Original Article

A qualitative study exploring self-directed learning in a medical humanities curriculum

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Abstract

Introduction: The humanities enrich and transform the practice of medicine. What remains to be seen, however, is how best to integrate humanities into the medical curriculum to optimize both educational and patient-related outcomes. The present study considers the structure of an innovative student-driven humanities curriculum and seeks to understand its strengths and limitations, as well as make recommendations for improvement. **Methods**: The Penn State College of Medicine, University Park Regional Campus uses an inquiry-based approach to education, whereby students are responsible for creating learning objectives in four core pillars of exploration: Foundational Science, Clinical Science, Health Systems Science, and Health Humanities. This study explores student-derived humanities learning objectives (HLO) across four years of the curriculum. **Results**: 420 HLOs met criteria for analysis and were coded as instrumental (developing direct clinical skill), non-instrumental (non-skill based), or both. Of these, 125 (30%) were instrumental, 239 (57%) were non-instrumental, and 56 (13%) were coded as both. Most instrumental HLO centered around communication skills. Non-instrumental HLO most commonly focused on bearing witness and critiquing a particular experience within a social and/or political context. **Conclusions**: Findings from this study contribute to the development of a humanities curriculum in a student-directed learning program. Non-instrumental HLO lacked a theoretical framework to guide student's investigations to a deeper level of analysis. Student-directed learning offers many strengths, but can be enhanced through external direction from humanities trained faculty, particularly given that many medical students have a limited humanities background.

Keywords: Curriculum; Medical education; Medical humanities; Student-directed learning

Introduction

The incorporation of humanities enriches the breadth and depth of medical education.[1–4] Limited evidence as to the impact of the humanities on educational outcomes,[2,5,6] and the lack of a shared theoretical framework guiding the use of humanities in medical curriculum suggest that the full

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potential of the humanities to complement traditional medical education has yet to be fully realized.[7]

We follow the predominant interpretation of humanities as encompassing the liberal and fine arts as well as the humanistic social sciences. Previous literature suggests that the humanities serve both instrumental and non-instrumental roles in medical education.[8–10] Humanities have an instrumental role when they directly develop a clinical skill. One such example can be found in the study of art work in order to develop visual observation and reasoning skills.[11–13] Humanities also serve non-instrumental (i.e. less tangible from the perspective of clinical skills) roles such as broadening one's worldview, contemplating self in society, or helping to promote professional identity formation.[8,14–16] Instrumental and non-instrumental humanities domains each serve an important role in medical education and should be viewed as intertwined and additive rather than categorical and opposing.[10,17]

The recent American Association of Medical Colleges (AAMC) Fundamental Role of the Arts and Humanities in Medical Education (FRAHME) initiative seeks to reinforce, expand, and codify the importance of the humanities in medical education.[18] The Prism Model,[18,19] which evolved from the FRAHME initiative, describes four explicit roles for arts and humanities initiatives in the context of curriculum design and execution: 1. Mastering skills; 2. Perspective-taking; 3. Personal insight; 4. Social advocacy. As these broad competencies can be interpreted in a variety of ways, the AAMC has called for further research to explore the educational impact of humanities education. Before the impact of humanities education can be effectively evaluated, however, we argue that greater analysis of the intended impact and scope of medical humanities is needed.[3] With this perspective in mind, the present study is a qualitative analysis of student-derived humanities learning objectives developed as part of an integrated case-based curriculum. Given its openness to student intervention, and its direction by students and faculty whose primary expertise lies outside the humanities, the student-driven curriculum provides the ideal setting for considering the various ways humanities education can be taken up in undergraduate medical education. Through this study we hope to better understand the structure, strengths, and limitations of a humanities curriculum that is primarily student-driven, and we attempt to make recommendations for improvement.

Methods

Humanities learning objectives are created by first-year medical students (M1) at the Penn State College of Medicine, University Park Regional Campus (UPRC) as part of routine inquiry-based learning. Students are immersed in a primary care setting several times each week at the beginning of the M1 year. This clinical immersion allows students to have authentic patient encounters that are subsequently used to generate learning objectives (LO) in four core pillars of exploration: Foundational Science, Clinical Science, Health Systems Science, and Health Humanities. To facilitate LO creation, students are organized into small inquiry groups (IQ) to discuss individual cases and decide what elements of each case they would like to explore on a deeper level over the course of the week. On the Monday of each week every student presents a summary of a patient encounter. Each IQ group selects 1-2 of the cases presented to guide their learning during the rest of the week. Students then develop broad LO for each pillar. Faculty are present to facilitate the process of LO development by suggesting potential areas of inquiry and guiding students in framing their LO. However, the process is primarily student-led. Bloom's Taxonomy guides LO creation for students and faculty. Contextual learning theory frames this process and encourages students to apply their real-world experiences to both the process and content of classroom learning. Students then

research their co-created LO and reconvene on Wednesdays and Fridays of each week to review their findings together. Source material for LO inquiry may be suggested by faculty for Foundational and Clinical Sciences LO, but it is usually up to students to find source material for Health Systems Science and Health Humanities LO. During the Wednesday and Friday sessions, discussion is primarily student-driven, but faculty may pose questions that challenge students to engage with material in a deeper way and draw connections to previously covered topics. Details about the UPRC LO process have been previously described.[20]

This study analyzes student-generated humanities learning objectives (HLO) from 2017 through 2021. Each class is comprised of 12 students and thus over four academic years 48 students were involved in the creation of these HLO. Thematic analysis was utilized to examine the HLO.[21,22] Two study team members (SW and MG) independently read through a subset of the HLO to familiarize themselves with the data and generate initial codes. They then met to refine codes before independently coding another subset of HLO for inter-coder comparison. Inter-coder reliability was 98%, and SW and MG completed the remaining coding independently. They then met to discuss and synthesize themes that had organically emerged from the data set.

This study was not subject to IRB review as it does not meet the definition of human subjects research as defined in 45 CFR 46.102(e) and/or (l).

Results

Four hundred and seventy-five student-generated HLO from 2017 through 2021 were analyzed. Fifty-five of those were excluded from analysis because they fit better as a Health Systems Science LO. The remaining 420 HLO were broadly categorized into instrumental (125; 30%) and non-instrumental (239; 57%), while 56 (13%) were coded as both instrumental and non-instrumental. The most common theme of the instrumental HLO was communication (see Table-1).

Table-1: Themes of Humanities Learning Objectives

Humanities Learning Objectives (HLO)	
Themes	**Examples**
A) Instrumental HLO	
Communication	Role playing patient experience Role playing provider role Researching communication skill-set
B) Non-Instrumental HLO	
Bearing witness	Observing first-person narrative
Critiquing	Utilizing critical social theory Contextualizing a narrative with a historical, social, and/or political framework

Roleplay was frequently employed as a way for students to explore and enact their identities as physician communicators, as demonstrated by this learning objective:

“Roleplay breaking the bad news to a patient that they will not be able to continue participating in a hobby or experience that is a significant part of their life.”

Roleplaying also created the opportunity for students to enter into the patient experience, and allowed for consideration of both the delivering and receiving end of an encounter, as exemplified by this learning objective:

“Roleplay a skit where a patient is frustrated, unwilling and hesitant to continue with treatment. Prepare to act as both the patient and the physician.”

Such objectives employed active learning and creative expression. Students

demonstrated communication skills, improvisation, empathy, and theory of mind within a creative context.

Other communication learning objectives focused on building a knowledge base. These were in contrast to the creative learning previously described. The following example illustrates an information gathering HLO:

“Research best communication methods/ practices on disclosing medical mistakes and/ or errors.”

In comparing the non-instrumental HLO, we discerned two major themes: bearing witness and critiquing. Bearing witness captured HLO that asked students to observe or contemplate the experience of another. Students frequently engaged with experiences that were different from their own, usually from a patient perspective. A typical example of this relies on first-person narrative:

“Find a narrative of someone who has struggled with alcohol sobriety.”

“Explore narratives of the mental health struggles with weight loss surgery.”

Narrative can ground a medical phenomenon in personal context, humanizing what might otherwise have remained an abstract concept. Considering these narratives provided the opportunity for students to broaden their understanding of human experience, but did not direct students on how to interpret such stories.

In contrast, critiquing captured HLO that asked students to go a step beyond bearing witness. These LO challenged students to think critically about social, political, and historical contexts relating to a particular experience or phenomenon. Critiquing objectives invoked critical social theory or contextualization of a current problem within a historical narrative:

“Explore the history of amphetamine use from both the perspective of legal prescriptions and the black market.”

While critiquing HLO did invite students to pull from a variety of disciplines within the humanities, they did not direct students on which particular elements to explore. Therefore, students were often required to identify the domains of scholarship relevant to the HLO before examining that scholarship’s bearing on the HLO in question. For example:

“Examine how gender bias/societal views on gender play a role in society and physicians’ views of sexual dysfunction and its treatment.”

Discussion

Our findings illustrate the possibilities and challenges of integrating health humanities learning into a student-driven, case-oriented curriculum. Student-generated HLO reflect the wide range of humanistic questions relevant to undergraduate medical education. These HLO can be broadly divided into instrumental (directly applicable to clinical skills) and non-instrumental (less directly related to clinical skills). A minority of the student-generated HLO were instrumental and largely focused on communication skills. Most student-generated HLO were non-instrumental and centered on the contrasting themes of bearing witness and critiquing. These results resonate with themes identified by Dennhardt et al. in their scoping review of quantitative medical humanities outcomes literature, which included skill-based, relational, and critical epistemic functions of an integrated humanities curriculum.[3] This resonance suggests that student-directed learning is similarly capable of addressing the range of objectives identified in other health humanities curricula.

Although student-directed learning has many

strengths,[23,24] it does pose unique challenges to the integration of health humanities within a medical school curriculum. Many students come to medical school with a biomedical background and have limited exposure to the humanities in their undergraduate education. Not only may students lack familiarity with humanities disciplines themselves, it may be difficult for medical students to know what they do not know when creating (or researching) their learning objectives. Students may not know how or where to look for humanities literature and peer-reviewed scholarship and instead may resort to Googling HLO topics and confining their inquiry to the first couple of search results. Indeed, our findings show that HLO rarely directed students on resources or a conceptual framework to look for. This comparatively superficial approach to research limits students' depth of engagement with humanities questions and risks devaluing the humanities as a relevant area of study in medical education. This lacuna is particularly relevant for non-instrumental learning objectives, where the goal is to build a more expansive and critical worldview. For example, we found that consulting personal narratives was a common HLO. While this type of HLO offers an opportunity to understand an experience different from one's own, without supplemental scholarship students may fail to understand the individual experience within a broader social context.

A student-generated HLO concerning narratives of mental health struggles associated with weight loss surgery will help demonstrate this potential difficulty. If personal narratives are consulted in the absence of critical social theory, students may come away with a rather myopic understanding of salient issues that are proximal and relevant to holistic patient care. For example, obesity can be theorized as both a biomedical condition and a social identity rooted in moral and cultural values.[25] While these are frequently suggested as opposing realist and constructivist frameworks, appreciating the intersection of the social environment and the physiology of obesity has significant implications for understanding and responding to the lived experience of a fat body. Concerted efforts would therefore need to be made by faculty facilitators in order to contextualize individual cases within a social context.

At the same time, critical social theory without personal narrative does not honor the unique interface physicians have with their patients. Physicians encounter many of the realities of oppression, racism, and inequity through the lived experience of their patients. Being able to move between understanding and empathizing with individual experience while recognizing the broader context and factors shaping that lived experience is essential to delivering high quality care. Physicians must be able to ask and understand why a patient's experience is the way it is. To do so changes the way physicians respond to patients on an interpersonal level. It also shapes how they influence change within the field of medicine and the way they conduct themselves as citizens of the world.

Our findings support the use of the Prism Model as a theoretical framework for curriculum design and implementation.[19] The particular contribution of this study concerns the best practices for a student-directed humanities curriculum. In order to bolster student engagement with the breadth of approaches taken to the health humanities, we suggest that medical educators consider utilizing a range of humanities disciplines, as discussed in the example above. Understanding the social, political, and interpersonal environment shaping any given case is as important as honoring individual experience. To enrich conversations in health humanities, the UPRC introduced a doctoral candidate in philosophy as a core faculty member. Working with a dedicated Health Humanities Graduate Assistant (MG) increased the depth of exploration and the diversity of

resources used to create and explore HLO (Gary, Walser, & Stephens; forthcoming).

Our findings focus on the content of HLO. They do not, however, capture the important process that students engage in while creating the HLO. This process, which is particularly rich in the UPRC curriculum, involves clinical exposure, small group discussions with faculty facilitation and is almost entirely student-driven. The act of identifying humanities questions from a personal experience is in itself an invaluable skill, demonstrating both instrumental and non-instrumental functions. This process is typically not discussed in the medical humanities literature, where the attention has instead been on the content and outcomes of the curriculum. However, the process of self-identifying areas of inquiry best mirrors the learning experience of health professionals who spend the majority of their careers outside of a formal educational environment. It is thus a particularly rich and understudied focus of future inquiry. Integrating a learning theory, such as the Johari Window, may help students build a skillset they can continue to utilize throughout their career. Cox et al. touch on a similar theme when discussing the role of art in medical education.[26] Their findings illustrate the richness of the art-making process itself, as opposed to art observation, for professional identity formation and exploring values, something we hope to continue to explore in further studies.

Another limitation of the present study is that we have not analyzed the content and impact of the classroom discussions stimulated by the HLO. How students synthesize their learning and apply it to their own experiences, past and present, is a crucial component of a medical humanities curriculum. However, the framing of that discussion, which is the focus of this study, sets the foundation for such learning. Further outcome-based research is needed to evaluate student learning processes and to understand how students integrate their health humanities experience. This future work may be usefully supplemented with existing research in interprofessional education.

Conclusions

Our findings illustrate the particular challenges of humanities education in a student-directed curriculum and identify several avenues for future improvement. Overall students were able to develop sophisticated HLO on their own. However, most student-derived HLO were non-instrumental and lacked a theoretical framework to guide their exploration of humanities topics. Our humanities curriculum would be enhanced by capitalizing on the strengths of student-driven learning alongside enhanced guidance from humanities trained faculty, including recommending specific and diverse source humanities scholarship. Our findings suggest that this additional scaffolding can help students to increase the depth and breadth of their engagement with the health humanities.

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