EFFECTS OF HOUSING STYLE ON UNDERGRADUATE MENTAL HEALTH

HONORS THESIS

Presented to the Honors College of Texas State University in Partial Fulfillment of the Requirements for Graduation in the Honors College

by

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San Marcos, Texas
May 2016
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Acknowledgments

First and foremost, I would like to thank my parents for their unending support and love. I would also like to thank them for always believing in me and my dreams and for being there for me no matter what. I thank my sister Samantha whose watchful eye kept me alive when I was a toddler. Without her, I would not be here today. I would also like to thank my thesis supervisor, Dr. Schepis, and my second reader, Dr. Easton, for their constant support and resourcefulness. Next, I would like to thank all my grandparents. Although they never got to see me actually go to college, they were a constant source of support in my upbringing and inspired me to always do my best and never stop learning. I also wish thank my best friends, Krystal Kurtz and Viviana Villalon for always being a shoulder to lean on and showing me what real friendship means. I appreciate all the support I received while working on this project.
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Abstract

This study examined the effects of housing style on undergraduate mental health. It was hypothesized that those living on campus would report lower levels of depression, anxiety, and stress than those living off campus. Approximately 228 students were surveyed at Texas State University. Participants completed a demographic questionnaire, a scale measuring depression, anxiety, and stress perceptions, self-rated perceptions of social support, and a questionnaire regarding mental health services offered on campus. Using an independent samples t-test, relationships between living arrangements, GPA, first-generation status, and perceived amount of social support, anxiety, depression, and stress were examined. An analysis of variance (ANOVA) was also run to test relationships between the different types of off campus living and their perceived social support and depression, anxiety, and stress symptoms. Although no significant results for either test were found, there was a significant correlation. Using a Pearson Correlation with a set alpha level of .05, a negative correlation was found between perceived social support and perceived symptoms of depression, anxiety, and stress ($r=-.328$, $p=.000$). The more social support one perceived the less likely one would experience detrimental mental health symptoms and vice versa. From the data collected in the study, we have concluded that social support and depression, anxiety, and stress are directly related. Differences in gender and symptoms of depression, anxiety, and stress were significant. An independent samples t-test showed females with significantly higher DASS scores ($M=37.19$, $SD=11.91$) than males ($M=32.89$, $SD=9.19$).
The transition from high school to college can be a difficult and trying time (Rutter & Sroufe, 2000). The majority of graduating high school students have spent all four years at the same school and have established relationships with peers. However, once they enroll in a university, several key aspects change. Most students have never been on their own, away from the watchful eye of their parents, and often go to school away from their hometown (Ruberman, 2014). This new setting of college life could have negative effects on students as they try to navigate their new surroundings. Stress accumulates from balancing classes, readjusting to a new environment, and trying to make new friends and eventually takes a toll on students. These new stressors can be hard to cope with, especially for underclassmen who are still relatively new to a university or college. Another factor of stress on campus may be that college-aged students are easily prone to becoming overwhelmed by stress. Young adults between the ages of 18-24 have the highest occurrence of mental illness than any other age group (Kessler et al., 1994). This may be the reason why mental health is such an issue on college campuses. Many students may not deal with daily stressors in a healthy way and soon their mental health begins to decline. In 2012, the American College Health Association reported that 31.6% of college students were so depressed that it was difficult to function. This leads to a negative effect on the students’ academic performance and quality of life (Rapaport, Clary, Fayyad, & Endicott, 2005). Students may begin skipping classes and withdrawing from social activities. Although stress is an inevitable part of day-to-day life, it is becoming more prevalent and harmful to college students (Gallagher, 1990).
Along with stress, depression and anxiety are ranked as the most common mental disorders on a college campus. Almost 10% of university students in the United States have been diagnosed with, or have been treated for, depression over the past twelve months (Warnke, et al., 2016). Another survey done by the American College Health Association in 2010 reported that 30.7% of students felt so depressed that it was difficult to function during the past twelve months. Research done by Brandy and colleagues (2015) show that there is a significant positive relationship between depressive symptoms and stress. More specifically, participants that showed more symptoms of depression on a college campus also had higher stress levels (Brandy, et al., 2015). Many possible factors could cause the rising number of mental health illness on college campuses. One factor to consider might be where the student chooses to live.

According to Astin (1984), the most important environmental factor that influences a student’s level of academic engagement is living on campus in a residence hall. Most campuses try to implement a guideline that unless a freshman student can commute to school in under an hour, they are required to live on campus. Students living in residence hall are usually placed in a community-like setting and tend to have a variety of social or team-building activities to participate in on any given weekend. This allows for opportunities to create relationships and bonds between first-year students. This could alleviate some stress from students and could help them focus more on their academic performance. A study done by Turley and Wodtke (2010) examined first-year college students, their living arrangements, and academic performance. While this study showed no significant effect of living arrangements on GPA, minorities who live on campus have significantly higher GPAs than those who live off campus or with family.
Most students move out of the residence halls after their freshman year, eager to finally have more privacy. However, this may be detrimental for their mental health. A study done by Beiter and colleagues showed that students living off campus scored higher in stress, anxiety, and depression than those students who lived on campus. This may be due in part to the added stress of paying bills, preparing meals, and commuting to campus (Beiter, et al., 2015). Research also showed that 80% of students feel overwhelmed by their personal responsibilities and 50% have been so anxious they struggled in school (National Association for Mental Illness, 2009).

Regardless of housing situation, mental health issues on college campuses are increasing. In 2010, respondents to the National Survey of Counseling Center Directors reported that 44% of their clients had severe psychological problems, up from only 16% in 2000. When surveyed, 92% of university counseling centers have experienced an increase in the number of students seeking help (Gallagher, 2012). Even with this increase, not all students needing help will seek it. Research conducted by the National Alliance on Mental Illness shows that 40% of students with a mental illness would not seek help. This high number could be due to a multitude of reasons. A study by Yorgason, Linville, and Zitzman (2008) aimed to examine the knowledge and use of university mental health services. The results of the study found that male students who lived off campus were less likely to know about services the university offered (Yorgason, Linville & Zitzman, 2008). University mental health centers must continue dispersing knowledge about their services so that students who need them can utilize them. However, other findings suggest that minorities, specifically Latino and black
students, might not seek out counseling because of the cultural stigma surrounding the use of mental health services (Yorgason, et al., 2008).

If students do not use the services provided by the university, a support system can help with the problems and stressors of university life by acting as a buffer. A study by Nicpon and colleagues (2006) examined the relationship between loneliness, social support, and living arrangements with academic performance of college freshmen. Although no significant relationship between social support or loneliness on GPA was found, freshmen that lived off campus had higher GPAs than those who lived on campus (Nicpon et al., 2006). Results also showed that women perceived more social support from family and friends than men did (Nicpon et al., 2006). If there is a lack of a social support system during this critical transition, this can lead to students displaying more stress and depressive symptoms (Lee, Dickson, Conley, & Holmbeck, 2014).

The current study aims to examine whether or not a student’s housing style has an effect on their mental health, specifically, depression, anxiety, and stress. Perceptions on social support will also be measured. Lastly, students will be assessed on their knowledge of the resources available on campus for those seeking help. My hypothesis is that students who live off campus and alone will have higher levels of stress, anxiety, and depression and lower levels of perceived social support than those who live on campus. My hypothesis is also that freshmen living on campus will have lower levels of depression, anxiety, and stress and higher levels of social support. I also believe that participants who score higher in perceived social support will be negatively correlated with levels of stress, anxiety, and depression. Finally, students living on campus will have more knowledge of university resources than those who do not live on campus.
Method

Participants

A total of 228 college students (42 male, 183 female) from Texas State University were surveyed. Ages ranged from 18 to 38 ($M=20.14$, $SD=2.94$). Of the participants, 99 identified as Caucasian, 76 identified as Hispanic/Latino, and 20 identified as African American. Classification of participants included 107 freshmen, 55 sophomores, 32 juniors, and 33 seniors. Of those participants, 139 were not first generation students. A total of 127 participants lived on campus and 101 lived off campus. Only 24 of the participants reported using campus mental health services. Participants were mainly recruited from the Psychology Human Subjects Pool. Some participants were recruited from an upper-level psychology course. Participants completed the study online using the SONA software. Participants received one credit towards their Psychology 1300 class if they were recruited from the Human Subjects Pool, and the professor for the upper-level psychology course determined extra credit. No identifying markers were used in this study. Approval for this study was obtained by the Texas State University Institutional Review Board. Participants were treated in accordance with APA ethical guidelines.

Materials

Researchers administered a survey online in four parts. The first was an eight-item demographic survey including age, ethnicity, classification, and GPA (see Appendix A). No direct identifying markers were given. Next, the Multidimensional Scale of Perceived Social Support (MSPSS) was given (Zimet, et al., 1988). This is a twelve-item questionnaire that addresses participants’ support, including support coming from family, friends, and/or a significant other. Scores were summed to create an overall support score
Next, participants were given the Depression, Anxiety, and Stress Scale (DASS-21) (Lovibond & Lovibond, 1996). Questions addressed participants’ perceived depression, anxiety, and stress (see Appendix C). Answers were summed and an overall score of 84 was calculated. Lastly, a three-item questionnaire addressing participants’ knowledge of Texas State mental health services was given (see Appendix D). All surveys were administered online.

**Procedure**

After being recruited, participants were told the study was going to examine differences in perceptions of depression, anxiety, and stress. After providing consent to participate, participants from the Human Subjects Pool logged onto the Texas State SONA webpage to complete the four questionnaires. Participants recruited from the upper-level psychology course completed the survey through Qualtrics. All conditions and questionnaires were the same for all participants. Upon completion of the survey, participants were thanked for their time and received either one credit towards their Psychology 1300 class or received extra credit determined by the professor.

All data was analyzed using the Statistical Package for the Social Sciences (SPSS). To compare which classification had the most social support and had more perceived symptoms of depression, anxiety, and stress an independent samples t-test was conducted. An independent samples t-test was also conducted to see relationships between GPA and DASS symptoms and social support. To test for gender differences in reported DASS scores and MSPSS scores, and independent samples t-test was conducted. Finally, an independent samples t-test was also conducted to test relationships between generational status and DASS symptoms and social support. To analyze which type of off
campus housing had the highest amounts of DASS symptoms and social support, an analysis of variance (ANOVA) was conducted. Lastly, a Pearson correlation was conducted in order to find any trends in the data collected.

**Results**

Researchers used SPSS to analyze the data collected. It was hypothesized that freshmen living on campus would have the highest social support. To test these relationships, researchers conducted several independent sample T-tests. Although no tests ran were significant, there were differences in scores. Freshmen did have higher perceived support \((M=68.01, SD=14.41)\) over upperclassmen \((M=67.47, SD=12.99)\). Generational status also had an effect on support. First generation students had lower support \((M=65.51)\) than those students who were not first generation \((M=69.06)\). Also notable was the relationship between GPA and perceived social support. Those with a GPA above 3.0 had more support \((M=68.38, SD=13.92)\) than those whose GPA was lower than 3.0 \((M=66.79, SD=13.22)\). An ANOVA was conducted to see which group of housing style had the greatest support. Those that lived alone reported having more support \((M=69.75, SD=10.89)\) than those living with family \((M=63.06, SD=13.38)\).

It was also hypothesized that freshmen living on campus would have lower depression, anxiety, and stress symptoms than all those living off campus. In order to test this, an independent samples T-test was conducted. Tests ran were not significant. However, results showed that freshmen do have slightly lower symptoms \((M=35.67, SD=10.68)\) than upperclassmen \((M=37.07, SD=12.19)\). Differences between symptoms and GPA and symptoms and generational status were not found. To test which group living off campus had the lower instances of depression, anxiety, and stress, an ANOVA
was conducted. Results showed that those living alone had the highest amount of symptoms \((M=40.38, SD=14.52)\) than those living with roommates \((M=35.98, SD=11.36)\), who had the lowest symptoms reported.

In order to test for differences in perceived social support based on gender, an independent samples t-test was conducted. No significant results were found. However, results showed that females reported more support \((M=68.63, SD=1.01)\) than males \((M=64.39, SD=2.12)\). This proves earlier research (Nicpon et al., 2006). In order to test for differences in DASS results, an independent samples t-test was conducted. Results were significant; \(t(67.85)=-2.46, p=.01\). Females reported more symptoms of depression, anxiety, and stress \((M=37.19, SD=11.91)\) than males did \((M=32.89, SD=9.19)\).

To test for any correlations, researchers conducted several Pearson correlation tests with a set alpha level of .05. A summary of correlations can be found on Table 1. Only one weak negative correlation was found between DASS scores and perceived social support \((r=-.328, p=.000)\). This supports the hypothesis that as DASS scores increase, perceived social support scores decrease.

**Discussion**

The central purpose of this study was to not only add to the limited amount of literature on housing arrangements and mental health, but also to test if there was a relationship between the two factors. It was hypothesized that freshmen living on campus would have the highest amount of perceived social support and lowest reported symptoms of depression, anxiety, and stress. Results did support the hypothesis in which freshmen have higher levels of support as compared to upperclassmen living off campus. Freshmen also had lower levels of depression, anxiety, and stress as compared to
upperclassmen living on campus. Possible explanations include the extra stress put on students living off campus such as commuting, paying individual bills, and preparing their own meals. However, the sample was not large enough to produce a significant result. It was also hypothesized that those with higher levels of social support would have lower levels of depression, anxiety, and stress. Results from a Pearson correlation support this hypothesis.

Perceived symptoms of depression, anxiety, and stress are seen among all classifications on a college campus, regardless of housing situation. However, there are gender differences. Females tend to have more depression, anxiety, and stress than males but also perceive more social support. This confirms earlier research (Nicpon et al., 2006).

Strengths and Limitations

One limitation of this study comes from the sample. A convenience sample of undergraduate students, mostly freshmen enrolled in Psychology 1300 was used. Additionally, the sample size was rather small, comprised of a little more than 200 students. A larger sample size might yield more significant results. Another limitation includes the fact that those in the upper level psychology course could be more aware and attuned to their mental health because of their declared major causing the results of the DASS to be significantly different than those students in a different major.

Another limitation is that the data collected was self-reported. Participants might not have answered all questions honestly. This leads to the social desirability bias that could have occurred. This bias occurs when participants are asked about socially sensitive topics such as their mental health and use of mental health services. Participants
could have responded in a way they thought was socially desirable rather than answering honestly.

There was also a factor that was not considered when structuring the survey. When giving participants an option for housing off campus, living with a spouse was not presented. This could have affected the data as those living with a spouse were not considered.

**Implications for Future Research**

Further research could expand the sample size and recruit participants from different universities across the country. One factor that was not considered was those participants living with a spouse or significant other. This could change DASS results and possibly elevate perceived social support. Future research could also include face-to-face interviews to learn about participants more and more emphasis could be placed on generational status and differences across ethnicities. The development of further research could involve campus mental health awareness as most students had not used campus services.

**Conclusion**

The hypothesis of the study was that freshmen living on campus would have lower levels of depression, anxiety, and stress and higher levels of perceived social support. Although the results prove the hypothesis, there were no significant tests conducted that will support it. Ideally, others could follow up this research. Sample size should be increased and more attention could be placed on whether generational status and ethnicity affect social support and depression, anxiety, and stress. Results could be used to increase mental health awareness on campus and help ease the transition from
high school to college. Universities could also use results to help students dealing with mental illness make better housing choices.
References


Table 1.

Summary of Correlations for Scores on Depression, Anxiety, and Stress 21 and the Multidimensional Scale of Perceived Social Support.

<table>
<thead>
<tr>
<th>Measure</th>
<th>MSPSS</th>
<th>DASS-21</th>
<th>Sig(2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSPSS</td>
<td>--</td>
<td>-.33**</td>
<td>.000</td>
</tr>
<tr>
<td>DASS-21</td>
<td>-.33**</td>
<td>--</td>
<td>.000</td>
</tr>
</tbody>
</table>
Table 2.
Summary of scores for the Depression, Anxiety, and Stress Scale-21.

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>38</td>
<td>32.89</td>
<td>9.19</td>
</tr>
<tr>
<td>Female</td>
<td>17</td>
<td>37.19</td>
<td>11.91</td>
</tr>
</tbody>
</table>

Equal variances not assumed

<table>
<thead>
<tr>
<th>F</th>
<th>Sig</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.63</td>
<td>0.01</td>
<td>-2.46</td>
<td>67.85</td>
</tr>
</tbody>
</table>
Appendix A

1. Age:
2. Gender: Male  Female  Transgender  Intersex  Non-binary  Other
3. Classification: Freshman  Sophomore  Junior  Senior
4. Ethnicity (Select all that apply): White  Hispanic/Latino  Black or African-American  American Indian or Alaska Native  Asian  Native Hawaiian or Pacific Islander  Other
5. Housing: On campus  Off campus - family  Off campus - alone  Off campus – roommates
   a. If you live on campus, what residence hall do you live in?
   b. If you live off campus, who do you live with? Family  Roommates  Alone
6. Are you involved in an organization/club/society/etc. on campus?
   a. If yes, please state which one(s).
7. This next question is about whether or not you are a first-generation college student. We define a first generation college student as someone whose parents, (either or both) did not attend college. Are you a first-generation college student?
8. Please indicate which best represents your current Texas State GPA:
   a. Below 2.0
   b. 2.0-2.49
   c. 2.5-2.99
   d. 3.0-3.49
   e. 3.5 and above
Appendix B

Multidimensional Perceived Social Support Scale

Instructions: We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.

Circle the “1” if you **Very Strongly Disagree**
Circle the “2” if you **Strongly Disagree**
Circle the “3” if you **Mildly Disagree**
Circle the “4” if you are **Neutral**
Circle the “5” if you **Mildly Agree**
Circle the “6” if you **Strongly Agree**
Circle the “7” if you **Very Strongly Agree**

1. There is a special person around when I am in need. 1 2 3 4 5 6 7
2. There is a special person with whom I can share my joys and sorrows. 1 2 3 4 5 6 7
3. My family really tries to help me. 1 2 3 4 5 6 7
4. I get the emotional help and support I need from my family. 1 2 3 4 5 6 7
5. I have a special person who is a real source of comfort to me. 1 2 3 4 5 6 7
6. My friends really try to help me. 1 2 3 4 5 6 7
7. I can count on my friends when things go wrong. 1 2 3 4 5 6 7
8. I can talk about my problems with my family. 1 2 3 4 5 6 7
9. I have friends with whom I can share my joys and sorrows. 1 2 3 4 5 6 7
10. There is a special person in my life who cares about my feelings. 1 2 3 4 5 6 7
11. My family is willing to help me make decisions. 1 2 3 4 5 6 7
12. I can talk about my problems with my friends. 1 2 3 4 5 6 7
Appendix C

Depression, Anxiety, and Stress Scale – 21 (DASS – 21)

Please read each statement and circle a number 0, 1, 2 or 3 that indicates how much the statement applied to you over the past week.

The rating scale is as follows:

0  Did not apply to me at all
1  Applied to me to some degree, or some of the time
2  Applied to me to a considerable degree, or a good part of time
3  Applied to me very much, or most of the time

1. I found it hard to wind down.  0 1 2 3
2. I was aware of dryness of 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 (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion).  0 1 2 3
5. I found it difficult to work up the initiative to do things.  0 1 2 3
6. I tend to over-react to situations.  0 1 2 3
7. I experienced trembling (e.g. 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
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.  
17. I felt I wasn’t worth much as a person.  
18. I felt that I was rather touchy.  
19. I was aware of the action of my heart in the absence of physical exertion.  
20. I felt scared without any good reason.  
21. I felt that life was meaningless.
Appendix D

Please read each statement and circle a number 0, 1, 2 or 3 that indicates how much the statement applies to you.

0 Never heard of these services

1 I have may heard of these services but do not know about them and could not explain them

2 I have heard of these services and know of them, but could not explain them to others

3 I could easily explain these services to others

1. How would you describe your knowledge of Texas State University mental health services?  0 1 2 3
2. How did you first hear about campus mental health services?
   a. Friend/fellow student
   b. Student orientation
   c. Faculty
   d. Physician
   e. Resident Advisor (RA)
   f. Family member
   g. Advertisement
   h. Internet
   i. Other, please list.
3. Have you used campus mental health services? Yes No
   a. If no, why?
      i. Did not need services
      ii. Did not think services would help
      iii. Felt embarrassed about using services
      iv. Lack of knowledge
      v. Independent approach to solving problems
      vi. Felt frightened or nervous
      vii. Worried about anonymity
      viii. Believed services were offered to only those with severe problems
      ix. Not enough time
      x. Other.