

Medical Students' Participation in Longitudinal Community Service During Preclerkship Years: A Qualitative Study on Experiences and Perceived Outcomes

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ABSTRACT: The aim of this study was to qualitatively evaluate medical students perspectives of the benefits of a longitudinal volunteering experience compared with a 1-day community service experience. Fifteen medical students participated in 2 types of community service: (1) longitudinal, weekly volunteering from February to April of 2019 and (2) a single day of community service in March of 2019. Semistructured interviews were conducted to identify medical students perspectives of the impact of volunteering. Interview data was analyzed thematically based on the common ideas expressed by the participants. Four themes emerged: development of communication and interpersonal skills; understanding how to teach; ability to understand community issues in a low socioeconomic status (SES) neighborhood and the improvement of overall well-being. Medical students' participation in a longitudinal nutrition education volunteer program was perceived as being an effective way to develop communication, interpersonal, and teaching skills. Medical students were able to interact with a diverse and vulnerable community located in a low SES neighborhood, to help them understand current community issues and risk factors.

KEYWORDS: Community service, medical education, preclerkship, nutrition education

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Introduction

Volunteering in underserved communities is associated with positive outcomes such as improved communication, higher empathy levels, and greater interpersonal and leadership skills.¹ Previous medical school community service projects have shown that as students progress through medical school, they can develop teaching skills, grow as leaders, and identify and address community health needs.^{2–4} Community service opportunities allow medical students to work in local settings, identify health needs, and work with others in the community.⁵ For many students, this provides a first encounter with a vulnerable, underserved population.⁶ This interaction between medical students and the community helps to personalize and personify their experience and keep the spirit of altruism alive throughout the demanding medical training.^{3,6} Evidence exists that when medical students volunteered to participate in community activities they had significantly higher grade points average (GPAs), and United States Medical Licensing Exam (USMLE) Step 2 scores.⁷ They also reported a strong commitment to volunteering after graduation and were more likely to practice in an underserved community in the future.⁴

Despite the known benefits of community service, many medical students do not volunteer, and many medical schools do not incorporate community service into their mission or vision statements.⁸ Research from the Association of American

Medical Colleges identified that only one-third of graduating medical students reported field experiences in service, and only one-fifth reported working with a diverse population.⁹ Many medical students believe that volunteering is important to addressing the health needs of a community and have a positive attitude toward social service.⁵ However, many students have limited capability and are not confident in performing community service alone or they are reluctant to engage in service at the community level.⁵

Currently, there is a lack of engagement among medical students in longitudinal, extracurricular community service. More opportunities in medical school are needed to engage students in volunteering in their community outside of the classroom. The primary aim of this study is to qualitatively evaluate the impact of a semester long, nutrition education community service program at a local Houston middle school on medical students at McGovern Medical School. The secondary aim of this study is to compare the benefits of a longitudinal volunteering experience versus a one time community service day.

Methods

Study design

We conducted a qualitative study to understand from a medical student's perspective their experience of voluntary community service. Medical students participated in 2 types of community



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service: longitudinal, weekly volunteering and a one time, single day of community service.

The Association for Nutrition in the Health Professions (ANHP) student organization at the University of Texas Health Science Center developed a nutrition education program at a local middle school in Houston, Texas. In the Spring semester of 2019, students in the organization had the opportunity to volunteer at the middle school every Wednesday morning for 1 h before class. Students used a curriculum from the Coordinated Approach to Child Health (CATCH) program developed by the University of Texas Health Science Center to teach various lessons on nutrition, and each lesson of the week was paired with various healthy, affordable food items for the children.¹⁰

McGovern Medical school in Houston, Texas implemented a Day of Service event to promote medical student involvement in volunteering. The Day of Service is an annual one time volunteering event in the Spring with mandatory participation of all first year medical students that involves approximately 2 to 4 h. A variety of local volunteering opportunities were identified, and groups of students were assigned to each location by the McGovern Office of Wellness and Resilience. Methods for these data have been reported elsewhere.¹¹ Briefly, electronic surveys were collected from students assessing well-being, impact, and ability to care for patients, with answer choices ranging from 1 to 5, 1 being “strongly disagree,” 2 being “disagree,” 3 being “neither agree or disagree,” 4 being “agree,” and 5 being “strongly agree.”

Medical students who participated in both programs were interviewed. Participants recruited for this study were medical students who participated in the required day of service and those who regularly volunteered at the local middle school. Fifteen medical students consistently participated in the longitudinal community service program. The mean age for the participants was 23.2 years. The sample included 11 White, 2 African American, and 2 Hispanic medical students. All 15 students identified as being from the middle-class socioeconomic status (SES). Eleven students had no prior longitudinal community service experience, while 4 students regularly volunteered in the community through other service projects.

Data collection and analysis

This study was considered exempt from the UTHealth institutional review board as educational research. Fifteen individual face-to-face interviews were conducted in English by the first author (A.H.) over a 3-day period (27-30) in April 2019 at McGovern Medical School. Interview notes were taken on paper, and a participant memo was written after each session. Semistructured interviews that lasted approximately 20 min were used to understand the experiences of medical students and what impact, if any, volunteerism had on students. Questions were intended to elicit responses of their lived experiences. For example questions included: “Did you benefit from

this community service program, if so, how?,” “Did volunteering weekly have any impact on you?,” “Did you gain anything from this community service program,” and “Compared to the single day service event, were there any benefits to the longitudinal volunteering.” Participants were encouraged to elaborate on their responses. Participants also provided feedback on transcripts and research findings from interviews.

Before beginning the interviews, the objective of the study, the confidentiality of their responses, and the ability to withdraw at any time was explained to participants. The data was collected by two researchers (AH, SE) who conducted a thematic analysis of the interview responses based on Braun and Clarke’s 6 step theoretical framework.^{12,13} Themes were distinguished based on the main subject matter of each interview and the common ideas expressed by the participants. Open coding was used to solidify conceptual categories in the data, then categories were further developed into themes based on the relevant subject matter and the common ideas expressed by the participants.

Results

Four themes emerged from the interviews: development of communication and interpersonal skills, understanding how to teach, the ability to understand community issues in a low SES neighborhood, and the improvement of overall well-being.

A common theme that arose from the medical student volunteers administering the nutrition education program to 6th and 7th grade students was the development of effective communication and interpersonal skills. The medical students quickly realized by interacting with students on a weekly basis they were able to improve their ability to communicate nutritional information to students. Our community service program demonstrates that medical students can learn and develop effective and adaptable communication and interpersonal skills during their preclerkship years.

“At first it was difficult trying to teach 6th grade students about nutrition. Sometimes I felt they were not engaged in the conversations I was having with them. It wasn’t until I changed how I communicated with them that I saw results. I realized that the students responded best when I asked questions, quizzed them, and actively listened to them versus lecturing them about nutrition.” (Participant 1)

“For me it was difficult at first talking to people that were much younger than me. I had never interacted with kids before, and through this experience I was able to learn how to adapt the way I talk and how I interact with different age groups.” (Participant 3)

Furthermore, the longitudinal volunteer program proved to be an effective way for medical students to develop effective teaching skills. This experience provided medical students with the opportunity to teach. It gave them a place where they could simultaneously practice teaching and refine their skills. The volunteers had to learn how to communicate material, how to

be an effective teacher, and how to adapt their teaching styles to the needs of the children.

“By teaching middle school students you have to learn how to present the information in a way that is easy for them to understand. This helped me become an effective communicator and will be useful for my future as a doctor because you must be able to present information in a way that is easy for your patients to understand.” (Participant 4)

Students reported an improved ability to understand community issues. This experience brought the medical students into a new environment. The middle school was located in a food desert, with most of the students receiving free breakfast and lunch through the National School Lunch Program. Furthermore, the administration of the school had signaled a strong need for nutrition and health education. Overall, this program provided the medical students with insight into local health disparities and gave the students a new outlook on community issues.

“This experience opened my eyes about the children’s nutrition access.” (Participant 2)

“It took this volunteering experience to expose myself to the struggles and injustices that some members of our community face.” (Participant 5)

“I was surprised by the clear lack of nutrition education these kids were receiving but was encouraged that students were genuinely interested in learning more.” (Participant 8)

“ANHP helped me to see this niche in my local community, and how I have the capability to take initiative and make a difference. It showed how volunteering can be a great way to give back, make an impact on young kids, and help give health information to people who aren’t exposed to that way of living.” (Participant 6)

In addition to providing a service to the community, the well-being of the volunteers was also improved. The most common theme that arose from the volunteers was that performing community service was a rewarding and valuable experience. It can be difficult in preclerkship years to focus on anything else other than studying. Committing 1 h each week throughout the semester proved to be beneficial for the medical students that volunteered and provided an outlet to decompress from their coursework.

“It was awesome feeling like I was actually making an impact on the kids. I love spending time with kids; it felt amazing each week when they kept coming back and were excited to learn and adding in the underserved aspect of the service leads to a really fulfilling volunteer experience.” (Participant 2)

“Every time I left the school, I felt happier and my mood was improved. I also feel that volunteering also improved my week. I would look forward to coming and this gave me something to be excited about each week.” (Participant 8)

“This program improved my well-being and was an easy way to relieve the everyday stress that comes with being a medical student.” (Participant 10)

When compared with a single-day service event, the volunteers experienced some benefits from the longitudinal aspect of the community service program. The difference in outcomes between long-term (ANHP’s volunteer program) and short-term (McGovern Day of Service) volunteering experiences were reported. Participants in the ANHP education program also participated in the McGovern Day of Service allowing for a comparison of the two programs. The data from the McGovern Day of Service had a significant number of students rating it as a valuable experience with most students (94%) saying that it improved their well-being and 87% of students saying that it had a positive impact on their ability to care for patients.¹¹

The survey of participants in the ANHP education program also had students describe their volunteering as a positive experience.

“It felt amazing when the same kids came back week after week, wanting to learn more. It seemed like we really built a relationship with the kids that came regularly.” (Participant 9)

“It was great to be able to follow-up on the information we were teaching and see how the kids learned throughout the program. One kid went home and told their parents about the lessons they had learned, and her breakfast routine had taken a 180 degree turn and she was feeling great.” (Participant 12)

Discussion

This study demonstrated that participation in a longitudinal nutrition education volunteer program provided an effective way to develop communication, interpersonal and teaching skills. Medical students were able to interact with a diverse and vulnerable community located in a low SES neighborhood, which helped them to understand current community issues and barriers to accessing care. When compared with a single day of service, a longitudinal volunteering experience provided our small sample of medical students with a sustained improvement in well-being as well as the added benefits of developing skills.

Interpersonal skills are an important part of the doctor-patient relationship and are necessary for physicians to be able to practice medicine effectively.^{14,15} Physicians create unique relationships with their patients, and it is important for a physician to be able to adapt and communicate effectively from patient to patient.¹⁵ As future physicians, a key objective includes skillful communication and the ability to adapt our interpersonal approach to the relationship needs of different patients. In our program, teaching middle school students was an effective way to develop this skill. Student volunteers had to learn how to adapt their communication styles to fit the needs of 6th and 7th graders. Each child was different and interacted

differently with the volunteers. Some children were more passive and preferred just to listen, while other students wanted a more interactive experience. Therefore, it is important for the student volunteers to be able to have flexibility in their communication styles.

Fourteen out of our fifteen volunteers had no prior experience teaching, much less teaching students that were 10 years younger than them. Teaching is inherent to the practice of medicine and one could argue, being a good physician. Physicians teach their patients everyday through counseling, introducing diagnoses, negotiating treatment options, and some physicians also teach medical students.^{16,17} It is critical for physicians to be effective teachers to improve patient outcomes.¹⁶ Physicians must be able to reduce factual overload to relay information in a way that allows their patients to understand their diagnoses and treatment.¹⁷ Despite this duty for physicians to be lifelong teachers, medical students are not taught how to teach and are suddenly given the responsibility upon graduation.¹⁷ This could also be reason why attendance in preclerkship courses has dropped and medical students have turned to more effective teachers in the form of third-party resources.⁹ Teaching lessons to local students, such as those about nutrition, during preclerkship volunteering is an effective way to develop skills while also providing a valuable community service to students.

McGovern Medical School is located just outside the Third Ward, an underserved community of low socioeconomic status in Houston, Texas. This provided an opportunity for young medical professionals to focus on those most in need, an important reinforcement in medical training as they reduce barriers to care and decrease the potential for the stigma of classism.¹⁸ It is important that medical students interact and engage with the community so that they can understand their patient population and the risks facing their patients.⁶ In fact, over the past three decades, approximately three quarters of medical students nationally have come from families in the top two income quintiles.¹⁹ Studies have shown that people place high subjective value in their identity with SES.²⁰ Therefore, the average medical student would likely identify with these higher SES groups. In context of this study, the ANHP program was focused on bringing nutrition education to children with low SES and placing the medical students in a position to interact and learn from children of this group.

It is understood that community service opportunities in general lead to numerous positive outcomes for medical students in their development.¹⁻⁵ Studies have shown that regular volunteering has a positive and increasing effect on subjective well-being over time if it is sustained.²¹ Arguably, short-term volunteering events do not provide this same continual reinforcement and growth. The brief experience leaves the volunteer subject to hedonic adaptation, and their well-being is not truly increased. The medical students in the ANHP program reported a sustained improvement of their overall well-being compared with the single day of service event.

There were limitations and strengths to our study. The sample size is relatively small at only 15 students and the sample may not be representative of the entire medical school class. However, the themes presented were common among all 15 students. The study is also qualitative in nature and definitive, quantitative conclusions on the impact of volunteering cannot be made. However, qualitative research does allow us to research the personal experience of each medical student and develop themes of their perceived benefits from volunteering.

Conclusion

Medical schools should consider incorporating a longitudinal volunteer program as part of their curriculum or provide a variety of extracurricular activities which benefit the local community to allow medical students to develop experiential skills outside of the classroom.

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Authors' Contributions

A.H. created the study, conducted and analyzed the interviews, and wrote the manuscript. S.E. reviewed the interviews, thematic analysis, and contributed in writing the manuscript as well as editing and reviewing. T.L. revised and edited the manuscript. All authors read and approved the final manuscript.

Ethical Approval and Consent to Participate

All participants were 22 years or older. Written informed consent was obtained from all participants. This study was considered exempt from the UTHealth Committee for the Protection of Human Subjects institutional review board as educational research. All procedures performed in studies involving human participants were in accordance with the ethical standards of UTHealth Committee for the Protection of Human Subjects IRB and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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