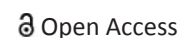


SHORT COMMUNICATION



Assessing patient ownership in clerkships: An exploratory study of student and clerkship directors' perceptions

Tasha R. Wyatt¹, Sarah C. Egan¹, Elena Wood²

¹Office of Faculty Development, Educational Innovation Institute, Medical College of Georgia, Augusta, GA

²Department of Medicine, Medical College of Georgia, Augusta University, Augusta, GA

ABSTRACT

Purpose: The phrase “take ownership of your patients” is commonly used by physicians to communicate the importance of demonstrating dedication and commitment to patients and their care. In an attempt to understand how patient ownership is supported in students' clerkship experiences, this exploratory study collected data on students' perceptions of ownership in their clerkships and the ways in which clerkship directors supported students in taking ownership.

Method: An adapted survey on psychological ownership was distributed to 233 third-year medical students upon completion of a clerkship. The survey assessed the students' perception of ownership and the extent to which clerkships supported its development in patient care. Follow-up interviews with clerkship directors were conducted to interpret the data and understand how each of the clerkships supports students' development of patient ownership.

Results: The results demonstrate differences between clerkship experiences. In those clerkships where students perceive the clerkship as developing their ownership, clerkship directors were intentional in setting up a system that supported this goal. Data suggest that when clerkship directors use consistent language across the clerkship, provide resident and faculty training to support students in taking ownership, and are explicit in their expectations for students' to engage in patient ownership behavior, students perceive the clerkship as supporting their ability to take ownership.

Conclusion: Clerkship directors have the ability to impact students' ability to take ownership of their patients by being intentional in their development of the clerkship climate.

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Introduction

The phrase “*take ownership of your patients*” is commonly used by physicians to communicate the importance of demonstrating dedication and commitment to patients and their care. In modern day use, the phrase is somewhat antiquated, in that it dates back to the practice when physicians were so deeply ingrained in patient care for such long periods of time that they came to “own” their patients [1]. However, it continues to be used because it facilitates students' development of professionalism and good practice in patient care and safety [1–3]. Additionally, it communicates an important aspect

of the physician–patient relationship, namely the idea that physicians should demonstrate such as *responsibility, commitment, accountability, and advocacy* [4,5].

Thus far, most of the research on ownership has occurred in graduate medical education, in part because resident-hour regulations have contributed to a decreased ability for physicians to take ownership [6]. Additionally, it has only been recently, that researchers have forwarded a behavioral definition of what patient ownership looked like in practice [7]. At present, very little is known about how *patient ownership* is developed and

Contact Tasha R. Wyatt ✉ tawyatt@augusta.edu 📧 Office of Faculty Development, Educational Innovation Institute, Medical College of Georgia, Augusta, GA.

supported in medical students, despite its frequent use in describing the goal of medical education.

In an attempt to understand how patient ownership is supported in medical students, in particular, their clerkship experiences, this exploratory study collected data on students' perceptions of their clerkships and the ways in which clerkship directors supported students in taking ownership. We sought to understand if there are differences between students' clerkship experiences and whether these differences affected their perceptions of patient ownership across their third-year clerkships. We were also interested in examining how clerkship directors support students to take ownership with the goal of helping them and be more strategic in nurturing students' ownership development.

Methods and Materials

The setting for this exploratory study was a large U.S. medical school that enrolls approximately 230 new students per year. Our institution is a 4-year medical school with a curriculum where students spend 2 years in the basic and medical sciences, followed by 2-years of clinical experiences in clerkships. Students' third year core rotations include internal medicine (IM), family medicine (FM), obstetrics and gynecology (OB/GYN), surgery, pediatrics (Peds), neurology, and psychiatry. We were interested in examining students' experiences in these clerkships where students begin to apply what they learned about patient-centered care in clinical settings.

Data sources and analysis

Phase one of this exploratory study consisted of adjusting the language to a survey on psychological ownership [8] to reflect a clinical environment. The original instrument was developed using the literature from organizational psychology, which was used to capture employees' feelings of ownership within institutions and organizations. We chose this instrument because like employees who feel that projects *belong* to them, physicians have similar feelings about their patients. There is a feeling of mine-ness that comes from taking responsibility for something, whether it be a task, person, or process. However, to ensure that the instrument was appropriate for a medical student population, subtle revisions in the item's language were made and sent to clerkship directors for feedback. These revisions were then incorporated into the final survey distributed to students.

The construct of psychological ownership is comprised of five subscales: a) territoriality, b) accountability, c) self-efficacy, d) belongingness, and e) self-identification. Survey questions ask students to comment on items using a five-point Likert scale ranging from "strongly agree to strongly disagree." The survey was distributed to the students at the end of each of the seven core rotations using the institutional electronic evaluation system.

Data were analyzed using SPSS Statistics 25. Statistical significance was assessed using an alpha level of 0.05. Each psychological ownership score was determined by averaging the items belonging to each subscale, giving a possible range from 1 to 5. Descriptive statistics on each subscale for the seven clerkships were then determined. To examine differences between clerkships, analysis of variance (ANOVA) was performed. And finally, a Tukey-Kramer multiple comparison procedure was used to examine *post hoc* pair-wise differences between clerkships. When results were collected and analyzed, individual interviews with clerkship directors were conducted to gain their perspectives on students' perceptions of their clerkship and the extent to which it supported them in taking ownership of patients.

Interviews with clerkship directors lasted approximately 30–40 minutes. They were asked to review their clerkship data and then comment on each of the subscales, focusing on the ways in which each of the concepts represented in the subscales were supported within the clerkship. The interviews were recorded using a personal recording device, and then, transcribed and analyzed for themes (i.e., clinical activities, curriculum, personnel, etc.). Given that our goal in conducting these interviews was to isolate how clerkships support student development in patient ownership, the results were then organized and reported in a way that could allow all clerkship directors to replicate similar efforts. Institutional Review Board (IRB) approved this study.

Results

Participants in the study were third-year medical students completing one of the seven clerkships: FM ($n = 38$, 14.3%), IM ($n = 47$, 17.7%), OB/GYN ($n = 18$, 16.8%), Peds ($n = 42$, 15.8%), psychiatry ($n = 28$, 10.6%), surgery ($n = 56$, 21.1%), and neurology ($n = 34$, 12.8%). In total, 95 students completed the survey out of the 233 third-year students

Table 1. Descriptive statistics and ANOVA results for differences in psychological ownership scores.

Subscale	FM	IM	OB/GYN	Peds	Psych	Surgery	Neurology	F	p-value
Territoriality	3.54 ± 0.90	3.74 ± 0.75	3.22 ± 1.07	3.60 ± 0.90	3.90 ± 0.88	3.64 ± 0.81	3.57 ± 0.74	1.41	0.21
Accountability	3.92 ± 0.64	3.97 ± 0.75	3.94 ± 0.70	3.93 ± 0.59	3.85 ± 0.62	3.74 ± 0.57	3.83 ± 0.47	0.75	0.61
Self-Efficacy	3.78 ± 0.69	3.87 ± 0.57	3.92 ± 0.80	3.78 ± 0.64	3.94 ± 0.58	3.74 ± 0.53	3.64 ± 0.59	0.94	0.47
Belongingness	4.05 ± 0.69	3.97 ± 0.74	3.81 ± 0.83	3.85 ± 0.59	4.12 ± 0.88	3.49 ± 0.83	3.51 ± 0.65	4.46	<0.01*
Self-Identification	4.11 ± 0.59	3.98 ± 0.68	3.74 ± 0.80	3.84 ± 0.57	3.96 ± 0.60	3.53 ± 0.66	3.61 ± 0.54	4.74	<0.01*

* $p \leq 0.05$.

Psych = psychiatry and health behavior.

(response rate 41%). The surveys were distributed at the end of each of the clerkships resulting in 263 total responses.

Ownership across clerkships

Table 1 shows the descriptive statistics and ANOVA results for the psychological ownership scores by clerkship. FM (4.05 ± 0.69) had a significantly higher belongingness score compared to surgery (3.49 ± 0.83) and neurology (3.51 ± 0.65). IM (3.97 ± 0.74) had a significantly higher belongingness score than surgery. Additionally, in the belongingness score, the psychiatry clerkship (4.12 ± 0.88) was higher than both surgery and neurology. For the self-identification scale, FM (4.11 ± 0.59) scored significantly higher than surgery (3.53 ± 0.66) and neurology (3.61 ± 0.54). IM (3.98 ± 0.68) and psychiatry (3.96 ± 0.60) both scored significantly higher in the self-identification score compared to surgery. There was no statistically significant difference between clerkships for territoriality, accountability, and self-efficacy subscales.

Clerkship directors' perspectives on patient ownership

Interview data with clerkship directors revealed that there were differences in setting expectations for students to take ownership and that consistent use of language was an important aspect of orienting students to this expectation. Clerkship directors of FM, IM, OB/GYN, Peds, and psychiatry intentionally used terms to describe ownership but had their own way of communicating this expectation. For example, IM used the phrase *patient ownership*, psychiatry and OB/GYN used *advocacy*, and Peds used *accountability*. Although the preferred language used differed, consistent use of a chosen term to describe ownership was a similar strategy employed in each clerkship. This consistent use helped clerkships to develop a shared culture for patient ownership.

Additionally, residents and faculty members working with students were also given specific

instruction to assist students in taking ownership. For example, after students were shown a video on patient ownership in their clerkship orientation [9], the IM clerkship director underscored the importance of assisting students with developing patient ownership in resident and faculty meetings. In Peds, the clerkship director developed faculty and resident training sessions that helped them to support students' development of ownership. For example, these sessions included "how to incorporate students into the clinical setting" and "how to link students' professional interests to the learning process." These training sessions underscored the idea that students should be *patient advocates* and were aimed at helping faculty envision how to support students' in their advocacy. Similar faculty and resident training sessions were also reported in two other clerkships, psychiatry and OB/GYN.

On the other hand, in the neurology and surgery clerkships, clerkship directors neither expressed that there were expectations for students to take this kind of leadership role in patient care nor was there an emphasis in the uniformity of language for patient ownership. Rather, in these clerkships, the emphasis was on ensuring that faculty members were making their decisions visible to students, so they understood what was being done for patients. Thus, the focus appeared to be more on making the process of care visible as a tool for learning, rather than ensuring students receive first-hand experience in taking ownership of patients.

Discussion

This exploratory study discovered statistically significant differences in two subscales of psychological ownership, belongingness and self-identification across the seven clerkships. The results demonstrate that in those clerkships where students perceive the clerkship as a significant part of the healthcare team, clerkship directors were intentional in setting up a system that supported

their development. Preliminary data suggest that when clerkship directors use consistent language across the clerkship, provide resident and faculty training to support students in taking ownership, and are explicit in their expectations for students' to engage in patient ownership behavior, students perceive the clerkship as supporting their ability to take ownership. These results suggest that clerkship directors have the ability to impact students' development in this area, should this be one of their goals.

Although this study was conducted at a single institution as a pilot for understanding how patient ownership is supported in students' clerkships, future research should consider multi-site institutional research. A multi-site study could help tease out whether these differences are a result of the culture within different specialties or the expectations laid out by clerkship directors. Additionally, this study only examined students' perceptions within the clerkship, and the ways in which directors supported students in this regard. In this study, we did not examine how ownership develops over time as students move through their third-year clerkships. Furthermore, the voluntary nature of the study resulted in varying sample sizes among the different clerkships. Future research should examine a longitudinal evaluation of students' development of patient ownership as well as strive for more equal sampling among the different clerkships, plans at our institution that are currently underway.

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