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Peter Collins

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Walden University
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Executive Summary: Staff Education Project

Staff Education To Pediatric Healthcare Providers On How To Prevent Unintentional Childhood Injuries

by

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Executive Summary Submitted in Partial Fulfillment

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Summary

This staff education quality improvement Doctor of Nursing Practice (DNP) project was focused on teaching pediatric healthcare providers how to provide education during wellness visits to prevent unintentional childhood injury. The practice problem at the clinic was that pediatric providers lacked knowledge about injury prevention. A literature review showed that unintentional childhood injuries are the leading cause of death in this population. The practice-focused question determined was to determine if, after educating providers, they have improved knowledge and intent to educate their patients. I used the analysis, design, development, implementation and evaluation (ADDIE) model to guide this project. The participants were two nurse practitioners, two physician assistants, and a medical doctor. They completed a presurvey before receiving the education, and a postsurvey afterward. Descriptive statistics were calculated to evaluate participants' pre- and postsurvey scores, showing an increase in knowledge from 60% presurvey to 85% postsurvey. Eighty percent of participants stated intent to provide this education to their patients and their caregivers. These results indicate that education did increase the participants' knowledge and intent to educate their patients. The limitations of the project were a small sample size and time constraints because of the high volume of patients. The interventions went beyond the walls of the project site clinic as the information about preventing childhood injury permeated the local community. This project impacts positive social change because it allows all patients and their caregivers to have access to injury prevention information and resources.

Background

Unintentional childhood injuries are known to be the leading cause of death among children in the United States (Banerjee et al., 2021). Some of the most common causes are drowning, suffocation, falls, burns, poisonings, and motor vehicle accidents. Injury prevention reduces the number of emergency department visits and hospitalizations, thereby reducing the economic burden that these injuries would cause, such as long-term disability and the loss of productive time due to parental absences from work to care for their children (Banerjee et al., 2021). These injuries may result in disabilities that may lead to emotional and financial stress on the families when parents have to miss work to care for their children (Larkins et al., 2023). Many unintentional childhood injuries could be prevented if better education and screening measures were put in place.

As part of the organizational assessment at the project site, one-on-one interviews were conducted with the clinic providers to gather their perceptions and insights about injury prevention. These interviews revealed a gap in practice at the clinical site regarding providers who were not engaging in education or screening for risks related to childhood injuries. This clinic lacked a standardized protocol for conducting assessments for injury risk and delivering education on care that is consistent with injury prevention. Additionally, there was no established method for pediatric providers to access or document injury prevention. The concept of injury prevention was seen as optional rather than integral in the standard practice of care. Pediatric providers often skipped injury prevention topics due to time constraints and a high volume of patients. In addition,

pediatric providers lacked the necessary training and were not up to date with the latest evidence-based information. One additional challenge is dealing with language as approximately 70 percent of the population treated in this clinic is from Middle Eastern countries, and communication with the patient and their caregivers requires an interpreter. This challenge makes it more difficult for providers to discuss or screen for risk. These challenges prompted the need for education for providers, so they could better educate patients and their families to prevent unintentional injuries.

I analyzed an injury report for this clinic to identify trends in the types injuries, their causes, and the locations and times of occurrence. My collection and analysis of evidence focused on injury rates, risk factors, and some of the common causes that result from gaps in practice. This information helped identify areas for focus as I designed the education.

Literature Review

I completed a literature review using the holdings of the Walden University Library. McCallin et al. (2020) focused on equipping pediatric healthcare providers with the knowledge to pass on to families about how to prevent drowning. A study was conducted by Berg-Poppe et al. (2022) to enhance the understanding of pediatric healthcare providers in Midwestern states to serve a unique population that comprised immigrants, Native Americans, and special needs children as it relates to trauma-informed care. They conducted their study to increase the knowledge of pediatric providers to improve their care of this population. Choi & Ahn (2021) recruited participants from a parenting portal site with the goal of using e-learning to help prevent

unintentional childhood injuries. They designed their study using the Analysis, Design, Development, Implementation, and Evaluation (ADDIE) model. Parents were given access to a website that was created with instructions on some of the common areas where children are prone to injure themselves and the intervention that could be taken to prevent the injuries. The researchers designed a computer program to help identify some of the common causes of injuries with a follow-up quiz at the end of each module. Woolf et al. (2024) used a virtual teaching module called “VirtualSafeHome” (VSH), which was a video game designed to identify potential hazards in the home. Parents found the video game to be enjoyable, interactive, and immersive. Banerjee et al. (2021) completed a study with 397 children and adolescents to identify the effectiveness of child-to-child education in preventing unintentional injuries. They found that when the child-to-child approach is encouraged, where adolescents are taught both in the clinic and school how to avoid injuries of childhood, they can disseminate this information to their younger siblings and other children in the community. This was particularly relevant to the project site because siblings often attend wellness visits in the clinic where this project is being completed. Larkin et al. (2023) revealed that children who live on farms tends to be more at risk for unintentional childhood injuries because of the environment in which they live. The logistics of the location sometimes affect the response time of emergency responders, and this longer distance to the hospital can result in fatality because of the length of time it takes to get to the hospital.

It is essential to incorporate injury prevention teaching during wellness visits because research shows that children from low-income and marginalized communities

are prone to have higher rates of injury because of their limited access to safety resources, such as living in safe housing and using car seats while being transported (McCallin et al., 2020).

The literature revealed that toddlers (i.e., children 1-3 years old) are more likely to sustain injuries such as aspiration, drowning, poisoning, and falls and that drowning is the leading cause of death in this age group (McCallin et al., 2020). Preschoolers (i.e., 3-5 years old) are more likely to have injuries such as burns, cuts, bruises, drowning and falls, while school-age children's (i.e., 6-12 years old) most common injuries are concussions, fractures, sprains, bullying from peer, and traffic accidents (Woolf et al., 2024). The leading cause of death in this group is motor vehicle accidents as a passenger or pedestrian (Woolf et al., 2024). Adolescents (i.e., individuals 13-18 years old) common injuries are self-harm, substance abuse, violence, motor vehicle accidents, and sport injuries. The leading cause of injury that leads to death in this group are motor vehicle accidents among teen drivers, poisoning that is often drug-use related and, injuries from the use of a firearm (Choi & Ahn, 2021). I incorporated all these statistics into the evidence-based education content for this project.

Staff Education Project Development

After identifying the gap and reviewing literature to support this project, I developed the following evidence-based question: "Will staff education to pediatric healthcare providers about unintentional childhood injury improve their knowledge and, by extension, their intention to educate families on how to prevent it during wellness visits?" The ADDIE model was used to guide this project. The project team completed

the analysis after identifying the learning needs and performance gaps of the project staff. The project team that contributed to the staff education, quality improvement project, included nurse practitioners, physician assistants, a medical doctor, a manager, and an injury prevention specialist. Stakeholders such as school administrators, teachers, police officers, fire marshals, and community leaders were also involved in the development and execution of the training. Working with community resources was an excellent way to not only reach clients from the project site clinic but also to influence more widespread education.

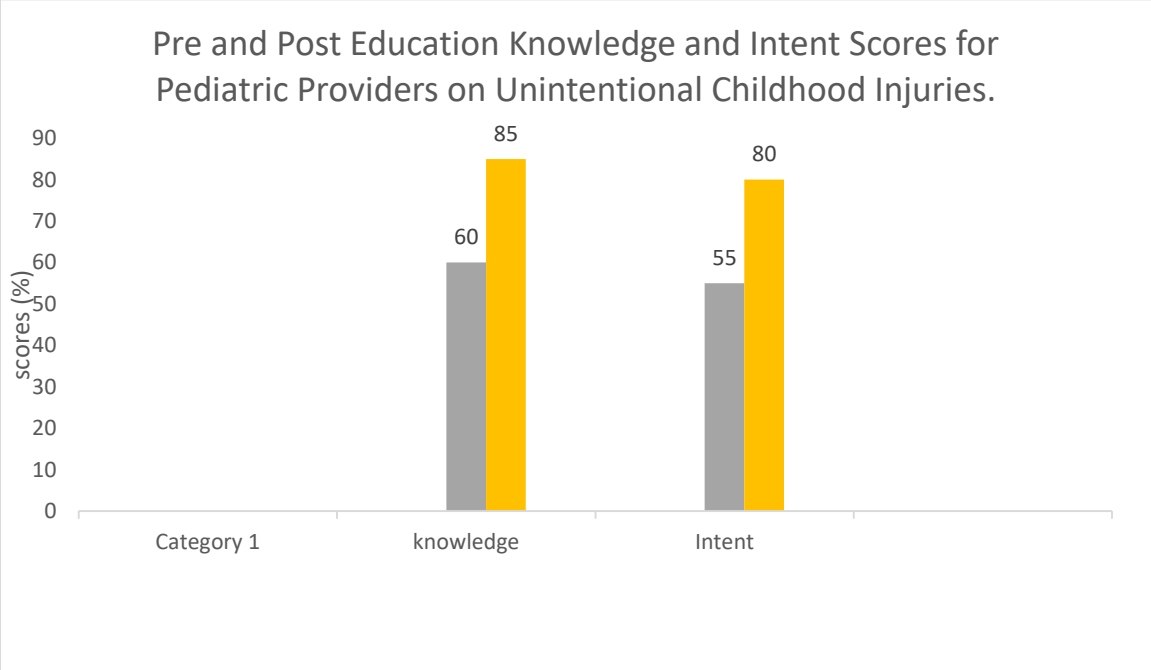
Design and development as part of the ADDIE model involved creating evidence-based content, in the form of a PowerPoint presentation that included education about prevention of falls, burns, poisonings, drowning, choking, suffocation, electrocution, and motor vehicle accidents. In addition, there was content about the use of car seats. Providers were encouraged to use this information when teaching patients and families during wellness visits. Implementation involved me teaching a 30-minute class to five participants. Before the class, the participants were given a presurvey, and the same survey was administered after the class, with an added question about intent to use the information they learned to educate their patients and families better. I compared the participants' pre and postsurvey education scores to determine if the staff education improved knowledge and intent.

Results

Five pediatric providers, including two nurse practitioners, two physician assistants, and a medical doctor, participated in the class and completed the pre-and

postsurveys. Evaluation in this project included the use of descriptive statistics to determine the average score on the pre and postsurveys (see Table 1). The participants pretest average score was 60% and the posttest average score was 85%. Eighty percent of the participants stated their intent to use the new knowledge to better educate their patients and families. These findings answered the evidence-based question by showing that education did improve the participants' knowledge and intent.

Table 1.



Limitations

There were some limitations for this project, including the small sample size of providers and high patient volume during the project's implementation, which limited

contact time with the providers. As a result, the postsurvey results were not as high as expected.

This staff education project was essential because unintentional injuries are the leading cause of death among children globally. Intervening at the clinic level enables early interventions through widespread dissemination of prevention practices to families. Implementing prevention strategies at a single clinic may seem localized, but its impact is far-reaching because it contributes to the broader public health mission.

The project site clinic provides services to a diverse population, some of whom are from low-income communities that are affected by injury disparities. When providers educate these families, it helps to bridge inequities in knowledge, access, and resources for this group. There is also a ripple effect from this initiative when families share this knowledge with extended families, neighbors and the community. The clinic can act as a hub for spreading injury prevention information in the community.

Conclusions

The impact of this DNP staff education project resulted in a 25% increase in providers' knowledge. The leadership of the project site clinic plans to incorporate injury prevention education during all wellness visits. Staff education has equipped the pediatric providers with the knowledge needed to counsel families confidently. Posteducation, my preceptor and I observed providers teaching injury prevention during wellness visits and families reporting appreciation for the education. This project has been impactful beyond the project site clinic and links into community resources through a collaborative effort to reduce childhood injuries and prevent avoidable emergency visits. one further

recommendation that might be considered is offering mandatory yearly training sessions for pediatric providers on the latest evidence-based injury prevention practices. The clinic could also develop and establish a pediatric safety champion to act as the child injury prevention lead. Their responsibility would be to keep educational materials up to date and coordinate follow-ups and referrals. The installation of visual reminders such as posters and infographics in the clinic is another strategy that can be used. The use of QR codes is also recommended to link families to reputable online safety websites. Pediatric providers play a vital role in impacting prevention and safety because they are in a position to proactively assess injury risk and educate patients and their families.

This project impacts positive social change by increasing provider knowledge so they can better screen for and educate about preventing childhood injuries. Patients and families benefit by being linked to resources so they can proactively create safer environments for their children. Diversity, equity and inclusion were considered in this project. All providers had the opportunity to attend the education, and as a result, all patients and families will have access to this education. When underserved populations like those served at the project site clinic are educated, it helps reduce disparities in injury rates. Injury preventions reduces emergency visits, hospitalizations, and disability, which benefits society as a whole. Injury prevention information should include everyone, and education materials should be in a language that families can understand. Provider must be culturally sensitive. When underserved populations are targeted, clinics help to reduce disparities in injury rates and this benefits the community.

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