

Introduction

Background: Learning how to perform the physical exam is crucial in physician assistant (PA) education. The ability to utilize physical exam findings in clinical reasoning hinges significantly on the skills of the individual performing the exam. Medical education literature extensively supports the effectiveness of museum-partnered art-based interventions, particularly in enhancing clinical skills, their applicability to physician assistant education remains to be determined.^{1,2,3,4,5} Structured physical exam assessments identified that a portion of our PA students struggled to identify pertinent physical exam findings despite the perception of being well-prepared. Our location and fast-paced curriculum limited our ability to implement a 4–6-week art-based course.

Aim: Our goal was to create a classroom-based activity utilizing pieces of art to increase PA student awareness that the skill of observation is not innate but instead acquired medical knowledge and purposeful practice.

Methods

Participates: 87 physician assistant students in 2nd semester of didactic year.

Duration: 2 hours

Activity:

- 15 groups of 6-7 students
- Five art pieces selected to illustrate various physical ailments relevant to the curriculum were individually displayed on large screens for five minutes each.
- Faculty-led discussion of students' initial observations and perceptions, identification of medical findings depicted in the artwork, and interpretations of the artist's intentions.
- Post-session Reflection Discussion Board Assignment
 1. How might selective perception cause problems in the medical field?
 2. Before this exercise, I used to think..., now I think...
- Discussion board responses were categorized according to themes.
- Themes meeting $\geq 10\%$ prevalence were considered significant.



Figure 1: Ket D. Self-Portrait. Rotterdam. Museum Boijmans Van Beuningen. 1932⁶



Figure 2: *Le Chapeau de Paille*. Rubens. P.P. London. National Gallery. c1622.⁷

Results

Responses (n=87) in the discussion board post-activity reflection of knowledge before and after the activity were individually read and categorized by themes. Prevalent themes were identified as topics or phrases reported by $\geq 10\%$

Significant Themes in Post-activity Reflection Discussion Board Posts

Pre-Activity Perceptions

- 16% Observation skills were adequate
- 14% The abnormalities would stand out
- 13% The diagnosis would be evident if all the “steps” were followed
- 11% All participants would notice the same details or abnormalities

Post-Activity Perceptions

- 18% Working with a team is important to provide comprehensive medical care.
- 15% It is important to look at the bigger picture.
- 15% Understand how bias influences perception

Selected Student Statements

“Before this exercise, I put less of an emphasis on clinical observations and more emphasis on labs/ imaging when working towards a differential.”

“It highlighted the importance of looking at things from different perspectives, multiple times, and collecting as much information/history before coming to a conclusion.”

“This exercise was a unique way of strengthening the significance of the different sections of a physical examination.”

Conclusions

A qualitative analysis of students' post-activity reflections demonstrates that an interactive workshop utilizing artwork successfully awakened students to the following:

- The importance of recognizing that bias influences perceptions
- Varied observations amongst peers.
- The skill of observation is a practiced art essential to providing quality medical care

PA programs can consider utilizing art within classroom activities to enhance physical exam skills of observation and clinical reasoning.

Limitations

- Limited Sample size of one cohort
- No control cohort
- Did not partner with the museum personnel
- Qualitative data was only evaluated

Future Research

- Repeat the activity with the same cohort in the 3rd didactic semester with new pieces of art to compare the development of observation skills with an increase in their medical knowledge
- Incorporate quantitative evaluation of targeted skills

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