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## Implementing the "Stop the Bleed" Program: The Impact of "Stop the Bleed" on Nursing Students at Northern Illinois University.

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Implementing the “Stop the Bleed” Program:  
The Impact of “Stop the Bleed” on Nursing Students at Northern Illinois University  
Northern Illinois University  
Julia Altemus  
April 2020

## IMPLEMENTING THE “STOP THE BLEED” PROGRAM

University Honors Program

Capstone Faculty Approval Page

Capstone Title: Implementing the “Stop the Bleed” Program: The Impact of “Stop the Bleed” on Nursing Students at Northern Illinois University

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Faculty Supervisor: Dr. Katherine Coulter; DNP

Faculty Approval Signature \_\_\_\_\_



Department of: Nursing

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Check if any of the following apply, and please tell us where and how it was published:

- Capstone has been published (Journal/Outlet):

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## IMPLEMENTING THE “STOP THE BLEED” PROGRAM

### Abstract

A victim of a life-threatening bleed, which includes but is not limited to a proximal extremity, can bleed to death in as little as 4-5 minutes (Burns et al., 2014). “Stop the Bleed” is a national initiative that teach laypeople how to become immediate responders in a bleeding emergency. Participants are given information on techniques to stop a bleeding emergency including applying direct pressure, packing a wound, and applying a tourniquet. The Stop the Bleed (STB) course was hosted for nursing students to explore nursing student’s perceptions of being an immediate responder in a bleeding emergency.

Before hosting the STB course, background research was completed to understand the goals and outcomes of STB. The training course was held on March 6<sup>th</sup> and was open to all undergraduate nursing students at Northern Illinois University. There was a total of 34 participants all of which completed the assessments. The course included pre-assessments and post-assessments to understand the impact of STB on nursing students.

The results showed positive impact on nursing students, and the assessments explored the nursing student’s confidence in using STB techniques to be an immediate responder in a bleeding emergency. The feedback that was presented after the STB training course proved that nursing students felt more confident in using STB techniques in a bleeding emergency.

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### Implementing the “Stop the Bleed” Program:

#### The Impact of “Stop the Bleed” on Nursing Students at Northern Illinois University

“Stop the Bleed” is a national initiative that provides participants with education and tools to respond to a situation in which a person or multiple people are externally hemorrhaging immediately. STB was first established in 2013, a few months after the Sandy Hook Elementary mass school shooting, to provide education on active shooter disasters and survivability.

Although the initiative is geared towards mass shootings and gun violence, STB strategies can be used for car accidents, playground incidents, and other events that could potentially have injuries. The basic course program educates participants in three specific areas: applying direct pressure to the wound, packing the wound, and using a tourniquet to prevent hemorrhaging. STB was created for nonmedical participants so that bystanders can be an immediate responder to a life-threatening bleed until emergency medical services arrive on the scene (American College of Surgeons, 2018). The purpose of this research study is to analyze how STB training can impact nursing student’s perceptions of being a first responder in a bleeding emergency.

### **Methods**

The background research was done using the American College of Surgeons. Before creating the pre-assessment and the post-assessment, I attended an STB training course and was certified in January 2020, shortly after I became an STB instructor and started to prepare for the training course I would be hosting. To ensure participation, I reached out to the Director of Operations for nursing requesting a mass email be sent to the undergraduate nursing students (Appendix A).

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The pre-assessment and post-assessment were generated using Qualtrics technology to create a survey to maintain the participant’s confidentiality. The IP address’ will not be able to be tracked, and no identifiable questions will be asked. Using a Qualtrics survey (Appendix B), I will ask participants for consent to use the data collected during the course for analysis and future study. This data may be published. The question will read, “Do we have your permission to use the answers you provide in this questionnaire for a research study that investigates student perceptions regarding “Stop the Bleed” techniques? The participants will be able to select “yes” or “no” based on their preferences (Appendix C). The last step before hosting the class was completing an IRB to ensure the rights of the participants.

I hosted the STB training course on March 6<sup>th</sup> at the School of Nursing. The course had a total of 34 participants who all filled out the pre-assessment and the post-assessment. After hosting the STB training course, the data was analyzed. The data was analyzed using Intellectus Statistics, the technology generated graphs and figures to display the outcome of the research. Overall the STB program showed a significant impact on nursing students’ perceptions.

### **Results**

The results focused on the perceptions of nursing students dealing with a bleeding emergency. The pre-assessment and post-assessment allowed participants to use a Likert (agreement) scale (*5-Strongly Agree 4-Agree 3-Undecided 2-Disagree 1-Strongly Disagree*) to express perceptions for the following statements: I am confident identifying a life-threatening bleed, I am confident alerting emergency services (911) in a bleeding emergency, I am confident applying direct pressure to a bleeding wound, I am confident packing a bleeding wound, I am confident applying a tourniquet to stop a bleeding emergency, I feel confident using “Stop the Bleed” techniques in a bleeding emergency, I feel confident using “Stop the Bleed” techniques in

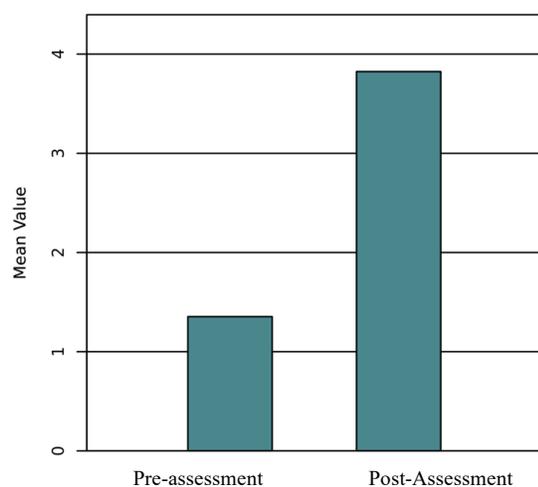
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my day-to-day life, and I feel confident using “Stop the Bleed” techniques in nursing practice.

*Figure 1* suggests the difference in the mean of the pre-assessment perceptions of feeling confident using STB techniques in a bleeding emergency and the mean of the post-assessment perceptions of feeling confident using STB techniques in a bleeding emergency was significantly different from zero.

Figure 1.

*Perceptions of feeling confident using Stop the Bleed techniques in a bleeding emergency.*



*Figure 2* displays the most frequently observed category of Pre-Assessment: I am confident applying a tourniquet was Disagree ( $n = 14$ , 41%). The most frequently observed category of Post-Assessment: I am confident applying a tourniquet Strongly agree ( $n = 29$ , 85%).

Figure 2.

*Comparing confidence with applying a tourniquet between pre-assessment and post-assessment*

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*Frequency Table for Ordinal Variables*

Variable	<i>n</i>	%	Cumulative %
Pre-Assessment: I am confident applying a tourniquet			
Agree	6	17.65	17.65
Disagree	14	41.18	58.82
Strongly agree	3	8.82	67.65
Strongly disagree	4	11.76	79.41
Undecided	7	20.59	100
Post-Assessment: I am confident applying a tourniquet			
Agree	5	14.71	14.71
Strongly agree	29	85.29	100

*Note.* Due to rounding errors, percentages may not equal 100%.

Qualitative data showed the significance of STB training in nursing students. Participants feedback included: “This was such a helpful training course. I now feel comfortable and confident in stopping a life-threatening bleed,” “This was AWESOME! This was so educational as well as interactive and fun. Loved it!,” “Very helpful and informative. So glad I took this training. I can see it being very beneficial in the near future at both work and elsewhere.,” and “This was very informative and useful.” The narrative that participants expressed along with the quantitative data above validated that the STB training course was significant in analyzing nursing student’s perceptions.

### **Conclusion**

Based on the feedback, STB Training had a significant impact on nursing students’ perceptions related to bleeding emergencies. The post-assessment showed confidence in STB techniques because the only responses to using STB techniques were “agree” and “strongly agree.” Participating in an STB training course was helpful for nursing students to feel more confident being immediate responders in a bleeding emergency. Clinical experience grasped the audience’s attention which allowed the course to use conversation and lead to the audience also sharing clinical experience. Before hosting an STB training course, thinking of examples to use

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during the literature review will be beneficial to allow the course to be more interactive. In the future, the STB instructor should prepare to allow one STB instructor per eight participants to ensure participation, interaction, and a positive learning experience.

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## References

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(2014). Hartford consensus: A call to action for THREAT, a medical disaster

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<http://dx.doi.org/10.1016/j.jamcollsurg.2013.12.009>

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## Appendix A

## Mass Email Sent to Undergraduate Nursing Students

Hi, my name is Julia Altemus and I am a 5th track student! I am working on my honors capstone project and need your help! The purpose of my research study is to analyze how Stop the Bleed training can impact nursing student’s perceptions of being a first responder in a bleeding emergency. Stop the Bleed is a national initiative that provides participants with education and tools to immediately respond to a situation in which a person or multiple people are externally hemorrhaging. I will be holding a **Stop the Bleed** training course on Wednesday, March 4th at 6:00pm at the school of nursing, room 100B. In order to sign up, follow this link: <https://www.signupgenius.com/go/4090448a5ae2aabfc1-stop>

Please don't hesitate to reach out to me with any questions at [z1771588@students.niu.edu](mailto:z1771588@students.niu.edu)

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## Appendix B

Pre-Course Assessment  
**“Stop the Bleed” – Student Assessment**  
 Student Survey March 2020

Do we have your permission to use the answers you provide in this questionnaire for a research study that investigates nursing student’s perceptions regarding “Stop the Bleed” techniques?

- No  
 Yes

Age: \_\_\_\_\_

Gender:

- Male  
 Female  
 Transgender Male/Trans Man/ Female-to-Male (FTM)  
 Transgender Female/Trans Woman/ Male-to-Female (MTF)  
 Genderqueer, neither exclusively male nor female  
 Additional Gender Category/(or Other), please specify: \_\_\_\_\_  
 Choose not to disclose

Race (Check all that apply):

- White (1)  
 Black (2)  
 Native American/Alaska Native (3)  
 Asian (4)  
 Native Hawaiian/Pacific Islander (5)  
 Unknown (6)

Ethnicity:

- Hispanic (1)    Non-Hispanic (2)

Likert (agreement) scale: *5-Strongly Agree 4-Agree 3-Undecided 2-Disagree 1-Strongly Disagree*

I am confident identifying a life-threatening bleed.	5	4	3	2	1
I am confident alerting emergency services (911) in a bleeding emergency.	5	4	3	2	1
I am confident applying direct pressure to a bleeding wound.	5	4	3	2	1
I am confident packing a bleeding wound.	5	4	3	2	1
I am confident applying a tourniquet to stop a bleeding emergency.	5	4	3	2	1
I feel confident using “Stop the Bleed” techniques in a bleeding emergency.	5	4	3	2	1

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I feel confident using “Stop the Bleed” techniques in my day-to-day life.	5	4	3	2	1
I feel confident using “Stop the Bleed” techniques in nursing practice.	5	4	3	2	1

Please feel free to make comments about “Stop the Bleed.”

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## Appendix C

Post-Course Assessment.  
**“Stop the Bleed” – Student Assessment**  
 Student Survey March 2020

Do we have your permission to use the answers you provide in this questionnaire for a research study that investigates nursing student’s perceptions regarding “Stop the Bleed” techniques?

- No  
 Yes

Age: \_\_\_\_\_

Gender:

- Male  
 Female  
 Transgender Male/Trans Man/ Female-to-Male (FTM)  
 Transgender Female/Trans Woman/ Male-to-Female (MTF)  
 Genderqueer, neither exclusively male nor female  
 Additional Gender Category/(or Other), please specify: \_\_\_\_\_  
 Choose not to disclose

Race (Check all that apply):

- White (1)  
 Black (2)  
 Native American/Alaska Native (3)  
 Asian (4)  
 Native Hawaiian/Pacific Islander (5)  
 Unknown (6)

Ethnicity:

- Hispanic (1)    Non-Hispanic (2)

Likert (agreement) scale: *5-Strongly Agree 4-Agree 3-Undecided 2-Disagree 1-Strongly Disagree*

I am confident identifying a life-threatening bleed.	5	4	3	2	1
I am confident alerting emergency services (911) in a bleeding emergency.	5	4	3	2	1
I am confident applying direct pressure to a bleeding wound.	5	4	3	2	1
I am confident packing a bleeding wound.	5	4	3	2	1
I am confident applying a tourniquet to stop a bleeding emergency.	5	4	3	2	1
I feel confident using “Stop the Bleed” techniques in a bleeding emergency.	5	4	3	2	1

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I feel confident using “Stop the Bleed” techniques in my day-to-day life.	5	4	3	2	1
I feel confident using “Stop the Bleed” techniques in nursing practice.	5	4	3	2	1

Please feel free to make comments about “Stop the Bleed.”

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Feedback on Education:

Scale: 5-Superior 4-Excellent 3-Good 2-Neutral 1-Poor

Overall, my experience with “Stop the Bleed” training was:	5	4	3	2	1
Overall, the knowledge that the instructor(s) contributed to the presentation was:	5	4	3	2	1
Overall, the organization of the course was:	5	4	3	2	1

How could we improve our “Stop the Bleed” training course?

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