

BACKGROUND

- Depression and anxiety account for a significant amount of disease burden and disability within the United States population
- Health professions providers and students are disproportionately affected by these mental health disorders
- Health professions students often fail to seek care for mental health disorders
- The increased disease burden and lack of treatment have prompted investigation into the barriers to seeking care
- Accelerated medical education programs, such as physician assistant (PA) training, have unique barriers to accessing care compared to other health professions trainees
- No validated tool currently exists that examines barriers to accessing mental health services for PA students

OBJECTIVE

- To determine the reliability and validity of the Barriers to Use of Mental Health Services for Depression and Anxiety in PA Students (BMHS-PA) Survey at BCM

METHODS

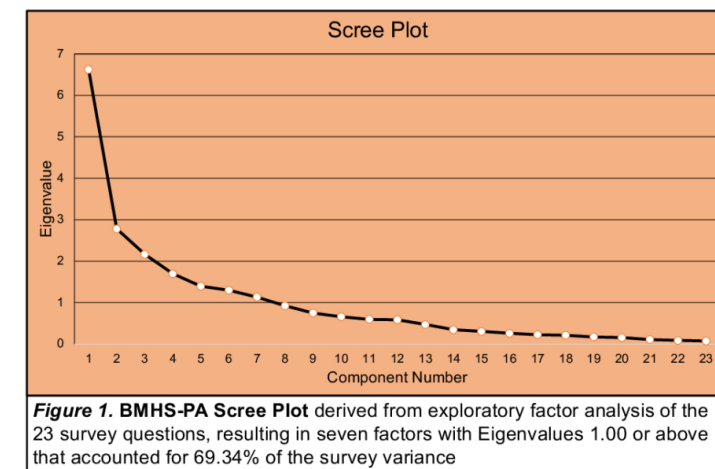
- The 30-item BMHS-PA Survey was administered to didactic year BCM PA students in the graduating classes of 2020 and 2021
- A four-point Likert scale was used to assess student attitudes towards mental health services and barriers to seeking care, which included questions about stigma, confidentiality, efficacy of services, access to care, self-awareness, management preference, and BCM specific reasons
- Instrument and subscale validity were determined through exploratory factor analysis using Eigenvalues ≥ 1.0 and a 0.4 suppression coefficient (See Figure 1)
- Instrument reliability was determined through Cronbach's alpha

RESULTS

- Fifty respondents completed the BMHS-PA Survey of which 86% were female, aged 20-29 years old (76%), and white (76%)
- Seven questions (18, 19, 21-25) were omitted from the analysis as they contained 87% of the "not applicable" responses
- Exploratory factor analysis showed variances and covariances among the survey items that were collapsed into seven factors with all items exhibiting loading weights of > 0.40 (Table 1)
- Six factors accounted for 69.34% of the variance in the BMHS-PA Survey: Personal Consequences (28.78%); Individual Perceptions (12.08%); Approach to Care (9.41%); Potential Repercussions (7.36%); Stigma (6.06%) and Contextual Barriers (5.65%)
- Overall Cronbach's alpha of all 23 survey items was 0.869, which revealed very good internal consistency and reliability
- Cronbach's alpha of Factors I through V was > 0.70 , which demonstrated good internal consistency and reliability. Cronbach's alpha of Factor VI was low at 0.547, and subsequent exclusionary tests found no one explanatory item (Table 2)

	I	II	III	IV	V	VI
Factor I: Personal Consequences						
Q2. I am concerned about confidentiality.	0.792	0.171	0.058	0.209	-0.066	-0.139
Q17. Fellow students would have less confidence in me if I sought mental health services.	0.757	-0.011	0.026	0.346	0.045	0.311
Q29. Faculty, including clinical supervisors, would have less confidence in me if I sought mental health services.	0.721	-0.146	0.009	0.113	0.294	0.222
Q7. I am concerned about the financial burden of mental health services.	0.581	0.481	-0.012	-0.041	0.171	0.152
Factor II: Individual Perceptions						
Q5. I do not believe mental health services (such as medication and/or counseling) would help me.	0.197	0.762	0.095	0.068	0.018	-0.105
Q15. I prefer to manage my problems on my own.	-0.340	0.713	0.142	0.029	0.115	0.199
Q3. No one would be able to understand my problems.	0.190	0.571	0.297	0.210	0.120	0.120
Q6. My problems are not important.	0.388	0.512	0.245	-0.126	0.378	-0.038
Factor III: Approach to Care						
Q30. Any mental health related symptoms I have or might experience are likely not indicative of a true problem but rather me simply over-identifying with symptoms described in class or textbooks.	0.056	-0.033	0.782	-0.012	0.153	0.047
Q27. I feel confident enough to self-diagnose a mental health problem, and therefore would not need the help of mental health services.	0.078	0.229	0.766	0.027	0.016	-0.109
Q20. I would prefer another method of support, such as a peer, support group, community organization, and/or religious organization.	-0.124	0.212	0.719	0.142	-0.072	0.327
Factor IV: Potential Repercussions						
Q13. I am concerned about a provider's lack of sensitivity to cultural issues.	0.190	0.036	-0.084	0.840	0.110	0.289
Q10. I fear that there will be documentation on my academic record.	0.578	-0.024	0.314	0.616	0.130	-0.053
Q16. Seeking mental health services would harm my future career.	0.554	-0.018	0.184	0.599	0.330	0.119
Q8. I am concerned about receiving unwanted intervention.	0.218	0.329	0.461	0.566	0.121	-0.036
Factor V: Stigma						
Q28. Seeking mental health services would make me feel less intelligent.	0.115	0.020	0.252	0.168	0.807	0.234
Q9. I feel that using mental health services will mean that I am weak or unable to cope.	0.045	0.572	-0.021	0.074	0.706	0.004
Q4. I am concerned about what others would think.	0.205	0.207	-0.132	0.518	0.642	-0.009
Factor VI: Contextual Barriers						
Q14. I am concerned about a provider's lack of sensitivity to sexual identity issues.	0.155	-0.024	0.232	0.197	0.181	0.669
Q12. There are not mental health services available for me.	0.459	0.183	-0.246	0.318	0.025	0.600
Q11. I do not know how to seek mental health services.	0.144	0.049	0.259	-0.185	0.300	0.584
Q1. I do not have time to seek mental health services.	-0.129	0.385	-0.373	0.052	-0.158	0.557
Percent Variance	28.78	12.08	9.41	7.36	6.06	5.65

Cronbach's alpha of all 23 Survey Items	0.869
Cronbach's alpha excluding Q26	0.874
Cronbach's alpha excluding Factor VI	0.868
Cronbach's alpha of Factor I Survey Items	0.776
Cronbach's alpha of Factor II Survey Items	0.701
Cronbach's alpha of Factor III Survey Items	0.718
Cronbach's alpha of Factor IV Survey Items	0.855
Cronbach's alpha of Factor V Survey Items	0.780
Cronbach's alpha of Factor VI Survey Items	0.547
Cronbach's alpha of Factor VI excluding Q1	0.578
Cronbach's alpha of Factor VI excluding Q11	0.522
Cronbach's alpha of Factor VI excluding Q12	0.481
Cronbach's alpha of Factor VI excluding Q14	0.547



DISCUSSION

- Instrument validation enables investigators to establish confidence in a measure and draw appropriate conclusions about data. The survey validation process consists of calculating validity through exploratory factor analysis and reliability through Cronbach's alpha
- Factor analysis of the BMHS-PA exhibited loading weights above 0.40, three or more items per factor, and the overall factor variance of almost 70%, which demonstrated strong instrument validity
- Cronbach's alpha of the overall scale as well as each individual factor established good instrument reliability
- In this pilot study, the BMHS-PA was validated and found to be reliable
- The factors identified by this study were not entirely consistent with factors initially defined by the survey producers, which highlights the strength of data-driven approaches like factor analysis

CONCLUSION

- The BMHS-PA is the first validated instrument that looks at barriers to mental health services in PA students
- The BMHS-PA can be administered to BCM didactic year PA classes to identify and act upon the most significant barriers to seeking mental health care
- Revision of the "N/A" response would allow for more questions to be analyzed within factor analysis
- Confirmatory factor analysis can be completed on a new student sample to verify the factor structure of the BMHS-PA