



Dietetics Experiential Learning at Diabetes Camp: Findings through Photovoice & Qualitative Analysis



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Background

Experiential learning provides an opportunity for students to develop hands-on experience and apply didactic learning to real-life situations. Diabetes camp is one setting that provides experiential learning on a topic that is crucial for future dietitians. Currently, much research in experiential learning focuses on pharmacy students, with little research with nursing students, and even less research involving dietetic students. It would behoove both nursing students and dietetics students to experience the many benefits of experiential learning.

Type one diabetes requires constant care and management from those living with the disease, their support network, and their medical team. Registered Dietitian Nutritionists play an important role in type one management. To better prepare dietetics students to manage type one diabetes in the future, this study explored whether and how educational experiences at a residential camp for children with type one diabetes changes knowledge, perceptions, confidence, and empathy of the disease. All health care disciplines have noted the importance of adequate preparation and training for the management of chronic diseases.¹ Most health care professional students believe they have a knowledge deficit in diabetes management if they do not participate in experiential learning where they can apply didactic material.² Camp Kno-Koma, the Diabetes Camp of WV was the setting for this research. Camp Kno-Koma has been a place for education, friendship, and adventure since it's beginning in 1950. During it's first year, camp served 34 campers. Currently, camp serves between 130 and 160 campers every year. Camp Kno-Koma has a full medical team, including physicians, endocrinologists, pharmacists, nurses, and dietitians. In addition to these medical staff members, multiple health care professional students attend camp, making it an ideal setting for experiential and interprofessional learning.

Purpose & Research Questions

The purpose of this study was to explore whether and how educational experiences at a residential camp for children with type one diabetes changes knowledge, perceptions, confidence, and empathy of the disease for dietetics students. In addition, this study helped describe how interprofessional education and teamwork can enhance learning for dietetics students regarding type one diabetes.

Research questions included:

- How do dietetic students identify their role in type one diabetes management?
- How confident are dietetics students in caring for patients with type one diabetes?
- How can immersive experiential learning at a residential diabetes camp improve knowledge of type one diabetes?
- How can immersive experiential learning at a residential diabetes camp improve confidence in the management of type one diabetes?
- How can immersive experiential learning at a residential diabetes camp enhance perceptions of type one diabetes?
- How can immersive experiential learning at a residential diabetes camp improve empathy for type one diabetes?



Methods

Participants: Four dietetic students were recruited to participate in this study through convenience sampling. Students were in varying stages of their dietetics education. Students were recruited through e-mail blasts and word of mouth.

Data Collection: Multiple qualitative methods were used to collect data: interviews; observations; Photovoice; journaling; and focus groups. The research methods were the same for both years of data collection, with the difference of using digital cameras and collecting journals in year two. The aim of the Photovoice intervention was to improve student knowledge, perceptions of diabetes, and increase confidence and empathy in caring for patients with type one diabetes. Photovoice, a kind of participatory action research, was used to engage students through data collection with photographs and dialogue to reflect upon how different educational strategies can benefit dietetics students. Photovoice is a qualitative research method of participatory action research, also called community-based participatory research, and includes photos and discussions to collect data.³ In this study, research participants were tasked with taking pictures of what they learned during their time at diabetes camp. These photographs provided a unique method to identify what students learned about type one diabetes, which provided additional information than discussion alone.

Data Analysis: Thematic analysis was used to identify emerging themes and summarize findings through triangulation. Five themes were identified in year one data collection and four themes were identified in year two data collection, to build on data collection from year one. See Table 1. Emerging Themes for details.



Figure 1. Longitudinal Data Collection Methods – Year One & Year Two.

Results

Qualitative data analysis revealed that experiential learning at diabetes camp provides an opportunity for dietetics students to experience in-depth learning, including: increase in knowledge of the disease, perceptions of living with the disease, confidence in treating the disease, and empathy for those who have been diagnosed. While attending camp for one week is beneficial for experiential learning, returning for another week the following year provided a deeper understanding of the disease process. Students identified wearing an insulin pump and “living with diabetes” were their best learning experiences.

Results (con't)

Figure 2. Top Learning Experiences – Year One & Year Two.

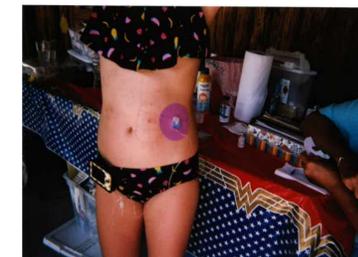


Table 1. Emerging Themes.

Year One Themes	Year Two Themes
The difference in diabetes (and management) throughout the lifecycle	Importance of teamwork and communication: My voice is important
The complex and overwhelming feelings associated with type one diabetes	Importance of the Registered Dietitian Nutritionist at camp
Dietetics students and their role in the interdisciplinary team—we fit!	As nutrition professionals, we are empowered to make a difference
More education needed on type one diabetes in dietetic curricula	Learning at camp increases confidence in the field and classroom
The influence of this experience on the participant's future plans in dietetics	

Table 2. Top Learning Experiences – Year One & Year Two.

Quotes from Students

“[at camp] I learned diabetes kind of at my own pace, like my own way. Instead of sitting in the classroom and learning it through slideshows.”

I feel like it [camp] made me a lot more empathetic. I always had empathy for type one diabetes, but I never understood it. So now I feel like I can really empathize with people and I really have a lot of admiration for them.

I feel like education in a classroom setting really doesn't even brush the surface of what diabetes really is like day-to-day, which it really can't. That's not even a flaw in the education system, it's just that it's so complex and it's so individualized. It's different for everyone.

“Dietitians are the segue between the kitchen and the doctors, pharmacists, and nurses. We are the translator between those two totally different worlds.”

The pod was definitely the most influential part of camp for me. To have that hands on experience with it and kind of understand. I think it's a great learning tool.

I had more than one person walk directly up to me and ask me a nutrition question. I feel like when somebody approaches you, that it increases your confidence.

Conclusions

This study adds to the limited body of knowledge concerning dietetics students' experiential learning at diabetes camps. The study's greatest contribution is the ability for educators to understand how experiential learning opportunities at diabetes camp provide in-depth education and how these learning experiences can be incorporated into dietetics curricula. Students verbalized the need for more education on type one diabetes in dietetic curricula, an important topic to consider in the Future Education Model and the future of dietetics education. As for the future of the four students, three of the four are interested in becoming CDCESs, while the fourth student is currently attending medical school with a goal of pursuing a career in pediatrics, and possibly the field of endocrinology.

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