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ABSTRACT

Negative attitudes toward people with mental illnesses lead these individuals to utilize non-traditional avenues of support-seeking, including online venues. Within these venues, particularly the website Tumblr, the practice of self-diagnosing is common. At present, self-diagnosing is understudied, making it difficult to determine if self-diagnosed individuals face public stigma. Thus, one question about this phenomenon is as follows: does the public perceive individuals as self-diagnosed differently than individuals who are professionally diagnosed? Participants will view one of three Tumblr blogs (professionally diagnosed, self-diagnosed, and no diagnosis). It was hypothesized that participants would express differential desires to distance themselves from individuals who claim to have been self-diagnosed as compared to individuals who say they have been professionally diagnosed. Results indicated there was no differences between the groups; however, implications for future research will be discussed.

TABLE OF CONTENTS

LIST OF FIGURES

Figure 1: Results of one-way analysis of variance of Condition on Social Distance Scores	
controlling for overall Mental Illness Stigma	13
Figure 2: Profile of Tumblr User in Support of Self-Diagnosis	27
Figure 3: Tumblr user asking permission to self-diagnose	27

LIST OF TABLES

Table 1: Platform familiarity means (and standard deviations) of different social media	
platforms	13
Table 2. Frequencies of participants' familiarity with mental illness	14
Table 3. Assigned condition of manipulation and participant response to the manipulation check.	14
Table 4. Frequency statistics of participant views on realism of presented profile	14
Table 5. Correlation matrix of continuous variables	14

Chapter I: Introduction

Stigma refers to negative perceptions about an individual regarding specific attributes such as sexual orientation, race, or mental health (Major & O'Brien, 2005). Stigmatized attitudes towards people with mental illness are held by both the public and individuals who have been diagnosed with mental illness themselves (Dinos, Stevens, Serfaty, Weich, & King, 2014; Stuber, Rocha, Christian, & Link, 2014). This is important because experiencing stigma is related to a variety of complications such as stress, shame, and difficulty in social interactions (Link, Phelan, Bresnahan, Stueve & Pescosolido, 1999).

Scholars have divided stigma into two types: First, perceived stigma refers to situations in which individuals with stigmatized attributes feel embarrassment and shame when discussing those attributes (e.g., mental illness) with peers (Alonso et al., 2008). Perceived stigma can negatively affect an individual's self-esteem, as well as how they perceive their own mental illness (Major & O'Brien, 2005). Second, public stigma is the societal view of individuals with stigmatized attributes (Major & O'Brien, 2005). Regarding mental health, public stigma is often displayed through social distancing, such as maintaining limited contact with individuals exhibiting symptoms of a disorder (Stuber et al., 2014). Social distance literature focuses more on the behaviors associated with mental illness as opposed to the feelings that individuals with mental illness have about their own disorder (Stuber et al., 2014).

Although stigmatization occurs across a variety of groups (Major & O'Brien, 2005), the literature suggests that individuals with mental illness are particularly vulnerable to experiencing both public and perceived stigma (Alonso et al., 2008; Parcesepe & Cabassa, 2013). Due to these perceptions of stigma, individuals with mental illness may wish to avoid traditional avenues of support seeking, such as confiding in family and peers, and instead retreat to online communities

to discuss their experiences (Corrigan, Druss, & Perlick, 2014; Rife, Kerns, & Updegraff, 2016). Much of this electronic support-seeking takes place in online forums (e.g., Bambina, 2007). In this context, disclosure of mental illness is at the discretion of the individual, and people do not have to disclose much information in mental health forums to be accepted by an online community (Brotsky & Giles, 2007).

Individuals with stigmatized mental health conditions can easily access online communities that exhibit positive environments surrounding mental health and provide a culture with reduced public stigma (Naslund, Grande, Aschbrenner, & Elwyn, 2014). Numerous online communities allow for an open discussion of mental illness (e.g. anorexia-support.com; Brotsky & Giles, 2007; Giles & Newbold, 2011) allowing individuals to engage in these forums to seek for social support from others.

Brotsky and Giles (2007) have described in detail the various properties of one such forum, specifically regarding anorexia. For example, one of the few requirements for gaining acceptance in these forums is a fundamental understanding of how the forum operates (e.g., how to post and comment). Posts about having a mental illness are accepted by the community without scrutiny, unless there is a violation of the forum's norms or stated guidelines. This suggests that there is minimal gatekeeping from the mental health community in online support forums. Giles and Newbold (2011) have further observed that community members often offer support in the form of diagnosing conditions brought up by experience of members and validating the self-diagnosis of other members. The authors also conclude that these experiences allow for different avenues from traditional-support seeking behaviors, because they are able to retreat to online forums to openly share their experiences (Giles & Newbold, 2011).

In much the same way as people with mental illness may retreat to online forums that provide an affirming environment to discuss their mental health (Brotsky & Giles, 2007), it is possible that mentally ill individuals utilize self-diagnosing, the practice of diagnosing without the aid of a medical professional, (Semigran, Linder, Gidengil, & Mehrotra, 2015) for an affirming environment and support. The Internet is viewed as an alluring diagnostic tool that allows for instant gratification in the diagnostic process. Lanseng and Andreassen (2007) indicate that if professional opinions about medical health were accessible online, people would be more likely to seek out diagnoses online rather than going to a doctor. Self-diagnosing is common: people report using the Internet for medical information 3-5 times a month (White & Horvitz, 2009). However, self-diagnosis is also problematic, as individuals may fail to find relevant information or be misled about the causes of their symptoms (Zuccon, Koopman, & Palotti, 2015).

If people are using information retrieved from the Internet to self-diagnose, it is difficult to determine whether they actually meet the diagnostic criteria for a given mental illness. The self-diagnosis of a mental illness overlooks several functions of a professional diagnosis. Trained practitioners follow several steps before diagnosing an individual with a mental illness. For example, practitioners assess an individual's background to understand behaviors that are potentially a result of a psychiatric diagnosis (Lilienfeld, Smith, & Watts, 2013). Practitioners are trained to determine whether a group of symptoms exhibited by an individual meet the criteria for a specific disorder, as opposed to being the result of a stressful life event (Lilienfeld et al., 2013). Self-diagnosing does not draw on the vast amount of training acquired by most practitioners. This creates a fundamental distinction between the construct of self vs. professionally diagnosing for mental disorders.

Diagnosing quizzes are accessible that provide immediate results to what "mental illness" one may have (Giles & Newbold, 2011); however, the acceptance of self-diagnosing is not specific to one website. Individuals can also easily access online communities that exhibit a positive environment surrounding mental health and provide a culture with reduced public stigma (Naslund et al., 2014). When disclosure of mental health issues is minimal (Brotsky & Giles, 2007), these communities are there to provide social support to people with mental illness, such as sympathizing with the user's experience, rather than to confirm or deny a diagnosis.

Mental Illness as Portrayed on Tumblr

Although a significant portion of online social support for individuals with mental illness takes place on stand-alone websites, there is also evidence that individuals sometimes use general-purpose social media websites such as Facebook and Twitter to seek social support (Rife et al., 2016). Some social media websites (e.g., Facebook and Twitter) are used by a diverse group of people, whereas other websites attract a more specific community. For example, Tumblr is a popular blogging platform that allows users to post a variety of content such as text, photos and videos. The website consists of 345 million registered accounts and is ranked 9th of the leading social media websites used by October, 2017 (Statista, 2017). Although Tumblr was not explicitly designed to serve these groups, it is a preferred gathering place for younger individuals with unique social identities and left-wing politics. Tumblr is also frequented by people with mental health issues (Fink & Miller, 2014). The website contains relatable posts about mental illness that can be shared publicly and anonymously, and this anonymity allows users with mental illness to post about their experiences without fear of public stigma (Dinos et al., 2004).

Tumblr is a structured, non-hierarchical blogging platform. Users can share, create, and follow blogs, as well as share content through a feature known as Reblogging. Content is easily searchable, and a tagging feature allows users to discover new material through keywords, allowing other individuals on Tumblr to find posts on various topics. Tumblr users express their identity through creating About pages, that do not have specific content requirements, allowing users to share personal information including their sexual orientation, interests, favorite media programs, and their mental illnesses. Through publicly posting about mental health, Tumblr users can further develop their identity as it relates to their mental illness (Giles & Newbold, 2011).

One unique feature of Tumblr is the structure of community norms regarding mental health. For example, Figure 2 shows a profile of a Tumblr user claiming to have "BPD" (Borderline Personality Disorder) and "AVPD" (Avoidant Personality Disorder). The user also claims to be in favor of self-diagnosing. The page further demonstrates that there are no community limitations to what users may disclose, as they are able to post this to a public About page. Individuals (such as the user in Figure 2) indicate that they accept self-diagnosing as a means of further understanding an illness and are likely to accept self-diagnosed individuals into the mental health community (Giles & Newbold, 2011). Similarly, Figure 3 is an example of a Tumblr "Anonymous Ask" – a message sent to a user that do not display any information about the sender. These examples suggest that Tumblr openly allows and potentially encourages self-diagnosing among users seeking support for mental illness.

Traditional theories regarding disclosure and stigma (e.g., Corrigan et al., 2014) suggest that individuals diagnosed with mental illness often fear being open about their mental health in public settings (Dinos et. al, 2004). However, users on Tumblr are publicly announcing that they

have mental illnesses. Stuber and colleagues (2014) found that in general exhibiting symptoms of mental illness results in avoidant behavior from the public; however, on Tumblr, symptoms are openly discussed. Although these discussions are potentially a means of coping with a mental illness (Rusch et al., 2014), the open discussions of mental illness are different from how researchers currently understand public.

Summary

The norms present on Tumblr present a unique opportunity to study differences in stigma between individuals who are self-diagnosed and individuals who are professionally diagnosed. To determine if public stigma of self-diagnosis occurs, the diagnosis of the individual should be explicitly stated. These distinctions must be addressed because of the current gap in the understanding regarding individuals who self-diagnose. It is important to determine whether individuals who are self-diagnosed are perceived the same by the public as individuals with a professionally diagnosed mental illness. If the two groups have different perceptions to the public, than it elicits a contrast in the experience of these two groups.

Several observations can be made regarding the relationship between public stigma and self-diagnosing. First, if the public is aware an individual is self-diagnosed, stigma may be decreased because the legitimacy of the diagnosis is in dispute. Second, the commonality of self-diagnosis in online forums necessitates the development of a new method of studying stigma—one that emphasizes the way in which self-diagnosed individuals communicate the fact that they have (or believe they have) a mental illness. If individuals are not exhibiting specific symptoms related to their disorder, or if symptoms are not visible, the public might not see a reason to hold different attitudes about individuals who are self-diagnosed. If this is the case, it would suggest

that public stigma is more about beliefs and myths regarding mental illness, as compared to the behaviors exhibited by people with mental illness.

Hypothesis

The purpose of this study is to assess the public stigma surrounding individuals who are self-diagnosed and disclose their mental illness on Tumblr. This will advance our understanding of mental health and how individuals with mental illness are perceived in electronic forums. Specifically, the present study examines whether there are differences in the amount of social distance people wish to maintain from a Tumblr user depending on whether the user is self-diagnosed, professionally diagnosed, or has no mental health diagnosis, controlling for preconceived stigmatized attitudes. It was hypothesized that there will be differences in social distance scores between the three groups after controlling for preconceived ideas of stigma.

Chapter II: Methodology

Participants

Participants (N = 151) were recruited through Sona systems at Murray State University. A power analysis indicated that 150 participants were necessary to detect a medium effect size with 80% power. 72.3% of participants were female. The mean age of participants was 19.63, (SD = 3.24). The sample was predominantly white (79%), with the remainder being African American (11%), bi/multi-racial (7%), and other (3%). All participants were Murray State students enrolled in an Introduction to Psychology class. Once participants enrolled in the study, they were provided with an external link to participate in the study online.

Materials and Procedure

Manipulation (Appendices C-E). Participants were randomly assigned to view one of three online Tumblr profiles. All profiles will have the same blog title, URL, photo icon, and post content. The participants viewed screenshots of the Tumblr user "Kayden's" profile. These posts consist of Tumblr reblogs regarding school, as well as personal posts that are common and with which participants can easily identify (e.g., "this week is already too busy"). Kayden's Tumblr profile gives descriptions about the user, such as age and information about being a college student. In one condition, Kayden's profile lists "I am professionally diagnosed with bipolar disorder". In the second condition, the profile lists "I am self-diagnosed with bipolar disorder". In the control condition, the user's profile has no mental illness listed. The participants viewed pictures of these profiles and prompted to pay attention to the user description as well as the posts they make. The posts on the blogs were the same across all three conditions. A pilot study was conducted to determine the how realistic people thought the profile to be. Out of 23 people, 17 individuals found the profile to be somewhat realistic, 4 finding it very realistic. The results of this pilot study suggested the profile was sufficiently realistic to participants.

Bipolar disorder was selected as the mental illness depicted in the stimuli based on the results of a pilot study in which the researcher asked a panel of students to list three mental illnesses with which they were familiar, along with a description of at least one symptom. Of these results, Bipolar Disorder was the fourth most common disorder listed (after Depression, Schizophrenia, and Anxiety). Although previous stigma research is focused largely on another severe mental illness such as Schizophrenia (Stuber et al., 2014), anecdotal evidence on self-diagnosing on Tumblr suggests that mood disorders are more commonly self-diagnosed by users of the website.

Offense Sensitivity. (Appendix F) Participants were given the Offense Sensitivity Scale (Roberts & Rife, 2018, $\alpha = 0.88$) to mask the hypothesis of the study from participants. This scale consists of 16 statements and asks participants to answer from 1 (strongly disagree) to 7 (strongly agree) how much they agree with the statements presented. A higher average score indicates greater trait offense sensitivity, meaning individuals are more likely to feel offended when their political or world views are criticized.

Social Distance. (Appendix G) A modified version of the Social Distance Scale (Link, Cullen, Frank, & Wozniak, 1987) assessed participants' attitudes about the user profile they viewed. The original scale consisted of seven items about spending time with an individual (working with them, having them provide childcare, etc., $\alpha = 0.94$; Breheny, 2007). Because of the specific sample recruited for this study, a version was created to make the scenarios more relatable to the current participant pool (college students, $\alpha = 0.83$). Example items include "How would you feel about sharing a living space with Kayden," and "How would you feel about following Kayden on social media?" Participants were asked to respond on a one (*not at all willing*) to five (*very willing*) Likert-type scale their willingness to associate with someone

like the Tumblr user Kadyen. Another pilot study was conducted to determine the internal reliability of the stimuli and associated measure, which were determined to be sufficiently realistic and appropriate for the purposes of this study.

Social Media (Appendix H) Participants were asked to indicate how many hours they spend using five social media websites (Tumblr, Reddit, Instagram, Facebook, and Twitter) in a typical week. Participants were also asked how familiar they were from 1 (*Not at all familiar*) to 5 (*Very familiar*) with the five social media websites. The frequency data of the social media usage and familiarity allowed us to understand how often and familiar participants were with the platform chosen.

Social Desirability. (Appendix I) To assess social desirability, participants responded to the Brief Fear of Negative Evaluation Scale (BFNE; Leary, 1983). This 12-item questionnaire assesses the extent to which individuals fear negative evaluation from others. Participants were asked to respond from a 1 (not at all characteristic of me) to 5 (Extremely characteristic of me) Likert-scale how characteristic the 12 statements were about them. Higher summed scores indicate greater fear of negative evaluation.

General Thoughts on Mental Illness (Appendix J). The Days Mental Illness Stigma Scale (DMISS; Day, Edgren, & Esshleman, 2007) is designed to assess general attitudes individuals have towards people with mental illness. This 28-item measure asks participants to respond to statements regarding individuals with mental illness as well as the general mental health field and practice on a 1 (completely disagree) to7(completely agree)-point Likert scale. Examples of questions include "Once someone develops a mental illness, he or she will never be able to fully recover from it" and "I would find it difficult to trust someone with a mental illness". The

original scale consists of seven subscales, but for this study it was used as a unitary control variable for stigma toward mental illness ($\alpha = .92$; Brugh & Joyce, 2017).

Demographics and Manipulation Check (Appendix K). Participants were given brief demographics questions. Participants were also asked if they had mental illness, or if someone close to them had a mental illness. Participants then selected whether Kayden's profile indicated the user had a mental illness. Participants then selected how realistic they thought the profile was. These frequencies were reported to assess participant familiarity with mental illness, along with the believability of the Tumblr profile.

Participants chose to sign up for the external link to the study. Following their consent form, participants were first given the Offense Sensitivity Scale. Participants were randomly assigned one of the three Tumblr profiles. After viewing one of the three presented profiles, participants were then given the Social Distance Scale. Upon completion, participants were asked about their Social Media Usage, given the BFNE and DMISS, followed by demographics. Following completion, participants were then briefed and prompted to exit the study. All data was collected online, either through a laptop phone or tablet.

Chapter III: Results

Primary Analysis

Table 5 presents the correlations of continuous variables. A Pearson's correlation test was conducted to determine the relationship between the dependent variable, which is the mean score on the Social Distance scale and the control variable, which is the mean score on the DMISS. There was no significant correlation between the two variables, r(150) = 0.003, p = 0.97. To determine whether social desirability contributed to the evaluations of the target, a Pearson's correlation test was conducted. Fear of negative evaluations (social desirability) was positively correlated with social distance scores; r(150) = .26, $p = .001^{1}$.

For the primary analysis, a one-way analysis of covariance was conducted to determine whether there were differences between social distance scores depending on if the Tumblr profile stated that the user was self-diagnosed with bipolar disorder, professionally diagnosed with bipolar disorder, or had no mental illness stated, controlling for scores on the Days Mental Illness Stigma Scale (DMISS). The results are depicted graphically in Figure 1. There was no significant difference on social distance scores between the three conditions, controlling for scores on the DMISS, F(2, 148) = 1.12, p = 0.86. Participants' scores were not significantly different when the user was professionally diagnosed (M = 3.3, SD = 1), self-diagnosed (M = 3.27, SD = 0.68), or when no mental illness was mentioned (M = 3.75, SD = 0.96). A further one-way analysis of variance indicated that after removing the control variable (the DMISS), there were still no significant differences between the groups F(2, 149) = 1.13, p = 0.38. Additional frequencies of additional outcome variables (demographics and the manipulation check) are depicted in Tables 1-4.

¹ *Note.* The degrees of freedom vary slightly between analyses because cases with missing data were not uniformly eliminated from the dataset.

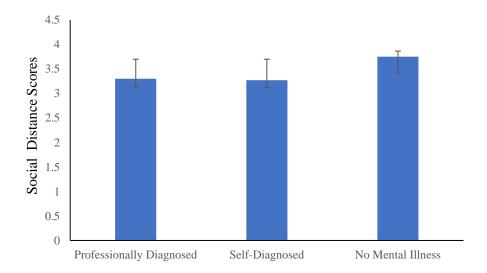


Figure 1. Results of one-way analysis of variance of condition on

Table 1

Platform familiarity means (and standard deviations) of different social media platforms.

	Platform Familiarity (1-5)			
Social Media Platform	M	SD	N	
Facebook	4.32	1.32	150	
Instagram	4.49	1.4	149	
Tumblr	2.31	1.56	148	
Twitter	3.93	1.49	148	
Reddit	1.6	1.25	148	

Table 2

Frequencies of participants' familiarity with mental illness.

		Diagnosis		
Mental Illness	N	Professionally	Self-Diagnosed	No
Participant Mental Illness	148	14.9%	5%	79.7%
Close Person Mental Illness	149	51%	7%	41%

Table 3

Assigned condition of manipulation and participant response to the manipulation check.

	Mental Illness Mentioned			
	Professionally	Self-Diagnosed	None	N
Condition	29.1%	35.8%	35.1%	151
Target identified	19.9%	34.4%	45.7%	151
by participant as				

Table 4

Frequency statistics of participant views on realism of presented profile.

	Frequency	Percentage
Not at all Realistic	31	20.5%
Somewhat Realistic	102	67.5%
Very Realistic	18	11.9%

Note: N= 151

Table 5

Correlation Matrix of continuous variables.

Variable	1	2	3	4
Age				
Social Distance	.00			
DMISS	02	.00		
BFNE	02	.26*	.01	
M	19.61	3.49	2.89	3.27
SD	3.21	.91	.85	.84
	2.21	.,, 1	.52	.01

Note: **p* < .01

Exploratory Analyses

To further probe the current data, additional exploratory analyses were conducted. A one-way ANCOVA examining difference in social distance scores by experimental group while controlling for fear of negative evaluations indicated that the inclusion of this control variable did not change the impact of the group assignment on social distance scores, F(2, 145) = 1.97, p = .29.

The original analysis plan did not include the deletion of data from participants who failed the manipulation check. However, only 67% of participants correctly identified the condition to which they had been assigned. Because of this, an additional one-way analysis of covariance was conducted post-hoc to determine if there were significant differences between the groups due to other factors. Social distance scores were significantly different based on the Tumblr profile viewed when controlling for the manipulation check, F(2, 149) = 4.15, p < 0.001. A Tukey's HSD test indicated that the mean score for social distance when no mental illness was mentioned (M = 3.75, SD = 0.96) was significantly higher than when the user stated that they had a self-diagnosed mental illness (M = 3.3, SD = 1). These results suggest that participants possibly had a lack of attention to the stimuli, contributing to the null results discussed previously.

Finally, a one-way analysis of covariance was conducted to determine if social distance scores varied between the groups controlling for whether the participant had a mental illness. There were no significant differences between the conditions when controlling for if the participant had a mental illness F(2, 143) = 2.44, p = 0.09. Participants did not differ between social distance scores between groups regardless if they had a mental illness that was professionally diagnosed (M = 3.85, SD = 1.11), self-diagnosed, (M = 3.66, SD = 0.99), or if

they had no mental illness (M = 3.42, SD = 0.86). An additional analysis of covariance indicated that there were significant differences between conditions when controlling for whether someone close to the participant had a mental illness F(2, 144) = 3.18, p = 0.045. Participants had higher social distance scores when someone closer to them had a self-diagnosed mental illness (M = 4.04 SD = 0.8) than if they knew someone close to them with a professionally diagnosed mental illness (M = 3.38, SD = 0.09). These results suggest that familiarity with mental illness may play in a role in how participants perceived the user profile.

Chapter IV: Discussion

This study attempted to examine differences between public stigma toward individuals whose mental illnesses was presented as self-diagnosed compared to individuals who indicated that their mental illness was professionally diagnosed. It was predicted that social distance scores would be different when participants saw an online profile of an individual with a self-diagnosed mental illness as opposed to a profile with no mental illness mentioned, or if the user stated that they have a professionally diagnosed mental illness. Results indicated that there was no effect of the type of user profile on social distance (stigma) scores. Controlling for overall stigmatizing attitudes, the user's stated mental illness appeared have no impact on the extent to which participants wished to associate with the user. There are two potential reasons why the present study failed to find the hypothesized differences: a manipulation failure, as well as the possibility of absence of stigma from the sample collected.

The presentation of a Tumblr profile may have been problematic for this studied sample. As shown by the frequencies in Table 1, participants often spent more time on Facebook and Instagram. This suggests participants may not have fully understood the community of Tumblr, and therefore may have experienced difficulty understanding the stimuli. Table 4 shows that most of the participants thought the profile to be somewhat realistic, however participants still may have not been familiar enough with Tumblr to understand the specific layout and presentation of the user profile. Additionally, participants were not particularly attuned to the profile, as only 67% of participants passed the manipulation check. Although about 80% of participants found the profile to be realistic, they may have not attended to Kayden's disorder.

While a manipulation failure may be responsible for the failure to find significant results in the present study, it is also possible that even if the manipulation was successful, the

hypothesized effect simply does not exist within the studied population. Exposure to individuals with mental illness is now more common. Additionally, because most participants were enrolled in an Introduction to Psychology course, they were potentially more familiar with individuals with mental illness and were more likely to be educated about mental illness. Previous stigma research has shown that even a brief informational session about mental health can decrease public stigma (Rusch, Angermeyer, & Corrigan, 2005). Additionally, prior stigma research has often used nationwide survey data, providing a more diverse sample with different education levels on mental illnesses (Stuber et al. 2014).

Limitations

A primary limitation to this study was the addition of a social media profile with a nuanced presentation of a mental disorder as opposed to the use of a more explicit vignette paradigm. Previous stigma studies have assessed public stigma through the presentation of vignettes (Angermeyer & Matschinger, 2003; Link et al., 1999; Stuber et al., 2014). Often, the vignettes tell a story about an individual exhibiting the behaviors of a psychiatric disorder (Link et al., 1999). In these instances, the behaviors depicted are explicit, indicating that individuals reading vignettes are reading about the symptoms the person in the vignette is experiencing (Link et al., 1999). In this study, participants viewed a user profile with a description of the mental illness. Participants did not see the user exhibit any signs or symptoms of their mental health; rather, they simply received an indication of the user's mental illness (or absence thereof). Because of this, participants may have had difficulty understanding the behavioral implications of the diagnosis (whether professionally or self-diagnosed) of the mental illness, which may have prevented them from understanding the severity of the diagnosis.

The posts on the profile did not present any of the physical or social characteristics associated with the user's mental health, adding an additional difference from typical public stigma literature (e.g., Link et al., 1999; Stuber et al., 2014). In the present study, participants were asked to view a blog profile that contained pictures pertaining to the user's life that indicated they were a typical college student. It may have potentially added to the realism of the manipulation to have the user's profile contain posts related to typical characteristics of bipolar disorder. The user profile included a minimal amount of information to prevent factors other than the manipulation from influencing social distance scores (e.g., a participant having something in common with the depicted user). When controlling for the manipulation check, participants had higher social distance scores on average when the user had no mental illness mentioned than when the user was stated to be self-diagnosed. These results may indicate that the information provided in the profile may have been insufficiently salient and made it difficult for participants to attend to the important parts of the profile.

Future Directions

Despite the non-significant findings, the present study provides a starting point for future research. First, when designing this type of study, the type of platform being simulated should be chosen carefully. As shown in Table 1, on a scale of 1-5, participants stated that their familiarity with Tumbler was, on average, 2.1, indicating most participants were not very familiar with the platform. If participants are not using Tumblr, they may not have been appropriately attentive to the user profile, or may not have known how to interpret the information in the profile. Using a platform more users are familiar with (e.g., Facebook) might improve the experimental realism.

Second, it may be beneficial to eliminate the user profile completely and examine the same question using a vignette about self-diagnosing, describing characteristics of the mental

illness in both conditions and how the individual went about diagnosing their condition.

Providing more information about the individual may also add to the realism of the stimuli.

Eliminating the use of a profile altogether and strictly using a vignette allows for participants to experience the signs and symptoms associated with the mental illness provided, instead simply being stated in the profile. Alternatively, the addition of more personal statements of the user that exhibit signs and symptoms of the mental illness could be added without a presentation of a vignette.

Finally, it may be useful to assess perceived stigma in individuals who are self-diagnosed. Like public stigma, there are several effects of perceived stigma that prevent an individual with mental illness from engaging in support-seeking behaviors, as well as seeking treatment. Due to feelings of embarrassment caused by perceived stigma of mental illness, these internalized feelings potentially cause a person to avoid seeing a physician for mental and physical care (Alonso et al., 2008). Due to feelings of embarrassment and guilt associated with mental illness, it is important to assess these feelings in individuals who are self-diagnosed to understand if they experience the same feelings as individuals who have received a professional diagnosis.

Although the findings of this study indicated no differences in the stigma of an individual who is self-vs.-professionally-diagnosed with a mental illness, several empirical questions can be drawn from the data, along with further directions for assessing this topic. Assessing stigma of mental illness requires various approaches that include, but are not limited to, the manner in which an individual with mental illness is presented to participants, but also acknowledging and accounting for diversity within the sample. It would be beneficial to expand on this study to gain

a further understanding of public (and eventually perceived) stigmatization of individuals with self-diagnosed mental illness.

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Figures

- I'M FEMALE. LESBIAN.
- I'M A CANCER SUN, PISCES MOON AND AQUARIUS RISING.
- INFO-T
- I HAVE BPD AND AVPD. I'VE BEEN DIAGNOSED WITH SOME OTHER THINGS TOO, FOR EXAMPLE, DEPRESSION, GENERALIZED ANXIETY DISORDER AND PANIC DISORDER, BUT I'M CONFUSED ABOUT THEM, BECAUSE I CONSIDER ALL OF IT A PART OF MY PERSONALITY DISORDERS.
- I SUPPORT SELF-DX, SPECIALLY BECAUSE BEFORE GOING TO A PSYCHIATRIST I SELF-DXED AND YES, I WAS RIGHT LOL. AND I HAVE A LOT OF REASONS TO AGREE WITH IT, I CAN DISCUSS IF YOU ASK/PM ME, OF COURSE, DON'T BE RUDE.
- · DON'T BE RUDE. DON'T BE RUDE. REALLY, I CAN'T HANDLE CRITICISM WELL.
- DON'T SEND ME A MESSAGE IF YOU WANT EMERGENCY HELP! I'M NOT ALWAYS ONLINE, SO PLEASE, SEARCH FOR A HOTLINE CRISIS. I WOULD PUT A LINK HERE, BUT I DON'T KNOW WHERE YOU LIVE.

Figure 2. Profile of Tumblr user in support of self-diagnosis.

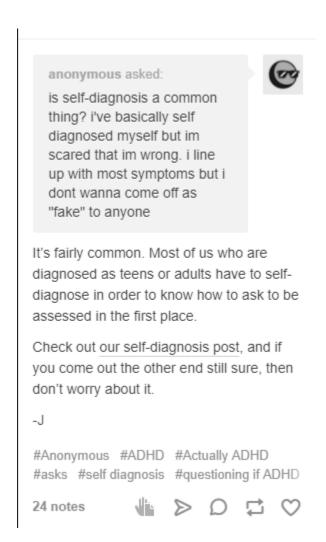


Figure 3. Tumblr user asking permission to self-diagnose.

Appendix A: Informed Consent

Project Title: Social Media Beliefs and Personality Factors

Primary Investigator: Asheley Roberts and Dr. Sean C. Rife, Dept. of Psychology, Murray State University, Murray, KY 42071, (270) 809-4404.

You are being asked to participate in a project conducted through Murray State University. You must be at least 18 years of age to participate. Below is an explanation of the purpose of the project, the procedures to be used, and the potential benefits and possible risks of participation.

- 1. **Nature and Purpose of Project:** The purpose of this study is to gain information about the relationship between personal traits and social media use.
- 2. **Explanation of Procedures:** Your participation in this study will involve completing a series of short exercises. You may be asked to write two brief essays, give your opinion about a news story, and complete a word generation task.
- 3. **Discomfort and Risks:** There is no known risk to you as a participant. Additionally, your participation is voluntary, you can refuse to answer any questions and you can discontinue your participation at any time.
- 4. **Benefits:** There are no direct individual benefits to you beyond the opportunity to learn first-hand what it is like to participate in a research study or to learn about some of the methods involved in psychological research. A general benefit is that you will add to our knowledge of the research subject.
- 5. **Confidentiality:** Your responses on all the tasks will be completely anonymous; they will only be numerically coded and not recorded in any way that can be identified with you. Dr. Rife will keep all information related to this study secured. Data may be made available in anonymized form to other researchers for reproducibility purposes.
- 6. **Required Statement on Internet Research:** All responses from online participants will be treated confidentially and stored on a secure server. However, we are unable to guarantee the security of the computer on which you choose to enter your responses. Information (or data) you enter, and websites you visit online can be tracked, captured, corrupted, lost, or otherwise misused.
- 7. **Refusal/Withdrawal:** Your participation in this study is completely voluntary. Your refusal to participate will involve no penalty. In addition, you have the right to withdraw at any time during the study without penalty or prejudice from the researchers, including the use of the "QUIT" button on an online questionnaire.

By clicking on the link below you are indicating your voluntary consent to participate in this research.

If you have any mental health questions or were distressed by any of the information you shared during this study, free counseling is available in the Psychological Counseling Center, 401 Wells Hall, or in the Counseling and Testing Center, 104 Oakley Applied Sciences Center.

THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY THE MURRAY STATE UNIVERSITY INSTITUTIONAL REVIEW BOARD (IRB) FOR THE PROTECTION OF

HUMAN SUBJECTS. ANY QUESTIONS PERTAINING TO YOUR RIGHTS AS A PARTICIPANT OR ACTIVITY-RELATED INJURY SHOULD BE BROUGHT TO THE ATTENTION OF THE IRB COORDINATOR AT (270) 809-2916. ANY QUESTIONS ABOUT THE CONDUCT OF THIS RESEARCH PROJECT SHOULD BE BROUGHT TO THE ATTENTION OF DR. SEAN RIFE IN THE MSU PSYCHOLOGY DEPT., AT (270) 809-4404.

Appendix B: Recruitment for Sona

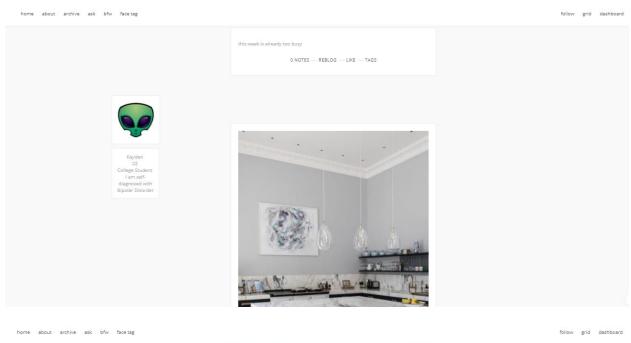
SONA TITLE: Social Media and Personality Factors

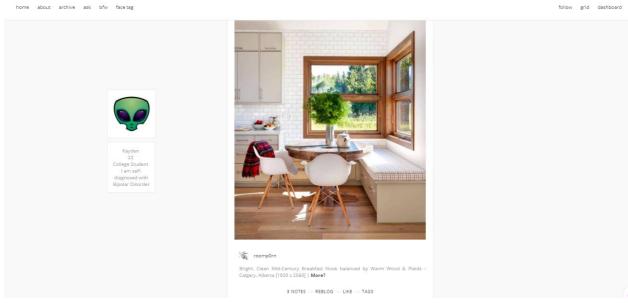
Short Description: This study asks participants to complete a brief online survey.

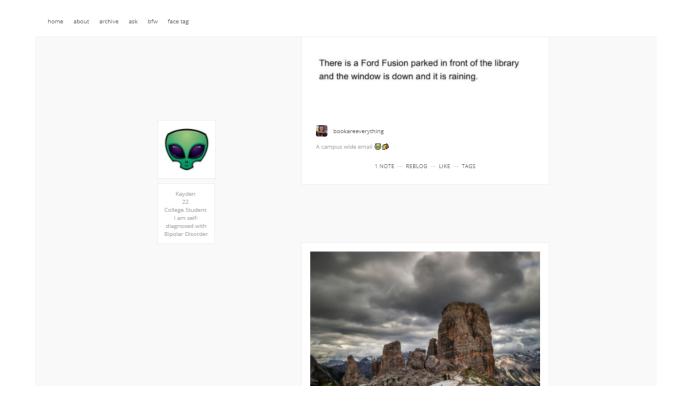
Long Description: This study asks participants to complete a brief online survey. Upon beginning the survey, participants will be asked to complete questionnaires and answer a few questions about their online habits. Participation in this study should take no more than 20 minutes. Participants will receive 10 credits for completing this study.

Study link: https://surveys.lyceum.ws/ls/index.php/579411?lang=en

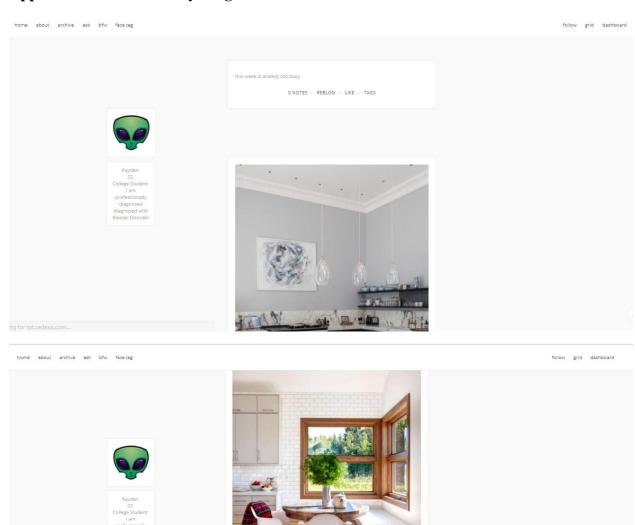
Appendix C: Self-Diagnosed

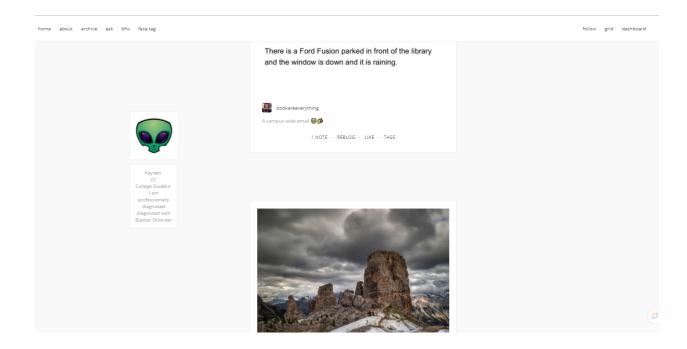




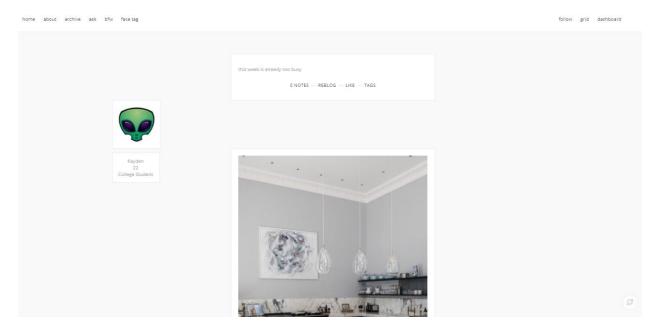


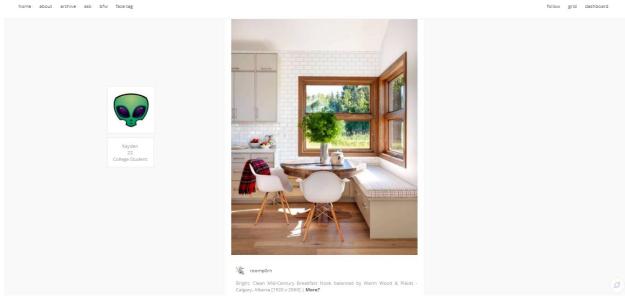
Appendix D: Professionally Diagnosed

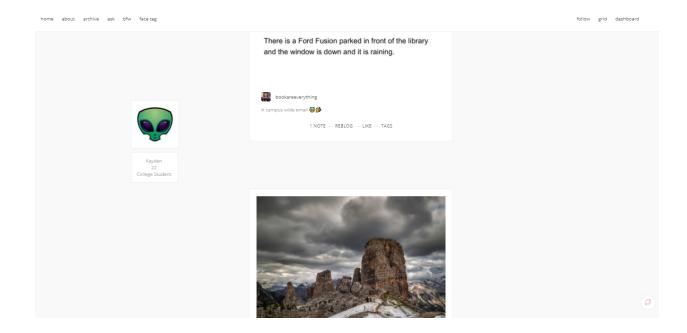




Appendix E: No Diagnosis







Appendix F

Please indicate how accurately each statement describes you. 1= Not at all like me. 7= Very much like me.

- 1. I am frequently angered by the current state of American Society.
 - 1 2 3 4 5 6 7
- 2. It gets on my nerves when people insult my views.
 - 1 2 3 4 5 6 7
- 3. The current state of affairs in the world is disgusting.
 - 1 2 3 4 5 6 7
- 4. The state of the world is unsettling.
 - 1 2 3 4 5 6 7
- 5.I am often astounded when people accuse me of being disrespectful to others based on social differences.
 - 1 2 3 4 5 6 7
- 6. It is difficult to keep up with what is deemed offensive by others.
 - 1 2 3 4 5 6 7
- 7. The way people today treat others is disrespectful.
 - 1 2 3 4 5 6 7

8. Peo	8. People attack others too harshly for having different opinions.								
	1	2	3	4	5	6	7		
9. I am	O. I am sad about the state of the world.								
	1	2	3	4	5	6	7		
10. I a	10. I am annoyed with how sensitive people today are about world issues.								
	1	2	3	4	5	6	7		
11. I o	ften fee	el angere	ed when	people	correct	me on	social issues.		
	1	2	3	4	5	6	7		
12. He	earing a	bout cer	tain pol	licies th	at are aş	gainst m	ny own political views is shocking.		
	1	2	3	4	5	6	7		
13. WI	hen my	opinion	is on so	cial affa	irs are o	criticize	d, I feel as though I am being attacked.		
	1	2	3	4	5	6	7		
14. If 1	my pers	onal be	liefs are	criticiz	ed, I fe	el disres	spected.		
	1	2	3	4	5	6	7		
15. I fe	15. I feel uncomfortable when people disagree with me on social issues.								
	1	2	3	4	5	6	7		
16. It i	16. It is disgusting to see things against my own moral standard.								
	1	2	3	4	5	6	7		

Appendix G

a	• 1		•		
So	C12	I)	101	ากา	CO
1)()	Cia		101	Lan	-

Please indicate	how willing from .	l (not at all	willing) to	o 5 (very w	villing) you	would b	e to
associate with I	Kayden in the follo	wing scenar	rios.				

1.	How would you	feel about sha	aring a living spa	ace with someo	ne like Kayden?
1	2	3	4	5	
2.	How would you	feel about hav	ving a worker or	the same job a	as someone like Kayden
1	2	3	4	5	
2	How would you	feel having so	omeone like Kay	den living in y	our residence hall?
1	2	3	4	5	
3	How about invit	ing someone l	ike Kayden to w	here you live?	
1	2	3	4	5	
4	How would you	feel about a si	ibling or a close	friend dating s	omeone like Kayden?
1	2	3	4	5	
5	How would you	feel about intr	roducing Kayde	n to your signif	icant other?
1	2	3	4	5	
6	How would you	feel about fol	lowing Kayden	on social media	n?
1	2	3	4	5	

Appen	dix	H
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Social Media U	Jsage
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Please indicate how many hours you spend in a typical week on each of the following websites.
Tumblr
Twitter
Facebook
Reddit
Instagram
I don't use any of these.

Please indicate from 1 (not at all familiar) to 5 (very familiar) how familiar you are with the following social media websites.

Facebook	1	2	3	4	5
Instagram	1	2	3	4	5
Tumblr	1	2	3	4	5
Twitter	1	2	3	4	5
Reddit	1	2	3	4	5

Appendix I

BFNE

Please read each of the following statements	carefully and	indicate how	characteristic	it is of
you according to the following scale:				

 $I = Not \ all \ characteristic \ of \ me$

2= Slightly characteristic of me

3= Moderately characteristic of me

4= Very characteristic of me

5= *Extremely characteristic of me*

1. I worry about what other people will think of me even when I know it doesn't make any difference.

1 2 3 4 5

2. I am unconcerned even if I know people are forming an unfavorable opinion of me.

1 2 3 4 5

3. I am frequently afraid of other people noticing my shortcomings.

1 2 3 4 5

4. I rarely worry what kind of impression I am making on someone.

1 2 3 4 5

5. I am afraid others will not approve of me.

1 2 3 4 5

6. I am afraid that people will find fault with me.

1 2 3 4 5

7. Other people's opinions of me do not bother me.

1 2 3 4 5

8. When I am talking to someone, I worry about what they may be thinking of me.

1 2 3 4 5

9. I am usually worried about what kind of impression I make.

1 2 3 4 5

10. If I know someone is judging me, it has little effect on me.

	1	2	3	4	5								
11.	Sometime	s I thinl	x I am to	oo conc	erned	l with	what o	other pe	ople	will t	hink	of m	e.
	1	2	3	4	5								

12. I often worry I will say or do the wrong things.

1 2 3 4 5

Appendix J

DMISS

	ndicate the extent wing scale:	t to which yo	u agree or disaş	gree with the st	tatements listed	below using
1	2	3	4	5	6	7
(comple	tely disagree)				(comple	tely agree)
1. 7	There are effective	e medication	s for mental illn	esses that allov	w people to retu	ırn to normal
and prod	luctive lives.					
2.	I don't think that	it is possible	e to have a norm	al relationship	with someone	with a mental
illness.						
3.	I would find it di	fficult to true	st someone with	a mental illnes	SS.	
4.	People with men	tal illnesses	tend to neglect t	heir appearance	e.	
5.	It would be diffic	cult to have a	close meanings	ful relationship	with someone	with a mental
illness.						
6.	I feel anxious and	d uncomforta	able when I'm ar	ound someone	with a mental	illness.
7.	It is easy for me	to recognize	the symptoms of	of mental illnes	ses.	
8.	There are no effe	ctive treatme	ents for mental i	llnesses.		
9.	I probably would	n't know tha	t someone has a	mental illness	unless I was to	old.
10.	A close relations	ship with sor	meone with a me	ental illness wo	ould be like livi	ng on an
emotion	al roller coaster.					
11.	There is little that	at can be don	ne to control the	symptoms of r	mental illness.	
12.	I think that a per	sonal relatio	nship with some	eone with a me	ntal illness wou	ald be too
demandi	ng.					

13.	Once someone develops a mental illness, he or she will never be able to fully recover	
from it.		
14.	People with mental illnesses ignore their hygiene, such as bathing and using deodorant.	
15.	Mental illnesses prevent people from having normal relationships with others.	
16.	I tend to feel anxious and nervous when I am around someone with a mental illness.	
17.	When talking with someone with a mental illness, I worry that I might say something	
that will upset him or her.		
18.	I can tell that someone has a mental illness by the way he or she acts.	
19.	People with mental illnesses do not groom themselves properly.	
20.	People with mental illnesses will remain ill for the rest of their lives.	
21.	I don't think that I can really relax and be myself when I'm around someone with a	
mental illness.		
22.	When I am around someone with a mental illness I worry that he or she might harm me	
physically.		
23.	Psychiatrists and psychologists have the knowledge and skills needed to effectively treat	
mental illnesses.		
24.	I would feel unsure about what to say or do if I were around someone with a mental	
illness.		
25.	I feel nervous and uneasy when I'm near someone with a mental illness.	
26.	I can tell that someone has a mental illness by the way he or she talks.	
27.	People with mental illnesses need to take better care of their grooming (bathe, clean	
teeth, use deodorant).		

_____28. Mental health professionals, such as psychiatrists and psychologists, can provide effective treatments for mental illnesses.

Appendix K

Demographics	
Age	
Gender	
Race	
What is your political affiliation?	
Do you have a mental illness?	
[Please Choose]	
Yes, it is professionally diagnosed.	
Yes, it is self-diagnosed.	
No.	
Does anyone close to you have a mental illness?	
[Please Choose]	
Yes, it is professionally diagnosed.	
Yes, it is self-diagnosed	
No.	
According to the user profile you recently viewed, Kayden has	
[Please choose]	
Professionally diagnosed bipolar	
Self-diagnosed bipolar	
No mental illness mentioned.	
How realistic do you think the user profile was?	
[Please choose]	

Not at all realistic

Somewhat realistic

Very realistic

Appendix L: Debriefing Statement

First, I would like to thank you for your help in this study. This study examines stigmatization of individuals who are self- or professionally-diagnosed with a mental illness.

If you have any questions, comments, or concerns about this study, please contact Dr. Sean Rife at srife1@murraystate.edu or 270-809-2857. Additionally, you may contact the Murray State Institutional Review Board Coordinator at 270-809-2916 if you have any questions about your rights as a participant.

If you participated for course credit, your 20 research participation credits will be assigned on the SONA website today. Your participation in this study is greatly appreciated. If you would like to receive a report of this research when it is completed, or a summary of findings, please contact Dr. Sean Rife at srife1@murraystate.edu. Thank you for your participation.

Appendix M: IRB Approval Letter



Institutional Review Board

328 Wells Hall Murray, KY 42071-3398

270-809-2916 msu.irb@murraystate.edu

TO: Sean Rife, Psychology

FROM: Jonathan Baskin, IRB Coordinator

DATE: 3/5/2018

RE: Human Subjects Protocol I.D. - IRB #18-115

The IRB has completed its review of your student's Level 1 protocol entitled Social Media and Personality Factors: After review and consideration, the IRB has determined that the research, as described in the protocol form, will be conducted in compliance with Murray State University guidelines for the protection of human participants.

The forms and materials that have been approved for use in this research study are attached to the email containing this letter. These are the forms and materials that must be presented to the subjects. Use of any process or forms other than those approved by the IRB will be considered misconduct in research as stated in the MSU IRB Procedures and Guidelines section 20.3.

Your stated data collection period is from 3/1/2018 to 12/31/2018.

If data collection extends beyond this period, please submit an Amendment to an Approved Protocol form detailing the new data collection period and the reason for the change.

This Level 1 approval is valid until 3/4/2019.

If data collection and analysis extends beyond this date, the research project must be reviewed as a continuation project by the IRB prior to the end of the approval period, 3/4/2019. You must reapply for IRB approval by submitting a Project Update and Closure form (available at murray state.edu/irb). You must allowample time for IRB processing and decision prior to your expiration date, or your research must stop until such time that IRB approval is received. If the research project is completed by the end of the approval period, then a Project Update and Closure form must be submitted for IRB reviews of that your protocol may be closed. It is your responsibility to submit the appropriate paperwork in a timely manner.

The protocol is approved. You may begin data collection now.



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Equal relax as Second employment agrees within MOP/D, AA employers thereing State University augments a channel deadily assence. Private reflects from personal behavior ass