baron and Kenney (1986) proposed four requirements that must be met in order to infer mediation: 1) the independent variable (IV) is significantly associated with the mediator; 2) the IV is significantly associated with the dependent variable (DV) in the absence of the mediator in the model; 3) the mediator is significantly associated with the DV; and 4) the association between the IV and the DV is attenuated when the mediator is added to the model. These requirements were tested for each of the three dependent variables (stress, anxiety, depression). These requirements were met for the following

variables: Social media intrusion (independent variable)- spiritual well-being (and the self-efficacy subscale)- and stress. (Note: For mediation analyses for each dependent variable, if a covariate was included in analyses for one of the above steps, it also was included in analyses for all other steps.)

Stress

After controlling for age and sex, social media intrusion was significantly associated with spiritual well-being ($\beta = -.14, p = .05$). As indicated in Table 3, social media intrusion was significantly associated with stress ($\beta = .22, p < .01$). With spiritual well-being added to the model, the association between social media intrusion and stress was attenuated ($\beta = .18, p = .01$), with spiritual well-being significantly inversely associated with stress ($\beta = -.33, p = .000$). These results indicate that spiritual well-being partially mediates the relationship between social media intrusion and stress. Further analysis using the Sobel test, a conservative procedure for testing mediation effects (Preacher & Hayes, 2004; Sobel, 1982), revealed that this mediation effect is marginally significant ($1.82, p = .07$).

After controlling for age and sex, social media intrusion was significantly associated with self-efficacy ($\beta = -.21, p < .01$). As indicated in Table 3, social media intrusion was significantly associated with stress ($\beta = .22, p < .01$). With self-efficacy added to the model, the association between social media intrusion and stress was attenuated ($\beta = .15, p = .03$), with self-efficacy significantly inversely associated with stress ($\beta = -.36, p = .000$). These results indicate that self-efficacy partially mediates the relationship between social media intrusion and stress. Further analysis using the Sobel test revealed that this mediation effect is significant ($2.56, p = .01$).

After controlling for age, sex, and religious affiliation, social media intrusion was not significantly associated with religious commitment ($\beta = -.04, p = .56$). Furthermore, after controlling for age and religious affiliation, social media intrusion was not associated with the life scheme subscale of spiritual well-being ($\beta = -.07, p = .33$). Because the statistical arm of Baron and Kenney's model (1986) requiring a significant association between the independent variable (IV) and the mediator variable (MV) was not met, further mediation analyses were not conducted with the religious commitment and life scheme variables.

Discussion

The main objectives of this study were to determine if social media intrusion was significantly associated with psychological adjustment, and if spiritual well-being and religious commitment mediated this association. Results revealed that social media intrusion was positively associated with stress, anxiety, and depression, and spiritual well-being mediated this relationship. This is consistent with the findings from Farquhar and Davidson (2014) and Hong, et. al. (2015). Both of these studies found that for those who already suffer from anxiety, increased social media use worsened their anxiety. Our results were consistent in that they revealed that when participants were high on social media intrusion and low on spiritual well-being, they were also high on stress, anxiety, and depression. Furthermore, it was found that there is a significant negative correlation between social media intrusion, spiritual well-being, and the self-efficacy component of spiritual well-being. One explanation for why increased social media use is associated with decreased spirituality and decreased self-efficacy may be that, as an individual relies more heavily on the attention and interactions they experience when using SNSs, they

tend to move away from spiritual practices. What has been seen from previous studies is that most spiritual practices promote some sort of psychological well-being, which was seen in research from Sorenson (2013) and Sternthal et al. (2010). In Sternthal's research in particular, we saw that a sense of purpose and meaning was associated most highly with positive mental health. We may take from this that perhaps individuals who use social media more and allow it to color the way they view themselves and others then they may experience a lessened sense of self-efficacy or ability, which in turn leads to poorer psychological health. One reason why social media intrusion would decrease an individual's sense of self-efficacy, particularly to improve one's life and find solutions to her/her problems, is that the more they view the public profiles of their peers, the less self-efficient they may come to believe they are. Seeing similar people achieve different goals such as marriage, careers, or children and having this basis to compare themselves and their own successes to may have them believing they do not measure up, and therefore, they believe they are incapable of being self-sufficient and successful. However, because correlation does not automatically imply causality, more research would need to be done to establish this specific relationship.

Additionally, it was found that spiritual well-being, but not religious commitment, mediated the association between social media use and psychological adjustment. One reason for this inconsistent finding could be that, while religious commitment indicates how often one engages in various practices associated with religion, it does not reflect the actual psychological state that the participant is at with regards to religious or spiritual beliefs. This means that while an individual may attend church regularly, donate large sums of money to a religious organization, or keep him or herself informed on the news

surrounding their religious practice, they may not be in a well-adjusted place spiritually. Hill et. al. (2000) state that it is the responsibility of each generation to define the difference between religion and spirituality. They go on to postulate that, secularism in the latter half of the 20th century, was accompanied by disillusionment with organized Western religions, and this led to spirituality taking on a distinct, separate, and more favorable connotation. The article further claims that nowadays, most see spirituality as personal transcendent experiences, while religion is seen as demanding, old-fashioned and an actual hindrance to spiritual experience. An example of religious commitment, therefore, would be attending an actual church service, while spirituality is entirely dependent on the current quality of the individual's relationship to his or her own spiritual beliefs and practices.

Limitations

This study, while having a fairly large sample size and low attrition, did have a few limitations. The first and foremost limitation is that, because this study was conducted at a university in the southeastern region of the US, it provided a very limited snapshot of religions. The majority of the participants identified as Baptist, and there were very few participants who identified as either nonreligious or of a non-Christian religion, which limits the sample range. Also, because the majority of participants identified as either white or black, there was a limited range of racial diversity. Lastly, the correlational design of the present study is a limitation in that we are unable to determine causality.

Future Research

For future studies, it is recommended that a sample be taken from a different region of the US or even from a different nation. Because social media networks are widespread, it would be interesting to see the relationship between these variables on an international scale and with varying ethnicities and cultures. Similarly, other regions of the US apart from the South would have a very different makeup of cultures and religious attitudes. Since this study was conducted in the Bible Belt, it is very unlikely a sample could be obtained from this region that is not primarily Protestant. Furthermore, the relationship between social media intrusion and spirituality that has been established through the findings in the present study needs to be researched further in an effort to better understand the causality between them. One way of doing this may be through experimental study, which has the ability to manipulate these variables to determine whether a decrease in spiritual well being and self efficacy leads to an increase in social media intrusion and negative psychological effects or vice versa. Also, a longitudinal study into the effects of social media intrusion on psychological adjustment would be something unprecedented and potentially significant. Because the millennial generation is the first generation to grow up with social media and heavy use of the internet, there are virtually no data on how these rapid changes in communication are affecting society for the long term. A study spanning 10 or 20 years of how technology and social media changes the way these born-and-raised users interact as a society could be a vast source of information that could benefit a great number of interested parties, such as psychologists, scientists, technology companies, teachers, and even parents.

While many seem to brush off social media as an insignificant aspect of teens' and college students' behavior, it actually has had a tremendous impact on the global scale just within the last 12 years that social media has been a mainstream fixture in users' daily lives. Companies and products cannot thrive now without social media, relationships are often begun and developed using the internet and social media as their primary mechanism, and too often the social internet sphere becomes the subject of nighttime news horror stories with instances of cyber-bullying and harassment. However, it is not just a passing fad. For better or worse, the internet, at large, and social media specifically, are now entities that psychologists need to be researching for the sake of both clients and society.

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Table 1*Descriptive Statistics for Social Media Intrusion, Religiosity, and Psychological Outcome**Variables*

Variable	M (range)	SD	Cronbach's Alpha
Social Media Intrusion	29.21 (8-53)	10.78	0.85
Religious Commitment	30.31 (10-50)	10.71	0.94
Spiritual Well-Being	48.03 (12-60)	9.62	0.92
<i>Self-Efficacy</i>	23.90 (6-30)	4.64	0.86
<i>Life Scheme</i>	24.14 (6-30)	5.79	0.89
Depression	3.64 (0-17)	3.47	0.83
Anxiety	4.81 (0-20)	3.75	0.72
Stress	6.93 (0-17)	3.87	0.76

Table 2*Correlations among Social Media Intrusion, Religiosity, and Psychological Outcomes Variables*

	1.	2.	3.	4.	5.	6.	7.	8.
1. Social Media Intrusion	--	-.05	-.20**	-.28**	-.10	.17*	.20**	.30**
2. Religious Commitment	-.05	--	.16*	.06	.21**	-.10	-.06	-.00
3. Spiritual Well-Being	-.20**	.16*	--	.89**	.93**	-.59**	-.46**	-.38**
4. Self-Efficacy	-.28**	.06	.89**	--	.68**	-.56**	-.50**	-.44**
5. Life Scheme	-.10	.21**	.93**	.68**	--	-.54**	-.35**	-.27**
6. Depression	.17*	-.100	-.59**	-.56**	-.54**	--	.61**	.59**
7. Anxiety	.20**	-.065	-.46**	-.50**	-.35**	.61**	--	.66**
8. Stress	.30**	-.005	-.38**	-.44**	-.27**	.59**	.66**	--

* $p < .05$; ** $p < .01$

Table 3

Spiritual Well-Being and Self-Efficacy Mediators in the Association between Social Media Intrusion and Stress

	β	t	R ²	ΔR^2
Outcome Variable: Stress				
<i>Block 1</i>				
Age	-.17	2.58**	.117	
Sex (0 = male; 1 = female)	.29	4.41**		
<i>Block 2</i>				
Social Media Intrusion	.22	3.22**	.160	.044
<i>Block 3</i>				
Spiritual Well-Being	-.33	-5.24**	.247	.102
Self-Efficacy	-.36	-5.66**	.277	.116

** $p < .01$

* $p < .05$

N = 204

Note: Mediator variables were run in separate analyses, but combined under Block 3 for conciseness.

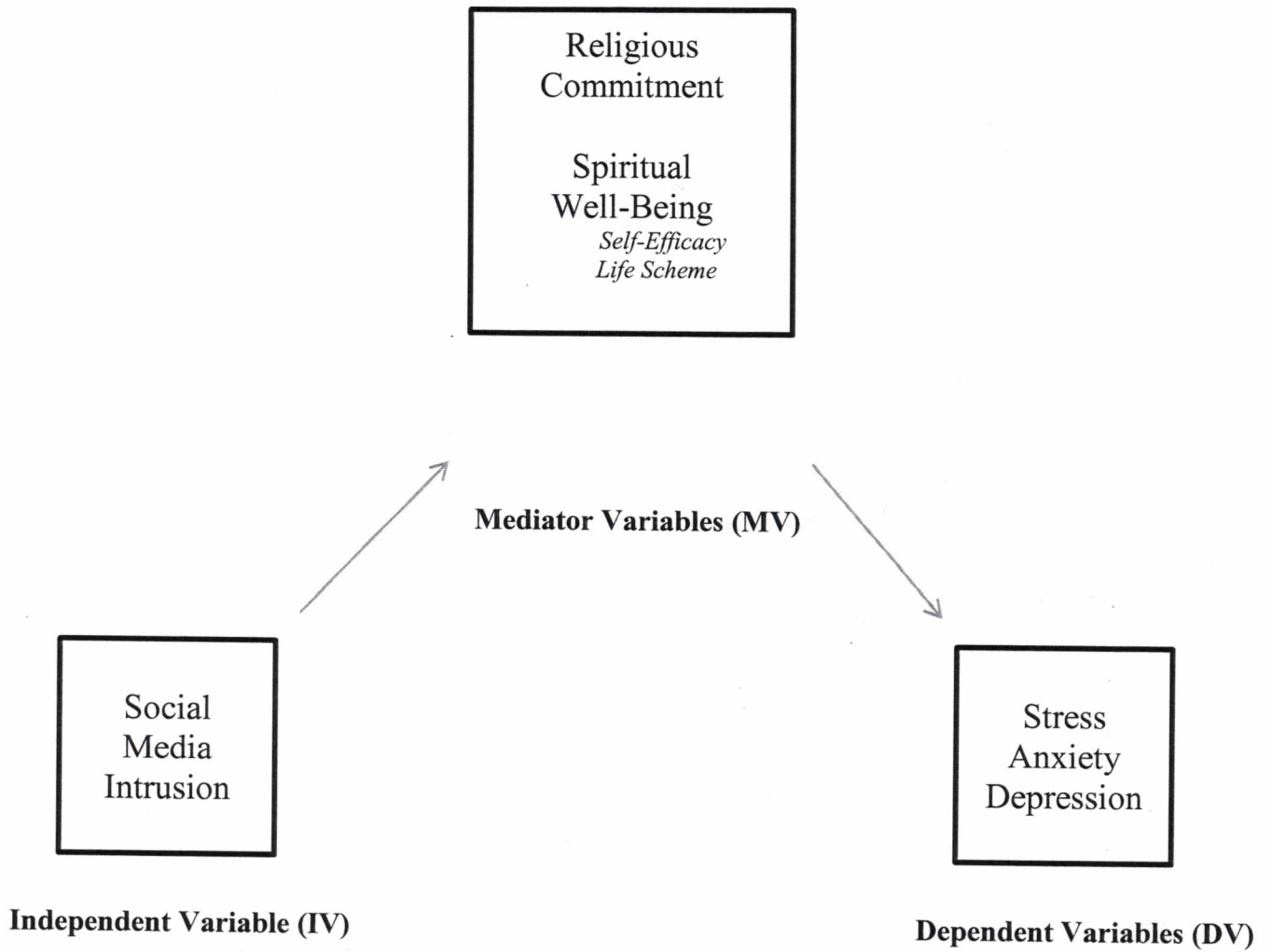


Figure 1. Mediation Model.

Appendix A- 1a
Informed Consent Form

Auburn University at Montgomery (Clinical Psychology)
INFORMED CONSENT
Concerning Participation in a Research Study

(Social Media Use and Adjustment in College Students)

You are invited to participate in a study of the relationship between social media use and adjustment.

Research Purpose & Procedures:

We hope to learn more about use of social media and adjustment in college students. If you decide to participate, you will complete questionnaires regarding use of social media and adjustment. Participant selection for this study is voluntary and therefore participation can be withdrawn at any time. The total time for completing the surveys is estimated to be 20 minutes. This study is being conducted by Meghan Wood, who is a graduate student at AUM and completing her Master's Thesis, and Dr. Stacy Parenteau who is a professor at AUM with previous research experience on the subject of religiosity and spiritual well-being. The research itself will be used to further investigate how social media use, adjustment, and spirituality interact in college students who are also members of the millennial generation.

Risks or Discomforts/Potential Benefits:

- *Some psychological discomfort may be experienced while completing the questionnaire related to adjustment. If so, please contact the AUM Counseling Center to seek counseling services.*
- *Participants will receive 1 research credit for their Introduction to Psychology class for participation in this research project.*

Provisions for Confidentiality:

Any information obtained in connection with this study that can be identified with you will remain confidential.

Management of Research-related Injury:

If during the course of participation in this research project you experience any psychological distress, counseling services can be obtained through the Auburn University Montgomery Counseling Center at (334) 244-3469 or by emailing them at counselingcenter@aum.edu.

Contacts for Additional Information:

Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions about the study, you can contact the investigator, Meghan Wood, mwood3@aum.edu, (334) 328-4466. If you have any questions about your rights as a volunteer in this research, contact Debra Tomblin, Research Compliance Manager, AUM, 334-244-3250, dtomblin@aum.edu.

Voluntary Participation & the Right to Discontinue Participation without Penalty:

If you decide to participate, you are free to withdraw your consent and to discontinue participation at any time without penalty. Your decision whether to participate will not prejudice your future relations with Auburn University at Montgomery. The researcher may discontinue the study at any point. The researcher may terminate your participation from the project at any point.

We will give you a copy of this consent form to take with you.

YOU ARE MAKING A DECISION WHETHER TO PARTICIPATE. YOUR SIGNATURE INDICATES THAT YOU HAVE DECIDED TO PARTICIPATE, HAVING READ THE INFORMATION PROVIDED ABOVE.

Participant's signature & Date

Investigator's signature

Appendix A- 1b
Demographic Questionnaire

Demographic Questionnaire

Directions: Please answer the following items to the best of your knowledge. You can skip questions that you feel uncomfortable answering.

Age: _____

Sex: ____ Male ____ Female

Ethnicity:

a) Are you Hispanic or Latino? ____ No ____ Yes

b) Which of the following best describes your race?

____ White _____ Biracial

____ Black or African American

____ Asian

____ American Indian and Alaskan Native

____ Native Hawaiian and Pacific Islander

Class (Senior, Junior, Sophomore, Freshman): _____

Marital status:

____ Single

____ Married

____ Divorced

____ Separated

Family Income:

____ 0-20,000/year

____ 80,001-100,000/year

____ 20,001-40,000/year

____ > 100,000/year

____ 40,001-60,000/year

____ 60,001-80,000/year

Religious Affiliation:

Catholic

Protestant

Lutheran

Baptist

Methodist

Evangelical

Episcopal

Other Christian

Jewish

Buddhist

Muslim

Hindu

Mormon

Unitarian

Atheist/Agnostic

Other Faith Tradition

Non-denominational

Church Attendance: How often do you attend church?

1x/week

1x/month

1-11x/year

Never

Appendix A- 1c
Depression Anxiety Stress Scale-21

Depression Anxiety Stress Scale-21

Please read each statement and circle a number 0, 1, 2 or 3, which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement. *The rating scale is as follows:*

- 0 Did not apply to me at all - **NEVER**
- 1 Applied to me to some degree, or some of the time - **SOMETIMES**
- 2 Applied to me to a considerable degree, or a good part of time - **OFTEN**
- 3 Applied to me very much, or most of the time - **ALMOST ALWAYS**

	N	S	O	AA
1) I found it hard to wind down.	0	1	2	3
2) I was aware of dryness of my mouth.	0	1	2	3
3) I couldn't seem to experience any positive feeling at all.	0	1	2	3
4) I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion).	0	1	2	3
	N	S	O	AA
5) I found it difficult to work up the initiative to do things.	0	1	2	3
6) I tended to over-react to situations.	0	1	2	3
7) I experienced trembling (eg, in the hands).	0	1	2	3
8) I felt that I was using a lot of nervous energy.	0	1	2	3
9) I was worried about situations in which I might panic and make a fool of myself.	0	1	2	3

	N	S	O	AA
10) I felt that I had nothing to look forward to.	0	1	2	3
11) I found myself getting agitated.	0	1	2	3
12) I found it difficult to relax.	0	1	2	3
13) I felt down-hearted and blue.	0	1	2	3
14) I was intolerant of anything that kept me from getting on with what I was doing.	0	1	2	3
15) I felt I was close to panic.	0	1	2	3
16) I was unable to become enthusiastic about anything.	0	1	2	3
17) I felt I wasn't worth much as a person.	0	1	2	3
18) I felt that I was rather touchy.	0	1	2	3
19) I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat).	0	1	2	3
20) I felt scared without any good reason.	0	1	2	3
21) I felt that life was meaningless.	0	1	2	3

Appendix A- 1d
Religious Commitment Inventory- 10

Religious Commitment Inventory-10

Instructions: Read each of the following statements. Using the scale to the right, please **CIRCLE** the response that best describes how true each statement is for you.

	Not at all true of me	Somewhat true of me	Moderately true of me	Mostly true of me	Totally true of me
	1	2	3	4	5
1) I often read books and magazines about my faith.	1	2	3	4	5
2) I make financial contributions to my religious organization.	1	2	3	4	5
3) I spend time trying to grow in understanding of my faith.	1	2	3	4	5
4) Religion is especially important to me because it answers many questions about the meaning of life.	1	2	3	4	5
5) My religious beliefs lie behind my whole approach to life.	1	2	3	4	5
6) I enjoy spending time with others of my religious affiliation.	1	2	3	4	5

7) Religious beliefs influence all my dealings in life. 1 2 3 4 5

8) It is important to me to spend periods of time in private religious thought and reflection. 1 2 3 4 5

9) I enjoy working in the activities of my religious affiliation. 1 2 3 4 5

10) I keep well informed about my local religious group and have some influence on its decisions. 1 2 3 4 5

Appendix A- 1e
Spirituality Index of Well-Being

Spirituality Index of Well Being

Instructions: Which response best describes how you feel about each statement?

1 = Strongly Agree 2 = Agree 3 = Neutral 4 = Disagree 5 = Strongly Disagree

1) There is not much I can do to help myself. 1 2 3 4 5

2) Often, there is no way I can complete what 1 2 3 4 5

I have started.

3) I can't begin to understand my problems. 1 2 3 4 5

4) I am overwhelmed when I have personal 1 2 3 4 5

difficulties and problems.

5) I don't know how to begin to solve my problems. 1 2 3 4 5

6) There is not much I can do to make a difference 1 2 3 4 5

in my life.

7) I haven't found my life's purpose yet. 1 2 3 4 5

8) I don't know who I am, where I came from, 1 2 3 4 5

or where I am going.

9) I have a lack of purpose in my life. 1 2 3 4 5

10) In this world, I don't know where I fit in. 1 2 3 4 5

11) I am far from understanding the meaning of life. 1 2 3 4 5

12) There is a great void in my life at this time. 1 2 3 4 5

Appendix A- 1f
Facebook Intrusion Scale

Facebook Intrusion Scale

Instructions: Please answer the following questions regarding use of social networking sites (SNSs), including Facebook, Twitter, Tumblr, Instagram, Snapchat, Yik Yak, using the scale below. There are no right or wrong answers. Do not spend too much time on any one statement.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree

1. I often think about SNSs when I am not using it. _____
2. I often use SNSs for no particular reason. _____
3. Arguments have arisen with others because of my SNSs use. _____
4. I interrupt whatever else I am doing when I feel the need to access SNSs. _____
5. I feel connected to others when I use SNSs. _____
6. I lose track of how much I am using SNSs. _____
7. The thought of not being able to access SNSs makes me feel distressed. _____
8. I have been unable to reduce my SNSs use. _____