

Exploring learning through volunteerism at a student-run community dental clinic

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ABSTRACT

Background: The Student Health Initiative for the Needs of Edmonton (SHINE) dental clinic is a student-run clinic that provides free oral health care to low-income inner-city individuals in Edmonton, Canada. SHINE was managed and operated by the Dental Students' Association, independent from the University of Alberta, at the time of data collection. Students care for patients under the supervision of volunteer dentists and dental hygienists from within the community. Although not a formal education facility, the SHINE clinic appears to offer valuable learning opportunities, based on anecdotal feedback from students and preceptors. The purpose of this study was to explore how the SHINE volunteer experience contributes to student learning. **Methods:** Ethics approval was granted by the University of Alberta Research Ethics Board (Pro00101981). Using maximum variation purposeful sampling, dentistry and dental hygiene students were recruited to participate in 5 focus groups (N = 19). Interpretive description informed the study, and data were analyzed using manifest thematic analyses. **Results:** Three themes captured how SHINE benefitted student learning: 1) learning in a facilitative environment (contextual factors, including pace, preceptor ratios, autonomy, and collaborative learning); 2) learning-conducive roles (tasks and responsibilities students undertook that supplemented existing clinical skills); 3) learning from patients (patient encounters that promoted empathy, communication strategies, and awareness of diverse patient circumstances). **Conclusion:** Students' experiences volunteering at SHINE had beneficial learning outcomes and brought to light 3 considerations for dentistry and dental hygiene education: the need for further cultural sensitivity training, student desire for "real-life" experiences, and a reduction in grading upon achieving competency.

RÉSUMÉ

Contexte : La clinique dentaire Student Health Initiative for the Needs of Edmonton (SHINE), une clinique dirigée par des étudiants, offre des soins buccodentaires gratuits aux personnes à faible revenu du centre-ville d'Edmonton, au Canada. L'initiative SHINE a été gérée et exploitée par la Dental Students' Association, indépendante de l'Université de l'Alberta, au moment de la collecte des données. Les étudiants traitent les patients sous la supervision de dentistes et d'hygiénistes dentaires bénévoles de la communauté. Bien qu'il ne s'agisse pas d'un établissement d'enseignement formel, la clinique SHINE semble offrir de précieuses occasions d'apprentissage, d'après les commentaires anecdotiques des étudiants et des précepteurs. L'objectif de cette étude était d'explorer comment l'expérience de bénévolat SHINE contribue à l'apprentissage des étudiants. **Méthodes :** L'approbation éthique a été accordée par le Comité d'éthique de la recherche de l'Université de l'Alberta (Pro00101981). À l'aide d'un échantillonnage ciblé par variation maximale, des étudiants en dentisterie et en hygiène dentaire ont été recrutés pour participer à 5 groupes de discussion (N = 19). Des descriptions interprétatives éclairaient l'étude, et les données ont été analysées au moyen d'analyses thématiques manifestes. **Résultats :** Trois thèmes ont permis de comprendre comment l'initiative SHINE a profité à l'apprentissage des étudiants : 1) l'apprentissage dans un environnement propice à la facilitation (facteurs contextuels, notamment le rythme, les ratios de précepteurs, l'autonomie et l'apprentissage collaboratif); 2) les rôles propices à l'apprentissage (tâches et responsabilités que les étudiants ont assumées et qui ont enrichi les compétences cliniques existantes); 3) l'apprentissage auprès des patients (rencontres avec les patients qui ont favorisé l'empathie, les stratégies de communication et la sensibilisation aux diverses circonstances des patients). **Conclusion :** Les expériences de bénévolat vécues par les étudiants à la clinique SHINE ont donné des résultats bénéfiques en matière d'apprentissage et ont mis en lumière 3 considérations pour l'éducation en dentisterie et en hygiène dentaire : la nécessité d'une formation plus poussée sur la sensibilité culturelle, le désir des étudiants pour des expériences « concrètes » et une réduction des notes accordées suite à l'acquisition de compétences.

Keywords: community-based; dental education; dental student; dental hygiene student; oral health care; underserved patients; volunteerism
CDHA Research Agenda category: capacity building of the dental hygiene profession

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PRACTICAL IMPLICATIONS OF THIS RESEARCH

- Students desire education that resembles and prepares them for practice upon graduation, specifically, task and pace requirements.
- Students who volunteered with SHINE reported experiences that benefitted and improved their clinical skills, further preparing them for practice upon graduation.
- Findings can inform clinical education, particularly in the areas of grading, preceptor ratios, and cultural sensitivity.

BACKGROUND

Canada's privatized approach to oral health care privileges the wealthy and those with dental insurance, creating broad oral health inequities in society.¹ Income and dental insurance coverage are the 2 most significant predictors of a person's seeking oral health care.² Before the introduction of the Canadian Dental Care Plan (CDCP) in 2024,³ Canadians without dental insurance—50% of low-income Canadians—were 3 times more likely to avoid seeing an oral health professional due to cost barriers alone.^{4,5} At this time, it is not known how the CDCP will impact the number of Canadians seeking and receiving oral health care. However, early projections show strong uptake by oral health care providers and eligible patients.⁶

Recognizing affordability as a barrier to care, undergraduate dentistry students established the Student Health Initiative for the Needs of Edmonton (SHINE) dental clinic in 2004. SHINE is a student-run free dental clinic located in inner-city Edmonton, Canada, operated independently of the Mike Petryk School of Dentistry, University of Alberta, at the time of data collection. SHINE operates within Radius Community Health & Healing, an Edmonton outreach clinic providing culturally sensitive, interdisciplinary health care for underserved communities experiencing adversity.⁷ Volunteer dental and dental hygiene students from the Mike Petryk School of Dentistry provide care to patients on Saturdays under the supervision of volunteer licensed dentists and dental hygienists.⁸ Each day of operation, SHINE requires 20 student volunteers to fulfill diverse operator and non-operator roles⁹; operator roles are only filled by third- and fourth-year students. Volunteers change each week. However, at least 2 members of the SHINE executive committee attend each Saturday to facilitate clinic operations. SHINE's mission is to provide free oral health care to low-income and uninsured individuals.⁸ Services offered include restorative dentistry, dental extractions, endodontics, pediatric dentistry, and dental hygiene.⁸ Appointments are on a first-come, first-served basis for whoever attends, and often demand exceeds capacity.

Problem

While not a formal curricular learning environment, the SHINE clinic appears, based on anecdotal feedback from students, to provide an invaluable learning opportunity. While being a social advocacy initiative of students, little is known about SHINE's unique clinical environment and how it might contribute to student learning. This study sought to explore how the volunteer experience at SHINE contributes to student learning. As the dentistry and dental hygiene programs expand their community-based rotations, understanding this type of volunteer experience can offer insight into how to better align undergraduate clinical education with students' learning needs.

MATERIALS AND METHODS

Ethics approval was granted by the University of Alberta's Research Ethics Board (Pro 00101981).

Design

The study was approached from a constructivist perspective. Interpretive description informed the study design. Interpretive description is an inductive method ideally suited to describing themes and patterns arising from the contextual nature of the human experience while simultaneously exploring shared realities and different perspectives.^{9,10} This approach impacted the data analysis in that the research team focused on highlighting shared and different values between and among participants. It also acknowledges the researcher as an integral contributor to constructing the analysis.

Virtual focus groups

Following Krueger and Casey's approach, focus groups were selected for data collection to understand the perspectives of a group of individuals who possess specific characteristics, in this case, students who volunteer at SHINE.^{11,12} The research team, consisting of 2 experienced qualitative researchers and an MSc candidate, developed the focus group guide, which was adapted between sessions to delve into themes derived from earlier sessions and account for sequential analyses. The primary researcher, a female dental hygiene graduate student, conducted the focus groups.

Following the evidence, a minimum of 3 focus groups were conducted.^{12,13} Additional focus groups were conducted until data saturation was achieved, for a total of 5 sessions. Focus groups were held and recorded via Zoom Video Communications Inc. (Zoom) at preselected times convenient to the participants. Sessions were transcribed verbatim by the primary researcher and saved to a password-encrypted server. Virtual focus groups are considered a theoretically sound alternative to in-person focus groups.^{14,15} Each session lasted between 45 and 80 minutes.

Recruitment and sample

Dentistry and dental hygiene students who volunteered at SHINE were eligible to participate. Students were recruited via email, using a recruitment letter that informed the students of the primary researchers' affiliations, the aim of the data collection, and how data would be used. A \$15 gift card was offered as an incentive to increase participation. Maximum variation purposive sampling was followed to ensure students within each year of both the dentistry and dental hygiene programs were represented. Additionally, the study engaged students who volunteered frequently and infrequently, within operator and non-operator roles, including members and non-members of the SHINE executive committee. Each participant provided written consent.

Analysis

Data were analyzed using sequential, manifest thematic analyses. Thematic analysis is a method that aligns with interpretive description for the identification of themes from patterns of responses inductively developed.¹⁶ Sequential analysis enabled the researchers to use data from earlier focus group discussions to guide subsequent discussions.¹⁷ Each transcript was read independently and each person developed initial codes. Themes were initially generated by 1 team member (MK) followed by discussion and further refinement of the themes with the other 2 team members (MNY and SMC). Disagreements regarding coding and thematic analyses were resolved via consensus among all 3 team members. Credibility and transparency were maintained using respondent validation and reflexivity.¹⁸

RESULTS

Twenty students responded to the invitation to participate in the study. Five focus groups with 3 to 5 participants per group, totalling 19 participants, were conducted (Table 1). One student was unable to participate due to scheduling conflicts. Three main themes were identified: learning in a facilitative environment, learning-conducive roles, and learning from patients.

Table 1. Participants

Volunteer type	SHINE student executive	Non-executive				
Count	6	13				
Program and year	DDS YR1	DDS YR2	DDS YR3	DDS YR4	DH YR3	DH YR4
Count	2	5	2	1	6	3
Gender	Male	Female				
Count	4	15				

Learning in a facilitative environment

Students unanimously reported having positive experiences while volunteering at SHINE and shared that they were highly motivated to participate in what they felt was a unique learning environment. The theme “learning in a facilitative environment” describes contextual factors that students perceived as relevant to dentistry and dental hygiene learning that differed from their university-based teaching clinic. Key factors included pace, preceptor ratios, autonomy, and collaborative learning.

A common motivator discussed by students to volunteer at SHINE was the belief that SHINE is akin to professional practice post-graduation. SHINE aims to provide quality care to as many people as possible. To accomplish this,

students felt they needed to develop a level of speed and efficiency, which was perceived as more closely resembling “real-life” clinical practice. Students shared that speed and efficiency in conducting oral assessments were promoted by fostering their abilities to discern what information was essential to document compared to the required, exhaustive documentation of conditions in their school clinics.

“It’s really nice because [SHINE] helps us to get into the habit of what it’s going to be like in private practice in terms of speed and efficiency and doing all of the right checks but not spending all the time that we do in [school].”

Speed and efficiency in treatments were fostered by the fast-paced environment of SHINE, where students problem-solved more autonomously, integrating their knowledge and skills to implement the best treatment plan. Although students felt they had more “autonomy” in creating treatment plans, preceptors approved all treatments before students proceeded. Students could not pre-plan for patients because SHINE does not take appointments. This presented students with an opportunity to “think on the spot.”

“At SHINE, you have no idea who you’re going to see, what age they are, [their] understanding of English, how severe their teeth or their oral disease might be, so I think it’s a really good learning experience to be able to think on the spot, and learn on the spot, and deal with things as they come.”

Additionally, students perceived the SHINE environment to be better at facilitating opportunities for peer-to-peer and learner-to-preceptor interactions. At SHINE, students are partnered with a peer, between and within programs, for all roles and procedures, providing opportunities for students to observe and learn from each other about how to complete certain procedures and use different instruments or techniques.

“At SHINE you get more one on one, time to talk to or interact with [other DDS] years, and preceptors as well, or even hygiene students.”

“It was one of the few times where you got to watch somebody else do something...you see how somebody else does a filling, and you’re like, ‘Oh, I never thought of that. I should do that next time.’ I think it can make everyone better operators.”

The reduced ratio of students to preceptors also allowed more time for students to interact with the expert preceptor for meaningful mentorship. This mentorship could also have been enhanced because SHINE, being entirely volunteer based, is not a clinic where students are graded. Alleviated from the pressures associated with grades, students felt it facilitated learning, as they were more comfortable interacting with and asking for help from peers and preceptors. The collaborative learning environment enabled students to practise open communication and constructive feedback with peers and preceptors alike.

“Our ratios are higher in [the school] clinic, so we feel behind because we don’t get as much help. Being able to have a [preceptor] spend more time with me was really nice at SHINE.”

“You get the education, but you don’t feel like you have to spend an extra 20 minutes on one tooth because you’re worried about grading...I find that helps develop my skills as an actual practitioner.”

Learning–conductive roles

Students perceived SHINE to be an opportunity for exposure to dental equipment and procedures that supplemented and reinforced their existing and developing clinical skills. Students found value in volunteering in both operator and non-operator roles within SHINE. Thus, the theme of learning–conductive roles is defined as responsibilities students undertake at SHINE that either add to or further develop existing clinical skills.

“[SHINE] broadens your clinical experience so much, and you get to learn new skills that you wouldn’t necessarily otherwise.”

Operator roles

Patients attending SHINE generally presented with worse oral health and were more challenging to treat than patients in the school clinic. Dental students shared that patients often presented with multisurface dental decay that required extensive fillings or extractions. While large restorations and multiple extractions are commonplace at SHINE, dental students expressed that they are rare in the school teaching clinic. Additionally, dental hygiene students indicated that patients of SHINE were more likely to be experiencing greater severity of oral diseases which challenged them to deliver a more advanced level of care in contrast to treatment provided at the dental school.

Non-operator roles

Because SHINE is entirely student-run, student volunteers take on roles beyond clinical operators, including reception, instrument processing, and sterilization. At the school teaching clinic, non-operator duties are completed by paid staff; students have limited exposure to those roles and responsibilities. Students discussed how exposure to non-operator roles at SHINE improved their knowledge of daily operations within a small dental clinic, specifically, how to interact with patients, triage patients, be familiarized with various dental tools, equipment, and software, and execute infection control during instrument processing. Students perceived that these skills would benefit them in their school teaching clinic and provide an advantage for entering private practice after graduation. See Table 2 for operator- and non-operator-specific enhanced skills and supporting quotations.

Learning from patients

The theme “learning from patients” is defined as the understanding students gained by interacting with SHINE’s patients, whom students primarily identified as “citizens who are of lower socioeconomic status, [and] immigrant groups who have a language barrier and [those who] have more difficulty accessing care.” Many students reflected that they were motivated to volunteer at SHINE because they wanted to help people with lower incomes by providing complimentary oral health care and education. However, after volunteering, students reported that the patients of SHINE had much to teach them. Three subthemes were identified in what students learned about the patient population: empathizing with patients, communicating with patients, and awareness of patient circumstances.

Empathizing with patients

For many students, volunteering at SHINE was their first introduction to working with a low-income, inner-city population. Some students self-described as coming from “sheltered backgrounds”; attending SHINE challenged their comfort zone while providing an opportunity to build rapport with patients and treat them empathetically. The subtheme of empathizing with patients was defined as students learning how to treat patients from diverse backgrounds with empathy.

Patients presented with complex oral health conditions and often limited oral health literacy. Students described their experience working with these patients as “eye-opening,” “challenging,” and “humbling.” Students learned from patients, developed an awareness of their circumstances, and empathized with them because “there is more time liberated for building relationships with patients at SHINE.” Volunteering at SHINE provided a valuable opportunity to learn how to engage with “people from all walks of life who have poor oral health for a lot of different reasons” and empathize with their life circumstances to “help them where they are at” in their oral health

Table 2. Supporting quotations for the "learning-conducive roles" theme

Role	Quotations
Non-operator	
	<i>I really like the opportunity to do more than the operator shifts [at SHINE] because we don't learn a whole lot about it [in school]... being able to go into an office and say that I have sterilization experience or that I have experience with Dentrax [a dental software] or I know how to talk to patients about the front end stuff gives you a lot of advantage when you are looking to go into private practice.</i>
Administration and triage	<i>One thing that I've learned at SHINE that I didn't really see at [school] was the triaging and the prioritizing what the patient needs.</i> <i>I found that the admin assist shift where I was triaging the patients was really helpful for education...you get really good at condensing [oral assessments].</i>
Instrument processing/sterilization	<i>We had to do all the sterilization and all the behind-the-scenes stuff, which is really cool because we don't get to do that at the clinic in our school setting.</i> <i>Depending on the clinic dynamics that we work in afterward, jumping in to help with sterilization can be huge with how you interact with your coworkers and how the clinic can continue to run smoothly on a busy day. Its awesome that we get the chance to go through all of the [sterilization] processing steps.</i>
Dentrax (software)	<i>Exposure to Dentrax – that's a huge pointer and a way to get students to volunteer [because] Dentrax is the main [software] that [practitioners] use in private practice.</i> <i>Dentrax is a big help because Axiom at school isn't used anywhere else. So then we have to relearn whole [software] programs. So having that exposure [to a more commonly used dental software] is really nice.</i>
Operator	
Tooth extractions	<i>We don't get a lot of extraction experience at the school.</i> <i>[SHINE patients] have significantly bombed out [decayed teeth and periodontal disease] teeth, we do a lot of extractions [and] a lot of open and drains.</i> <i>There's been lots of extractions [at SHINE]. There's been lots of root tip extractions, and there's bombed-out caries extractions or lost teeth due to periodontal disease.</i>
Large dental restorations	<i>There's been quite a few major fillings—ones that involve four surfaces.</i>
Different dental instruments and materials	<i>[There are] different instruments, or materials that we see at SHINE [that] we didn't know what it was before and now we've learned...[that] there are other options.</i> <i>The materials that we use [at SHINE] are similar, but it's not always the same. I think it's fantastic because after you graduate...you might not get the composite gun that you want...[or] the exact materials that you know how to use.</i>
Oral radiology	<i>We are more likely to take radiographs at SHINE.</i> <i>The pans as well, at [school] they just do it for you. They show you, but –</i>
Complex oral hygiene cases	<i>More exposure to more difficult cases has really helped facilitate learning.</i> <i>From a hygienist perspective, we see a lot more difficult cases, so we're able to improve our skills more.</i> <i>Cases at SHINE [have] more heavy [calculus] deposit.</i>

journey. Students described SHINE as an opportunity to interact with inner-city patients that "shape[s] views and... hopefully it makes us open and understanding of all kinds of beliefs and people's opinions."

"SHINE overall is a really humbling experience and allows us to gain a lot more empathy for people...and the circumstances they are in."

Communicating with patients

Students perceived that many SHINE patients had limited oral health literacy, which complicated how patients expressed their oral health concerns and how students communicated solutions. The subtheme of communicating with patients was defined as communication strategies students learned to enhance interactions with patients.

Working with patients experiencing language barriers or low oral health literacy was thought to “[teach] us how to speak to different people.” Further, it reinforced students’ active listening skills to ensure they understood the patients’ chief concern as they shared that “it really made me a better listener, and hopefully a better dentist.” Students learned to navigate language barriers using multiple techniques, including hand gestures, diagrams, simple wording, and online translation tools. Students valued the opportunity to navigate language barriers and considered it a good learning experience.

Awareness of patient circumstances

Volunteering at SHINE challenges students’ awareness of social inequities.²⁵ After participating at SHINE and witnessing barriers to care, students demonstrated understanding of dental poverty, social determinants of health, and how SHINE improves access to care and, therefore, oral health outcomes for underserved populations. Students felt more aware of dental poverty within the city, realizing “how cost prohibitive and how limited access is for a lot of people.” Cost was universally identified as the main barrier to care. Thus, SHINE, as a free service, was perceived to alleviate the financial burden associated with the cost of professional oral health care. Beyond the financial barriers, students were able to identify means by which SHINE’s unique environment improved access to care for low-income earners. They expressed that SHINE is “culturally diverse” and “less formal” compared to other dental clinics and that the diversity and “comfortable” environment made patients feel more at ease attending SHINE.

Although SHINE improves access to care for its target population, student commentary indicated awareness of remaining barriers to care for their patients, such as the availability of services. Further, students identified that the first-come, first-served nature of the clinic impedes access for some individuals.

“I would say that there is way more need than we can accommodate. Because on a weekly basis, we are turning people away.”

“Some people don’t have the time or the ability to wait outside or to wait in line for[up to] four hours for treatment, especially in the winter months.”

Despite efforts to improve access to oral health services through initiatives such as SHINE, barriers to care persist,

resulting in poor oral health outcomes. The worsened disease state among the SHINE patient population led to differing student opinions about patient priorities. Although some students believed that patients simply did not prioritize oral health and that their teeth did not matter until they were in pain, other students believed that patients could not afford to prioritize their oral health. Although students disagreed on their understanding of patient priorities, students agreed that SHINE patients primarily presented for “symptomatically driven visits,” which differed from the preventive oral health care students were accustomed to performing in school. A large portion of the patients sought care through SHINE for pain relief. Students found serving SHINE patients rewarding because they could make an immediate and significant difference for the patients by providing freedom from pain. Students associated dental pain with poor quality of life.

“[SHINE patients] have often waited longer before they access care, so their disease conditions are usually [more] progressed.”

“[Patients are] simply not prioritizing their oral health, and it’s obvious...they only care when it starts hurting.”

“...it’s not that people don’t care about their oral health. Money really is that huge of a factor.”

Part of providing quality oral health care is educating patients and preventing further oral disease. Volunteering at SHINE showed students that individuals who lack access to oral care may potentially also lack oral health literacy, with limited understanding of the etiology of their disease or how to prevent it. Students deemed oral health education important; it was a significant portion of their practice at SHINE. Oral health education topics included caries etiology, caries prevention, techniques for oral home care, periodontal theory, and gingivitis theory. Students perceived that if they could educate the patients on oral home care, it could lessen the need for responsive dental treatment. They believed that oral health education was a valuable aspect of SHINE. Acknowledging that SHINE patients have limited access to oral health care, students speculated that many of their patients had never seen a dentist or dental hygienist before SHINE. Students emphasized the value of providing patient-specific oral health education.

“If we can educate them on prevention, or why their tooth might be hurting, why they have cavities, why their gums are bleeding, I think that’s really helpful.”

"[Students] solve the problem, but also give them instructions on how to prevent further disease...that's where the value comes in."

"It's giving them the tools that they need in order to help them where they are at in their situation."

Lastly, students learned that patients often needed help sourcing where to find affordable care options and seek treatments that SHINE could not provide. Teaching patients where and how to access care was of importance because access is the first step in care.

"There are a lot of people who need dental education for what is going on, what they need, and how to navigate the dental system here, so we can get them wherever we need them."

DISCUSSION

This study explored the student experience at SHINE and its impact on learning. The data show that students experienced beneficial learning while volunteering at SHINE. Further, the data reveal insightful perspectives that could be used for quality improvement.

The learning environment fostered problem solving, speed, efficiency, and collaborative learning, which students attributed to freedom from grading, working in pairs, and low preceptor-to-student ratios. Freedom from grading aligns with the concept of low-stakes assessments. Low-stakes assessment allows for learner agency and creates an environment where students feel safe and are more receptive to feedback.^{19,20} Preceptor-student relationships that foster learner autonomy enable students to use assessment to support their learning, free from stress.¹⁹ Once a student reaches clinical competency, grading may become a potential barrier to the building of further competencies.²¹ Flexibility in an environment that moves away from a focus on grading towards a focus on hands-on student learning can potentially enhance experiential learning.²¹ Further, grading can create an environment of competition rather than collaboration. Free from grading, the focus on hands-on learning in pairs may enhance collaborative learning between student peers.²² Additionally, low preceptor-to-student ratios enable more discourse and immediate feedback, as students are more receptive to feedback due to the low-stakes assessment.²⁰ Although there is no objective difference between written and oral feedback,^{23,24} there is evidence for immediate and interactive feedback.^{20,21,25,26} The learning benefit from SHINE may be due in part to low-stakes assessment with a reduction in grading, increased collaborative learning opportunities, and the opportunity for students to receive engaged feedback.

In addition to assessments and collaborative learning, students identified a desire for an authentic learning experience akin to clinical practice post-graduation. Participating in non-operator roles such as sterilization, triage, and administration were considered assets of SHINE that students identified as missing from their school clinic. Further, the pace of SHINE was perceived as more reflective of practice after graduation. Students indicated a desire for an authentic or "real-life" experience to prepare them for professional practice upon graduation. SHINE satisfied that desire and was considered an advantage for future employability. Student opinions of advantages for employability are also reflected in the literature. There is a growing emphasis on "economies of experience."²⁷ For students to attain employment, the experience and cultural capital that comes from volunteering can provide an advantage.²⁷ Additionally, community partnerships can create real-world experiential learning, improving cultural sensitivity for diverse populations.²⁸ However, since not all students volunteer at SHINE, providing students with authentic experiences within the curriculum may improve students' sense of preparedness. Any future implementation of such curricula should be supported by a further investigation into the alignment of student perceptions of what "real-life" dental clinics are in comparison to actual practice settings to ensure that there is indeed an authentic representation of private practice that enhances student skills and knowledge.

Lastly, students identified learning directly from patient experiences as a key benefit of volunteering at SHINE, with subthemes of empathy, communication, and awareness. This type of education aligns with the concept of cultural competence, which is the ability to interact meaningfully with people of diverse cultural backgrounds, including beliefs, values, and behaviours.²⁹ Attaining cultural competence is a constant and evolving process whereby individuals must improve their self-awareness and social skills to interact and advocate for others.²⁹ Thus, student reports of enhanced empathy, communication skills, and awareness align with the concept of cultural competence, and the Radius Community Health and Healing Clinic's mission to provide culturally sensitive care. Further, cultural competency has been identified as key to decreasing racial and socioeconomic disparities from the perspective of both health-based outcomes and patient experiences within the health care system.^{28,30} To improve patients' health outcomes, it is essential to create empathetic and culturally competent students.^{28,31}

Although cultural competence was not measured as a part of this study, empathy and cultural sensitivity were not uniformly demonstrated by students. Students had differing opinions on the oral health literacy and priorities of patients with low socioeconomic status. Experiential learning without purposeful education can reinforce stigma, stereotypes, and discriminatory

behaviours towards marginalized populations, leading to worse health outcomes.^{31,32} Therefore, it is important to pair experiential learning with education, reflection, and assessment that have clear objectives promoting cultural competence and sensitivity.³¹

Implications for the study

The volunteer learning experience at SHINE points to 3 considerations for undergraduate education. First, cultural competence was not equal among students, and purposeful pedagogical strategies surrounding stigma and empathy may be required. Second, authentic learning experiences resembling practice upon graduation may be fostered by including non-operator roles for students within their curricular clinics. However, further investigation is required to understand how students perceive practice post-graduation. Third, students perceived that freedom from grading enabled a better understanding of their competency level, thus improving their efficiency when providing patient care. Therefore, a reduction in grading in areas where students have already attained competence may improve efficiency in patient care.

Limitations

Due to the volunteer nature of the SHINE opportunity, patient and student selection and the level of direct supervision students received were not controlled within this study. As a result, the motivations and characteristics of students who chose to volunteer at SHINE may not be shared with students who chose not to do so and, therefore, learning outcomes and recommendations may not be generalizable to all dental and dental hygiene students.

Experiential learning that promotes cultural competence requires clear objectives. However, such educational objectives may be difficult to implement in a volunteer opportunity like SHINE, which is outside of formal curricula. The research team was unable to formally assess cultural competence as part of this study given the volunteer aspect of the experience.

CONCLUSION

SHINE's unique learning environment facilitated student learning that differed from their university-based teaching clinic experience. Specifically, students felt that they completed patient care more efficiently than at their university clinic and that the collaborative learning at SHINE prepared them for clinical practice upon graduation. Second, having varied volunteer roles such as instrument processing, administration, and dental assisting at SHINE was conducive to enhancing student clinical learning, furthering student understanding of the various roles required in clinical practices. Third, the patient population at SHINE provided enriched clinical experiences that fostered awareness of and empathy for patient circumstances. Additionally, patient diversity challenged students to adapt and improve communication skills to disseminate information to a diverse clientele.

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CONFLICTS OF INTEREST

The primary investigator who conducted the focus groups was a dental hygiene clinical instructor at the University of Alberta, at the time of data collection.

DATA SHARING

Data available upon request due to privacy/ethical restrictions.

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