Fall 2019

Developing and implementing trauma informed care principles: A pilot project

Lisa Blair Bell

Developing and Implementing Trauma Informed Care Principles: A Pilot Project

Lisa Blair Bell

A Clinical Research Project submitted to the Graduate Faculty of

JAMES MADISON UNIVERSITY

In

Partial fulfillment of the requirements

for the degree of

Doctor of Nursing Practice

School of Nursing

December 2019

FACULTY COMMITTEE

Committee Chair: Dr. Jeannie Garber

Committee Members/Readers:

Dr. Sara Jennings

Dr. Bonnie Price

Acknowledgements

I am grateful for all those who collaborated with me during this project. I would like to thank my project chair Dr. Jeannie Garber for the continuous motivation and guidance. I would also like to thank Dr. Sara Jennings and Dr. Bonnie Price who were always there to support me and walk with me during my DNP journey. Thank you to my family who endured this long road with me. Finally, thank you to my battle buddy, Jenny, who kept me on track and motivated me to keep going.

Table of Contents

List of Tables

List of Figures

Abstract

Background: Exposure to childhood trauma have lifelong consequences effecting the health and well-being of the individuals who experienced or witnessed the trauma. As healthcare providers, we must recognize patients who have been exposed to trauma and ensure that it is responded to appropriately. This approach is known as trauma informed care.

Objective: The purpose of this quality improvement project was to increase knowledge, opinion, and self-rated competence related to trauma informed care through the use of an educational intervention. Application of trauma informed care into daily practice was monitored through semi-structured interviews with project participants.

Methods: Registered nurses from the women's and children's division of a Magnet designated, community hospital in Virginia were invited to attend an instructor led class on the key aspects of trauma informed care. Training was developed using Substance Abuse and Mental Health Service Administration (SAMHSA) trauma informed care guidelines and facility data collected during a 2018 organizational assessment. Lewin's change theory was the theoretical framework for the project.

Results: Statistically significant changes in nurse's knowledge, opinions, and competence in applying trauma informed care were noted after attending the trauma informed care educational session. Participants consistently reported the importance of recognizing the effects trauma may have on patients and their families. Accounts of positive nurse driven experiences after the application of trauma informed care principles were also self-reported during post-intervention interviews.

Conclusion: This quality improvement project yielded positive results related to using education to increase knowledge, opinions, and competence in providing trauma informed care. After the intervention, participants were also able to apply trauma informed care to daily practice producing positive nurse-patient relationships. This project supports the need for further research in the relationship of the application of trauma informed care and patient outcomes.

Key words: trauma informed care, pediatrics, education

Introduction and Background

Trauma can be defined as an event, series of events, or set of circumstances experienced by an individual as physically or emotionally harmful or life threatening with lasting adverse effects on the individual's functioning and mental, physical, social, emotional, spiritual well-being (SAMHSA, 2015). Trauma can be broken down into primary trauma, which means the person experienced the trauma themselves, or secondary trauma which includes exposure to trauma that happened to someone else (i.e.: hearing about a traumatic event or caring for a victim of trauma). The source of trauma can include abuse, neglect, or household dysfunction. Household dysfunction can be further broken down into events such as divorce, incarceration of a family member, or living with a caregiver with mental illness. It is estimated more than sixty percent of adults have experienced at least one adverse childhood experience (Galvin, 2019). This trauma exposure leads to suffering, increase in healthcare related costs, and illness (Brenner, 2019). These exposures are closely tied with at least five of the leading causes of death in the United States (Galvin, 2019). This includes heart disease, cancer, diabetes and suicide. Without proper identification and treatment, trauma can leave damaging health consequences including but not limited to ineffective coping and negative physical health outcomes.

The trauma informed care (TIC) model focuses on asking, "What has happened to you?" versus "What's wrong with you?" (SAMHSA, 2015). Shifting from problem focused healthcare to a more holistic approach that encompasses how the patient's past may be impacting their current health will allow healthcare providers to build trusting relationships and identify potential barriers to positive health outcomes.

The concept of trauma informed care has increased in the literature and is currently being applied across many disciplines, including social work, education, and the justice system. Most recently, the importance of shifting to a TIC model in the health care system has gained interest.

SAMHSA has been a known leader in TIC implementation. This includes defining core elements that are needed for successful TIC implementation. These elements are referred to as the four "R's": realize, recognize, respond, and resists re-traumatization (SAMHSA, 2014).

Healthcare staff must first realize that children are often exposed to traumatic events during childhood. This exposure may have lasting impact on patients and can affect individuals in many ways. Childhood trauma exposure can also cause life-long effects that may be exacerbated by experiences that remind the individual of the original traumatic event.

Having the ability to recognize signs and symptoms of trauma and respond appropriately using TIC interventions is a key element in successfully caring for patients who have been impacted by trauma. Trauma victims may have difficulty coping, building relationships, and following treatment regimens. If health care providers can recognize the signs of past trauma exposure, they can ensure interventions are put into place to assist in building resilience and obtaining positive outcomes.

Finally, having the ability to prevent re-traumatization builds trusting relationships and support for patients (SAMHSA, 2014). The healthcare setting can inadvertently cause trauma to patients who have a significant history of trauma (SAMHSA, 2014). Healthcare providers need to be mindful that the medical setting may

bring back conscious or subconscious reminders of the initial traumas that were suffered by the patients. The use of trauma informed care assists healthcare providers in resisting re-traumatization by anticipating or minimizing trauma triggers. Trauma triggers may include sights, sounds, or smells that remind the child of the original traumatic event. Having staff members build trusting nurse-patient relationships and understand patient's individual triggers allows patients to feel they can receive health care in a safe, secure environment.

Trauma exposure can lead to negative health outcomes including addiction, mental health challenges, cardiovascular disease, respiratory disease, and cancer (Purkey, Patel & Phillips, 2018). Nearly two-thirds of individuals have been exposed to at least one traumatic event during their childhood (Marsca et al, 2016). Early recognition of symptoms that may be related to trauma exposure is critical and allows for the patients plan of care to be tailored to meet both the physical and mental health needs that are present.

In the late 1990's, the Adverse Childhood Experiences or ACEs study drew attention to the impact of childhood trauma on mental and physical health. ACEs highlighted the prevalence of trauma that occurs during childhood including emotional, sexual, and physical abuse, neglect, and family dysfunction (Gerber, 2019). The study also recognized that the exposure to trauma is widespread and that the effects of trauma on the individual are strongly proportionate to their ACEs score.

The research continues to support the use of TIC, confirming that the traumatic experiences and stress that we endure can have lasting negative impacts on our bodies and brains. It is important that healthcare providers begin to learn to recognize patients

who have been exposed trauma and have the tools needed to assist the patient in developing interventions to assist in reducing the negative effects. This phenomenon is known as trauma informed care (TIC). The trauma informed care model should be applied to all patients and is becoming known as a universal precaution within the literature.

To develop a culture that embraces trauma-informed care, staff must understand the key concepts related to trauma, recognize the importance of TIC, and embrace their role in delivering trauma informed care. Current literature supports the need for education as a building block for successful implementation of trauma informed care principles and supports the use of trauma informed care as a universal precaution.

Purpose of the Project

The purpose of this project was to develop and implement a trauma informed care basics educational intervention that increased staff knowledge, opinion, and self-rated competence in delivering trauma informed care. The literature supports the need for staff education related to trauma and the long-term impact of trauma, however guidelines on how to successfully implement trauma informed care education in the pediatric healthcare system has yet to be developed.

Review of Literature

A systematic review of literature was completed to identify literature that supported education as a foundational building block for successful implementation of trauma informed care. Databases including Pubmed, Cochrane Library, Scopus and CINAHL were searched. Key words included trauma-informed care, education, training,

and implementation. Search criteria focused on full text articles published within the past five years that were published in English. Reference lists from the search articles were also analyzed.

A gap in literature describing specific models of trauma informed care training was noted; however, the content for the training is clearly described in several studies. A similar pilot project conducted by Choi & Seng (2015) focused on trauma informed care in the perinatal care setting. The project showed successful increases in knowledge, skills, and attitude related to trauma informed care after a sixty minute educational session. Another study completed in 2017, noted that that pediatric residents reported increased comfort recognizing and supporting families with a previous trauma after ninety minutes of education on trauma informed care (Schiff et al, 2017).

Purtle's (2018) systematic review on trauma informed interventions highlighted the importance of training as a first step in becoming a trauma informed care organization. The systematic review reported that most organizations developed their own training, but common elements of training included the effects of trauma, strategize to prevent re-traumatizing patients, and developing a common language about trauma (Purtle, 2018). The length of the trainings ranged between one hour to multiple days using a pretest/posttest design to measure outcomes.

Theoretical Model

Lewin's change model was used to drive systematic change. Lewin's model has proven to be successful in many quality improvement projects. This model includes unfreezing, change, and refreezing. During the unfreezing stage, the organization was

prepped for the implementation of trauma informed care for the women's and children's pilot group. A leadership team was formed and needs assessment data on trauma informed care that was previously collected was analyzed.

The change stage included the delivery of the educational intervention. Leaders from the Women's and Children's division were asked to encourage and support staff in attending the trauma informed care training session. The educational intervention served as the change agent in this project. The education focused on increasing nurse's knowledge, skills and competence related to trauma informed care.

Finally, the refreezing step involved ensuring trauma informed care was applied to daily practice. The application stories were shared with the leadership team in hopes that the positive

Project Study and Design

A mixed method, pilot project design was utilized to test the success of the application of trauma informed care after an educational intervention was implemented. The project consisted of a ninety-minute educational in person training developed form SAMHSA's Concept of Trauma and Guidance for a Trauma-Informed Approach (2014) and educational content designed by the organization that focused on data collected from a 2018 trauma informed care organizational assessment. Lewin's Change Theory assisted in ensuring the project was completed in a systematic manner.

Project Setting

The project took place in a Magnet designated, community hospital which is part of a large multi-state healthcare system. This hospital is the primary provider for

pediatric healthcare within the organization. The hospital contains a dedicated pediatric emergency department, general pediatric unit, pediatric intensive care, neonatal intensive care, labor and delivery, and mother infant units.

Project Sample

The project used a convenience sample of registered nurses working in the women's and children's division of a Magnet designated, community hospital in Virginia. Nurses were recruited for the project by the nurse managers of the hospital's women's and children's units. Units that participated in this study included mother infant unit, labor and delivery, general pediatrics, pediatric intensive care, and pediatric emergency department. These units were chosen due to the fact that each of the units interacts with both children and their caregivers.

Participants were notified of the project via email and word of mouth. Inclusion criteria included all employed registered nurses in the women's and children's division. Exclusion criteria included contracted employees and non-English speaking employees.

Ethical Considerations

Institutional Review Board (IRB) approval was obtained from James Madison University and the organization where the project was implemented. Participation in the study was voluntary and consent was obtained prior to participation.

Sources of Data

A pre and post intervention survey was developed using a tool created for a previous study measuring nurse's views on trauma informed pediatric nursing care

(Kassam-Adams et al, 2014). The tool used in the project was specifically modified by the author due to no other studies measuring the changes in knowledge, opinion, and self-rated competence on trauma informed care after an educational intervention for pediatric nurses. The survey included twelve questions graded on a five-point Likert scale. The post survey included two additional open-ended questions in hopes to better understand the future implementation of trauma informed care by the participant. Participant data included number of years worked in the healthcare field and unit on which the participant primarily worked.

Approximately one month after the education, participants were invited via email to partake in a semi structured interview focusing on application of trauma informed care into daily practice.

Implementation

Six ninety-minute, instructor led training sessions were conducted over a two-month period. All sessions were led by the principal investigator (PI) to ensure consistency in the material and delivery. The PI attended a trauma informed care basics train the trainer session held by Greater Richmond SCAN and Trauma Informed Care Network prior to leading any sessions. Sessions were offered on various days of the week and at different times of the day in an attempt to meet the needs of the participants and their units.

Prior to the start of the training, participants were given a paper pre-test graded on a five-point Likert scale.

The training focused on defining trauma, recognizing the impact of trauma on the brain, development, and behavior, the link between trauma and health outcomes, and how to help those impacted by trauma. The information was provided using various teaching strategies including lectures, video clips, open discussions, and case studies. Participants were encouraged to reflect on their current nursing practice and to develop strategies to implement trauma informed care into their daily work.

At the conclusion of the training, participants were given a post-test that consisted of the same twelve questions from the pre-test with the addition of two open-ended questions regarding implementation of trauma informed care into their work.

Data Analysis

Participant Characteristics

Data analysis for participants included number of years worked in the healthcare field and primary unit in which the participant worked. Statistical analysis included percentiles for years in healthcare and unit.

Survey Analysis

Changes in the pre and post test data was analyzed using Excel's data analysis tool. Paired sample *t* tests were performed to identify the differences in mean before and after the intervention was applied.

Results

Thirty-four registered nurses participated in the project; however, two participants were excluded due to incomplete pre or posttest surveys. The majority of participants

were experienced nurses with greater than fifteen years of healthcare experience (n=12). Seventeen percent (n=5) had less than five years' experience in healthcare. Participants were equally divided across the women's and children's division. Tables 1 and 2 depict participant characteristics.

Quantitative Results

Paired sample *t* tests were performed to test for differences in mean from the pre intervention and post intervention scores. The post implementation scores showed a statistically significant change for all questions except one. The question that did not yield desired results reflected on providers focus on the patient's medical care versus the child's mental health. Overall, the education increased the nurse's knowledge, opinions, and self-rated competence for trauma informed care. This data is noteworthy as previous research has highlighted that staff confidence and competence are important in successful implementation of trauma informed care (Muskett, 2014).

Qualitative Results

The first open ended question inquired about potential changes to daily practice. Responses were coded into two categories: recognition and intervention. Seventy-six percent of participants reported they would be more aware of trauma in the workplace and would use newly learned skills to recognize patients who have been exposed to trauma. Nineteen percent of participants described the need for recognition of trauma in the patients and families they care for as well as interventions they would use to help patients who have been exposed to trauma and to prevent re-traumatization.

The second question focused on potential barriers related to implementation of trauma informed care. These results were coded into three categories: resources, time, and staffing. Results showed nurses felt that having access to resources would be the biggest barrier to successful implementation with fifty-four percent of participants noting this on their post-survey.

Semi-structured interviews were conducted with participants who volunteered to share their experiences in implementing trauma informed care into their daily practice. Staff awareness of their actions when caring for trauma survivors was noted in all post intervention interviews. Stories of early recognition of patients and families who have a history of trauma exposure were highlights of many of participant interviews. Participants were able to better understand patient and parent's behaviors. Many of these behaviors had previously been seen as threatening or uncooperative. Participants noted that continuing the training beyond the pilot group was necessary to ensure full integration of trauma informed care.

Quality

Project papers that contained participant information were stored in a locked drawer, in a locked office. At the conclusion of this project the documents will be shredded.

Discussion

This quality improvement project supports the use of education in successful trauma informed care implementation. Surveys completed prior to the intervention noted that nurses had some knowledge on the topic of trauma informed care, however after

completion of the education, statistically significant change was noted in the majority of areas addressed in the survey. Both the pre and posttest surveys reflect positive attitudes related to the need to implement trauma informed care in the women's and children's units. Open ended questions also supported the nurses' desire to use trauma informed care in their daily practice. There were also reports of early recognition of patients who have been exposed to trauma, as well as ensuring appropriate interventions were implemented for trauma survivors one month after the education was completed.

Limitations of the project include a small sample size (n=32) identified through convenience sampling. Even though the sample size was small the intervention proved to have statistically significant change for all but one question. Convenience sampling could have led to the sample being saturated with highly engaged nurses who were willing to make practice changes to best meet the needs of their patients. However, this may also lead to nurse's role- modeling trauma informed care to their peers and sharing positive experiences and knowledge that they learned lending to the spread of trauma informed care principles through a snowball effect. This project only focused on nursing staff; research is needed to develop a program that allows for the education of the entire healthcare team. Finally, the participants were only asked to provide feedback on implementation through the use of semi structured interviews at one month post education. Future studies would need to ensure application of trauma informed care continued to be successful and that participants did not need additional resources to help with implementation.

Implications for Practice

Trauma informed care is a relatively new model of care that is beginning to show promising positive outcomes in the literature (Bartlett & Steber, 2019). This pilot project demonstrated that education on trauma informed care can lead to successful implementation of TIC practices. After reviewing literature from other disciplines and studies that were conducted in various settings, it is believed that the information gained from this pilot project can be generalized to additional members of the healthcare team including practicing providers and students in the healthcare field. Continuing research on successful strategies for implementation of trauma informed care practices will be critical in ensuring the longevity of this work.

Having a strong foundational knowledge of trauma informed care is an important stepping stone for introducing additional trauma informed care approaches such as crisis response protocols, family engagement strategies, and screening procedures (Bartlett & Steber, 2019). The TIC approach can be woven through policy and procedure within the healthcare field in efforts to appropriately respond to and prevent re-traumatization. Having the ability to recognize and react to patients who have trauma exposure is an important piece in building trusting relationships with patients and their families.

Systematic screening of patients using tools such as the ACEs questionnaire has led to positive health outcomes due to early implementation of trauma specific interventions and resources, such as resiliency training. Early intervention or prevention of exposure to ACEs encourages a proactive approach to mitigating the long-term effects of trauma exposure. Programs that focus on positive parenting skills and support in developing coping skills may help build resilient communities.

Studies have also demonstrated an increase in patient, staff and family satisfaction when trauma informed practices are used (Carter& Blanch, 2019), however more research is needed in both of these areas.

Conclusions

This pilot project emphasizes the potential impact of educating healthcare providers on the effects of trauma exposure. Further research is needed related to patient outcomes achieved when trauma informed care is applied, as well as, expansion of trauma informed care education to the ancillary teams. Continued comprehensive education for those who have achieved baseline trauma informed care knowledge must be implemented to ensure sustained commitment. Although implementation of trauma informed care does not prevent patients from experiencing trauma, it assists staff in recognizing patients who have been exposed and developing care plans that address the impact that trauma has had on their physical and mental health.

References

Bartlett, J., Steber, K., (2019). How to implement trauma-informed care to build resilience to childhood trauma. Retrieved from https://www.childtrends.org/publications/how-to-implement-trauma-informed-care-to-build-resilience-to-childhood-trauma

Brenner, G.(2019, September 14). *How Adverse Childhood Experiences Cost $1.33 Trillion a Year.* Retrieved from https://www.psychologytoday.com/us/blog/experimentations/201909/how-adverse-childhood-experiences-cost-133-trillion-year?fbclid=IwAR0Yq-LYfFLG99XmeVPC

Bryson, S. A., Gauvin, E., Jamieson, A., Rathgeber, M., Lorelei Faulkner-Gibson, Bell, S., . . . Burke, S. (2017). What are effective strategies for implementing trauma-informed care in youth inpatient psychiatric and residential treatment settings? A realist systematic review. *International Journal of Mental Health Systems,* (1), 1. doi:10.1186/s13033-017-0137-3

Carter, P., & Blanch, A. (2019). A trauma lens for systems change. *Stanford Social Innovation Review, 17*(3), 48-54. Retrieved from https://search.ebscohost.com/login.aspx?direct=true&AuthType=cookie,ip,cpid,athens,shib&custid=s8863137&db=sih&AN=136631930&site=eds-live&scope=site

Choi, K. R., & Seng, J. S. (2015). *Pilot for nurse-led, interprofessional in-service training on trauma-informed perinatal care*. United States: Retrieved from https://search.ebscohost.com/login.aspx?direct=true&AuthType=cookie,ip,cpid

,athens,shib&custid=s8863137&db=edsbl&AN=RN603473538&site=eds-live&scope=site

Damian, A. J., Gallo, J., Leaf, P., & Mendelson, T. (2017). Organizational and provider level factors in implementation of trauma-informed care after a city-wide training: An explanatory mixed methods assessment. *BMC Health Services Research, 17*, 1-10. doi:10.1186/s12913-017-2695-0

Dichter, M. E., Teitelman, A., Klusaritz, H., Maurer, D. M., Cronholm, P. F., & Doubeni, C. A. (2018). *Trauma-informed care training in family medicine residency programs: Results from a CERA survey*. United States: SOCIETY OF TEACHERS OF FAMILY MEDICINE. Retrieved from https://search.ebscohost.com/login.aspx?direct=true&AuthType=cookie,ip,cpid,athens,shib&custid=s8863137&db=edsbl&AN=RN617237645&site=eds-live&scope=site

Galvin, G.(2019, November,5). CDC: Childhood Trauma Tied to Poor Health. Retrieved from https://www.usnews.com/news/healthiest-communities/articles/2019-11-05/childhood-trauma-tied-to-poor-health-social-outcomes

Gerber, M. (2019). *Trauma Informed Healthcare Approaches: A guide for Primary Care* Boston, MA:Springer.

Jankowski, M. K., Schifferdecker, K. E., Butcher, R. L., Foster-Johnson, L., & Barnett, E. R. (2019). Effectiveness of a trauma-informed care initiative in a state child

welfare system: A randomized study. *Child Maltreatment, 24*(1), 86-97. doi:10.1177/1077559518796336

Kassam-Adams, N., Rzucidlo, S., Campbell, M., Good, G., Bonifacio, E., Slouf, K., . . . Grather, D. (2015). Nurses' views and current practice of trauma-informed pediatric nursing care. *Journal of Pediatric Nursing, 30,* 478-484. doi:10.1016/j.pedn.2014.11.008

Lewin, K. (1951). *Field theory in social science: Selected theoretical papers* (1st ed.) New York, NY: Harper.

Marsac, M. L., Kassam-Adams, N., Hildenbrand, A. K., Nicholls, E., Winston, F. K., Leff, S. S., & Fein, J. (2016). Implementing a trauma-informed approach in pediatric health care networks. *JAMA Pediatrics, 170*(1), 70-77. 10.1001/jamapediatrics.2015.2206 Retrieved from http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,cookie,url,cpid,uid&custid=s8863137&db=rzh&AN=112207240&site=eds-live&scope=site&authtype=ip,uid

Muskett,C.(2014). Trauma-informed care in inpatient mental health settings: A review of the literature. *International Journal of Mental Health Nursing, 23*(1), 51-59. doi:10.1111/inm.12012

Purtle, J. (2018). Systematic review of evaluations of trauma-informed organizational interventions that include staff trainings. *Trauma, Violence, & Abuse,* , 1524838018791304. doi:10.1177/1524838018791304

Purkey, E., Patel, R., & Phillips, S.(2018). *Trauma –Informed care better care for everyone.* Canada: College of Family Physicians. Retrieved from https://search.ebscohost.com/login.aspx.?direct=true&AuthType=cookie,ip,cpid,athens,shib&custid=s8863137&db=edsbI&AN=RN615401327&site=eds-live&scope=site

Substance Abuse and Mental Health Services Administration (2014). Concept of trauma and guidance for a Trauma-informed approach. Retrieved from https://store.samhsa.gov/product/SAMHSA-s-Concept-of-Trauma-and-Guidance-for-a-Trauma-Informed-Approach/SMA14-4884.html

Schiff, D. M., Zuckerman, B., Hutton, E., Genatossio, C., Michelson, C., & Bair-Merritt, M. (2017). Development and pilot implementation of a trauma-informed care curriculum for pediatric residents. *Academic Pediatrics, 17*(7), 794-796. doi:10.1016/j.acap.2017.03.011

Strait, J., & Bolman, T. (2017). Consideration of personal adverse childhood experiences during implementation of trauma-informed care curriculum in graduate health programs. *Permanente Journal, 21*(1), 50-56. doi:10.7812/TPP/16-061

Weiss, D., Kassam-Adams, N., Murray, C., Kohser, K. L., Fein, J. A., Winston, F. K., & Marsac, M. L. (2017). Application of a framework to implement trauma-informed care throughout a pediatric health care network. *Journal of Continuing Education in the Health Professions, 37*(1), 55-60. doi:10.1097/CEH.0000000000000140

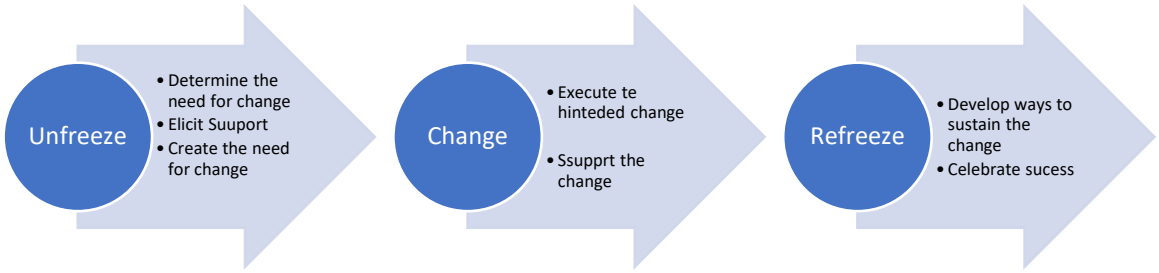
Yatchmenoff, D. K., Sundborg, S. A., & Davis, M. A. (2017). Implementing trauma-informed care: Recommendations on the process. *Advances in Social Work, Vol 18,*

Iss 1, Pp 167-185 (2017), (1), 167. 10.18060/21311 Retrieved from http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,cookie,url,cpid,uid&custid=s8863137&db=edsdoj&AN=edsdoj.39d2906e43a24edea70465510ce5a788&site=eds-live&scope=site&authtype=ip,uid

Appendix A

Figure 1

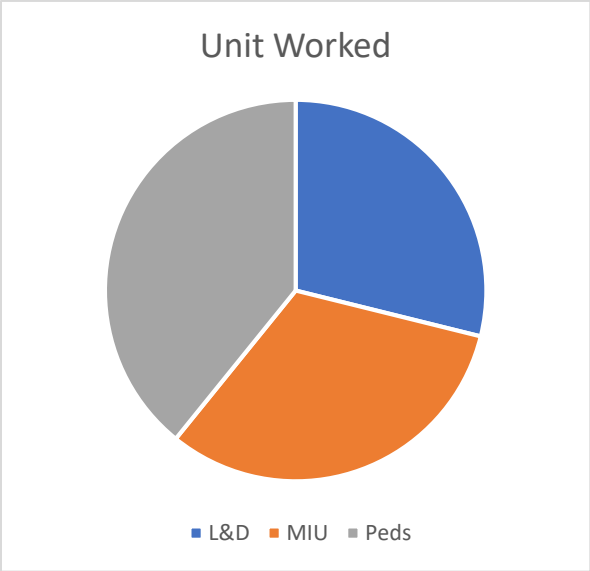
Lewin's Three Step Model for Change



Appendix B

Figure 2

Participant Unit

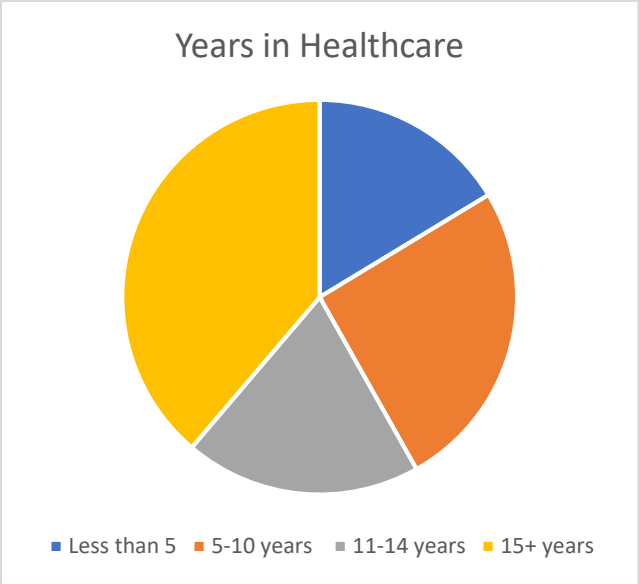


L&D	28.00%
MIU	31.00%
Peds	38.00%

Appendix C

Figure 3

Participant Number of Years in Healthcare



Less than 5	16%
5-10 years	25%
11-14 years	19%
15+ years	38%

Appendix D

Pre-Intervention Questionnaire

	Strongly Agree	Agree	Neither Agree/ Nor Disagree	Disagree	Strongly Disagree
1. I understand what trauma is					
2. I understand how trauma affects the brain and body					
3. There are effective screening measures for assessing trauma that providers can use in practice					
4. I understand how trauma affects a child's development					
5. I can recognize signs and symptoms of trauma in children and families					
6. Providers should focus on medical care for hospitalized children versus the child's mental health					
7. The way medical care is provided can be adapted to make it less stressful for patients and families					
8. Providers can implement strategies to help families cope with trauma					
9. Healthcare professionals should regularly assess for symptoms of traumatic stress					
10. I am comfortable engaging with traumatized children/families					
11. I feel comfortable educating children and families about stress reactions					
12. I provide trauma informed interventions to my patients					

Appendix E

Post-Intervention Questionnaire

	Strongly Agree	Agree	Neither Agree/ Nor Disagree	Disagree	Strongly Disagree
I understand what trauma is					
I understand how trauma affects the brain and body					
There are effective screening measures for assessing trauma that providers can use in practice					
I understand how trauma affects a child's development					
I can recognize signs and symptoms of trauma in children and families					
Providers should focus on medical care for hospitalized children versus the child's mental health					
The way medical care is provided can be adapted to make it less stressful for patients and families					
Providers can implement strategies to help families cope with trauma					
Healthcare professionals should regularly assess for symptoms of traumatic stress					
I am comfortable engaging with traumatized children/families					
1. I feel comfortable educating children and families about stress reactions					
2. I provide trauma informed interventions to my patients					

I will make the following changes to my daily practice:

_____

_____

I have identified the following barriers to implementing trauma informed care:

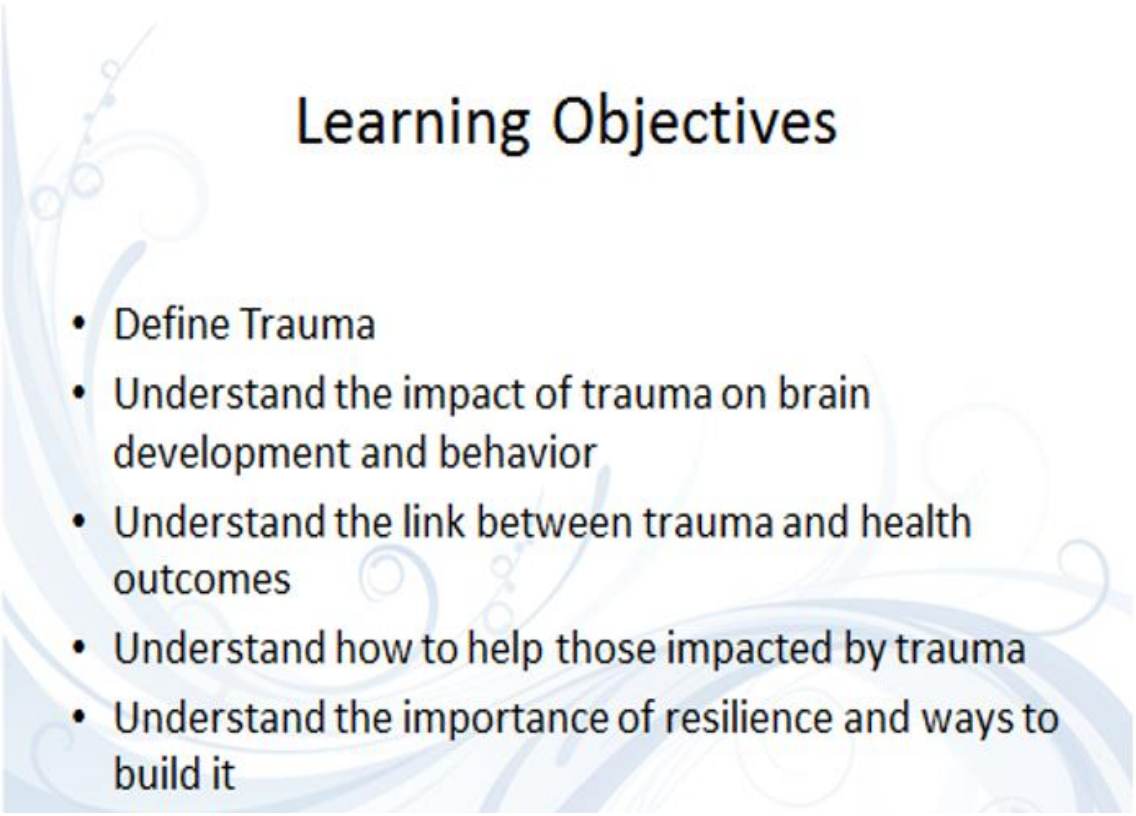
_____

_____

Appendix F

Figure 4

Trauma Informed Care Program Objectives



Appendix G

Post Intervention Interview Questions

5. Have you had the opportunity to apply trauma informed care to your practice?

2. How have you applied trauma informed care?

Any specific stories?

3. Have you encountered any barriers to applying trauma informed care? If yes, what?

4. If you have not been able to apply trauma informed care (TIC) what do you need to support you in applying TIC to your practice?

5. Next steps, comments, etc.

Appendix H

Table 1

Survey Results

	Pretest Mean	Posttest Mean	Mean Score Change	*P* Value
Q1	4.09	4.78	0.69	3.54E-08
Q2	3.94	4.75	0.81	9.3588E-09
Q3	3.72	4.34	0.63	7.7022E-06
Q4	3.81	4.66	0.84	6.4926E-08
Q5	3.74	4.42	0.68	2.5821E-06
Q6	3.00	3.35	0.35	0.09379498
Q7	4.16	4.78	0.63	4.4128E-08
Q8	4.19	4.78	0.59	1.5619E-07
Q9	4.47	4.88	0.41	6.6323E-05
Q10	3.84	4.44	0.59	1.2318E-06
Q11	3.41	4.19	0.78	3.5648E-08
Q12	3.38	4.31	0.94	7.7382E-08

Appendix I

Table 2

Themes of TIC implementation identified through participant interviews

Theme	Sample quotes
Recognition	"I had a mom who was overly protective of her infant and was very difficult to deal with and seemed to have complete distrust in every medical decision. Come to find out she has lost another infant child in the past"
Recognition	Sometimes talking about the work we do triggers those we are engaging with. "It was a wake-up call to me that the content I provide about abuse really does impact people"
Recognition	"It has given me a better understanding of some parents behavior that may have looked threatening or uncooperative prior to my TIC knowledge"
Preventing Re-traumatization	"I can now recognize potential triggers"
Interventions	"I realized that I needed to get resources for the patient and I was able to get her connected with a social worker prior to discharge"
Barrier	"All staff need to have the training"
Barrier	"In the ER sometimes we have to treat the obvious medical issue and move on even though deep down we may know there is some psychological issues we would love to have the time to address"