

Mental Health Study

FFE Research Grant Report

Mental health is a growing concern in the United States, even more exacerbated by the recent COVID19 pandemic. Issues such as anxiety, depression, stress, and loneliness are particularly prevalent among college-aged students. Fraternities and sororities provide collegiate members and alumni with opportunities for growth and development, including personal and professional support as well as meaningful and impactful connections. Research suggests the higher sense of social support among fraternity and sorority members is associated with lower depression levels (Chartoff, 2017). The extent to which fraternity and sorority involvement helps address mental health among members is theorized but not demonstrated in the research. There are mixed findings regarding mental health help-seeking behaviors and stigma in regards to gender identity (Vidourek et al., 2014) and little research that details the differences in mental health experiences and behaviors among affiliated and unaffiliated students.

Study Methodology

For this study, we used large-scale data to examine the current status of mental health experiences and behaviors of fraternity and sorority affiliated students and provide comparison with unaffiliated students. The data insights presented in this report are generated from analysis conducted on the 2018-2019 Healthy Minds Study. The Healthy Minds Study is an annual survey that explores mental health, service utilization, and other issues related to student mental health. The Healthy Minds Study was selected for this analysis and the data gathered provide details about the mental health experiences of students in using psychological health screening tools used by medical professionals along with items allowing for self-reported experiences.

The 2018-2019 sample included 78 participating institutions. As four-year colleges and universities make-up the majority of host institutions for fraternal organizations, the total study sample from 2018-2019 was narrowed for analysis to only include students who were pursuing a bachelor's degree. The total number of student respondents included in the analysis was 41,302. The number of students responding to each item may vary due to institutions including optional question blocks or students opting to not respond. The response totals included in analysis for each item is listed in the footnotes.

Unless otherwise specified, statistical analysis was conducted using a 95% significant level ($P>0.05$).

Highlighted Findings

Through comparison with unaffiliated students, the following findings highlight the mental health experiences and perspectives of fraternity and sorority affiliated students.

- Fraternity and sorority affiliated students report higher positive mental health scores.
 - This was consistent for affiliated male and affiliated female students in comparison to their unaffiliated peers of similar gender identities, but was not consistent for affiliated non-binary students.
- Fraternity and sorority affiliated students report lower mean scores related to depression and anxiety.
 - For depression, this was consistent for affiliated male and affiliated female students in comparison to their unaffiliated peers of similar gender identities, but was not consistent for affiliated non-binary students.
 - Significant differences were not observed for mean anxiety scores when considering affiliation and gender.
- Fraternity and sorority affiliated students have lower lifetime diagnosis of depression by a medical professional, but higher lifetime diagnosis of anxiety.
 - These findings were consistent when further disaggregating responses for affiliation and gender identity.
- Fraternity and sorority affiliated students have higher rates of lifetime use of therapy or counseling, but lower rates of current use of therapy or counseling.
- Fraternity and sorority affiliated students have a higher positive rating of campus support systems, but lower knowledge of where to go to access mental health services if needed.
 - This was consistent for affiliated male and affiliated female students in comparison to their unaffiliated peers of similar gender identities, but was not consistent for affiliated non-binary students.

Positive Mental Health

The Flourishing scale is an 8-item summary measure of self-perceived success in areas of relationships, self-esteem, purpose, and optimism and is used as a psychological well-being score.

A one-way analysis of variance (ANOVA) showed significant differences in mean psychological wellbeing scores between gender identities, $F(2,39465)=210.279$, $p=.000$. Further analysis through independent sample t-tests conducted on the general undergraduate student population in the sample indicate female students have statistically significant higher mean psychological wellbeing scores ($M=44.270$, $SD=8.177$) than male students ($M=43.520$, $SD=8.816$) and non-binary students ($M=37.980$, $SD=9.308$).

In the 2018-2019 HMS data set¹, students who indicated affiliation with a fraternity or sorority had a statistically significant higher mean psychological well-being score ($M=45.56$, $SD=7.664$) than students who reported being unaffiliated ($M=43.64$,

¹ n=39,494 undergraduate students, 5608 identified as affiliated members of a fraternity or sorority.

SD=8.547), $t(8096)=17.015$, $p=.000$. When considering fraternity or sorority affiliation and gender (Table 1), independent sample t-tests indicate:

- Fraternity affiliated male students reported statistically significantly higher mean psychological wellbeing scores ($M=45.22$, $SD=8.052$) than their unaffiliated male peers ($M=43.22$, $SD=8.912$).
- Sorority affiliated female students reported statistically significantly higher mean psychological wellbeing scores ($M=45.770$, $SD=7.421$) than their unaffiliated female peers ($M=44.020$, $SD=8.268$).
- There was no statistically observable difference in the mean psychological wellbeing scores between affiliated ($M=41.240$, $SD=9.917$) and unaffiliated non-binary students ($M=37.980$, $SD=8.546$).

Table 1, Mean Psychological Wellbeing Scores

	Mean	N	Std. Dev.
Male Students			
Affiliated	45.22	1919	8.052
Unaffiliated	43.22	10766	8.912
Female Students			
Affiliated	45.77	3661	7.421
Unaffiliated	44.02	22425	8.268
Gender Non-Binary			
Affiliated	41.24	25	9.917
Unaffiliated	37.98	672	8.546

When comparing psychological well-being among affiliated students, independent sample t-tests indicate statistically significant differences based on gender identity:

- Affiliated female students reporting higher mean psychological wellbeing scores ($M=45.770$, $SD=7.421$) than affiliated men ($M=45.220$, $SD=8.052$).
- Similarly, statistically significant differences were observed between affiliated female students and affiliated non-binary students with affiliated women reporting higher mean psychological wellbeing scores ($M=45.770$, $SD=7.421$) than affiliated non-binary students ($M=41.240$, $SD=9.917$).

Depression

Depression is categorized and assessed in the Healthy Minds Study using the Patient Health Questionnaire (PHQ-9)²², which is a self-administered diagnostic instrument for mental disorders that categorizes depression from minimal to severe.

A one-way analysis of variance (ANOVA) showed significant differences in mean depression scores between gender identities among the general undergraduate student population in the dataset, $F(2,29323)=292.198$, $p=.000$. Further analysis using independent sample t-tests conducted on the general undergraduate student population indicate:

- Female students reported statistically significant higher mean depression scores ($M=8.890$, $SD=6.244$) than male students ($M=7.690$, $SD=6.117$).
- However, non-binary students ($M=13.540$, $SD=6.949$) reported statistically significant higher mean depression scores than female students ($M=8.890$, $SD=6.244$) and male students ($M=7.690$, $SD=6.117$).

In the 2018-2019 HMS data set³³, students who indicated affiliation with a fraternity or sorority had a statistically significant lower mean depression score ($M=7.97$, $SD=5.756$) than students who reported being unaffiliated ($M=8.70$, $SD=6.353$), $t(5657.213)=7.293$, $p=.000$. When considering fraternity or sorority affiliation and gender (Table 2), independent sample t-tests indicate:

- Fraternity affiliated male students reported statistically significantly lower mean depression scores ($M=7.400$, $SD=5.666$) than their unaffiliated male peers ($M=7.750$, $SD=6.197$).
- Sorority affiliated female students reported statistically significantly lower mean depression scores ($M=8.270$, $SD=.115$) than their unaffiliated female peers ($M=8.990$, $SD=.6.308$).

There was no statistically observable difference in the mean depression scores between affiliated ($M=13.560$, $SD=7.905$) and unaffiliated non-binary students ($M=13.540$, $SD=6.923$). However, the mean scores of non-binary students, regardless of affiliation, falls within the moderate depression (scores between 10-14) category using the PHQ-9 scale. Whereas, mean depression scores among male and female students, regardless of affiliation, fell within the mild depression range (scores between 5-9).

Table 2, Mean Depression Scores

	Mean	N	Std. Dev.
Male Students			
Affiliated	7.40	1468	5.666

²² The PHQ-9 utilizes categorizes depression in the following score scale: 0-4=minimal depression, 5-9=mild depression, 10-14=moderate depression, 15-19=moderately severe depression, 20-27=severe depression.

³³ n= 29,344 undergraduate students, 4003 identified as affiliated members of a fraternity or sorority.

Unaffiliated	7.75	7785	6.197
Female Students			
Affiliated	8.27	2515	5.752
Unaffiliated	8.99	17016	6.308
Gender Non-Binary			
Affiliated	13.56	18	7.905
Unaffiliated	13.54	524	6.923

Further, cross-tabulation analysis indicates a smaller portion of students affiliated with fraternities and sororities (18.9%) have been diagnosed with depression by a medical profession than unaffiliated students (20.6%). When considering the intersection of gender identity and affiliation, a smaller portion of affiliated students have been diagnosed with depression by a medical professional (Table 3).

Table 3, Depression Diagnoses, by Affiliation and Gender Identity

	Affiliated	Unaffiliated
Male Students	13.1%	13.5%
Female Students	21.8%	23.2%
Gender Non-Binary	42.3%	49.9%

n= 41,271 undergraduate students, 5,768 identified as a member of a fraternity or sorority.

Anxiety

Anxiety is categorized in the Healthy Minds Study using the Generalized Anxiety Disorder scale (GAD-7)⁴⁴, which is used to diagnose and assess the severity of anxiety disorder.

A one-way analysis of variance (ANOVA) showed significant differences in mean anxiety scores between gender identities among the general undergraduate student population in the dataset, $F(2,29011)=519.351$, $p=.000$. Further analysis using independent sample t-tests conducted on the general undergraduate student population indicate:

- Female students reported statistically significant higher mean anxiety scores ($M=8.040$, $SD=5.733$) than male students ($M=5.970$, $SD=5.286$).

⁴⁴ The GAD-7 utilizes categorizes anxiety in the following score scale: 0-4=no signs of anxiety, 5-9=mild anxiety, 10-14=moderate anxiety, 15-21=severe anxiety.

- However, non-binary students (M=10.700, SD=5.966) reported statistically significant higher mean anxiety scores than female students (M=8.040, SD=5.733) and male students (M=5.970, SD=5.286)

In the 2018-2019 HMS data set⁵⁵, students who indicated affiliation with a fraternity or sorority had a statistically significant lower mean anxiety score (M=7.21, SD=5.513) than students who reported being unaffiliated (M=7.47, SD=5.728), $t(5394.379)=2.783$, $p=.005$. However, independent sample t-tests indicate no statistically significant observable differences in mean anxiety scores exist between affiliated and unaffiliated students when gender identity is considered (Table 4). Additionally, the mean scores of non-binary students, regardless of affiliation, falls within the moderate anxiety (scores between 10-14) category using the GAD-7 scale. Whereas, mean anxiety scores among male and female students, regardless of affiliation, fell within the mild anxiety range (scores between 5-9).

Table 4, Mean Anxiety Scores

	Mean	N	Std. Dev.
Male Students			
Affiliated	5.94	1449	5.060
Unaffiliated	5.97	7693	5.327
Female Students			
Affiliated	7.93	2489	5.620
Unaffiliated	8.06	16839	7.750
Gender Non-Binary			
Affiliated	10.94	17	6.571
Unaffiliated	10.69	527	5.952

Further, cross-tabulation analysis indicates a larger portion of students affiliated with fraternities and sororities (25.7%) have been diagnosed with anxiety by a medical professional than unaffiliated students (24.5%). When considering the intersection of gender identity and affiliation, a slightly larger portion of affiliated male and female students have been diagnosed with anxiety by a medical professional (Table 5), while a slightly lower portion of affiliated non-binary students have been diagnosed with anxiety compared to unaffiliated non-binary peers.

Table 5, Anxiety Diagnoses, by Affiliation and Gender Identity

	Affiliated	Unaffiliated

⁵⁵ n= 29,030 undergraduate students, 3,957 identified as affiliated members of a fraternity or sorority.

Male Students	14%	13.5%
Female Students	31.7%	29%
Gender Non-Binary	50%	52.4%

n=41,271 undergraduate students, 5,768 identified as a member of a fraternity or sorority.

Perception and Use of Services

Use of Services

Cross-tabulation analysis found that a larger portion of students affiliated with fraternities and sororities (47.9%) have ever used therapy or counseling services than unaffiliated students (45.4%). However, among those who have reported ever using therapy or counseling, a smaller portion of students affiliated with fraternities and sororities are currently doing so (42.3%) compared to unaffiliated students (46.9%). This equates to roughly 13% of all students affiliated with fraternities and sororities and 14% of unaffiliated students currently using therapy or counseling.

Table 6, Use of Counseling or Therapy for Mental Health Concerns

	Lifetime	Current
Male Students		
Affiliated	35.7%	39.5%
Unaffiliated	35.5%	42.3%
Female Students		
Affiliated	54.1%	43%
Unaffiliated	49%	47.5%
Gender Non-Binary		
Affiliated	63.6%	66%
Unaffiliated	83%	60%

n=41,271 undergraduate students, 5,768 identified as a member of a fraternity or sorority.

The findings of current use of counseling or therapy are drawn from analysis of students who had ever used counseling or therapy. The portions listed above represent the percentage of students who have ever used counseling or therapy that were currently doing so at the time of data collection.

Perceived Need for Help with Emotional or Mental Health Problems

A one-way analysis of variance (ANOVA) showed significant differences in perceived need for help with emotional or mental health problems between gender identities among the general undergraduate student population in the dataset, $F(2,37730)=851.513$, $p=.000$. Further analysis using independent sample t-tests conducted on the general undergraduate student population indicate:

- Female students reported statistically significant higher perceived need for help for emotional and mental health problems ($M=4.060$, $SD=1.788$) than male students ($M=3.310$, $SD=1.839$).
- However, non-binary students ($M=4.980$, $SD=1.470$) reported statistically significant higher mean anxiety scores than female students ($M=4.060$, $SD=1.788$) and male students ($M=3.310$, $SD=1.839$).

There was not a statistically significant difference observed between fraternity and sorority affiliated students ($M=3.86$, $SD=1.812$) and unaffiliated students ($M=3.83$, $SD=1.844$) in regards to perceived need for help with emotional or mental health concerns in the last 12 months, $t(37756)=.931$, $p=.352$. Additionally, independent sample t-tests indicate no statistically significant observable differences in perceived need for professional help for emotional or mental health issues exist between affiliated and unaffiliated students when considering gender identity (Table 7). While fraternity and sorority affiliation does not appear to influence a significant difference between gender identity peer groups (i.e., affiliated vs. unaffiliated female students) in terms of perceived need for professional help for emotional or mental health concerns, the significant findings for differences among students of different gender identities in the general population regarding perceived need for help should be noted and of concern.

Table 7, Perceived Need for Professional Help for Emotional/Mental Health Issues (Last 12 months)

	Mean	N	Std. Dev.
Male Students			
Affiliated	3.38	1801	1.822
Unaffiliated	3.29	10207	1.842
Female Students			
Affiliated	4.10	3492	1.758
Unaffiliated	4.05	21567	1.792
Gender Non-Binary			
Affiliated	4.59	22	1.709
Unaffiliated	4.99	644	1.461

Knowledge of Campus Support Resources

A one-way analysis of variance (ANOVA) showed significant differences in knowing where to go for mental or emotional help on campus between gender identities among the general undergraduate student population in the dataset, $F(2,37010)=53.218$, $p=.000$. Further analysis using independent sample t-tests conducted on the general undergraduate student population indicate:

- Male students reported statistically significant means in knowing where to go for mental or emotional help on campus ($M=2.570$, $SD=1.448$) than female students ($M=2.400$, $SD=1.395$) and non-binary students ($M=2.43$, $SD=1.484$).
- No statistically significant difference was observed between female students ($M=2.400$, $SD=1.395$) and non-binary students ($M=2.43$, $SD=1.484$) in regards to knowing where to go on campus to get help for emotional or mental health concerns.

When considering affiliation, there are statistically significant differences between fraternity and sorority affiliated students and unaffiliated students⁶⁶ with unaffiliated students reporting higher mean scores ($M=2.5$, $SD=1.435$) of knowing where to go to seek professional help on campus than members of fraternities and sororities ($M=2.18$, $SD=1.255$), $t(76732.376)=16.18$, $p=.000$. Further, when considering the affiliation and gender identity (Table 8), independent t-tests indicate:

- Affiliated male students reported statistically significantly lower means ($M=2.260$, $SD=1.304$) than their unaffiliated male peers ($M=2.620$, $SD=1.466$) in regards to knowing where to go on campus to get help for emotional or mental health concerns.
- Affiliated female students reported statistically significantly lower means ($M=2.140$, $SD=1.226$) than their unaffiliated male peers ($M=2.450$, $SD=1.416$).

There was no statistically observable difference in the mean anxiety scores between affiliated ($M=2.090$, $SD=1.342$) and unaffiliated non-binary students ($M=2.440$, $SD=1.488$) in regards to knowing where to go on campus to get help for emotional or mental health concerns.

Table 8, Would know where to go to seek professional help for mental or emotional health on campus

	Mean	N	Std. Dev.
Male Students			
Affiliated	2.26	1780	1.304
Unaffiliated	2.62	9947	1.466
Female Students			

⁶⁶ $n=37,037$ undergraduate students, 5,235 identified as a member of a fraternity or sorority.

Affiliated	2.14	3431	1.226
Unaffiliated	2.45	21200	1.416
Gender Non-Binary			
Affiliated	2.09	22	1.342
Unaffiliated	2.44	633	1.488

Perception of Campus Support System

A one-way analysis of variance (ANOVA) showed significant differences in belief that good support systems exist on campus for students going through a tough time between gender identities among the general undergraduate student population in the dataset, $F(2,17708)=51.419$, $p=.000$. Further analysis using independent sample t-tests conducted on the general undergraduate student population indicate:

- Male students reported statistically significant higher agreement that good support systems exist on their campus ($M=4.220$, $SD=1.148$) than female students ($M=4.150$, $SD=1.161$) and non-binary students ($M=3.580$, $SD=1.252$).
- Female students reported statistically significant higher agreement that good support systems exist on their campus ($M=4.150$, $SD=1.161$) than non-binary students ($M=3.580$, $SD=1.252$).

When considering fraternity and sorority affiliation, there is a statistically significant difference among affiliated and unaffiliated students⁷⁷ in their beliefs that their campus has a good support system for students going through difficult times. Fraternity and sorority members reported higher means in their agreement that a good support system exists on their campus ($M=4.26$, $SD=1.133$) compared to unaffiliated students ($M=4.15$, $SD=1.166$), $t(17,723)=4.003$, $p=.000$. Further, when considering the affiliation and gender identity (Table 9), independent t-tests indicate:

- Affiliated male students reported statistically significantly higher agreement ($M=4.360$, $SD=1.140$) than their unaffiliated male peers ($M=4.210$, $SD=1.148$) that good support systems exist on their campus.
- Affiliated female students reported statistically significantly higher agreement ($M=4.220$, $SD=1.128$) than their unaffiliated female peers ($M=4.140$, $SD=1.116$) that good support systems exist on their campus.

There was no statistically observable difference in agreement that good support systems exist between affiliated ($M=4.00$, $SD=1.095$) and unaffiliated non-binary students ($M=3.57$, $SD=1.255$).

⁷⁷ $n=17,725$ undergraduate students, 2,143 respondents identified as a member of a fraternity or sorority.

Table 9, Belief Good Support Systems Exist on Campus for Students

	Mean	N	Std. Dev.
Male Students			
Affiliated	4.36	585	1.140
Unaffiliated	4.21	4855	1.148
Female Students			
Affiliated	4.22	1550	1.128
Unaffiliated	4.14	10374	1.166
Gender Non-Binary			
Affiliated	4.00	6	1.095
Unaffiliated	3.57	341	1.255

Conclusion

In regards to experiences with mental health, fraternity and sorority affiliated students report higher levels of positive mental health along with lower rates of depression and anxiety. It is important to make the distinction that the lower levels of depression and anxiety among fraternity and sorority members reported using the screening constructs (i.e., PHQ-9 and GAD-7) are reflective of the experiences of students at the time of their response to the study. When considering lifetime diagnoses, there is a smaller portion of fraternity and sorority members with prior depression diagnoses, but a larger portion with prior anxiety diagnoses compared to unaffiliated members.

Further, a larger portion of fraternity and sorority members have ever used therapy or counseling at some point in their lives, but fewer were currently utilizing therapy or counseling at their time of response to the study.

While fraternity and sorority members have a more positive view of the support system on their campus, knowledge of where to go on campus for professional help for mental health concerns among fraternity and sorority affiliated students is lower compared to unaffiliated students.

Finally, the majority of the findings related to the role of affiliation (i.e., all affiliated students compared to all unaffiliated students) remain consistent when considering the role of gender and affiliation (i.e., affiliated female students compared to unaffiliated female students) for binary-identify students. However, the role of affiliation plays less of a role for non-binary students as significant differences were not observed between affiliated non-binary students and unaffiliated non-binary students. Additionally, there

were significant differences found between binary-identifying students and non-binary students that suggest non-binary students experience mental health concerns at higher rates than binary-identifying students, which warrants further investigation and discussion to identify equitable, effective, and inclusive support for non-binary students.

Future Directions

This report contains the first findings from the study. Further analysis to include gender disaggregation will be conducted to narrow in further on the experiences and perspectives of fraternity men and sorority women in relation to their unaffiliated peers. Our team has access to multiple years of data dating back to 2014-2015, in which further analysis will include longitudinal comparisons year-to-year. With access to additional data from the American College Health Association, our team plans to triangulate findings by conducting analysis on similar concepts collected through the National College Health Assessment.

Finally, our team has intentions of authoring articles for journal submission utilizing findings from this study.

Research Team

- [Amanda E. Assalone, PhD](#) - Research Manager, PERC, University of Tennessee, Knoxville
- [Meghan M. Grace](#), EdD - Associate, Plaid, LLC.
- [J. Patrick Biddix, PhD](#) - Professor of Higher Education & Associate Director of PERC, University of Tennessee, Knoxville

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