

## PURPOSE

The purpose of this three-year study is to describe the experiences of Physician Assistant (PA) and Theatre students who identify as rural in an interprofessional psychiatric patient-provider simulation assessment model.

## INTRODUCTION

Interprofessional simulation activities provide opportunities to assess student capability to apply knowledge gained and engages students in a higher-level mastery of skill. According to the National Alliance on Mental Illness, 1 in 5 adults in the United States experience mental illness.<sup>1</sup> Preparing students for these common patient encounters requires instruction that cultivates effective interpersonal and communication skills and clinical reasoning skills. Finding and sharing innovative ways to provide these opportunities fosters confidence and competence in future PAs to care for a vulnerable population.

## METHODS

Over a three-year study period, 35 Morehead State University (MSU) Theater students volunteered to serve as simulated patients for 165 University of Kentucky Physician Assistant (UKPA) students. Pre-simulation, PA students received in-class lecture on how to conduct thorough psychiatric interviews; in addition, theatre students were provided symptoms of each diagnosis and were encouraged to improvise their role.

All student participants were invited to participate in a voluntary, anonymous online survey upon completion of the simulation. The 25-question survey included 3 demographic items, 5-point Likert-type items, and three qualitative items to obtain reflection/commentary. Data were analyzed by descriptive statistics, Cohen's D for practical significance, paired samples t-test, and Pearson correlation analysis. This study was reviewed and approved by the University of Kentucky Institutional Review Board (protocol #53751).

## RESULTS

| Year  | Theatre Students<br>(n = respondents / invited; response rate %) | PA Students<br>(n = respondents / invited; response rate %) | Total<br>(n = respondents / invited; response rate %) |
|-------|--|---|---|
| 2020  | 6/10<br>(60.0%)  | 37/57<br>(64.9%)  | 43/67<br>(64.1%)                                      |
| 2021  | 7/11<br>(63.6%)  | 29/52<br>(55.7%)  | 36/63<br>(57.1%)                                      |
| 2022  | 6/14<br>(42.8%)  | 35/56<br>(62.5%)  | 41/72<br>(59.6%)                                      |
| Total | 19/35<br>(54.3%)   | 101/165<br>(61.2%)  | 120/202<br>(59.4%)                                    |

|                                   | Theatre Students (n) | PA Students (n) |
|-----------------------------------|----------------------|-----------------|
| Birth County: Rural               | 15                   | 45              |
| Birth County: Urban               | 4                    | 56              |
| Majority Upbringing County: Rural | 15                   | 51              |
| Majority Upbringing: Urban        | 4                    | 50              |

Figure 1: Participant Feedback

"I have always felt strongly about mental health treatment and this just further solidified my feelings that mental health treatment should be promoted more aggressively."  
"It reinforces my belief of the importance of mental health treatment as so many people fear the stigma of seeking help."



|   | Paired Samples T-Test |              |                |              |              |        |     | Cohen's D           |                  |                   |      |                   |
|---|-----------------------|--------------|----------------|--------------|--------------|--------|-----|---------------------|------------------|-------------------|------|-------------------|
|   | n                     | Mean, st dev | Std error mean | 95% CI lower | 95% CI upper | t      | df  | p                   | Pre mean, st dev | Post mean, st dev | d    | r                 |
| <b>Pre-Post Item 1: degree of knowledge regarding components of a psychiatric interview</b>                 | 120                   | -0.67, 0.84  | .077           | -0.819       | -0.514       | -8.66  | 119 | <.001 <sup>**</sup> | 3.76, 0.93       | 4.43, 0.68        | 0.82 | 0.38 <sup>#</sup> |
| <b>Pre-Post Item 2: degree of confidence in conducting a psychiatric interview</b>                          | 100                   | -1.07, 0.82  | .082           | -1.233       | -0.907       | -13.05 | 99  | <.001 <sup>**</sup> | 3.12, 0.97       | 4.19, 0.66        | 1.29 | 0.54 <sup>+</sup> |
| <b>Pre-Post Item 3: degree of confidence in portraying characters diagnosed with a psychiatric disorder</b> | 18                    | -1.111, 1.23 | .290           | -1.723       | -0.499       | -3.83  | 17  | .001 <sup>**</sup>  | 3.44, 1.15       | 4.56, 0.51        | 1.26 | 0.53 <sup>+</sup> |

Legend: CI = confidence interval, df = degrees of freedom, d = Cohen's d, r = effect size  
5-Point Likert-Type Scale: High (5), Moderate (4), Somewhat (3), Slight (2), Not At All (1)  
<sup>#</sup> statistical significance p < 0.05 before Bonferroni correction; <sup>+</sup> statistical significance (p < 0.017) after Bonferroni correction  
Cohen's d effect size scale: <sup>\*</sup>small = 0.20 - 0.49, <sup>\*\*</sup>medium = 0.50 - 0.79, large = 0.80+

## SUMMARY OF RESULTS

120 students participated over the course of the three-year study period, including 101 PA students and 19 Theatre students (Table 1). Cronbach's alpha reliability exhibited exceptional levels of internal consistency for scaled items for knowledge/confidence levels and agreement levels ( $\alpha = 0.981$  and  $0.999$ , respectively). Among study participants, the majority of Theatre students self-reported both their birth and majority upbringing counties as rural ( $n = 15$ , or 78.9%). PA student rurality was more evenly split with rural birth county accounting for 44.6% ( $n = 45$ ) and rural county for majority upbringing at 50.9% ( $n = 51$ ). Qualitative themes from rural students regarding this simulation assessment include empathy, confidence, and positive associations with mental health treatment.

## DISCUSSION & CONCLUSION

Prior work has demonstrated the value of simulation training to aid in development of psychiatry skills and attitudes that are ideally facilitated through experiential learning rather than rote memorization.<sup>2-3</sup> This study echoes such a philosophy and validates the intentional use of interprofessional students in simulation activities as means to foster meaningful learning experiences for all. Innovative simulation experiences that integrate interprofessional collaboration further expand the overall student experience. Providing spaces for active learning across disciplines helps students build confidence in skills needed to perform the psychiatric interview.

Moreover, incorporation of psychiatric interview simulations into Physician Assistant curricula show promise to create an inclusive culture surrounding mental healthcare.

## REFERENCES

1. National Alliance on Mental Illness. Mental Health by the Numbers. <https://www.nami.org/mhstats>. Updated December 2020. Accessed March 3, 2021.
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3. Coerver, Donald PhD, PA-C, CHSE; Multak, Nina PhD, MPAS, PA-C; Marquardt, Ashley MPAS, PA-C; Larson, Eric H. PhD The Use of Simulation in Physician Assistant Programs. *The Journal of Physician Assistant Education*: December 2017 - Volume 28 - Issue 4 - p 175-181 doi: 10.1097/JPA.000000000000173.