

Brain Injury Screening: Survivors of Domestic Violence in Nebraska

Report

June 2019

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Submitted to:

Brain Injury Alliance of Nebraska

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Suggested Citation:

Rajaram, S., New-Aaron, M., Ojha, T. & Smith, L. (2019). Brain Injury Screening: Survivors of Domestic Violence in Nebraska. Submitted to the Brain Injury Alliance of Nebraska.

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EXECUTIVE SUMMARY

This project is the first of its kind in Nebraska that organizations providing services to survivors of domestic violence were trained to screen survivors of domestic violence for a possible brain injury. The purpose of the project was to assist domestic violence service organizations to identify women who may have a brain injury.

This project was conducted by the Brain Injury Alliance of Nebraska in partnership with the University of Nebraska Medical Center and University of Nebraska at Lincoln. Training was provided to domestic violence serving organizations, including domestic violence shelters across Nebraska, on brain injury and how to use the help brain injury screening tool - HELP.

The screening tool HELP was specifically designed to be used by people who are not experts in traumatic brain injury. "HELP" it is an acronym for the key parts of screening: **H** = Hit in the head; **E** = Emergency room treatment; **L** = Loss of consciousness; **P** = Problem because of a hit to the head or due to strangulation.

Key Findings

- ❖ Using the HELP Screening tool, 58% of the 171 women who were screened, tested positive.
- ❖ Among women who were screened 91% indicated that they had been hit in the head or strangled, and 31% of these women reported that this happened more than six times in their life.
- ❖ Thirty-five percent of women received medical treatment due a hit to the head or strangulation, and 64% reported losing consciousness or experienced a period of being dazed and confused.
- ❖ The most frequent symptom that they experienced included anxiety, depression, headaches, insomnia, changes in relationships and difficulty concentrating. Among women who reported experiencing problems, 43% believed the problems were due to the head injury.
- ❖ The most common support requested was to see a specialist.

Recommendations

- ❖ All organizations that provide services to women and men who have experienced domestic violence, should screen survivors for a brain injury.
- ❖ Healthcare providers should screen all women and men survivors of domestic violence for brain injury.

- ❖ Systematically evaluate programs to educate and train healthcare providers and all organizations that provide services to women and men who have experienced domestic violence in screening for domestic violence.
- ❖ Develop, implement, and evaluate referral protocols for support services for domestic violence survivors who have experienced a brain injury.

Brain Injury Screening: Survivors of Domestic Violence in Nebraska

BACKGROUND

This project was conducted by the Brain Injury Alliance of Nebraska in partnership with the University of Nebraska Medical Center and University of Nebraska at Lincoln. Training was provided to domestic violence serving organizations, including domestic violence shelters across Nebraska, on brain injury and how to use the help brain injury screening tool - HELP.¹ Instructions on how to use the tool were provided (See Appendix A for the HELP tool).

PURPOSE OF THE PROJECT

The purpose of the project was to assist domestic violence service organizations to identify women who may have a brain injury.

SCREENING TOOL

The screening tool HELP was specifically designed to be used by people who are not experts in traumatic brain injury. “HELP” it is an acronym for the key parts of screening: **H** = Hit in the head; **E** = Emergency room treatment; **L** = Loss of consciousness; **P** = Problem because of a hit to the head or due to strangulation.

A HELP screening is considered positive for a possible brain injury when the following three items are identified:

1. An event that could have caused a brain injury (yes to H or E), and
2. A period of loss of consciousness or altered consciousness after the injury or another indication that the injury was severe (yes to L or E), and
3. The presence of two or more chronic problems listed under P that were not present before the injury.

¹The original HELPS TBI screening tool was developed by M. Picard, D. Scarisbrick, R. Paluck, 9/91, International Center for the Disabled, TBI-NET, U.S. Department of Education, Rehabilitation Services Administration, Grant #H128A00022. The Helps Tool was updated by project personnel to reflect recent recommendations by the CDC on the diagnosis of TBI. See http://www.cdc.gov/ncipc/pub-res/tbi_toolkit/physicians/mtbi/diagnosis.htm.

RESEARCH PROCESS

The de-identified data from the HELP screening tool were provided to the researchers for analysis. The Institutional Review Board (IRB) of UNMC did not consider this project to be human subjects research.

RESULTS OF THE HELP BRAIN INJURY SCREENING TOOL

The results of the screening are provided below.

Total Screenings

A total of 171 HELP Brain Injury screenings were conducted by domestic violence serving organizations. The majority of screenings (n=84, 52%) were in the age group of 26 to 40 years (Table 1).

Number of Screenings

Table 1	HELP Brain Injury Screenings by Age-groups	
	Age-Groups	Number (and percentage) of screenings
	<=25 years	30 (18%)
	26- 40 years	84 (52%)
	> 40 years	48 (30%)
	Total screenings	162 (100%)

Missing = 9

Participating Organizations

The participating organizations were in Lincoln (Friendship Homes, FH, and Voices of Hope, VOH) and in Omaha (Women's Center for Advancement, WCA). The majority of the screenings (n=113, 67%) were conducted at FH and only one screening was done at Voices of Hope (VOH). In Omaha, WCA conducted 33% (n=55) of the screening (Table 2).

Number of screenings according to cities

Table 2	Total number of HELP Brain Injury Screenings according to locations	
Locations	Number (and percentage) of screenings	
Lincoln (FH & VOH)	114 (67%)	
Omaha (WCA)	55 (33%)	
Total screenings	169 (100%)	

missing= 2

Help Brain Injury Screening Tool Results

Status

Of the total 171 screenings, 100 (58%) screened positive and 71 (42%) screened negative (Table 3).

Table 3	Status (Positive/Negative) of HELP Brain Injury Screenings	
Status (Positive/Negative)	Number (and percentage) of screenings	
Positive	100 (58%)	
Negative	71 (42%)	
Overall	171 (100%)	

[H] Hit to the Head or Strangulation

Of the total 171 women who were screened, 155 (91%) indicated that they had been hit in the head or strangled (Table 4). Of those women who stated that they did sustain a hit to the head or had been strangled, 77 (50%) indicated that it happened within the past year (Table 5), 147 (95%) reported that it happened from an assault or fight (Table 6), and 25% (n=37) of these women reported that they were strangled/choked or pushed during the assault (Table 9). Also, 46 (31%) reported that they had been hit or strangled more than six times in their life (Table 11).

Table 4	[H] Have you ever had a hit to your head or been strangled?	
	Yes	155 (91%)
	No	16(9%)
	Overall	171 (100)

Table 5	If yes, when was your head hit or when were you strangled? (multiple responses possible)?	
	Within the year	77 (50%)
	1-2 years ago,	38 (25%)
	3-4 years ago,	16 (10%)
	Longer than 4 years ago	34 (22%)
	As a Child	17 (11%)

Table 6	Please describe how it happened (multiple responses possible).	
	Playing sports	2 (1%)
	Riding a bike	2 (1%)
	From a fall	10 (6%)
	From an assault or fight	147 (95%)
	In a car accident	14 (9%)
	From almost drowning under water	3 (2%)

Table 7	Given that you had a car accident, did you experience a <u>whiplash/ violent shaking of your head/neck?</u>	
	Yes	7 (50%)
	No	7 (50%)
	Overall	14 (100%)

Table 8	Given that you were riding a bike, did you wear a <u>helmet</u>?	
	No	2 (100%)
	Yes	0 (0)
	Overall	2 (100%)

Table 9	Given that your head was injured during a fight/ assault, were you <u>pushed, punched, shaken, choked, or strangled</u>?	
	Yes	37 (25%)
	No	110 (75%)
	Overall	147 (100 %)

Table 10	Given that you were almost drowning or being held under water, did you experience <u>lack of oxygen</u>?	
	Yes	2 (67%)
	No	1 (33%)
	Overall	3 (100%)

Table 11	Given the questions above, how many times had your head been hit or you were strangled?	
	1-3	72 (48%)
	4-6	32 (21%)
	More than 6	46 (31%)
	Overall	150 (100%)

Missing 5

[E] Seen in the Emergency Room, Hospital, or by a Doctor

Of the 155 women who reported being hit or strangled, 55 (35%) stated that they were seen in the emergency room, hospital, or by a doctor due to a hit to the head or because of strangulation (Table 12).

Of the women who did receive medical treatment, most (n=51, 93%) were seen by a doctor (Table 13). And majority (n=38, 75%) were given follow up recommendations (Table 14), of which 74% (n=28) reported following the recommendations (Table 15).

Table 12	[E] Were you ever seen in the emergency room, hospital, or by a doctor because of a hit to your head or because of strangulation or choking?	
	Yes	55 (35%)
	No	100 (65%)
	Overall	155 (100%)

Table 13	If yes, were you seen by a... (multiple responses possible)	
	Doctor	51 (93%)
	Nurse	10 (18%)
	Other medical professional	6 (11%)

Table 14	Were you given follow-up recommendations?	
	Yes	38 (75%)
	No	13 (25%)
	Overall	51 (100%)

Missing =4

Table 15	If given recommendations, did you follow the recommendations?	
	Yes	28 (74%)
	No	10 (26%)
	Overall	38 (100%)

[L] Blackout, Loss of Consciousness or Experience of Dazed and Confused

Of the 155 women who responded to question L, 99 (64%) reported losing consciousness or experiencing a period of being dazed and confused because of a hit to the head or due to strangulation (Table 16). Of these women who did lose consciousness the majority (n=62, 65%) reported feeling dazed or confused for hours versus days or months (Table 17). Also, 42 (53%) indicated they felt this way 1-3 times, while 22 (28%) stated they felt this way more than six times (Table 18).

Table 16	[L] Did you ever blackout, lose consciousness or experience a period of being dazed and confused because of a hit to the head or due to choking or strangulation?	
	Yes	99 (64%)
	No	56 (36%)
	Overall	155 (100%)

Table 17	If yes, how long have you felt this way?	
	Hours	62 (65%)
	Days	27 (29%)
	Months	6 (6%)
	Overall	95 (100%)

Missing = 4

Table 18	How many times have you felt this way?	
	1-3	42 (53%)
	4-6	15 (19%)
	More than 6	22 (28%)
	Overall	79 (100%)

Missing = 20

[P] Problems in Daily Life

Among women who responded to question P, 121 (88%) reported experiencing the following problems due to a hit to the head or strangulation: headaches, dizziness, nausea, sensitivity to light, blurred or double vision, numbness or weakness in any of their limbs, insomnia difficulty sleeping or changes in their sleeping patterns, difficulty remembering, difficulty concentrating, etc. The most frequent symptom that they experienced included anxiety, depression, headaches, insomnia, changes in relationships and difficulty concentrating (Table 20).

Among women who reported experiencing problems, 49 (43%) stated that they believed the problems were due to the head injury. Only 44% of the women who responded to the question for support indicated that they would like resources or support to help with their problems (Table 21). The most common support requested was to see a specialist (Table 22).

Table 19	[P] Do you experience any of these problems (see list in the next table) because of a hit to your head or due to strangulation?	
	Yes	121 (88%)
	No	17 (12%)
	Overall	138 (89%)

Missing = 17

Table 20	Given that you had a hit in your head due to strangulation or choking, have you experienced or are you experiencing? (Multiple responses possible)	
Headaches		93 (77%)
Dizziness		72 (56%)
Nausea		43 (36%)
Sensitivity to light		54 (45%)
Blurred or double vision		60 (50%)
Numbness or weakness in any of your limbs		53 (44%)
Insomnia, difficulty sleeping, or changes in your sleeping patterns		82 (68%)
Feeling irritable or impatient		74 (61%)
Feeling anxiety		99 (82%)
Depression		98 (81%)
Confusion		60 (50%)
Difficulty remembering		76 (63%)
Difficulty concentrating or focusing		79 (65%)
Lack of balance		47 (39%)
Fatigue		65 (54%)
Changes in your sense of smell or taste		31 (26%)
Challenges with going back to school or work and performing tasks you used to		59 (49%)
Changes in relationship		79 (65%)
Difficulty in problem solving is also good		42 (35%)

Table 21	Do you think any of the problems are related to a head injury?	
	Yes	49 (43%)
	No	23 (20%)
	Uncertain	43 (37%)
	Overall	115 (100%)

Missing=6

Table 22	Would you like any resources or support for those problems?	
	Yes	4 (44%)
	No	4 (44%)
	Uncertain	1 (11%)
	Overall	9 (100%)

Missing=112

Table 23	Please describe what support would you like to receive?
	<ul style="list-style-type: none"> • Not interested in assessment • Want appointment with specialist • Interested in having an appointment with a specialist • Want an appointment with specialist XX [name redacted]. • Need to be assessed, possible medications or other assistance available • Yes, I need help at my apartment. My apartment all over and clothes. • Can't get in order at all. It very debilitating. • Applying for disability • I would like the top of my head examination. • Once I am settled, not in shelter, and not in trauma of being displaced.

CONCLUSION

This project is the first of its kind in Nebraska that organizations providing services to survivors of domestic violence were trained to screen survivors of domestic violence for a possible brain injury. Using the HELP Screening tool, 58% of the 171 women who were screened, tested positive. Among women who were screened 91% indicated that they had been hit in the head or strangled, and 31% of these women reported that this happened more than six times in their life. Thirty-five percent of women received medical treatment due the hit to the head or strangulation, and 64% reported losing consciousness or experienced a period of being dazed and confused. The most frequent symptom that they experienced included anxiety, depression, headaches, insomnia, changes in relationships and difficulty concentrating. Among women who reported experiencing problems, 43% believed the problems were due to the head injury. The most common support requested was to see a specialist.

RECOMMENDATIONS

- ❖ All organizations that provide services to women and men who have experienced domestic violence, should screen survivors for a brain injury.
- ❖ Healthcare providers should screen all women and men survivors of domestic violence for brain injury.
- ❖ Systematically evaluate programs to educate and train healthcare providers and all organizations that provide services to women and men who have experienced domestic violence in screening for domestic violence.
- ❖ Develop, implement, and evaluate referral protocols for support services for domestic violence survivors who have experienced a brain injury.

APPENDIX – A

HELP SCREENING TOOL

HELP Brain Injury Screening Tool and Follow-up Questions

The **HELP** screening tool can:

- Assist you in identifying an individual who may have a brain injury and additional support
- Be used as a script as you talk to someone about the possibility of a brain injury and learning if she needs an accommodation, adaptation, or modification during her stay with us.

The HELP screening tool is not a medical evaluation and does not provide a diagnosis. Any individual identified should seek professional medical advice for any concern.

Date of Screening _____	Age of individual being screened _____	Positive (3+) <input type="checkbox"/> Negative <input type="checkbox"/>
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H - Have you ever had a hit to your head, been strangled or choked?

- Yes
 No

Note: Prompt client to think about all incidents that may have occurred at any age, even those that did not seem serious. Screen for domestic violence and child abuse, and also for service-related injuries. A TBI can also occur from violent shaking of the head, such as being shaken as a baby or child.

If **yes**, when was your head hit or when were you strangled or choked? Was it: (check all that apply)

- Within the year?
- 1- 2 years ago?
- 3-4 years ago?
- Longer than 4 years ago?
- As a child?

Please describe how it happened. Did it happen:

- Playing sports?
 - Riding a bike?
 - Were you wearing a helmet?
- From a fall?
- From an assault or fight?
 - Were you pushed, punched, shaken, choked or strangled?
- In a car accident?
 - Did you receive whiplash or have a violent shaking of your head or neck?
- From almost drowning- or being held under water?
- Did you experience lack of oxygen for a significant amount of time?

Given the questions above, how many times has your head been hit or you were strangled or choked?

- 1-3
- 4-6
- More than 6

Please think about all incidents that may have occurred at any age, even incidents that did not seem serious. Are there any other incidents you want to tell me about?

E- Were you ever seen in the emergency room, hospital, or by a doctor because of a hit to your head or because of strangulation or choking?

- Yes
 No

Note: Many people are seen for treatment. However, there are those who cannot afford treatment, or who do not think they require medical attention.

If **yes**, were you seen by a:

- Doctor
- Nurse
- Other medical professional

Were you given follow-up recommendations?

- Yes
- No

Did you follow the recommendations?

- Yes
- No

L - Did you ever lose consciousness or experience a period of being dazed and confused because of a hit to the head or due to choking or strangulation? lost consciousness 1 yes 2 no; dazed 1 yes 2 no confused 1 yes etc.

- Yes
 No

Note: People with TBI may not lose consciousness.

For how long did you feel dazed or confused:

- Hours
 Days
 Months

How many times have you felt this way:

- 1-3
 4-6
 More than 6

P-Do you experience any of these problems in your daily life because of a hit your head or due to strangulation or choking?

- Yes
 No

Note: Ask your client if s/he experiences any of the following problems since the injury. You are looking for a combination of two or more problems that were not present prior to the injury.

Since the injury, have you experienced or are you experiencing:
(mark all that apply)

- Headaches?
- Dizziness?
- Nausea?
- Sensitivity to light?
- Blurred or double vision?
- Numbness or weakness in any of your limbs?
- Insomnia, difficulty sleeping, or changes in your sleeping patterns?
- Feeling irritable or impatient?
- Anxiety
- Depression
- Confusion?
- Difficulty remembering?
- Difficulty concentrating or focusing?
- Lack of balance
- Fatigue
- changes in your sense of smell or taste?
- Challenges with going back to school or work and performing the tasks you used to?
- Changes in relationships
- Difficulty in problem solving is also good.

Do you think any of the problems are related to a head injury?

- Yes
 No
 Uncertain

Would you like any resources or support for those problems? If so, please describe what you would like:

Notes for Shelter Advocate: