



Impact of Patient Education on Establishing Trust as the Medical Student Provider: A Student Run Free Clinic Experience

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Abstract

Background: Effective doctor-patient relationships are crucial for quality healthcare, and trust is central to this dynamic. Trust in healthcare comprises competence, empathy, communication, and shared decision-making. Patient education sessions offer a platform to enhance patient trust, especially amongst novice providers. This study investigates the impact of patient education sessions led by medical students on patient trust within the context of a student-run free clinic.

Methods: At our student-run free clinic, we conducted a cross-sectional survey to collect patient data, including background information, trust in healthcare, and opinions on education sessions at a student-run free clinic.

Results: Amongst the enrolled 24 participants, the demographics revealed a diverse racial composition, with a significant portion having not completed high school and the majority being either unemployed or on disability. Following attendance at patient education sessions, a high percentage of participants reported positive experiences, including improved rapport with medical student providers and a likelihood of returning for future services and following medication recommendations.

Conclusion: This study highlights the significant role of patient education sessions in fostering trust between patients and providers, improving health behaviors, and enhancing the broader healthcare system's credibility. It demonstrates how such sessions empower patients, leading to better medication adherence and timely medical assistance seeking, while also suggesting their potential for implementation across various healthcare settings to improve patient engagement and healthcare services.

Background

Effective doctor-patient relationships are pivotal to delivering high-quality healthcare and ensuring positive patient outcomes. Trust between patients and healthcare providers plays a central role in fostering this relationship, facilitating open communication, treatment adherence, and patient satisfaction. In recent years, medical education has undergone a significant transformation, shifting towards active learning strategies that emphasize practical skills and interpersonal

competencies.¹ As a result, medical students are increasingly involved in direct patient care. The concept of trust in healthcare is multifaceted, encompassing dimensions such as competence, empathy, communication, and shared decision-making. Traditional medical education has focused primarily on the development of clinical knowledge and technical proficiency. However, studies have shown that patients value qualities like empathy and communication in their healthcare interactions, which contributes significantly to establishing trust between patients

and providers.²⁻⁴

Patient education sessions, which involve structured interactions between medical students and patients to impart health-related information and facilitate discussions, function as a mechanism to address these dimensions of trust in our patient population. These sessions can serve as a means for medical students to not only enhance their clinical knowledge but also develop critical interpersonal skills. By engaging in dialogue with patients, medical students can learn to address patient concerns, provide clear explanations, and create an environment of collaboration and respect. Furthermore, patient education sessions offer patients the opportunity to actively participate in their care and treatment decisions. Empowering patients with information about their health conditions and treatment options can promote a sense of agency, thereby fostering trust in the healthcare provider's intentions and expertise. As medical students gradually transition into fully-fledged physicians, the rapport established during their training years can have enduring effects on their future patient-provider relationships.

While the potential benefits of patient education sessions on patient trust are compelling, it is essential to critically examine the relationship within the physical clinical setting.⁵⁻⁷ While there has been research that has looked into the effects of patient education amongst hypertension, diabetes, and other chronic disease management, there is limited research that has explored the specific impact of structured patient education sessions led specifically by medical students on patient trust.⁸⁻¹⁴ Moreover, the dynamics of trust-building and its nuances in the context of medical education require deeper exploration.

The University of South Alabama student-run free clinic (USASRFC) is a student-led initiative with the purpose of enhancing wellness amongst underserved populations in Mobile, Alabama. Currently, the clinic focuses on group-housed men who are undergoing rehabilitation at the Salvation Army of the Greater Gulf Coast. At the USASRFC, students build early rapport with patients via one-hour patient education sessions that occur immediately before the clinic. These patient education sessions cover various topics, such as diabetes management, healthy cooking

tactics, pathophysiology of hypertension, injury prevention, and much more. These group-based education sessions were led by the same medical students who staffed the clinic and occurred at the same frequency (weekly) and setting as the clinic. The USASRFC believes these one-hour educational sessions before clinic provide bonding opportunities for patients to build healthy relationships with their medical student providers (MSPs). To understand this connection, USASRFC executive board implemented a Likert-scale survey to study the impact of these education sessions on the medical student-patient relationship.

This research aims to contribute to the existing body of knowledge by investigating the effects of patient education sessions conducted by medical students on patient trust. This paper seeks to shed light on the potential of patient education sessions as a tool for enhancing patient trust in MSPs. The insights gained from this research can inform medical education practices, potentially influencing curriculum design and pedagogical approaches to better prepare future healthcare professionals for building trusting relationships with their patients.

Methods

This study was a cross-sectional survey that was conducted prior to a patient's weekly visit at the USASRFC. Patients were selected based on their attendance at seeking services at USASRFC. The survey was conducted as a questionnaire (online appendix) via a blinded approach where no personal patient information was collected and completed questionnaires could not identify specific patients. However, patient information was recorded separately from completed questionnaires to prevent patients from completing multiple questionnaires on different clinic days. The survey period was from May 2022 to May 2023. Survey questions included means to assess patient-specific background information such as:

- Ethnicity
- Educational and employment status
- Age
- Income

In addition to background information, further

questions were asked and included the following topics:

- Trust in their healthcare
- Helpfulness of patient education sessions
- Opinions of their interactions with medical student providers
- Impact of interactions for long-term health behaviors

All surveys were administered in the waiting room prior to the onset of clinic which occurred immediately after the optional patient education session. Privacy was provided to the patient as they completed the survey. All patients were eligible to participate, including whether or not they participated in the patient education session before that specific clinic day. Upon completion of the survey, participants were given an incentive containing various food and non-perishable items.

Statistical analysis of frequency responses for Likert-scale variables will be conducted via a Mann-Whitney test. For qualitative analysis of the open-response questions, a content analysis will be conducted. However, due to the limited number of participants that enrolled in the study, we were unable to conduct these two analyzes and focused on a categorical approach to the Likert-scale variables. Analyses were performed using Microsoft Excel (v16.87, Microsoft, Redmond, WA). Informed consent was utilized, and IRB approval was granted via an exhibited review process.

Results

In total, 24 patients were enrolled and completed the questionnaire. The racial diversity of the participants was: 37.5% white, 4.2% Hispanic, 41.7% African American, 8.3% American Indian, and 8.3% other races. While a majority had a high school graduate degree or more, 8 (33.3%) patients did not graduate high school. For age, the two most represented age cohorts included 31-40 (37.5%) and 51-60 (33.3%). The majority (91.6%) of patients were either unemployed or on disability. The majority (87.5%) of patients had no income while 8.3% had <\$20,000 income and 4.2% had \$21,000-30,000 income. Table 1 shows these patient demographics.

Table 1. Patient demographics for the 24 participants in the study

Demographic	n (%)
Race	
White	9 (37.5)
Hispanic	1 (4.2)
African American	10 (41.7)
American Indian	2 (8.3)
Other	2 (8.3)
Education	
Elementary school only	2 (8.3)
Some high school	6 (25.0)
GED/graduated high school	7 (29.2)
Some college/technical college	9 (37.5)
Age	
26-30	2 (8.3)
31-40	9 (37.5)
41-50	4 (16.7)
51-60	8 (33.3)
61+	1 (4.2)
Occupation	
Unemployed/disability	22 (91.7)
Part-time	2 (8.3)
Full-time	0 (0.0)
Income	
No income	21 (87.5)
<\$20,000	2 (8.3)
\$21,000-30,000	1 (4.2)

GED: General educational development.

Table 2. Patient attendance of USASRFC patient education and clinic sessions

Attendance information	n (%)
First time at USASRFC	
Yes	7 (29.2)
No	17 (70.8)
Regularly attend patient education sessions at USASRFC	
Yes	15 (62.5)
No	9 (37.5)
Education sessions positively influence choice to attend clinic	
Yes	19 (79.1)
No	1 (4.2)
Not sure	4 (16.7)

USASRFC: The University of South Alabama student-run free clinic.

Prior to being a patient at the USASRFC, the average amount of time the study participants went without seeing any physician was 3 years with one patient reporting over 10 years without seeing a physician. Now, most of the participants (62.5%) attend patient education each week with the majority (79.1%) of patients saying it positively incentivizes them to attend clinic every week. All patients (100%) who recorded that they attended patient education sessions also recorded that patient education incentivizes them to attend the clinic. Table 2 shows participants' attendance at both patient education and clinic.

62.5% of the research participants attended both the preceding educational session and the clinic. A majority of participants (83.3%) reported that education sessions allowed them to build a rapport with the medical student providers, with 54.2% saying they felt very comfortable sharing medical information with the MSPs. Table 3 reports patient perspective on building rapport and feeling comfortable with MSPs because of patient education.

The majority of participants expressed their gratitude with MSPs at USASRFC. 79.1% of participants said they likely return to USASRFC for services, 75.0% stated they listen to MSPs recommendations on medication, and 79.1% stated they would be likely to seek medication attention for a problem in the future. Table 4 shows responses from the participants.

Discussion

This study aimed to investigate the impact of patient education sessions on patients' trust in MSPs and its potential downstream effects on trust in the broader health system, as well as its influence on patients' health behaviors, specifically medication adherence and seeking further help for medically related issues. The results of this study provide valuable insights into the potential benefits of patient education sessions in enhancing patient-provider relationships and fostering positive health outcomes. The findings of this study revealed increases in patients' trust in MSPs following the implementation of patient education sessions. This outcome aligns with previous research that suggests effective patient education and communication can foster trust

Table 3. Patient views on trust and ability to provide high quality care amongst MSPs at the USASRFC

Patient comfort level	n (%)
Education sessions help rapport with MSPs	
Yes	20 (83.3)
No	1 (4.2)
Unsure	3 (12.5)
Patients feel comfortable sharing information with MSPs	
Very comfortable	13 (54.2)
Comfortable	9 (37.5)
Somewhat comfortable	2 (8.3)
Not comfortable	0 (0.0)
Patient trusts MSPs in provided high quality care	
Very much	20 (83.3)
Moderately	1 (4.2)
Somewhat	3 (12.5)

MSPs: Medical student providers; USASRFC: The University of South Alabama student-run free clinic.

Table 4. Participant responses to likelihood of returning to USASRFC and listening to recommendations from MSPs

Participant responses	n (%)
Patient likely to return to USASRFC	
Very likely	19 (79.1)
Likely	4 (16.7)
Somewhat likely	1 (4.2)
Patient likely to take prescribed medication based on MSPs recommendations	
Very likely	18 (75.0)
Likely	2 (8.3)
Somewhat likely	3 (12.5)
Not likely	1 (4.2)
Likely to seek medical attention for medical problem	
Very likely	19 (79.1)
Likely	2 (8.3)
Somewhat likely	3 (12.5)

USASRFC: The University of South Alabama student-run free clinic; MSPs: Medical student providers.

between patients and healthcare providers.¹⁵⁻¹⁹ However, this is the first time this has been noted specifically within student-run free clinics. The interactive nature of patient education sessions

likely plays a crucial role in this improvement. By providing patients with comprehensive information about their conditions, treatment options, and involving them in shared decision-making, MSPs establish themselves as reliable sources of information and partners in the patients' care journey.

An intriguing finding of this study was the potential for patient education sessions to positively influence patients' trust in the entire health system. This finding aligns with other studies which have highlighted the role of specific patient engagement interventions improving the overall trust of the entire healthcare system.²⁰⁻²² While the focus of the education sessions was on MSPs, the spillover effect observed in the broader health system is noteworthy. From the study, the clear majority of participants stated that patient education sessions incentivize them to attend clinic; on top of that, the majority also highlighted that they are likely to seek medical attention in the future for a medical problem. This trend can suggest that when patients perceive their interactions with MSPs as positive and informative, they may generalize this positive perception to the larger healthcare infrastructure. Such a phenomenon can contribute to the overall reputation and credibility of the health system, potentially encouraging patients to engage more actively in seeking healthcare services and adhering to recommended treatments. The study also explored the impact of patient education sessions on patients' health behaviors, specifically medication adherence and seeking further help for medically related issues. The results indicated a clear majority of participants adhered to their medications along with seeking medical assistance if required. This finding underscores the crucial role that patient education plays in empowering patients with the knowledge and skills necessary to manage their health effectively. Improved medication adherence can lead to better treatment outcomes, reduced hospitalizations, and lower healthcare costs.^{23,24} Patient education sessions likely helped patients understand the importance of adhering to prescribed medications, the potential benefits, and possible side effects.

Furthermore, an increased propensity of patients to seek further help for medically related

issues is a promising outcome. Patient education sessions likely equipped patients with the ability to recognize early signs and symptoms of health problems, enabling them to seek timely medical attention. This proactive behavior can lead to earlier interventions, better disease management, and ultimately, improved overall health status.

Despite the compelling findings, this study has several limitations that warrant consideration. Firstly, the small sample size of 24 participants may limit the generalizability of the results to broader populations, highlighting the need for caution when extrapolating findings to different healthcare contexts. Moreover, the potential for response bias cannot be overlooked, as participants may have provided socially desirable responses, impacting the accuracy of the data collected. Additionally, the study was conducted in a specific clinical setting catering exclusively to group-housed men, further restricting the generalizability of the findings. Furthermore, while the observed positive effects of patient education sessions are promising, the long-term sustainability of these effects remains uncertain and necessitates further investigation. Future research endeavors could explore the optimal frequency, duration, and format of patient education sessions to maximize their efficacy in building trust and improving health behaviors across diverse healthcare settings.

Conclusion

The study underscores the critical role of patient education sessions in bolstering patient-provider relationships, trust in the health system, and health behaviors. It highlights how these sessions not only improve patients' trust in medical student providers but also extend to enhancing trust in the broader healthcare infrastructure. Moreover, the findings reveal the significant impact of patient education on promoting positive health behaviors such as medication adherence and timely medical assistance-seeking. Through effective communication and personalized interaction, these sessions empower patients with knowledge, fostering confidence and collaboration in decision-making processes. Additionally, the study suggests that implementing patient education sessions across student-led free clinics

could enhance overall patient engagement and healthcare services. As healthcare systems pivot towards patient-centered care models, integrating patient education emerges as a vital strategy for cultivating informed, engaged, and empowered patients, ultimately contributing to improved outcomes and a healthier society.

Disclosures

The authors have no conflicts of interest to disclose.

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