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Mental Health Apps: A Study of College Students' Perceptions of Counseling Through an App

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Honors Project Final Paper

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LITERATURE REVIEW

College stress levels during pandemic

The mental health of college students, especially during the recent pandemic that caused great upheaval and disruption to the usual life demands, has always been reported to be low, with numerous students suffering from stress, anxiety, or depression. In one study (Wang et al., 2020), researchers sought to find the current statistics of all college students who suffered from depression and anxiety in the United States and if those students felt like their mental health had worsened during the pandemic. Using two standardized psychological assessments of depression and anxiety, (The Patient Health Questionnaire-9, the General Anxiety Disorder-7), distributed to students at Texas A&M University, the researchers showed that out of all the students who participated in the study (N=2031), 71.26% (n=1443) stated that they thought their depression and anxiety had increased during the pandemic. The researchers also found that 48.14 % of students had moderate to severe levels of depression and anxiety.

In a similar study conducted by some of the same researchers (Son et al. 2020), possible sources for the sharp increase in stress reported during the pandemic were identified through interviews with college students across the country. Some stressors identified were worry over academic performance due to the shift to online school, fear for themselves and their loved ones, concentration problems, trouble sleeping due to excessive worry, the general uncertainty surrounding the pandemic, and reduced social interaction with peers and educators.

Another round of research, conducted at the beginning of the pandemic in April and halfway through the summer of 2020 at the height of mask restrictions and stay-at-home orders, studied general levels of stress and anxiety in college students as well as the inequalities in stress levels between different genders, races, social classes, and sexualities (Hoyt et al., 2021). Along

with a predicted increase in mental health issues for the college students who participated

(N=707), the researchers also found significant differences between the levels of anxiety and

stress experienced by men and women (women reported higher stress levels than men), between

heterosexual and queer students (sexual minority students reported higher stress levels than

heterosexual students), and household incomes (students from lower income households reported

higher levels of stress than students from high-income households).

Yet another study, conducted in 2020, gathered data on French college students stress

levels during the COVID-19 pandemic, but focused their research on the mental health effects of

the mandatory confinement in their country (Husky et al., 2020). These researchers found,

similar to results from the United States studies mentioned above, that the students reported

feeling increased levels of stress from life due to the pandemic (61.6%). However, they noted

that there was a considerable difference between the students who chose to move home for the

confinement period and those who chose to not move home. Specifically, 71.6% of the students

who stayed in their university apartments/living situations reported higher levels of stress while,

although still a high percentage, 50.5% of the students who moved back home reported higher

levels of stress.

Many college students seek mental health counseling to deal with the usual stressors and

challenges that come with higher education in general. One study, conducted in 2018 with over

26,000 students aged 18 or older, spanning 40 universities across the United States, sought to

find statistics regarding students' use of the following different mental health counseling

methods: campus counseling services, personal counselors, personal psychiatrists, medical

providers, and religious figures. The researchers found that 20.3% of the college students

interviewed utilized counseling services on campus, 41.2% saw personal counselors outside of

campus, 15.8% saw personal psychiatrists, 17% received counseling from an outside medical

provider, and 6.4% consulted with a religious figure (Statista, 2019). With the shutdown of

many of these different counseling providers during the COVID-19 pandemic, college students

had to seek different means of mental health help when they were cut-off from the usual face-to-

face counseling.

       One alternative method to face-to-face counseling that rose in popularity during the

pandemic was mental health apps (MHAs). A mental health app can be defined as a smartphone

app that provides methods for improving and tracking mental health conditions (Kern et al.,

2018). Some examples of commonly used MHAs are HeadSpace, Calm, talkspace, and

BetterHelp. Interestingly, MHAs have been used and studied previous to this pandemic.

According to research released in 2017 regarding the theoretical and practical uses of MHAs,

these applications could be very beneficial for those seeking mental health counseling, especially

since two-thirds of Americans own a cellphone or another similar device, and using an app can

combat the social stigma of going to a clinical counseling center for therapy (Van Amerigen et

al., 2017). However, according to the researchers, there is considerable discontent between

certain aspects that contribute to the development and distribution of MHAs, such as the app

creators, the mental health community, and health care officials.

       In an earlier study (Kenny et al., 2014), 34 teenagers (aged 15-16) were asked to use a

therapeutic app prototype and describe any important factors they thought were important for the

app to have. Some concerns the participants identified with the prototype were as follows:

accessibility, safety, functionality, social interaction, engagement, gender, awareness, and young

people in control. All of these concerns were cited as either missing or severely lacking in the

prototype. Although the general reception of the prototype was positive, the researchers found

that the participants were most frequently concerned about the safety aspects (such as privacy and security), engaging graphics, and overall functionality of the prototype.

Another study, which focused more on the use of cognitive behavioral therapy for depression through an app format and had the user reviews the therapeutic app platform, yielded similar results (Stawarz et al., 2018). The researchers gathered the reviews of 1,287 therapeutic app users (both patients and health professionals) and compiled their concerns and interests from their experiences. They found that, similar to the Kenny et al. study (2014), the overall experience of using a therapeutic app was positive, with participants noting that the apps were helpful for both replacing face-to-face counseling and for quick sessions or relaxation breaks between actual counseling appointments. The participants also left positive reviews for the "hands-on" function of the apps, which essentially meant that the participants felt like they had more control over their mental health because they were the ones actively using the apps to improve their mental health. The concerns listed by the participants fell along the same lines as the Kenny et al. (2014) study; participants expressed concerns for the privacy, security, and unsupervised aspects of the MHAs, along with engagement and trust between the app creators, the health care officials, and the patients. The trust placed in app creators to provide adequate mental health care, especially, was noted as important because the app didn't involve face-to-face interaction, so the patients had to rely on what the therapeutic app was offering them as solutions without the guidance or reassurance of an actual mental health care provider.

Along with trying to appeal to the younger generations and incorporate their suggestions into their products, the opinions from the health care officials who would either be working with the MHAs or recommending them to clients were also of great importance to the therapeutic app developers. Researchers Ariana Kerst, Jürgen Zielasek and Wolfgang Gaebel sought to learn

what health care professionals thought of MHAs as a tool to help their clients battle depression

(Kerst et al., 2020).   They interviewed 72 health care officials, ranging in job specifications in

the mental health field, and asked them 25 questions about different aspects of MHAs, such as

current attitudes towards app use in their particular field, the demographics of the respondents,

and the overall technological functionality of the app, along with including several concerns that

facilitators raised about MHAs focused on depression for the participants to rate in order of

importance. The researchers found that, while the participants were open to the idea of using

MHAs for depression treatment, in practicality many did not support their use. To elaborate, of

the 72 mental health professionals surveyed, 23 (40.3%) participants indicated that they would

be interested in using MHAs, but only 12 (21.1%) stated that they had used MHAs in their

clinical setting. This difference in percentages can be attributed generally to the basic human

nature of avoidance of novel ideas or specifically to the concerns rated as the biggest issues to fix

for MHAs by the participants: limited security and privacy, little to no therapist contact with

client, and limited patient sustainability. At the same times, the aspects that the facilitators rated

as the most beneficial in therapeutic app usage were as follows: increased patient outreach, easy

access, and increased hours of operation. These observations were similar to the results of

Kenny et al.'s 2014 study, when they noted that the overall reaction to using MHAs in a clinical

practice setting was positive, but safety concerns were prominent issues to be resolved.

College students and MHAs

As mentioned previously, many college students lost direct access to their counseling

support once the COVID-19 pandemic hit due to the shut-down of many face-to-face health

services. To combat this sudden loss of support, students may have created new methods of

counseling that were COVID-19 safe. Interestingly, little is known about the specifics of coping

strategies that college students created during the pandemic.

One study covered the basics of what students were doing to cope with the mental effects

of the COVID-19 pandemic (Logel et al., 2021). In this study, researchers asked students

(N=527) from the University of Toronto to describe how they had been dealing with the effects

of the pandemic and the loss of face-to-face (or in-person) counseling services. They found that

45% of the student participants gravitated towards the upkeep of social connections (either with

friends, family, teachers, etc.), establishing a consistent routine, and attempting new activities to

combat their higher levels of stress.

Another novel method of coping that many college students gravitated towards was

MHAs. Therapeutic app usage by college students has been studied prior to the pandemic,

although the percentage of students who sought counseling from these apps was very low. For

instance, Kern et al., (2018) found that, although 26.1% of their 741 participants indicated

through their questionnaire that they were interested in using MHAs, only 7.3% had used it

before. This lack of usage could be due to a number of issues that many college students have

with MHAs. In concordance with articles listed above, college students took issue with the lack

of privacy and security that these apps exhibit (Melcher & Torous, 2020). Psychologists Jennifer

Melcher and Dr. John Torous conducted a study in 2020 to see if college counseling centers that

offered MHAs to their students as a COVID-19 safe counseling option were actually suggesting

MHAs that were safe for their students. What they found was that 39% of the apps reviewed did

not have privacy features, something that has been repeatedly mentioned across recent literature

as a major concern. Also of concern, these researchers noted that 44% of the apps had not been

updated by the developer in over 6 months and 28% were no longer available for downloading

by the students.

Despite these concerns, college students are interested in the idea of using MHAs in place

of in-person counseling (Hadler et al., 2021.). Along the same lines as Kerst et al.'s study,

Hadler et al. found that students appreciated the easy access to counseling services and the

extended hours of availability that the MHAs offered. More specifically, the review of past

literature found that students used MHAs for the accessibility, helpfulness, and convenience,

along with the COVID-19 safety this medium between clients and therapists presented.

Based on all the present information on MHAs gathered from the literature review, the

purpose of the current study was to gather additional data on college students' current

perceptions of MHAs and to see if any of the issues listed in the literature review resonate with

the participants. The current study also expanded on the current literature on college students'

perceptions of MHAs, applying a previously developed questionnaire to a new college setting.

Methodology

The survey in the current study will be the same survey used in the 2018 study "MHAs in

a college setting: openness, usage, and attitudes" by Drs. Adam Kern, Victor Hong, Joyce Song,

Sarah Ketchen Lipson, and Daniel Eisenberg. Permission to use this instrument was granted by

Drs. Daniel Eisenberg and Victor Hong on January 20, 2022. The demographic questions were

created by the researchers of the current study. See Appendix B for a complete list of survey questions.

The sample size goal for this study was 100 participants. However, due to technical difficulties in the distribution of the survey, there were only 91 respondents in total. The number of answers to the questions throughout the survey varied based on the content of the question. In more detail, participants didn't answer some questions in the survey if they have not used a MHA before. The current study was approved by the Institutional Review Board on March 24, 2022.

The survey was distributed through two different platforms, Qualtrics and SONA. SONA was used to give students who were in psychology classes at The University of Akron an opportunity to receive extra credit, while Qualtrics was used for all other students who chose to participate. The participants were emailed through their school accounts from March 30, 2022, until April 11, 2022. Two separate informed consent forms were attached to the email, clearly labelled as "QUALTRICS Informed Consent Form for Participation" and "SONA Informed Consent Form for Participation." The average amount of time it took to complete this survey was approximately 5-10 minutes, and that varied primarily on whether the participants had used MHAs before. The process of taking the survey was completely voluntary, participants could choose not to answer any questions, and they had no obligation to complete the survey once they began. Students were also told they were welcome to contact the main researcher with any questions they might have about the survey questions or the study in general.

Results

This section will be split into four sections for easier understanding of the results: demographics, openness of MHAs, usage of MHAs, and attitude towards MHAs. A complete table of the results that had pre-determined answers is included in Appendix A. All responses to the open-ended questions can be made available upon request.

Demographics

The current study included a total of 91 participants, 59 participants (65.6%) self identified as female, 28 participants (32.22%) self identified as male, and 2 participants (2.22%) self identified as non-binary/third gender. A majority of the participants were first year students at The University of Akron (33.33%, $n=30$), with third year students being the second-highest percentage of participants (23.3%, $n=20$). The other options for years of attendance at The University of Akron were: second year students (22.2%, $n=19$), fourth year students (14.4%, $n=12$), and fifth year students or higher (6.7%, $n=6$).

The ages of the participants were fairly close in percentage, the average age being 20, with 19-year-old students (25.9%, $n=21$) being the most common, followed by 21-year-old students (23.5%, $n=19$), 20-year-old students (19.8%, $n=16$), 18-year-old students (16.1%, $n=13$), and 24-year-old students (2%, $n=2$). There were two outliers, one participant aged 38 (1%) and another participant aged 44 (1%).

Openness to MHAs

To begin this survey, participants were asked if they had a mobile smartphone, since that is the most common distributing platform for MHAs. 93.1% ($n=81$) of participants said they had a mobile phone, 6.9% ($n=6$) said they did not. Participants were also asked if they had ever searched for a MHA on their phone. The responses were evenly split, with 50% saying they had ($n=43$) and 50% saying they had not ($n=43$).

A majority of the participants indicated that they would be open to using a mental health app, either choosing "maybe" (50.6%, *n*=44) or "yes" (42.5%, *n*=37). Only a few participants chose "no"(6.9%, *n*=6). The percentage of affirmative answers changed when participants were asked if they had ever discussed using a MHA to track their mental health with a mental health provider, with 85.2% of participants indicating that they had not (*n*=69) and 14.8% indicating that they had (*n*=12). Whether this was because of personal preference or unwillingness to use a MHA was not asked.

Usage of MHAs

Although a majority of the participants indicated that they would be open to using a mental health app, a majority also indicated that they have never previously used a mental health app (66.7%, *n*=58). Other participants said they had used a mental health app before (26.4%, *n*=23), and 6 participants (6.9%) indicated that they were unsure if they had used a MHA before. The most common MHAs participants had used were Headspace, Calm, and TalkSpace.

Although about three-quarters of the participants had not used MHAs before, 65.1% (*n*=56) said they had used apps for other aspects of their well-being, such as for exercise. The remaining 34.9% of participants (*n*= 30) answered the question with either "maybe" or "no".

Regarding MHAs having an evidence base, a majority of the participants indicated that they did not know if that could be applied to MHAs (52.9%, *n*=46). The percentages of students who answered "yes" (21.8%, *n*=19) or "maybe" (24.1%, *n*=21) were similar, one participant (1.2%) chose "no".

Of the 57 participants who answered the question "How often did you use the mental health app(s)?", 46 participants specified that they had only used the app for a week or less (80.7%), while a significantly lower portion said they used MHAs daily (17.5%, *n*=10), and only

one participant indicating they had used the app multiple times daily (1.8%). Participants who

had used a MHA were also asked how long they used the MHA, with the highest percentage

answering "<1 week" (70.2%, *n*=40). The percentages for the other two categories were almost

equal, with 15.8% of the participants choosing "1-4 weeks" (*n*=9) and 14% of the participants

choosing ">4 weeks" (*n*=8).

Attitudes toward MHAs

The most common responses, appearing almost every other answer, to the open-ended

question "Why would you use a mental health app?" were as follows: to receive help for their

mental health, to keep track of emotions easily, and to have a convenient and accessible outlet.

In comparison, the most common responses to the opposite open-ended question "Why would

you NOT use a mental health app?" were as follows: the expense, the possible forgetfulness to

use the app, a preference for face-to-face counseling, and the increased screen time that would

come with using an MHA. When participants were asked if they would pay to use a MHA, they

again expressed their dislike of a price placed on MHAs; 38.37% of participants chose the option

"no" (*n*=33), 45.4% chose "maybe" (*n*=39), and 16.3% chose "yes" (*n*=14).

Similar to the most common responses listed above, participants who had used MHAs

indicated that the reasons they liked using MHAs was because of their convenience and the easy-

to-follow set-up of the apps, while the most prominent reason they did not like using MHAs was

because of the cost for some features of the app. Again, a majority of the participants who had

used MHAs said that they had only used the app for a week or less (70.2%, *n*=40).

When asked if using a MHA helped with mental health conditions, 53.7% of participants

said no (*n*=29), 27.8% said maybe (*n*=15), and 18.5% said yes (*n*=10). Participants also

indicated that they would prefer to see a mental health professional over using a MHA (56.9%,

n=49). They were then asked with an open-ended question to elaborate, and the most common responses were that participants would prefer the connections that can be made in a face-to-face counseling appointment, they were afraid of data being leaked, and an app might not hold them accountable. In congruence with participants' fear of data leaks, 47.7% of participants (*n*=41) indicated in another question that they would be worried about privacy issues when using a MHA, 27.9% of participants (*n*=24) were unsure if this would be an issue for them, and 24.4% of participants said they were not worried about this particular issue (*n*=21).

Participants were also asked if they thought a mental health app could possibly improve their academic performance if they were experiencing a mental health condition. A majority of participants were unsure (48.8%, *n*=42), a slightly smaller group was confident it would (40.7%, *n*=35), and the minority of participants said no (10.5%, *n*=9).

Discussion

This section of the paper walks through the key findings of the current study and how they compare to the results of the Kern et al. (2018) study and the results from other studies included in the literature review from above. Additionally, this section includes limitations of the current study, and suggestions for future research.

The key findings of the current study were similar to the Kern et al. (2018) study that was extended with the current activity. In particular, a large percentage of the respondents indicated they would be open to using a MHA but very few have actually used one. Additionally, most students preferred to see a mental health provider rather than through a MHA. The reasons given for not wanting to use a MHA by the current participants at this large urban, primarily commuter school coincided with the data from previous studies listed in the literature review.

The most common reasons for not wanting to use a MHA were the price of using one, the lack of

a social connection, and the fact that an app might not be able to hold someone accountable.

These responses were consistent throughout the survey when answering a variety of questions

about their use or none use of MHAs. From the repeated mention of concern regarding privacy

issues, lack of social connections, and the prices maintained to use a MHA, it can be inferred

these are issues that should be addressed by MHA creators to improve the usage frequency. If

universities or other schools decide to implement MHAs as part of their counseling programs,

they might increase MHA usage by paying for the premium options.

       The current study, the Kern et al. (2018) results, and results included in the literature

review all had similar responses for why participants would use a MHA. Two of the most

common reasons were the convenience and the accessibility to mental health help. Another

common answer found prominently in this study's results was that participants liked the fact that

MHAs offered a chance to receive mental health care in a way that did not force them into

uncomfortable social situations. Some participants shared that they would feel embarrassed

speaking about their mental health conditions with a mental health provider, while others said

they didn't feel comfortable sharing something so personal about themselves with essentially a

stranger. Therefore, for some participants MHAs provided them with an outlet for their mental

health conditions without triggering social anxieties.

       There are several limitations of the current study. Both the original and this extension

could be improved upon if this research was replicated. Both studies were conducted at large,

public universities, which provided a good sample of students, but not enough to generalize the

results to all undergraduate college students in other kinds of institutions. This replication of the

study in particular had limitations in the area of participants because of technological difficulties

in distributing the study to the undergraduate population. Although enough participants were

gathered to compare results to the original 2018 study, not enough were gathered to generalize

the findings. The questions used in the study were also at times too vague to make assumptions

that undergraduate college students feel the same about MHAs across different mental health

conditions. As always with the self-selection of participants, there is bias present in the form of

choosing to participate and, as seen in the current study, the choice of what questions to reply to

and what questions to leave blank.

Some suggested paths for future research could be to delve deeper into the reasonings for

the existence of the sizable gap between the number of participants who said they would be open

to using a MHA in comparison to the number of participants who said they had actually used a

MHA before. Also, specifying questions to different mental health conditions to discover if

there is a preferential difference regarding the method of mental health care (through a MHA or

through face-to-face counseling) could yield very practical information. Additionally, expanding

the research to multiple universities to gather more diverse data could increase the information

available, which at the moment is rather scarce.

Conclusion

MHAs have become a prominent method of counseling, especially since the beginning of

the COVID-19 pandemic and the sudden removal of face-to-face counseling as an option (Kerst

et al., 2020). Although research has shown that MHAs have many advantages, especially for

those with a busy schedule since they are convenient, there are also disadvantages that still could

be improved upon, such as privacy and security issues. College students have been used as test

subjects for the implementation of MHAs into the mental health field because of their busy

schedules and higher rates of depression, anxiety, and stress (Hadler et al., 2021). The current

study showed significant student openness to the idea of MHAs, but also found low interest in

actually using MHAs at present. These mixed feelings about MHAs could be subject to change

as MHAs are updated and made more available to the general public, as they are still a relatively

new method of counseling. Further research could be used to learn more about the advantages of

MHAs for specific mental health conditions, and hopefully this would lead to the integration of

MHAs as another tool for university counseling services to provide an accessible form of

counseling for busy students.

Resources

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Appendix A: Results Tables

Demographics

What gender do you identify with?

#	Answer	%	Count
1	Male	32.22%	29
2	Female	65.56%	59
3	Non-binary / third gender	2.22%	2
4	Prefer not to say	0.00%	0
	Total	100%	90

How many years have you attended The University of Akron?

#	Answer	%	Count
1	1	33.33%	30
2	2	22.22%	20
3	3	23.33%	21
4	4	14.44%	13
5	5+	6.67%	6
	Total	100%	90

Openness to MHAs

Do you have a mobile smartphone?

#	Answer	%	Count
1	No	6.90%	6
2	Yes	93.10%	81
	Total	100%	87

Have you ever searched for a mental health app on your phone?

#	Answer	%	Count
1	No	50.00%	43
2	Yes	50.00%	43
	Total	100%	86

Would you be open to using a mental health app?

#	Answer	%	Count
1	Yes	42.53%	37
2	Maybe	50.57%	44
3	No	6.90%	6
	Total	100%	87

Have you ever discussed with a mental health provider using apps to track or help with your

mental health?

#	Answer	%	Count
1	Yes	14.81%	12
2	No	85.19%	69
	Total	100%	81

Usage of MHAs

Have you ever used a mental health app?

#	Answer	%	Count
1	No	66.67%	58
2	Unsure	6.90%	6
3	Yes	26.44%	23
	Total	100%	87

Do you use apps for other aspects of well-being (e.g., exercise, health, diet, etc.)?

#	Answer	%	Count
1	Yes	65.12%	56
2	Maybe	4.65%	4
3	No	30.23%	26
	Total	100%	86

Do you think MHAs have an evidence base?

#	Answer	%	Count
1	Yes	21.84%	19

2	Maybe	24.14%	21
3	I don't know	52.87%	46
4	No	1.15%	1
	Total	100%	87

How often did you use the mental health app(s)?

#	Answer	%	Count
1	Multiple times daily	1.75%	1
2	Daily	17.54%	10
3	Weekly or less	80.70%	46
	Total	100%	57

How long did you use the mental health app(s)?

#	Answer	%	Count
1	<1 week	70.18%	40
2	1-4 weeks	15.79%	9

3	>4 weeks	14.04%	8
	Total	100%	57

Attitudes towards MHAs

Would you pay to use a mental health app, if you were experiencing a mental health condition?

#	Answer	%	Count
1	Yes	16.28%	14
2	Maybe	45.35%	39
3	No	38.37%	33
	Total	100%	86

Did the mental health app(s) help with your mental health?

#	Answer	%	Count
1	Yes	18.52%	10
2	Maybe	27.78%	15

| 3 | No | 53.70% | 29 |
| | Total | 100% | 54 |

Would you prefer to use a mental health app to seeing a mental health professional, if you were experiencing a mental health condition?

#	Answer	%	Count
1	Yes	16.28%	14
2	Maybe	26.74%	23
3	No	56.98%	49
	Total	100%	86

Would you be worried about privacy issues when using a mental health app?

#	Answer	%	Count
1	Yes	47.67%	41
2	Maybe	27.91%	24
3	No	24.42%	21

| | | Total | | 100% | | 86 |

Do you think a mental health app could possibly improve your academic performance, if you were experiencing a mental health condition?

#	Answer	%	Count
1	Yes	40.70%	35
2	Maybe	48.84%	42
3	No	10.47%	9
	Total	100%	86

Appendix B: Survey Questions

1. Age

2. Gender

3. Year at University of Akron

4. Do you have a mobile smartphone? (yes/no)

5. Would you be open to using a mental health app? (yes/maybe/no)

6. Why would you use a mental health app? (open-ended)

7. Why would you not use a mental health app? (open-ended)

8. Do you think MHAs have an evidence base? (yes/maybe/ I don't know/no)

9. Have you ever used a mental health app? (yes/unsure/no)

10. Which mental health app(s) have you used? (open-ended)

11. What did you like or not like about the mental health app(s) you used? (open-ended)

12. How often did you use the mental health app(s)? (multiple times daily/daily/weekly or less)

13. How long did you use the mental health app(s)? (<1 week/1-4 weeks/>4 weeks)

14. Did the mental health app(s) help with your mental health? (yes/maybe/no)

15. Have you ever discussed with a mental health provider using apps to track or help with your mental health? (yes/no)

16. Would you pay for a mental health app, if you were experiencing a mental health condition? (yes/maybe/no)

17. Would you prefer to use a mental health app to seeing a mental health professional, if you were experiencing a mental health condition? (yes/maybe/no)

18. Explain why you would prefer to use a mental health app to seeing a mental health professional. (Open-ended)

19. Have you ever searched for a mental health app on your phone? (yes/no)

20. Do you think a mental health app could possibly improve your academic performance, if you were experiencing a mental health condition? (yes/maybe/no)

21. Would you be worried about privacy issues when using a mental health app? (yes/maybe/no)

22. Do you use apps for other aspects of well-being (e.g., exercise, health, diet, etc.)? (yes/maybe/no)

23. Do you have any other thoughts or comments about MHAs?