

Comparison of the Wellness of a Medical School to General Student Population

Amy Adik, BS¹, Sanjay K.A. Jinka, BS¹, Christian Seif, BS¹, Theodore Weber, BS¹, Anika A. Jinka¹, Randon S. Welton, MD¹

1. Department of Psychiatry, College of Medicine, Northeast Ohio Medical University, Rootstown, OH, 44272

ABSTRACT

When compared to the general population, healthcare students have been shown to have significantly higher rates of burnout, depression, anxiety, and suicidal ideation. However, there is limited data regarding mental health, access to mental health resources, and utilization of mental health resources by healthcare students in comparison to other student populations. This study aims to evaluate a medical university's mental health and access/utilization of resources when compared to the general student population. Survey results from The Healthy Minds Study (HMS) of Northeast Ohio Medical University (NEOMED) students were compared to a national sampling of graduate and post-graduate student populations. Categories that were assessed included mental health status (previous diagnosis, depression/anxiety related symptoms experienced recently or within the past 12 months) and access/utilization of resources (support system, use of psychotropic medications). Analysis was completed through individual Chi-squared tests. Compared to the national sample NEOMED students were less likely to talk to a professional clinician ($p=0.017$), friend ($p=0.001$), significant other ($p=0.009$), or family member ($p=0.001$) about distress and were less likely to be on anti-anxiety medications ($p=0.018$). NEOMED students were less likely to be unsure of where to go for help ($p=0.009$) while preferring to deal with issues on their own ($p=0.001$); NEOMED students were less likely to report a history of depression ($p=0.044$) or anxiety ($p=0.028$). NEOMED students were more likely to have no days of the week be impacted by mental difficulties ($p=0.005$), and NEOMED students were more likely to strongly disagree that they were in need of help for their mental state ($p=0.047$). Despite the intensity of healthcare training, this survey showed that students at NEOMED were no worse than the general student population in terms of access and utilization of mental health resources and mental functioning. The data suggest that NEOMED students are more reluctant to seek help but may have fewer mental health issues compared to other student populations.

Keywords: mental health, students

INTRODUCTION

Northeast Ohio Medical University (NEOMED) includes a College of Medicine, College of Pharmacy, and a College of Graduate Studies which focus on healthcare related programming. The vision of the University is to be the model of excellence in innovative education and impactful research to create transformational healthcare leaders. Currently about 60% of NEOMED students are in the College of Medicine, 30% in the College of Pharmacy, and 10% in the College of Graduate Studies.

Healthcare education in the United States aims to develop graduates who are competent, empathetic, and strive for excellence when treating the sick or making advances in the medical field.¹ Healthcare education is academically and emotionally draining,¹ and there is growing recognition that those demands

lead to a potential decline in students' mental and emotional well-being.¹

Most of the data in healthcare education comes from the training of medical students. Even though many medical schools strive to support students, data show that distress is common among these students.¹ About 50% of US medical students report symptoms of burnout and 11% acknowledge recent suicidal ideation.² In addition, depression rates are seen to be higher in medical students than the general population.³ Anxiety is less studied in the medical student population but also seems higher than in the general public.⁴ Substance use is prominent in medical students with one third of students demonstrating high risk alcohol consumption.⁴

Substance use may contribute to the depression and anxiety seen in medical students.^{1,3} Perhaps because of the ongoing stigma associated with mental illness, medical students are less likely to seek treatment

Demographic	NEOMED Survey (n=274)	General Student Survey (n=103,748)
Gender		
<i>Male</i>	39%	39%
<i>Female</i>	60%	58%
<i>Other</i>	1%	3%
Race		
African American/Black	6.12%	17%
American Indian or Alaskan Native	0.68%	2%
Asian American/Asian	26.53%	11%
Hispanic/Latin(x)	3.40%	12%
Native Hawaiian or Pacific Islander	0.34%	1%
Middle Eastern, Arab, or Arab American	7.48%	2%
White	54.08%	63%
Self-identify (please specify)	1.36%	2%
Mean Age	25.23	23.38

Table 1. Survey Demographics

compared to the general population.³

It is not clear how much of this worsening mental health and wellness is due to general stresses associated with higher education as opposed to healthcare education in particular. Maser et. al. compared medical students’ mental health with similarly aged postsecondary graduates in Canada and found that medical students had significantly higher rates of anxiety, suicidal ideation, and psychological distress (p-value < 0.001).⁵ There is minimal literature regarding mental health, access to mental health resources, and utilization of mental health resources by healthcare students in comparison to other student populations. This study aims to fill this gap by evaluating a rural medical university’s mental health and access/utilization of resources when compared to a national student population in the United States. These findings will help the university understand how to better adapt current university mental health resources

for healthcare students in particular. Failure to do so can result in the continued growth of the many consequences of mental distress among healthcare students, including having a negative impact on a student’s journey to becoming a proficient provider, increased unprofessional behavior, and decreased empathy, all of which can possibly lead to the burnout.⁶

METHODS

This project was based on the results of the 2021 Healthy Minds Study (HMS) – an anonymous web-based survey.⁷ Students were invited by their university to participate and were reminded via emails, which contained a URL that students used to gain access to the survey. The HMS upheld the privacy and confidentiality of participants and was also protected by a Certificate of Confidentiality from the National Institutes of Health.⁷

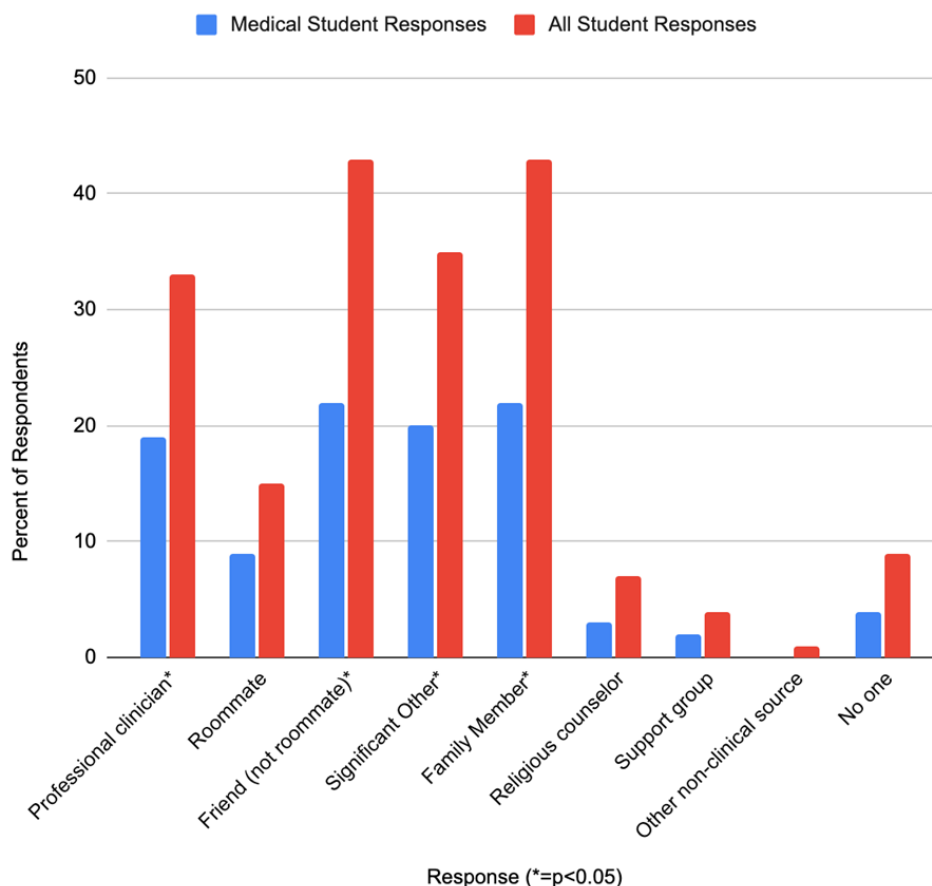


Figure 1. Emotional support sources among medical school students compared to all higher education students

The HMS was designed to examine mental health and related issues in college level student populations.⁷ NEOMED’s use of this data was to identify needs and priorities and to plan for services and programs. Our study compared NEOMED’s survey results from the spring – summer of 2021 to the results of various undergraduate and postgraduate student populations from 2020 to 2021. The survey was anonymous, and there was no compensation for participating.

Categories that were analyzed included mental health status (previous diagnosis, depression/anxiety related symptoms experienced recently or within the past 12 months) and access/utilization of resources (support system, use of psychotropic medications). These results compared the 103,748 students that participated in the HMS national survey, with the 274 students that participated in the NEOMED survey.

All statistical analyses (chi-squared) were carried out using STATA (13MP) with a significance level of $p < 0.05$.

IRB approval for this analysis was not sought

as the survey had been previously conducted and published.

RESULTS

Demographics

The national HMS had 103,748 participants including the 274 students at NEOMED. This yielded an approximate participation rate of 15% for the national survey and 27% at NEOMED. The majority (64%) of respondents in the general HMS survey were pursuing a bachelor’s degree, while the majority (68%) of respondents in the NEOMED survey was pursuing a medical degree. Of the other respondents in the general population, 18% were pursuing an associate degree, 11% master’s degrees, and only 1% medical degrees. Thirty percent of the NEOMED respondents were pursuing a pharmacy degree and 2% were pursuing other graduate degrees. See Table 1 for a summary of demographics in each survey sample.

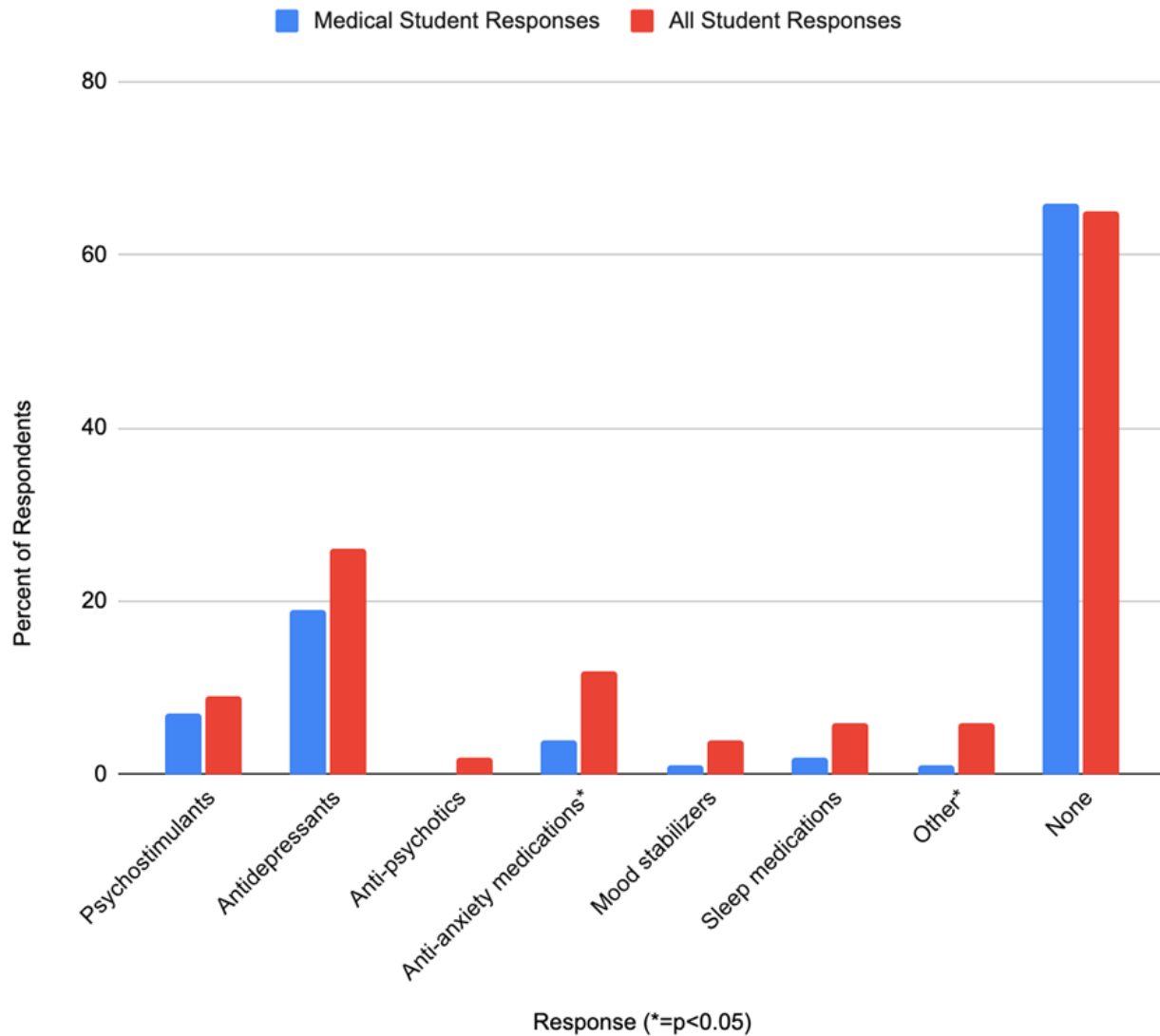


Figure 2. Prescription medication use among medical school students compared to all higher education

Emotional Support

When asked “If you were experiencing serious emotional distress, whom would you talk to about this,” NEOMED students were most likely to seek support from a friend or family member (44% total), but this was at roughly half the rate of their general student counterparts (86% total). NEOMED students were significantly less likely to seek support from a professional clinician, friend (not roommate), significant other, or family member (p-values = 0.02, 0.00, 0.01, and 0.00, respectively). (Figure 1)

Prescription medications

When asked “In the past 12 months have you taken any of the following types of prescription meds (several times per week minimum),” NEOMED students were significantly less likely to report having taken anti-anxiety medications (p-value = 0.02). Only 19% reported having taken antidepressants, but this was not statistically different than the 26% of general students who reported having taken antidepressants. (Figure 2)

Barriers for mental health services

When asked “In the past 12 months, which of the following factors have caused you to receive fewer

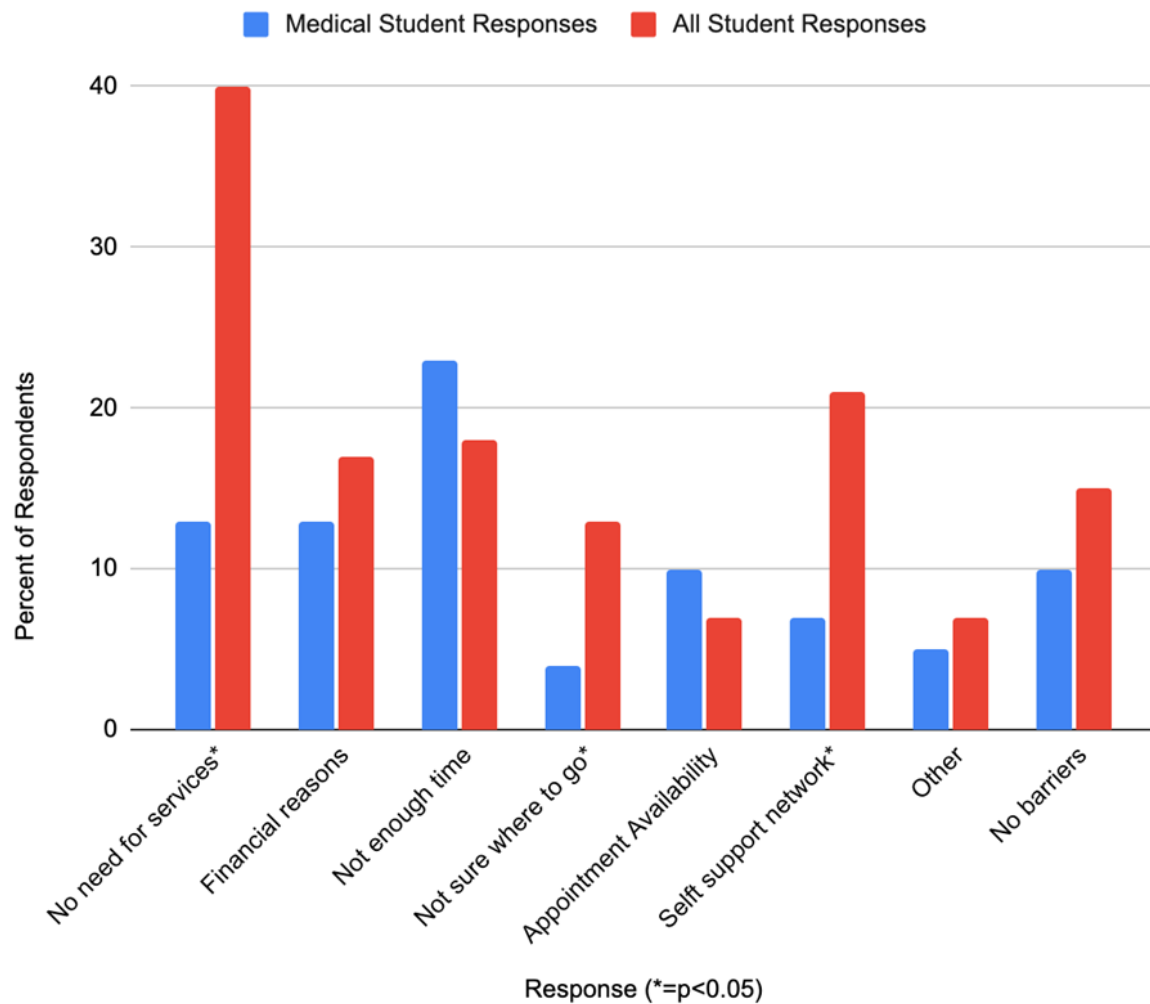


Figure 3. Barriers for mental health services among medical school students compared to all higher education students

services (counseling, therapy, or medications) for your mental or emotional health than you would have otherwise received? (Select all that apply),” 13% of NEOMED respondents claimed they had no need for services, 4% that they were not sure where to go, and 7% that they preferred to deal with issues on their own or with personal support networks. These were all significantly less frequent than in the general student population (p -values = 0.00, 0.01, 0.00, respectively). (Figure 3)

Mental health affecting academic performance

When asked “In the past 4 weeks, how many days have you felt that emotional or mental difficulties have hurt your academic performance,” NEOEMD students were significantly more likely to respond

“none” than the general student population (28% vs 17%, $p = 0.01$). (Figure 4)

Current need for mental health support

When asked about their agreement with the statement “I currently need help for emotional or mental health problems such as feeling sad, blue, anxious or nervous,” NEOMED students were significantly more likely to select “Strongly Disagree” than were general students ($p = 0.04$), but the rates were low (6% vs 3%). (Figure 5)

Previous mental health diagnosis

When asked if respondents had previous diagnoses of mental health disorders, significantly fewer NEOMED students reported having a history depression

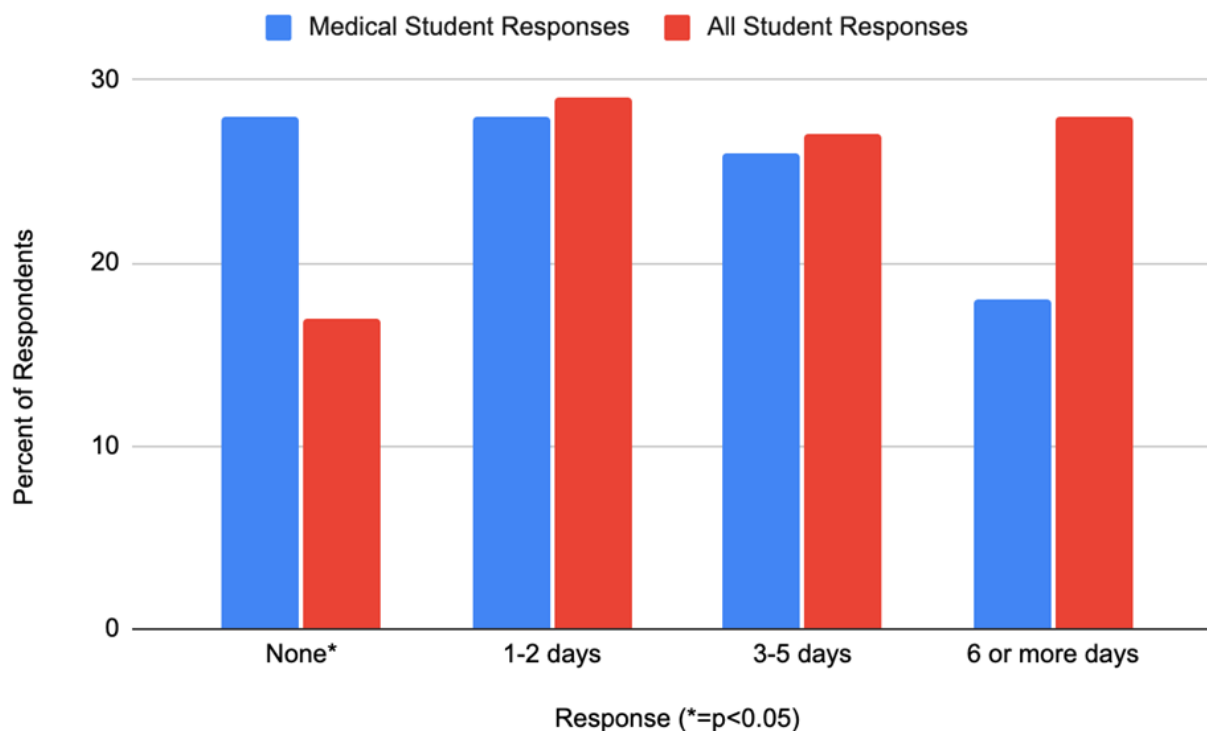


Figure 4. Mental health's effects on academic performance among medical school students compared to all higher education students

(17% vs 28%) or anxiety (19% vs 31%) when compared to the general population (p-values =0.04 and 0.03, respectively). (Figure 6)

DISCUSSION

The findings in this study suggest that NEOMED students are less likely to seek emotional support in times of distress when compared to the general undergraduate / graduate student population. A possible explanation for this is that students in healthcare specialties are uniquely hesitant to disclose mental health issues or the need for mental health treatment.⁸ This could partially stem from the stigma of having a mental illness or seeking treatment. There might also be the belief that depression and anxiety are an expected part of medical training, and they may need to learn how to manage it on their own. This fear of disclosure could cause students to shy away from needed help. For healthcare students, there could also be the fear that seeking such treatment might have a negative impact on their career and make them less competitive for future training positions or future employment. A study at the University of New Mexico School of Medicine revealed that 51% of students at the University stated they would not disclose a previous mental health diagnosis on a New Mexico Medical Board license application.⁹

Apart from the public stigma, NEOMED students are also less willing to turn to family and friends for support. This might imply that the hesitation is at least partly due to wanting to maintain an image of being able to cope with life's stresses or needing to maintain a self-image of strength and undiminished ability. Often, help-seeking and time off can be perceived as weakness or poor work ethic in a competitive medical community that emphasizes success and productivity.¹⁰ This perception is supported by results of our study. In Table 4, the most common reason given for not seeking services was related to "not enough time." Fear of being depicted as unproductive or unambitious could be leading students to avoid appropriate treatment.

Our study also found that NEOMED students report taking fewer psychotropic medications than the general student population. This may be due to a variety of factors. Firstly, NEOMED students may be underreporting their medication use. Secondly, healthcare students might place a lot of pressure upon themselves to put on a public façade of toughness and perfection. The self-imposed expectation to be flawless leaves students feeling as if they are frequently falling short, which places significant strain on their mental health.¹¹ The use of prescription medications to improve mental health would undermine the image that the students are trying to forge. The need to maintain this façade may

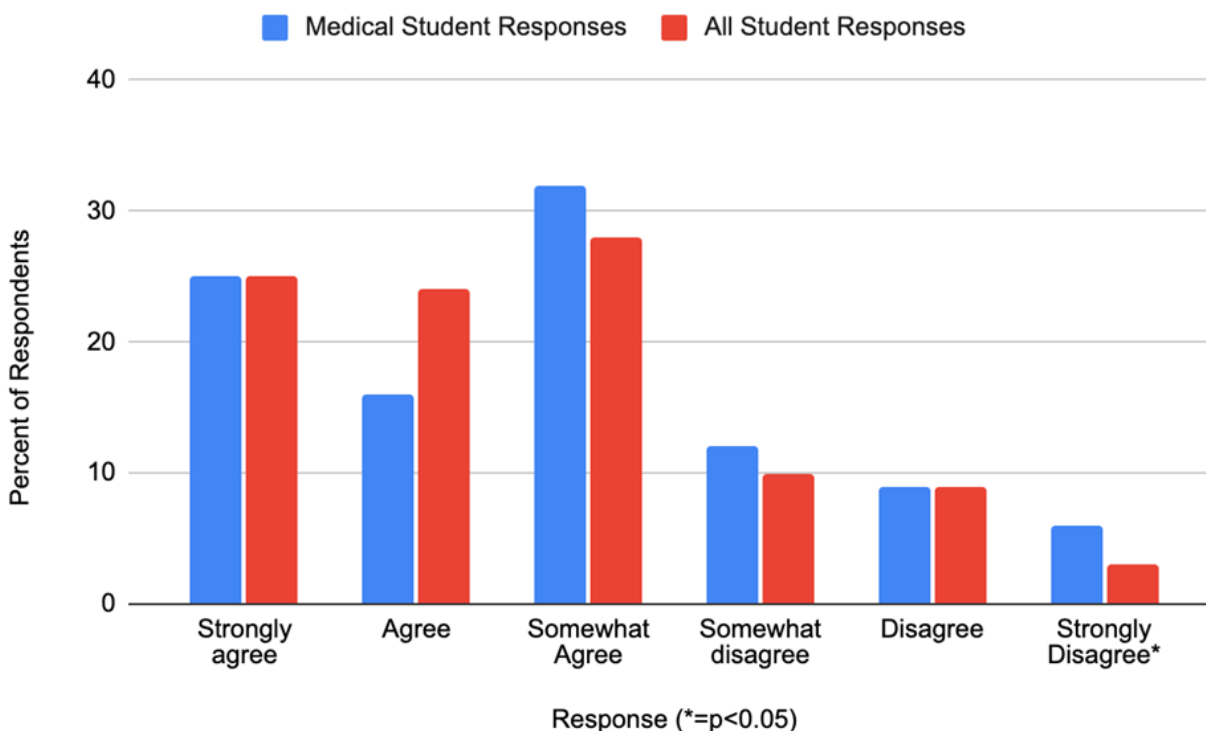


Figure 5. Current need for mental health support among medical school students compared to all higher education students

both worsen their distress and prevent them from seeking the help necessary to alleviating the distress. Healthcare training should place an emphasis on embracing vulnerability in students and allowing them to understand that perfection is unachievable and asking for help is admirable.

The findings in this study also suggest that NEOMED students are less likely to report previous formal diagnoses of mental health disorders. It could be posited that this is due to admission of students without previous mental health conditions, but there has been no significant research into this subject. Denying their own history of mental illness might also be in service of maintaining a strong and capable self-image.

A large number of participants of the NEOMED study were Asian students, however it is unclear what impact that could have had on the results. No significant previous research could be found that could correlate Asian students baseline mental health in comparison to all other students.

Further analysis into this subject is warranted, as there is limited literature comparing the mental health of medical students to other student populations. Future research could be directed towards comparing averaged responses from all medical schools in the United States versus all graduate schools. Other studies may be conducted after excluding undergraduate students, to better account for age.

Students could feel more comfortable accessing counseling services if counseling services were destigmatized. One way to go about this would be to see if any students who currently are undergoing counseling would be willing to speak on their experience and the benefit they have received from counseling. This would allow students to feel more comfortable in engaging in counseling themselves by seeing that one of their peers received help. Another way to help students feel more comfortable in accessing counseling is to have a panel of counselors discuss with the class what goes on during the counseling sessions. This will give the students a better idea of what is exactly entailed within counseling and will help them become more aware if they have a need for counseling.

Taken together, these data point to a need for mental health resources for students regardless of type of school. On-campus behavioral health counselors are common at the university level, but Kirsch et. al. goes on to outline a more unique solution: student support networks.¹² These support groups, while simple and inexpensive, harness the power of peer-to-peer interventions to influence positive outcomes. A more recent study from Naslund et. al. went on to show the peer-to-peer support groups can be effective in influencing positive changes even when these groups only exist virtually through mediums such as social media.¹³ These successes lead to us recommending

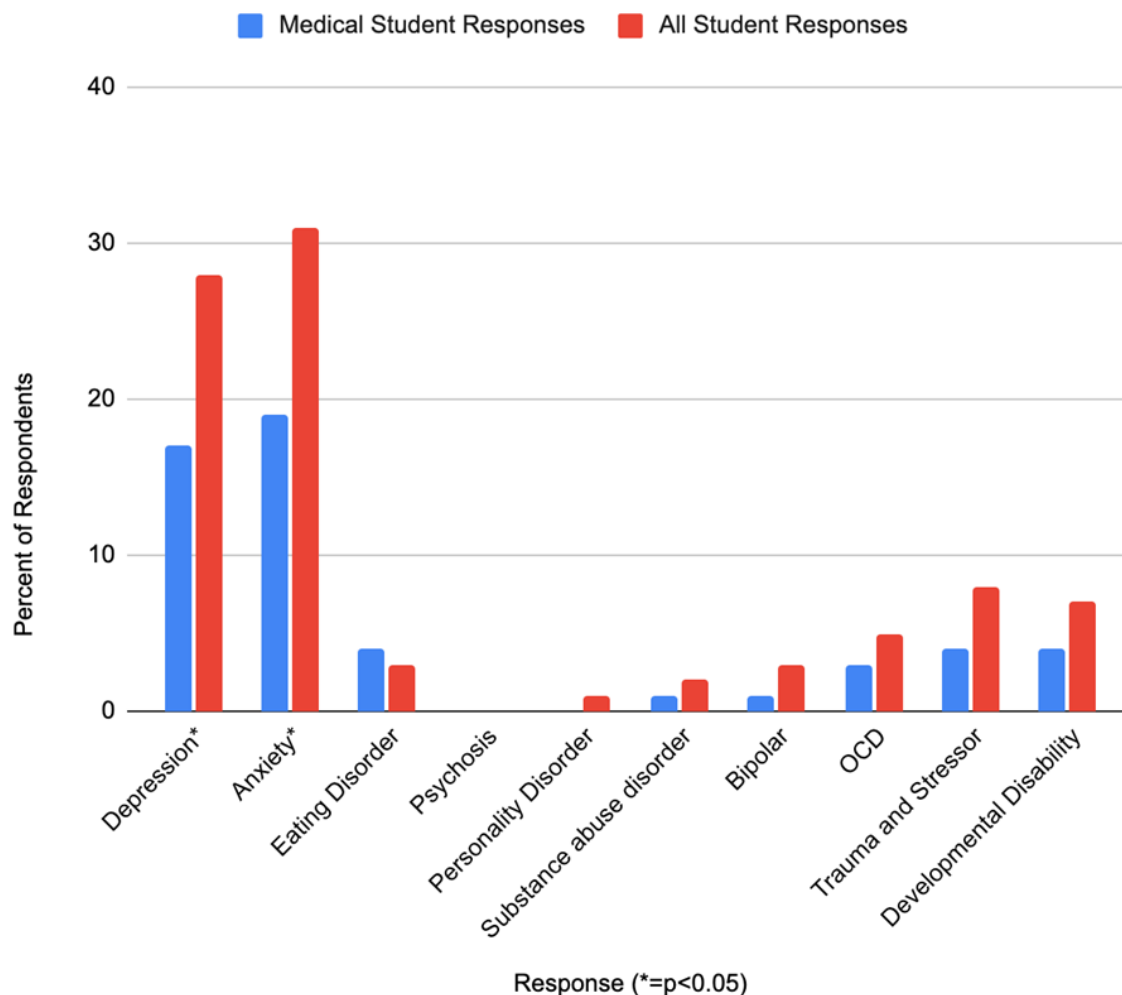


Figure 6. Previous mental health diagnoses among medical school students compared to all higher education students

universities facilitate peer support groups in both online and in-person settings moving forward to help improve student wellness.

This study has numerous limitations. Our data is collected from one medical university in rural, northeast Ohio. The data is also an aggregate of medical students, pharmacy students, and graduate students. It is possible that one or more of these groups responded in a fashion distinctly different than the other(s). The results are self-reported data and thereby influenced by students' willingness to report. Over-reporting on an anonymous survey may not be likely, but it is certainly possible that some students had previous histories of mental illness or mental health treatment that they chose not to report. The survey was distributed during the COVID-19 pandemic, and it is unclear how those stresses impacted the survey results. It is also unclear if the pandemic impacted healthcare students differently than general students. Another possible limitation to this

study is the relatively small sample size (274) in comparison to the national data (103,748). A final consideration is there might be significant differences in the demographics of the NEOMED students compared to the general student population that might have skewed the data. These could include age, gender, sexual orientation, race, and ethnicity. All of these factors might have impacted the generalizability of our data.

CONCLUSION

We used The HMS to compare students at NEOMED to the general student population in terms of access/utilization of mental health resources and mental functioning. Our study found that NEOMED students reported having fewer mental health issues and were more reluctant to seek appropriate help when compared to the general student population. Expanding our

analysis of the HMS to include multiple medical schools can lead to more generalizable findings.

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CONFLICTS OF INTEREST

All authors declare no conflicts of interest.

AUTHOR CONTRIBUTIONS

Data Collection: AA, SJ, CS, TW, AJ, RW

Data Analysis: AA, SJ, CS, TW, AJ, RW

Manuscript Preparation: AA, SJ, CS, TW, AJ, RW

Manuscript Review: AA, SJ, CS, TW, AJ, RW