

Broadening the View of Holistic Care: Integrating Arts and Humanities Into Physician Assistant Education

Shaun Horak, DMSc, PA-C; Pamela Dickey, MPAS, PA-C; Samantha K. Ammons, PhD; T. Lynne Barone, PhD; Beth Culross, PhD, GCNS-BC, CHSE; Melissa Berke, PhD; Adrian R. Duran, PhD; Daniel N. Hawkins, PhD; Steve Langan, MFA; Joseph McCaffrey, PhD; Amy Morris, PhD

Introduction The integration of arts and humanities (A&H) into physician assistant (PA) preclinical curriculum may enhance student performance and improve their patient rapport. Arts and humanities content could promote the personal and professional qualities we desire in clinicians including competence, compassion, and empathy. The aim of this research was to determine what PA students report learning from A&H modules designed to foster personal insight and perspective-taking.

Methods The “Introduction of Humanities & Arts into Physician Assistant Education” (IHAPAE) project is an inter-campus collaboration between 2 Midwest Universities. The IHAPAE faculty collaboratively created and delivered A&H-based modules within first-year communication courses. Two cohorts of PA students (N = 130) participated in modules and subsequently attended exploratory focus groups to elicit their perceptions of the A&H curriculum.

Results Using a constructivist grounded theory approach for data analysis, we found that PA students perceived multiple benefits. Specifically, module content promoted reflection and stress reduction, improved their continuity of care notes, provided utility in cultivating empathy in patient communication, and introduced students to A&H approaches they could recommend to patients.

Discussion The process model that emerged from student perceptions fits well with existing emotional regulation theory and provides empirical evidence for cultivation of empathy and patient-centeredness. Given the positive outcomes of our project, PA programs should consider the value of incorporating the A&H activities into their curriculum to enhance the student experience and develop essential provider attributes and skills.

Introduction

The arts and humanities (A&H) offer powerful tools to health care providers. A 2018 National Academies of Science, Engineering, and Medicine report¹ found that these disciplines improve close reading skills, attention to context, greater awareness of emotions, appreciation for varying perspectives, and the cultivation of creative expression.² Arts and humanities are effective in cultivating self-awareness, resilience, and regulation of emotions because they engage a broad range of cognitive and emotional abilities.³ Health professionals benefit from understanding that, like artists, clinicians use their bodily senses combined with intellectual cognition to evaluate and determine the outcomes of an encounter. In clinical trials, cultivating these skills has been shown to reduce burnout.^{4,5}

Arts and humanities benefits carry over into provider-patient encounters. By learning skills that humanize encounters in the clinical space, providers develop the ability to engage in a person-centered way that recognizes individual needs as well as community, structural, and cultural considerations. Quality provider-patient communication contributes to better patient outcomes (eg, emotional health, symptom resolution, and pain

control).⁶ Empathetic communication brings an added dimension to the patient-provider encounter promoting the exchange of personal perspectives and insights which improve care decisions.

The potential benefits of A&H for health care professionals and the provider-patient dyad support curricular integration. In a 2020 report, the Association of American Medical Colleges advocated for increased collaboration between A&H scholars and medical professionals in curricular creation, including efforts that go beyond assessing student satisfaction.⁷ Recent publications have echoed this call for interdisciplinary collaboration resulting in carefully crafted curricular content⁸ and additional data on durable student takeaways.

While health humanities has a long history in physician education with well-documented benefits, its integration into physician assistant (PA) education is more recent.⁹ Exploring greater health humanities curricular integration is warranted, especially as a majority of PA students report emotional exhaustion and exhibit at least minimal levels of depression that they associate with attending PA school.¹⁰⁻¹² However, instructional time must be set aside, and curricular content must be accessible. Unless students (and faculty) buy into the benefits, students will unlikely participate in these activities during their free time or apply them during a patient encounter. For example, a study found that although 64% of graduating PA students were aware of mindfulness-based practices, only 16% frequently engaged in mindfulness activities during their clinical year.¹³

The authors declare no conflict of interest.

J Physician Assist Educ 2024;35(3):221–227

Copyright 2024 PA Education Association

DOI 10.1097/JPA.0000000000000578

We theorize that integrating A&H into the preclinical PA curriculum enhances well-being, clinical observation skills, and their ability to communicate and connect with patients. For example, observing drama increases empathy; reflective writing may improve students' well-being; drawing enhances the reading of faces; and observation of art improves the art of observation.¹⁴⁻¹⁸ The purpose of this study was to examine the "mental map" or "process model" by which these benefits unfold from the student's perspective through qualitative inquiry.

Methods

Study Design and Population

The "Introduction of Humanities & Arts into Physician Assistant Education" (IHAPAE) project is a collaboration between a Midwest university medical center and a nearby affiliated university. While distinct campuses, these institutions share an institutional review board that approved the research as exempt (investigating normal educational practices not likely to affect students adversely). The IHAPAE project brings together health educators and faculty from the arts, humanities, and social sciences to investigate how to improve empathy and build resilience among PA students through education in health humanities. IHAPAE faculty collaboratively created and delivered A&H-based modules within first-year communication courses (see Table 1). In designing the modules for the study, the authors used the Visual, Auditory, Read/Write, and Kinesthetic sensory modalities model, as it engages students with diverse individual learning styles.¹⁹ We collected qualitative data to understand students' responses to the modules. This approach moves beyond measuring satisfaction and provides a nuanced understanding of how they engage with the modules and their practical takeaways.⁶

Participants

As part of the IHAPAE project evaluation, PA students (N = 130) from 2 cohorts consented to participate in focus groups. These occurred after module completion but before students began clinical clerkships. We gathered cohort 1 data in-person during late July 2021, while cohort 2 data were gathered over Zoom in early September 2022. Institutional cohort data are presented in Table 2. Participants closely mirror the national demographic profile of PA students²⁰ as the majority were women, with an overall average age of 23.7 years. Students from each cohort did not participate in focus groups due to unavoidable scheduling conflicts. We provided snacks to in-person participants and a \$20 gift card to the first cohort at the conclusion in appreciation of their time. Scheduling conflicts necessitated moving the second cohort focus groups to Zoom.

Focus Groups

For in-person focus groups, 2 study personnel (a facilitator and a notetaker) led the sessions, which each contained 7 to 10 students. Each group met for roughly 30 to 45 minutes and engaged in a semistructured discussion led by the facilitator, with the notetaker recording nonverbal participant cues and the flow of conversation. PA students were asked 4 open-ended questions with planned probes (see Table 3). Additional follow-up questions emerged organically from the

discussion. Zoom focus groups did not have a notetaker but followed the same procedure. We followed best practices regarding the focus group process.²¹ In-person focus groups used multiple digital recorders to capture the conversation. For Zoom focus groups, we used digital recorders as a backup to the built-in Zoom recording feature.

Data Analysis

All transcription was done verbatim by a third-party service, with study personnel reconciling transcripts and cleaning data of typos and misspellings. We integrated observational notes of nonverbal behavior documented during in-person focus groups (eg, "crosses arms throughout"). Finally, study personnel deidentified data before coding. Then, we uploaded the transcripts into ATLAS.ti for Windows (Version 23.3.3),²² a qualitative data analysis software program. We used a constructivist grounded theory approach for data analysis.²³ In consideration of positionality, groups of 4 study personnel from diverse disciplines, genders, and ages first read through the data and engaged in open coding. We identified, discussed, and applied emergent and a priori codes to data. Several study personnel not affiliated with the PA program further analyzed the data and engaged in axial coding (refining, merging, and splitting codes as needed). Through our iterative analysis, we identified multiple ways that cohort 1 PA students perceived value in the IHAPAE modules. We then confirmed our results with the cohort 2 data.

Results

Physician assistant students reported that the A&H content promoted reflection, improved their continuity of care notes, had utility for cultivating empathy and patient communication, and introduced them to techniques they could recommend to patients. In this section, we unpack these dimensions and discuss how they are inter-related. Students reported the necessity of cultivating and practicing skills on themselves before they could carry them forward to the patient encounter and after-visit charting. While they often reported that modules were entertaining in the moment, we report here on durable takeaways that extended past the classroom and how these insights "mapped together."

Promoting Personal Insight

Modules prompting self-care were the most frequently mentioned theme (87 coded segments) that took on 3 distinct forms in a step-by-step process. Students reported that modules helped by (1) encouraging them to pause their thoughts and be in the moment, (2) centering themselves and their humanity, and (3) "refilling their tank," which encouraged empathy and resilience through self-reflection.

Pause in the Moment

Some focus group participants told us they first had to make room for reflection in their immediate thoughts and actions. The way they talked about this was "pausing." A student in cohort 2 explained it this way: "I think the big takeaway from, like, the humanities courses has just been kind of allowing us to be in the moment a little bit more... I think that the most impactful sessions that I think we'll carry are the ones that kind

Table 1. Arts and Humanities Module Content and Student Learning Outcomes

Module Focus	Activity	Description	Student Learning Outcomes
Introduction	Wellness/movement	Wellness stretching exercises for didactic students, use in clinical rotations, and beyond into practice for wellness	Recognize the importance of wellness of mind and body
Visual	Perspective taking	Situational awareness from different perspectives (provider vs. patient) through images with group discussion to build empathy	Situational awareness of different perspectives (patient vs. provider) to build empathy for patients
	Healing environment (art and art history)	An immersive experience in the healing environment of the Chihuly Sanctuary as a place for patients, visitors, and health care providers to go for wellness and reflection. Discovery of an individual's unique interpretation of the environment	Articulate how viewing art shapes wellness and improves observation skills. Learn about the role of art in hospitals and clinics in providing spaces for wellness and reflection for patients, visitors, health care workers
Auditory	Music	Music as a modality of therapy for patients. Music in murmurs: comparing components of music with components of murmur sounds (the art of listening)	Examine the role of music in patient therapy and provider wellness. Apply skill of selective hearing to identifying heart murmur sounds
	Sounds	Audio only soundtracks of music or environmental sounds and how individuals interpret sounds differently based on life experiences	Recognize how music or a sound can be interpreted differently based on life experience. Understand another person's perspective to build empathy
Reading/writing	Poetry	Guided creative activity putting thoughts, feelings, or experiences into poetry	Practice descriptive emotional writing. Apply creative writing to provider wellness
	Medical narratives	Small group and class discussion on 2 narratives surrounding the personal impact of the pandemic on patients and providers and their unique perspectives	Understanding differing patient and provider perspectives from lived experience
Kinesthetics	The art of observation	Participants were provided nonmedical pictures and wrote detailed descriptions of what they saw so their partner could read and reproduce the image by drawing it	Increase attention to fine details transferring to physical exam skills. Enjoyment in viewing art
	Improv	Participants in an interactive group setting practiced improv for techniques to encourage more description during patient interview using open-ended questions	Role playing to improve patient interviewing skills and situational flexibility
	Drawing Burnout and Joy	Participants drew a picture of what burnout feels like, and what joy feels like, to the individual. Participants had an opportunity to share their drawing and the meaning behind their picture	Creating art to identify sources of joy and burnout to provide insights

Table 1 is an overview of the modules and student learning outcomes we assessed as part of the IHAPAE project. IHAPAE, Introduction of Humanities and Arts into Physician Assistant Education.

of allowed us to pause. . . [The art history module] was a big one that made us, like, stop in our tracks, and like, think for a second, and really reflect" (Woman, cohort 2). For a different student in this same focus group, this pause allowed an awareness of bodily consciousness, which was a lightbulb moment for her: "we were forced not to think about school, but also we were forced to think about how our bodies feel stress" (Woman, cohort 2). Pausing and taking stock was a practice that focus group participants reported they struggled

with in a compressed PA program: "[Modules] made me realize I do need to take more time to myself and like focus on things I do like, rather than just continuously doing school after school after school" (Woman, cohort 2).

Prioritizing Themselves and Own Humanity

Another way the A&H contributed to personal insight was by allowing students to acknowledge their own humanity and

Table 2. Sociodemographic Profile of Participants in the IHAPAE Study

	Cohort 1	Cohort 2	Combined
% Women	81.8	74.2	78.0
% Men	18.2	25.8	22.0
Average age (y)	23.2	24.1	23.7
Age range (y)	20–43	20–47	20–47
N	66	66	132

Table 2 provides cohort and aggregate participant demographic information by age, gender, and percentage of Nebraska residency.

IHAPAE, Introduction of Humanities and Arts into Physician Assistant Education.

feelings. One student told us: "It just kind of, I guess for me, unlocked a little bit of that I needed to journal more, or that I need to maybe write down my feelings a little bit more. I guess I'm more of a feelings suppressor" (Man, cohort 1). In addition to an awareness of their emotional regulation style, focus group participants mentioned clarity in other areas: "I was drawing, like, specific things that were tangibly stressing me out. It made me realize like, 'Oh, okay! I can control this. I can control this. I can't control this. Like, we don't need to stress about this'" (Man, cohort 1).

Having greater clarity about their humanity also occurred in the form of prioritizing their own care ahead of patient care or at least at an equivalent level. As one student told us [the drawing modules encouraged us to] "communicate within ourselves and discern certain feelings and, you know, just take time to make sure that we're also treating ourselves healthy. . . and making sure we're giving ourselves the same grace and communication that we're giving our patients" (Woman, cohort 2).

"Refill the Tank"

A common refrain from focus group participants was that the A&H modules were a break from their rigorous PA program and helped them destress in the moment. Students perceived durability to the lessons, for coping with burnout or increasing

their empathy. Some students recognized that they were putting the module skills into practice or told us they could imagine doing so in the future. The breathing/movement activity was especially discussed often. For example, one student mentioned: "Sometimes when I, like, can't go to sleep at night, I'll lay in my bed and just breathe slowly and actually do the activity that she taught us. So, I think that's one thing that I've been able to carry through and, like, just taking time. 'Okay, I need to decompress and like, stretch'" (Woman, cohort 2).

The applied nature of the A&H modules permitted students to try out different techniques calling attention to their embodied experience, and students were quick to see potential personal benefits. However, as first-year PA students in a 2-year program, thoughts of utility quickly turned to how A&H could help them be more effective providers during a patient encounter.

Provider-Patient Communication

The second most common theme (59 coded segments) was improved provider-patient communication. PA students reported this could occur through different intersecting dimensions: more patient condition details, less awkward patient rapport, greater empathy for the patient experience, and patient placement in a wider context.

Focus group participants sometimes mentioned A&H as communication mediums that could help elicit patient condition details or build rapport. One participant explained it this way: "It just gave us other tools to use with our patients or like learn about opportunities, how to connect with them better. . . Maybe having a patient be able to write down how they're feeling because they may not be able to articulate it, but they can explain it in a drawing or like a writing" (Woman, cohort 1). Likewise, another individual remarked: "I think it'll just really help us to be more holistic. . . Like, it's a real person and they have their entire expansive interests and it's just different ways we can relate to them. . . you can just have a conversation like person to person rather than patient and provider" (Woman, cohort 1).

During focus groups, participants often mentioned the value of A&H for perspective-taking. The module content

Table 3. Focus Group Questions for IHAPAE Study Participants

Questions	Probes
Which arts and humanities class activity did you enjoy the most?	Why this activity? What was appealing about it?
Which activity did you struggle with the most?	What made this activity challenging for you? Was it the task you were asked to do? Unclear instructions? Changed your self-perspective, or view toward others? Something else?
How well do you think these activities were integrated into the course?	Why do you think these activities were in your communications course? How did activity takeaways help you in other parts of the course?
Finally, we want you to think about the future. When you are working as a provider, is there an activity that you think will continue to influence you?	Why this activity, in particular?

Table 3 conveys the focus group questions we asked the study participants.

IHAPAE, Introduction of Humanities and Arts into Physician Assistant Education.

asked students to step into their patient's shoes, which cultivated empathy. This was not always comfortable for students, but nevertheless, many found the experience to be valuable. One student mentioned the importance of soliciting and considering different perspectives: "I also feel like art in any form, um, you have your own version of it, but then if you're discussing it, you see versions that other people see. . . . And I think that is probably the biggest player for me when it comes to communication because as a provider we see it as a provider view and sometimes we forget about the patient view. So it kind of reminds us about the views that all of our patients have, and the family members have, and how that can play a role in our caregiving" (Woman, cohort 1).

For focus group participants, establishing patient rapport was an ongoing concern. At this point in didactic training, PA students had little to no experience interacting with patients in a provider role. However, students also saw utility beyond the immediate patient encounter.

Arts and Humanities as Durable Tools

The third theme (29 coded segments) was the utility of A&H as a form of recommended therapy or as an informal "tip" they could suggest to alleviate stress either in patients or caregivers. One student explained it this way: "We have to be open to art and humanities as providers, like it's not all medications and follow-ups and physical therapy, but it's also giving them the option that, um, music and art can also help their condition" (Woman, cohort 1). This encouraged students to consider resources outside of traditional health care as interventions for patient care. A student told us "When we are providers, we can, like, find out what kind of exhibits or, um, different things like that our institution or hospital may have for patients and kinda be just educated on that" (Woman, cohort 2).

Continuity of Care Notes

Finally, a few participants connected modules to improving continuity of care notes (4 coded segments). Students told us that the modules encouraged them to stretch documentation

skills either through descriptive word choices or writing to future providers to help them "see" their patients through their lens. One student told us the modules made her think about perspective-taking: "I might perceive the exact same painting a different way than, like, someone else does. And so how do I document it so that you can, like, see it in the way I see it and to treat a patient with that documentation?" (Woman, cohort 1). Likewise, a woman from cohort 2 mentioned that drawing modules challenged her writing skills: "A lot of my writing is very like factual-based and not opinion piece of very much sloshed in there. And so, I think it was really hard for me to use like descriptive words and kind of writing in that sense."

While less frequently mentioned, more detailed notes and potential therapeutic impacts are suggestive of outcomes reaching beyond the examination room. Explicit connections between the modules and continuity notes may be clearer when the students have additional clinical experience.

How Focus Group Participants Talked about Process

We asked participants what (if anything) they took away from the A&H modules. The focus group discussions revealed nuanced patterns about how the previous themes were linked and structured and a process model emerged (see Figure 1).

Participants told us that reflection realizations needed to happen first (pausing, prioritizing, and recognizing their current coping styles/emotions) and then practicing/learning coping skills. As one student remarked: "You can't have your tank run empty and provide the best quality care" (Woman, cohort 1). Then, being fully present and renewed facilitated their ability to communicate and adopt a wider patient lens allowing empathy to develop. "I think communication requires a lot of first, well, self-awareness. But also, like, emotional awareness about your patient because you have to meet them where they're at. I think the humanities really helped you take a step back and recognize that there's a lot more to a patient's life and many more aspects to their life, that you're only seeing one little side of it" (Woman, cohort 2).

In considering empathetically oriented patient encounters, students saw opportunities for A&H to facilitate health through

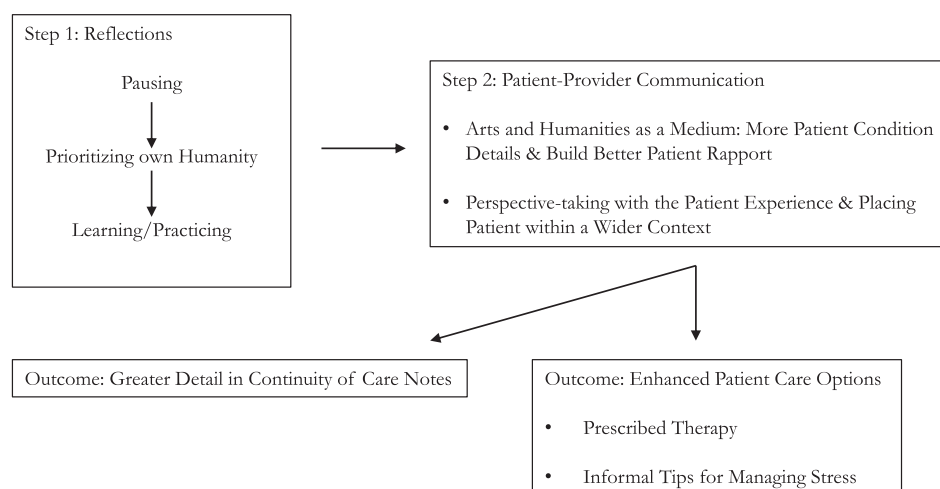


Figure 1. IHAPAE arts and humanities process model for PA students. Figure 1 is a schematic representation of the process model of PA students' perspectives they used in evaluating the acceptability and integration of art and humanities into the classroom and future clinical practice. IHAPAE, Introduction of Humanities and Arts into Physician Assistant Education.

modeling behaviors or recommending A&H engagement. For example, one student told us that she imagined telling a future patient “Hey, if you’re feeling overwhelmed with what’s going on around you, there’s a space that you can go to [art gallery]. And I might join you there because I’m feeling like that too, you know. I might need to center myself a little bit or whatever” (Woman, cohort 2). Finally, greater detail in the continuity of care notes ensured that future providers would have accurate and more complete patient information.

This progression, from the students grounding themselves to writing higher quality notes for future providers, constitutes a wide arc of potential benefits.

Discussion

Talking with 2 cohorts of PA students about integrating A&H content during their didactic year and their perceived take-aways gave us new insights. Our exploratory findings indicate that students saw multiple potential benefits, ranging from better self-care and enhanced provider-patient interaction to improved patient care. Moreover, students saw these gains accruing in a particular order, with self-care coming first and patient care options or detailed notes occurring last. These insights are helpful to others as they consider scaffolding A&H content into their programs. For example, drawing on the students’ understanding allows content creators to sequence curriculum or to contextualize content in ways that effectively resonate with students.

Our process model fits well with existing theory and empirical evidence about cultivating empathy and patient-centeredness. According to emotion regulation theory, individuals must be aware of and accept their emotions before effectively regulating them to meet a particular goal (such as communicating empathically with a patient).²⁴ While we are unaware of any existing research on PA students that tests emotion regulation theory, studies of similar health care professional students lend support. For example, first-year medical students who struggle with emotion regulation report significantly lower empathic concern and are less patient-centered.²⁵

Focus groups were also instrumental in improving the content and scheduling of the models going forward. We often heard from students that the modules should be self-contained with minimal outside-of-class work and scheduled around other pressing coursework (such as examinations). For example, scheduling modules at times when there was less course-related pressure allowed students to prioritize learning about personal insight. Students want to align the A&H skills to the core competencies of practice, and explicitly doing so improves their experience.

Limitations

The study has some limitations that need to be acknowledged. The A&H curriculum was integrated into required communication courses for the PA program. This could introduce a bias among students if they perceived the modules as busy work. Furthermore, there were slight alterations in the content and delivery of the modules between cohorts 1 and 2. This paper does not examine if the perceived A&H module benefits translate into clinical practice and improved patient care in the short-term or long-term. In addition, to ensure confidentiality, the focus group portion of the study did not collect individual

demographic data. Instead, we rely on program statistics, which provide an accurate portrayal of the cohorts.

Conclusion

This study provides exploratory information from PA students about their perceptions of A&H modules designed to expand their clinician skill sets. Our findings offer insights into outcomes and a process model that other academic institutions could reproduce. Given the positive outcomes of our project, other PA programs would be encouraged to adopt similar learning initiatives and processes. Future research could also consider evaluating the lasting effect of these learning interventions as the students transition to being clinicians and rendering patient care outside of the academic setting. Finally, although the theme of continuity of care notes occurred less frequently, its presence inspired us to conduct follow-up focus groups with participants once they concluded their clerkships. These results will be the subject of a future publication.

Shaun Horak, DMSc, PA-C, is a PA program associate director/DMSc director/assistant professor at University of Nebraska Medical Center (UNMC), Omaha, Nebraska.

Pamela Dickey, MPAS, PA-C, is a PA program admissions director/assistant professor at University of Nebraska Medical Center (UNMC), Omaha, Nebraska.

Samantha K. Ammons, PhD, is an associate professor of sociology at University of Nebraska Omaha (UNO), Omaha, Nebraska.

T. Lynne Barone, PhD, is an associate professor of anthropology/director of medical humanities at University of Nebraska Omaha (UNO), Omaha, Nebraska.

Beth Culross, PhD, GCNS-BC, CHSE, is an assistant professor/learning resource center director for the college of nursing at University of Nebraska Medical Center (UNMC), Omaha, Nebraska.

Melissa Berke, PhD, is an associate dean of the college for communication, fine arts, and media at University of Nebraska Omaha (UNO), Omaha, Nebraska.

Adrian R. Duran, PhD, is a professor of art history at University of Nebraska Omaha (UNO), Omaha, Nebraska.

Daniel N. Hawkins, PhD, is a professor of sociology/director of online development at University of Nebraska Omaha (UNO), Omaha, Nebraska.

Steve Langan, MFA, is an affiliated faculty member in medical humanities at University of Nebraska Omaha (UNO), Omaha, Nebraska.

Joseph McCaffrey, PhD, is an assistant professor of philosophy at University of Nebraska Omaha (UNO), Omaha, Nebraska.

Amy Morris, PhD, is a professor of art history/director of school for the arts at University of Nebraska Omaha (UNO), Omaha, Nebraska.

Correspondence should be addressed to: Shaun Horak, DMSc, PA-C, PA Program Associate Director/DMSc Director/Assistant Professor, University of Nebraska Medical Center (UNMC), 984300 Nebraska Medical Center, Omaha, NE 68198-4300. Telephone: (402) 559-4738; Email: shaun.horak@unmc.edu

REFERENCES

1. National Academies of Sciences, Engineering, and Medicine. *The Integration of the Humanities and Arts with Sciences, Engineering, and Medicine in Higher Education: Branches from the Same Tree*. Washington, DC: National Academies Press; 2018. <https://doi.org/10.17226/24988>
2. Moniz T, Golafshani M, Gaspar CM, et al. The prism model: advancing a theory of practice for arts and humanities in medical education. *Perspect Med Educ*. 2021;10(4):207-214.
3. Gruber H, Oepen R. Emotion regulation strategies and effects in art-making: a narrative synthesis. *Arts Psychother*. 2018;59(1):65-74.
4. Moss M, Edelblute A, Sinn H, et al. The effect of creative arts therapy on psychological distress in health care professionals. *Am J Med*. 2022;135(10):1255-1262.e5.
5. Celic AS, Kilinc T. The effect of laughter yoga on perceived stress, burnout and life satisfaction in nurses during the pandemic: a randomized control trial. *Complement Methods Clin Pract*. 2022;49:101637.

6. Stewart MA. Effective physician-patient communication and health outcomes: a review. *CMAJ*. 1995;152(9):1423-1433.
7. Howley L, Gaufberg E, King BE. *The Fundamental Role of the Arts and Humanities in Medical Education*. Association of American Medical Colleges; 2020.
8. Moniz T, Golafshani M, Gaspar CM, et al. How are the arts and humanities used in medical education? Results of a scoping review. *Acad Med*. 2021;96(8):1213-1222.
9. Grant JP, Gregory T. The sacred seven elective: integrating the health humanities into physician assistant education. *J Physician Assist Educ*. 2017;28(4):220-222.
10. Wallace MM. Strategies for improving mental health in physician assistant students. *J Physician Assist Educ*. 2022;15:10-97.
11. Sierra T, McCall TC, Brown H, Smith NE. The role of interpersonal toxicity on healthcare students' well-being. *J Physician Assist Educ*. 2022;33(3):198-204.
12. Cocke KD, Klocko DJ, Kindratt TB. Screening for undetected depression in physician assistant students. *J Physician Assist Educ*. 2019;30(2):118-121.
13. Hoover EB, Butaney B, LeLacheur S, et al. Wellness in physician assistant education: exploring mindfulness, well-being, and stress. *J Physician Assist Educ*. 2022;33(2):107-113.
14. Hojat M, Axelrod D, Spandorfer J, Mangione S. Enhancing and sustaining empathy in medical students. *Med Teach*. 2013;35(12):996-1001.
15. Shapiro J, Kasman D, Shafer A. Words and wards: a model of reflective writing and its uses in medical education. *J Med Humanit*. 2006;27(4):231-244.
16. Brechet C, Baldy R, Picard D. How does Sam feel?: children's labelling and drawing of basic emotions. *Br J Dev Psychol*. 2009;27(pt 3):587-606.
17. Mangione S, Chakraborti C, Staltari G, et al. Medical students' exposure to the humanities correlates with positive personal qualities and reduced burnout: a multi-institutional U.S. survey. *J Gen Intern Med*. 2018;33(5):628-634.
18. Garino A. Improving observation skill in physician assistant students. *J Physician Assist Educ*. 2008;19(1):47-52.
19. Kharb P, Samanta PP, Jindal M, Singh V. The learning styles and the preferred teaching-learning strategies of first year medical students. *J Clin Diagn Res*. 2013;7(6):1089-1092.
20. Physician Assistant Education Association. *By the Numbers: Program Report 35: Data from the 2019 Program Survey*. Washington, DC: PAEA; 2020.
21. Morgan DL, Scannell AU. *Planning Focus Groups*. SAGE; 1998.
22. ATLAS.ti Scientific Software Development GmbH. ATLAS.ti V.23.2.3 Windows; 2023.
23. Charmaz K. *Constructing Grounded Theory*. 2nd ed. SAGE; 2014.
24. Gratz KL, Roemer L. Multidimensional assessment of emotion regulation and dysregulation: development, factor structure, and initial validation of the difficulties in emotion regulation scale. *J Psychopathol Behav Assess*. 2004;26(1):41-54.
25. Ardenghi S, Russo S, Bani M, Rampoldi G, Strepparava MG. The role of difficulties in emotion regulation in predicting empathy and patient-centeredness in pre-clinical medical students: a cross-sectional study. *Psychol Health Med*. 2023;28(5):1215-1229.