Preventing Posttraumatic Stress in Children following Injury

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Mentors: Meghan Marsac Ph.D., Nancy Kassam-Adams Ph.D., and Kristen Kohser MSW, LSW
Overview

• Define/describe PTSD
• Background on trauma
• Introduce the Coping Coach Intervention
  • Modules
• Coping Coach study design
  • Objectives
  • Design
• My role in Coping Coach
• Introduce my own study
  • Question
  • Methodologies
  • Results
  • Discussion
What is PTSD?

• Posttraumatic stress disorder (PTSD) requires exposure to a potentially traumatic event.
  • i.e. death or serious injury to individual/others.

• Symptoms can include re-experiencing, avoidance, arousal, changes in mood or cognitions, and impaired daily functioning. ¹,²

• Poorer health outcomes and impaired quality of life. ¹⁵
Why should we care?

• Injuries, acute medical illnesses, and medical treatments are among the most common traumatic experiences of children worldwide.

• Children facing acute pediatric medical events frequently exhibit significant PTSS. 3,12,20,23

• 20 million U.S. children suffer unintentional injuries annually. 10
  • 19% significant persistent PTSD 11, 15
Why should we care?

• Prevalence rates of PTSS among children exposed to trauma range widely, from 12–19% of children with injuries or illnesses to 20–63% of children exposed to violence. 16

• High prevalence/impact of PTSD
  • Research is needed

• As of now, preventive PTSS interventions for pediatric medical populations have produced mixed results. 4, 6, 13, 15, 20, 24
83% of U.S. children aged 3-17 have a computer in their home.  

Low cost, accessible method for delivery of psychological, health information, and interventions.

Cognitive Behavioral Therapy shown to be very effective.
  • Missing evidence to be translated into widely accessible interventions
Welcome to Coping Coach!

Hi! Coping Coach is a game for you to play to learn some ways to deal with a scary thing. To beat the Coping Coach game, you will have to conquer 3 levels.

- Along the way, you will meet your Coach (who can help you along your journey), a squirrel named General Malaise, and townspeople who need your help.
- You will complete an Adventure Log to keep track of your journey.
- You can re-play the levels as many times as you want to earn more points.

Good luck!
Modules

- 20 -30 min each (can be repeated)
  - Feelings
  - Appraisals
  - Avoidance
  - Promotion of Social Support
Objectives

• Assess/maximize the feasibility of the Coping Coach intervention for children who experience acute, potentially traumatic medical events due to violence.
Design

- Target sample size: 20 children and their parents
  - Pilot study to examine feasibility, usability, acceptability, and child engagement/comprehension of the Coping Coach Intervention.

Baseline Measures & Intervention → 6 Week Follow up → 12 Week Follow up
Measures

- **Children will complete:**
  - How I Coped Under the Pressure Scale (HICUPS)
  - Child Post-Traumatic Cognitions Inventory (CPTCI)
  - Adaptive Appraisals Questionnaire (AAQ)
  - Child PTSD Symptom Scale (CPSS)

- **Parent will complete:**
  - Demographic Questionnaire
  - Traumatic Events Screening Inventory-Parent Report (TESI-P)*
  - Parent Socialization of Coping Questionnaire (PSCQ)
  - Pediatric Quality of Life Inventory (PedsQL)
  - PTSD Checklist (PCL)
Eligibility

Inclusion Criteria:

- Children aged 8-12 years of age
- Child experienced a potential traumatic experience in past 2 weeks
- Child perceived event as traumatic (determined by screening)
- English
- Consent/Assent
- Child's Glasgow Coma Score >12
- Injury had to be due to non familial violence or violent injury (e.g. fight at school)

Exclusion Criteria:

- Child’s medical status precludes completing assessments.
- No parent/guardian available
- Child’s injury involved family violence/abuse
- Child or parent has been arrested or is subject to legal proceedings related to the injury
My role

- Completed Coping Coach training
- Screened CHOP’s healthcare software (EPIC) for eligibility
- Enrolled children into study
- Conducted follow up calls
- Tested Coping Coach for bugs/updates
Psycho-social factors

• Psychosocial factors potential mechanisms.

• Low vs. high socioeconomic localities and PTSS levels.\textsuperscript{5}

• Significant effects of social support on PTSS.\textsuperscript{14, 21}

• Parents role\textsuperscript{15}
Question

Could parent encouragement to seek social support mediate the relationship between socioeconomic status and PTSS in children following injury?
Methodologies

- 98 Children (aged 8-13 years)

- Demographic Questionnaire
  - Income
  - Education

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PARENT and CHILD DEMOGRAPHIC INFORMATION
We are hoping to include a diverse group of children and parents in this study. Your answers to the questions below will help us see how well we are doing. Your responses are CONFIDENTIAL.

PARENT
1. What is your age? _____
2. What is your sex? _____ Male _____ Female
3. Which of these categories best describes your racial background? (Check all that apply.)
   ___ American Indian/Alaskan Native
   ___ Asian
   ___ Native Hawaiian/Other Pacific Islander
   ___ Black/African American
   ___ White
   ___ Other ______________
4. Are you of Hispanic or Latino origin?
   ___ YES
   ___ NO
5. What is the highest grade or year of school you completed?
   ___ Some high school
   ___ Completed high school/GED
   ___ Some college
   ___ Completed college
   ___ Graduate/professional degree
   ___ Other (SPECIFY)__________________
```
Parent Socialization of Coping Questionnaire (PSCQ):\textsuperscript{17} Assesses parents’ suggestions regarding children’s coping strategies with regard to a specific stressor. Subscales include:

- Distraction Strategies
- Avoidance Strategies
- Support Seeking Coping Strategies

Parents suggest many different things to their children to help them adjust to upsetting situations. The types of things a parent recommends depends upon their unique knowledge of their child and the situation.

I would like you to indicate how much you have encouraged or discouraged your child to use each of the following strategies to deal with his/her reactions to the injury since the injury. In answering these questions, please use the following scale to indicate how much you have discouraged or encouraged your child to do each behavior:


How much have you discouraged or encouraged your child to do the following things when he/she is upset (since the injury)?

<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

1. Tell someone what made him/her feel the way he/she did.
Methodologies cont.

Child PTSD Symptom Scale (CPSS): 24-item self-report measure yields PTSD severity score and PTSD diagnostic status.

THE CHILD PTSD SYMPTOM SCALE (CPSS) – PART 1
I am going to read a list of problems that kids sometimes have after experiencing an upsetting event. After each item, please tell me how often that problem has bothered you IN THE LAST MONTH – Not at all, once in a while, half the time, or almost always.

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>Once in a while</th>
<th>Half the time</th>
<th>Almost always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Having upsetting thoughts or images about the event that came into your head when you didn’t want them to</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. Having bad dreams or nightmares</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
SES Results

<table>
<thead>
<tr>
<th>SES Categorization</th>
<th>Income</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$0-29,999</td>
</tr>
<tr>
<td></td>
<td>$30,000-$74,999</td>
</tr>
<tr>
<td></td>
<td>$75,000+</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some High School,</td>
<td>Low SES</td>
</tr>
<tr>
<td>High School Diploma, GED</td>
<td></td>
</tr>
<tr>
<td>Some College</td>
<td>Middle SES</td>
</tr>
<tr>
<td>Completed College,</td>
<td>High SES</td>
</tr>
<tr>
<td>Graduate/Professional Degree</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Cross-Tabulation of SES Categories

<table>
<thead>
<tr>
<th></th>
<th>Low Education</th>
<th>Middle Education</th>
<th>High Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Income</td>
<td>12%</td>
<td>8.7%</td>
<td>0%</td>
</tr>
<tr>
<td>Middle Income</td>
<td>8.7%</td>
<td>13%</td>
<td>7.6%</td>
</tr>
<tr>
<td>High Income</td>
<td>6.5%</td>
<td>8.7%</td>
<td>34.8%</td>
</tr>
</tbody>
</table>

$\chi^2(4, N = 92) = 32.99, p < .001.$

United States Census Bureau (2013)
SES on PTSS Results

The effect of education on PTSS:

\[
\text{ANOVA}
\]

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>111.567</td>
<td>2</td>
<td>55.783</td>
<td>.399</td>
</tr>
<tr>
<td>Within Groups</td>
<td>12990.055</td>
<td>93</td>
<td>139.678</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>13101.622</td>
<td>95</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[(F(2,93) = .41, p = .67)\]

The effect of income on PTSS:

\[
\text{ANOVA}
\]

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>731.512</td>
<td>2</td>
<td>365.756</td>
<td>2.817</td>
</tr>
<tr>
<td>Within Groups</td>
<td>12466.324</td>
<td>96</td>
<td>129.858</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>13197.836</td>
<td>98</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[(F(2,96) = 2.82, p = .07)\]
SES on Social Support Results

The effect of education on parental encouragement to seek social support:

\[
\begin{array}{|c|c|c|c|c|}
\hline
 & \text{Sum of Squares} & \text{df} & \text{Mean Square} & F & \text{Sig.} \\
\hline
\text{Between Groups} & 48.104 & 2 & 24.052 & .502 & .607 \\
\text{Within Groups} & 4363.145 & 91 & 47.947 & & \\
\text{Total} & 4411.249 & 93 & & & \\
\hline
\end{array}
\]

\[(F(2,91) = .51, p = .61)\]

The effect of income on parental encouragement to seek social support:

\[
\begin{array}{|c|c|c|c|c|}
\hline
 & \text{Sum of Squares} & \text{df} & \text{Mean Square} & F & \text{Sig.} \\
\hline
\text{Between Groups} & 209.989 & 2 & 104.995 & 2.321 & .104 \\
\text{Within Groups} & 4251.768 & 94 & 45.232 & & \\
\text{Total} & 4461.757 & 96 & & & \\
\hline
\end{array}
\]

\[(F(2,94) = 2.31, p = .11)\]
• Back to step 1:

• Categorization of SES varied based on parental income or education

• Future research should utilize a measure of SES that fully incorporates and captures the complexity of SES.
  • Standardized Scale
    • (e.g. Duncan SEI, Nam-Powers OSS, & Household prestige scale)

• Assessing partial mediation
References


References


References


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    - Safa Browne
  - SUMR Cohort 2015
Questions?