

**Office of Evidence Based Practice (EBP) – Critically Appraised Topic:** Does the application of trauma informed care (TIC) minimize Secondary Traumatic Stress (STS) and impact the rate of compassion fatigue (CF) and burnout in nurses?

**Specific Care Question**

Does the application of trauma informed care (TIC) minimize secondary traumatic stress (STS) and impact the rate of compassion fatigue (CF) and burnout?

**Question Originator**

Newly Licensed Nurse (NLN) Residency Program

**Literature Summary**

**Background.** To fully understand the question asked, the definitions for TIC, STS, CF, and burnout are needed. Children’s Mercy defines TIC as an organizational culture that is sensitive to “how trauma affects individuals and families seeking services, as well as how it affects the staff who serve those patients” (Children’s Mercy--Kansas City, 2017). Secondary Traumatic Stress STS, defined by Figley (1995), is behaviors (such as thinking about patients/families while doing other tasks and avoiding specific situations as they remind them of patients/families) that occur when a caregiver realizes another person experienced trauma. CF is defined as a caregiver’s inability or attentiveness to provide empathy (Figley, 1995). Burnout, defined by Maslach and Jackson (1981), is an individual’s response to chronic work-related stress comprised of three elements: emotional exhaustion cynicism to peers and patients/families, and reduced personal self-worth.

Studies traditionally have used the psychometrically validated Professional Quality of Life (ProQOL) survey to measure the separate constructs of CF, burnout, and STS. ProQOL is a free instrument (Stamm, 2010). The ProQOL can be accessed here [https://proqol.org/ProQol\\_Test.html](https://proqol.org/ProQol_Test.html) If the NLN Team decides to employ the ProQOL, the “at risk” scores for the three separate constructs are a: CF score less than 33, burnout score greater than 22, and STS score greater than 17 (Stamm, 2010).

All healthcare professions are exposed to STS as they work in a fast-paced environment while caring for patients with complex needs (Kellogg, Knight, Dowling, & Crawford, 2018). While CM, as an organization, is implementing TIC interventions to change the CM culture, single nursing departments could obtain baseline data for STS, CF, and burnout and develop interventions to decrease STS, CF, and burnout. This synopsis will provide potential interventions for QI teams to implement.

**Study characteristics.** The search for suitable studies was completed on November 20, 2018. Dr. Bartlett reviewed the 54 titles and abstracts found in the search and identified nine articles believed to answer the question. After an in-depth review, three articles (Flarity, Nash, Jones, & Steinbruner, 2016; Hevezi, 2016; Potter et al., 2013) answered the question.

**Key results.** Based on very low quality evidence (as the included studies have a high risk of bias, inconsistency, and imprecision) compassion fatigue may be decreased by attendance at didactic sessions with individual or small group activities that includes self-care meditation. As the interventions were dissimilar between the studies, and the ProQOL outcomes were reported in different ways (such as *p* values only, mean or median) the data from the studies could not be reported in a forest plot. Due to the low quality evidence, the studies will be reported in high level format.

**Summary of studies**

**Flarity et al. (2016).** The study was exploratory in nature with participants (*N* =9), forensic emergency room nurses, attending a four-hour interactive seminar (components included managing stress to reduce the effects of CF through self-regulation, relaxation techniques, and self-care activities). Seven participants completed the intervention with significant improvement in decreasing CF (*p* < .001), burnout (*p* < .04) and STS (*p* < .003), as measured by the ProQOL. Limitations to this study were the small number of participants, the seminar length, the seminar needs to be conducted by a certified CF specialist, and it is unknown when the post-test measurement occurred.

**Office of Evidence Based Practice (EBP) – Critically Appraised Topic:** Does the application of trauma informed care (TIC) minimize Secondary Traumatic Stress (STS) and impact the rate of compassion fatigue (CF) and burnout in nurses?

**Hevezi (2016).** This was a pilot study with oncology nurses ( $N = 17$ ). Participants attended a 1:1 session in which CF, compassion satisfaction, burnout, with meditation techniques (including mindfulness breathing techniques) for stress reduction and relaxation were reviewed. Participants received a folder that contained all of the session contents for subsequent referral. Participants committed to practicing the self-care and mindfulness techniques 5 days a week for a 4 week time period after which the post-test was completed. Fifteen participants completed the intervention with significant improvement, as measured by the ProQOL, in decreasing CF ( $p < .027$ ), burnout ( $p < .003$ ) and STS ( $p < .047$ ). The limitation of this study was the small number of participants; however, it may be a promising intervention as the training session is minimal and appears not to be dependent on instructor certification.

**Potter et al. (2013).** The study was a descriptive pilot study with oncology nurses ( $N = 14$ ). Participants attended four 90-minute sessions facilitated by professional staff who received 16-hours of CF and resiliency training. In addition, participants attended a 4 hour retreat to discuss content from the weekly sessions and practice self-care. Follow up occurred immediately after the program completion, and repeated at three month and six-month intervals. No significant differences were identified for the constructs of CF or burnout on the ProQOL, however STS was significantly improved ( $p < .044$ ) at six months compared to baseline. Study limitations include the small number of participants, the seminar length, and the additional training needed for the intervention facilitator.

**Search Strategy and Results** ([see PRISMA diagram](#))

CINAHL search strategy for – trauma informed care and nurse resiliency

#	Query	Limiters/Expanders	Last Run Via
S4	S1 AND S2 AND S3	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S3	(MH "Nurses+") OR "nurses" OR "nurse" OR "nursing"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S2	(MH "Compassion Fatigue") OR "vicarious trauma" OR "secondary trauma" OR "secondary stress" OR "secondary post traumatic stress" OR "Secondary traumatization" OR "secondary post-traumatic stress" OR "trauma informed care"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
S1	"resilience" OR "resiliency" OR (MH "Hardiness") OR (MH "Wellness") OR "wellness" OR (MH "Psychological Well-Being") OR (MH "Psychological Well-Being (Iowa NOC)+") OR (MH "Well-Being (Iowa NOC)") OR "well-being" OR "wellbeing"	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL

Total number and question originator

**Studies Included in this Review (in Alphabetical Order)**

- Flarity et al. (2016)
- Hevezi (2016)
- Potter et al. (2013)

**Office of Evidence Based Practice (EBP) – Critically Appraised Topic:** Does the application of trauma informed care (TIC) minimize Secondary Traumatic Stress (STS) and impact the rate of compassion fatigue (CF) and burnout in nurses?

**Studies Not Included in this Review with Exclusion Rationale (in Alphabetical Order)**

Citation	Reason for exclusion
Al-Majid, Carlson, Kiyohara, Faith, and Rakovski (2018)	Authors assessed the degree of compassion fatigue only, no interventions occurred in this study.
Hoysted et al. (2017)	Authors investigated if healthcare professionals had received trauma informed care education and if they would be interested in attending a session.
McCann et al. (2013)	Narrative literature.
Sweigart (2017)	Narrative literature.
Vermilyea (2014)	Reported compassion fatigue in mental health workers.

**Method Used for Appraisal and Synthesis**

The Cochrane Collaborative computer program, Review Manager (Higgins & Green, 2011)<sup>a</sup> was used to synthesize the three included studies. [GRADEpro GDT \(Guideline Development Tool\)](#) is the tool used to create the Summary of Findings Tables for this analysis.

<sup>a</sup>Higgins, J. P. T., & Green, S. e. (2011). *Cochrane Handbook for Systematic Reviews of Interventions [updated March 2011]* (Version 5.1.0 ed.): The Cochrane Collaboration, 2011.

**Medical Librarian Responsible for the Search Strategy**

Keri Swaggart, MLIS, AHIP

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**EBP Team Member Responsible for Reviewing, Synthesizing, and Developing this Document**

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**Acronyms Used in this Document**

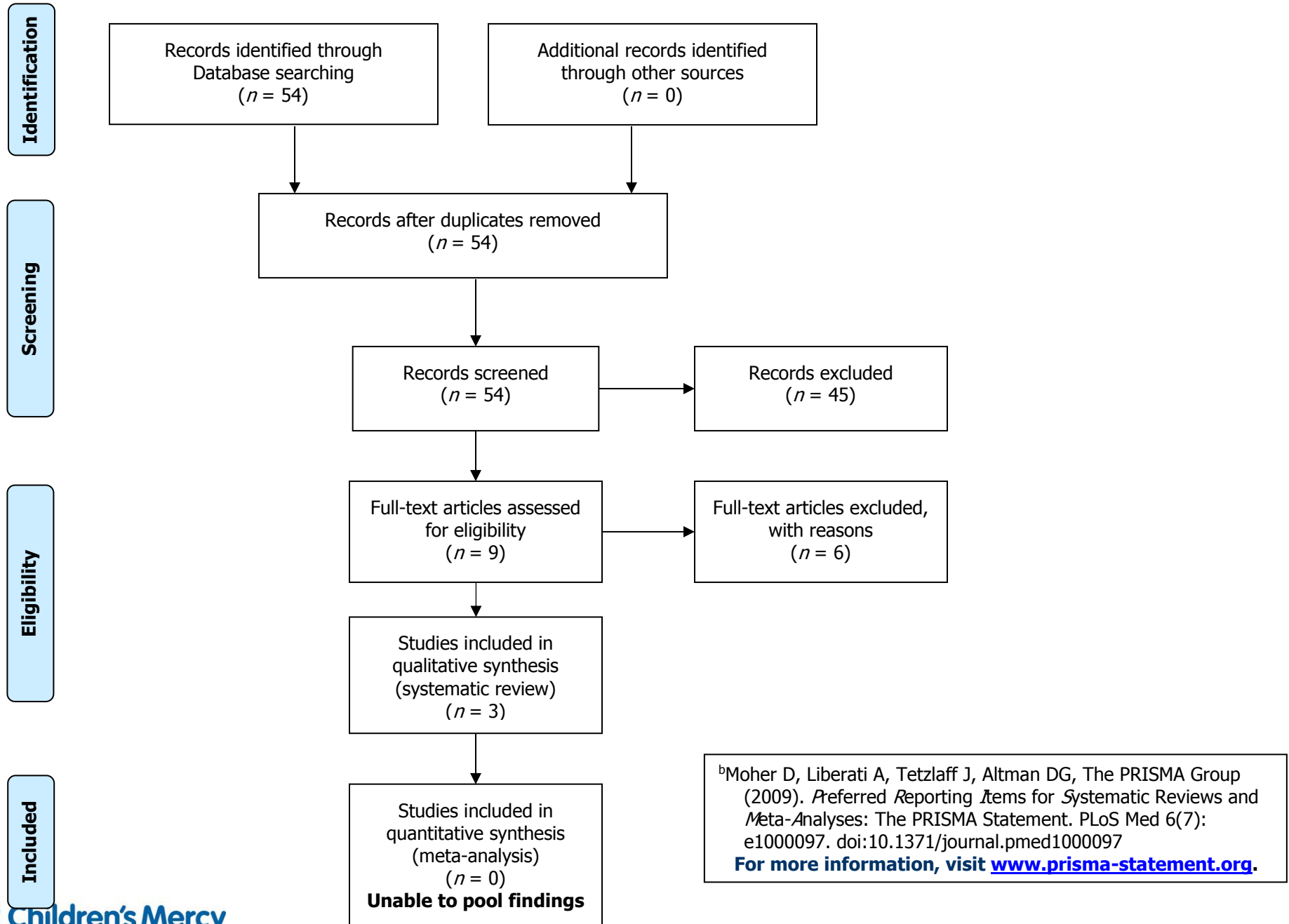
Acronym	Explanation
TIC	Trauma Informed Care
STS	Secondary Traumatic Stress
CF	Compassion Fatigue
NLN	Newly Licensed Nurses
ProQOL	Professional Quality of Life
Mdn	Median

**Date Developed/Updated**

12/21/18

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Figure 1. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)<sup>b</sup>



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**Flarity 2016**

<b>Methods</b>	Cohort-exploratory study
<b>Participants</b>	<p><b>Setting:</b> 69-bed urban hospital ED, Level II trauma center  <b>Participated in study:</b> <math>N = 9</math>  <b>Completed study:</b> <math>n = 7</math>  <b>Gender, males:</b> <math>n = 0</math>  <b>Age, years (range):</b> 31-55 years old  <b>Inclusion criteria:</b></p> <ul style="list-style-type: none"> <li>• Forensic nurses attending sexual assault forensic examiner meetings</li> <li>• Voluntary participation</li> </ul> <p><b>Exclusion criteria:</b> None listed  <b>Power analysis:</b> Not done</p>
<b>Interventions</b>	<p>Pretest, 4-hour interactive seminar and posttest  The ProQOL 5 was used in the pretest/posttest to measure the constructs of Compassion Satisfaction, Burnout, and Secondary Traumatic Stress.</p>
<b>Outcomes</b>	<p><b>Primary outcome:</b></p> <ul style="list-style-type: none"> <li>• To increase compassion satisfaction and decrease compassion fatigue</li> </ul> <p><b>Secondary outcome:</b></p> <ul style="list-style-type: none"> <li>• Decrease burnout and secondary trauma score</li> </ul>
<b>Results</b>	<p>Compassion satisfaction: <math>p &lt; .001</math></p> <ul style="list-style-type: none"> <li>• Preintervention: <ul style="list-style-type: none"> <li>○ Mean (<math>M</math>): 36.6%</li> <li>○ Median (<math>Mdn</math>): 37%</li> <li>○ Range: 29-46%</li> </ul> </li> <li>• Post intervention: <ul style="list-style-type: none"> <li>○ <math>M</math>: 43.7%</li> <li>○ <math>Mdn</math>: 43%</li> <li>○ Range: 40-48%</li> </ul> </li> </ul> <p>Burnout: <math>p = .04</math></p> <ul style="list-style-type: none"> <li>• Preintervention: <ul style="list-style-type: none"> <li>○ <math>M</math>: 27.4%</li> <li>○ <math>Mdn</math>: 37%</li> <li>○ Range: 20-36%</li> </ul> </li> <li>• Post intervention: <ul style="list-style-type: none"> <li>○ <math>M</math>: 22.3%</li> <li>○ <math>Mdn</math>: 20%</li> <li>○ Range: 16-36%</li> </ul> </li> </ul>

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	<p>Secondary Traumatic Stress: <math>p = .003</math></p> <ul style="list-style-type: none"> <li>• Preintervention:             <ul style="list-style-type: none"> <li>○ <i>M</i>: 31.7%</li> <li>○ <i>Mdn</i>: 25%</li> <li>○ Range: 22-44%</li> </ul> </li> <li>• Post intervention:             <ul style="list-style-type: none"> <li>○ <i>M</i>: 24.9%</li> <li>○ <i>Mdn</i>: 26%</li> <li>○ Range: 16-32%</li> </ul> </li> </ul>
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**Hevezi 2016**

<b>Methods</b>	A nonrandomized, pre-post intervention study to evaluate the effectiveness of breathing and mediation techniques on reducing compassion fatigue (CF) and improving compassion satisfaction (CS).
<b>Participants</b>	<p><b>Participants:</b> Self-identified Oncology nurses from the pilot unit.  <b>Setting:</b> University of California San Diego Health System  <b>Number enrolled:</b> <math>N = 17</math>  <b>Number completed:</b> <math>n = 15</math>  <b>Gender, males:</b> 0% male  <b>Age, years:</b> Not reported "age and years of nursing experience were reflective of the overall makeup of the pilot unit staff"  <b>Inclusion Criteria:</b> Registered nurses on the designated pilot unit  <b>Covariables identified:</b> Demographic variables were not considered in the study</p>
<b>Interventions</b>	<p>All participants:</p> <ul style="list-style-type: none"> <li>• Received one-on-one education that described CF, CS, burnout, self-care, and mindfulness</li> <li>• Received a folder containing a printed version of the education and an audio CD with a four minute mindful breathing technique for immediate stress reduction, an eight minute breathing exercise for relaxation, and a four minute Loving Kindness Meditation.</li> <li>• Participants committed to practicing the meditations 5 days per week for 4 weeks.</li> <li>• The ProQOL 5 was used pretest/posttest to measure the constructs of Compassion Satisfaction, Burnout, and Secondary Traumatic Stress (STS).</li> </ul>
<b>Outcomes</b>	<p><b>Primary outcome(s):</b></p> <ul style="list-style-type: none"> <li>• Compassion satisfaction</li> <li>• Burnout</li> <li>• STS</li> </ul>

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<b>Results</b>	<p>Compassion satisfaction: <math>p &lt; .027</math></p> <ul style="list-style-type: none"> <li>• Preintervention mean: 36.6</li> <li>• Postintervention mean: 39.3</li> <li>• 95% CI [-4.98, -.036]</li> </ul> <p>Burnout: <math>p &lt; .003</math></p> <ul style="list-style-type: none"> <li>• Preintervention mean: 26.4</li> <li>• Postintervention mean: 22.2</li> <li>• 95% CI [1.66, 6.60]</li> </ul> <p>STS: <math>p &lt; .047</math></p> <ul style="list-style-type: none"> <li>• Preintervention mean: 25.3</li> <li>• Postintervention mean: 22.2</li> <li>• 95% CI [0.40, 5.96]</li> </ul>
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**Potter 2013**

<b>Methods</b>	Cohort Study
<b>Participants</b>	<p><b>Participants:</b> Oncology staff nurses  <b>Setting:</b> Siteman Cancer Center at Barnes-Jewish Hospital in St. Louis, MO  <b>Number enrolled:</b> <math>N = 14</math>  <b>Number completed:</b> <math>n = 13</math>  <b>Gender, males:</b></p> <ul style="list-style-type: none"> <li>• <math>n = 2</math></li> </ul> <p><b>Age, years (mean):</b></p> <ul style="list-style-type: none"> <li>• <math>n = 43.9</math> years</li> </ul> <p><b>Inclusion Criteria:</b>  Staff RNs who were:</p> <ul style="list-style-type: none"> <li>• 20 years of age or older</li> <li>• who provided direct patient care</li> <li>• were employed at one of the cancer center’s outpatient chemotherapy infusion centers</li> </ul> <p><b>Exclusion Criteria:</b></p> <ul style="list-style-type: none"> <li>• Actively suicidal or currently abusing substances, as determined by self-report during the interview.</li> </ul> <p><b>Covariates identified:</b> Age, years in nursing, and years in oncology.</p>
<b>Interventions</b>	Two separate intervention programs for nursing staff were conducted. The content was the same for each program. Each program included four 90-minute sessions held during the early evening hours after the nursing staff’s regularly assigned shifts. Between the third and fourth weeks, a four-hour retreat was conducted offsite to allow participants to debrief and practice self-care, including a healing arts program.
<b>Outcomes</b>	<b>Primary outcome:</b> Pilot project that evaluated the efficacy of a resiliency program in reducing compassion fatigue among oncology nurses through pretest-posttest measurements of the Maslach Burnout Inventory; the ProQOL IV which measured the constructs of Compassion Satisfaction, Burnout, and Secondary Traumatic Stress; Impact of Event Scale-Revised; and the Nursing Job Satisfaction Scale.

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<b>Results</b>	<p>Compassion satisfaction, findings were not significant; at risk score for this subscale is &lt; 33</p> <ul style="list-style-type: none"><li>• Preintervention: Mean (<i>M</i>) = 39.53</li><li>• Six months after intervention: <i>M</i> = 40.76</li></ul> <p>Burnout, findings were not significant; at risk score for this subscale is &gt; 22</p> <ul style="list-style-type: none"><li>• Preintervention: <i>M</i> = 23.46</li><li>• Six months after intervention: <i>M</i> = 22.3</li></ul> <p>Secondary Traumatic Stress: <i>p</i> &lt; .05; at risk score for this subscale is &gt; 17</p> <ul style="list-style-type: none"><li>• Preintervention: <i>M</i> = 19.76</li><li>• Six months after intervention: <i>M</i> = 16.23</li></ul>
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