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School-Based Tier II and III RTI Interventions for Children Affected by Trauma

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Critically Appraised Topic (CAT) Paper: School-Based Tier II and III RTI Interventions for

Children Affected by Trauma

May 12th, 2017

This evidence project, submitted by

Sarah Ladderud, OTS, Maria Randall, OTS, April Crabtree, OTS

has been approved and accepted

in partial fulfillment of the requirements for the degree of

Master of Science in Occupational Therapy from the University of Puget Sound.

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Keywords: School Based, Trauma, Intervention

Abstract

We partnered with Wendi Trummert, DrOT, OTR/L, an occupational therapist in a school district in Puyallup, Washington. We collaborated to examine what school-based Tier II & Tier III Response to Intervention (RTI) interventions can be used by occupational therapists, teachers, and paraeducators to improve school participation in children aged 3-13 who have experienced trauma. It was found that various forms of Cognitive Behavioral Therapy (CBT) interventions may reduce post-traumatic stress disorder (PTSD) symptoms, depression, and anxiety in children age birth - 13 who have experienced trauma. CBT was the most effective intervention based on the current literature. Additionally, there is emerging research on six other interventions which may improve school participation for children who have experienced trauma.

To translate this knowledge, a manual of research-based interventions was created for the collaborating clinician as well as a kit of one of the interventions deemed most appropriate for the school setting by the collaborating clinician. The Bounce Back (Langley & Jaycox, 2015) intervention was perceived as the most feasible and appropriate for her practice. A satisfaction survey was provided to the collaborating clinician to monitor the effectiveness of the intervention kit. We recommend that school-based clinicians familiarize themselves with evidence-based and academically relevant intervention for children who have experienced trauma.

Executive Summary

    The purpose of this research project was to examine what school-based Tier II & Tier III RTI interventions can be used by occupational therapists, teachers, and paraeducators to improve and support school participation in children aged 3-13 who have experienced trauma. For the purpose of this project trauma was defined as an adverse childhood experience, or other personal trauma that was not universally experienced by a population including circumstances such as a natural disaster, war-related violence, or collective environmental trauma. Children who have been exposed to trauma may experience a variety of challenges that may include symptoms related to PTSD, anxiety, and depression which impact participation in school (Petrenchik & Weiss, 2015). We concluded that various forms of CBT interventions have been found to reduce PTSD symptoms, depression, and anxiety in children age birth - 13 who have experienced trauma. Additionally, GoFar (Coles, Kable, Taddeo, & Strickland, 2015), child & caregiver training, Kids in Transition to School (KITS) (Pears, et al., 2013; Pears, Fisher, & Bronz, 2007), Math Interactive Learning Experience (MILE) (Coles, Kable, & Taddeo, 2009), and Mindful Awareness Practices (MAPs) (Coles, Kable, & Taddeo, 2009) interventions appear to have a positive impact on performance of children's emotional and behavioral actions in the classroom, reducing negative behaviors, and resulting in improvements in academic participation.

    Overall, there are many school-based interventions that have been found to reduce the effects of symptoms resulting from trauma (Santiago, et al., 2015; Gillies, et al., 2016; Rolfsnes, & Idsoe, 2011; Kowalik, Weller, Venter, & Drachman, 2011). According to the American Occupational Therapy Association (Petrenchik & Weiss, 2015), occupational therapists have a role in supporting children with the occupation of being a student in the classroom due to their knowledge of "cognitive, social and emotional, and sensory components of activity and its

impact on behavior". Occupational therapists in school settings should be aware of the interventions that may increase participation in the classroom for those who have experienced trauma. Practitioners who would like to determine the most appropriate interventions for children who have experienced trauma should be intentional about selecting interventions, considering: the goal, target population, and training requirements. It is within the scope of occupational therapy practitioners to provide input on interprofessional teams when working with children who have experienced trauma. Additionally, practitioners can influence the individual, the family, and the community to provide support for these children (Petrenchik & Weiss, 2015).

In our efforts to translate this knowledge into the field of occupational therapy in schools we developed a manual outlining the main points of each intervention. At the request of the clinical collaborator, we put together the Bounce Back (Langley & Jaycox, 2015) kit and manual for implementation into Wendi's current practice at the beginning of the next school year. Wendi was very pleased with the products and anticipates using the kit and manual in the follow school year.

In summary, evidence for school-based interventions directly targeting children who have experienced trauma is emerging. The side-effects and resulting disability from trauma affect all aspects of a child's occupations including the ability to participate in school. As occupational therapists, we need to advocate for our role alongside other health professionals to help children who have been exposed to trauma.

CRITICALLY APPRAISED TOPIC (CAT) PAPER

Focused Question:

What school-based Tier II & Tier III (RTI) interventions can be used by occupational therapists, teachers, and paraeducators to improve/support school participation in children aged 3-13 who have experienced trauma?

Collaborating Occupational Therapy Practitioner:

Wendi Trummert OTR/L

Prepared By:

Sarah Ladderud, Maria Randall, & April Crabtree

Chair:

Yvonne Swinth, Ph.D., OTR/L, FAOTA

Course Mentor:

Renee Watling, Ph.D., OTR/L, FAOTA

Date Review Completed:

11/15/16

Clinical Scenario:

Wendi Trummert works in the Puyallup School District as an occupational therapist. Her school uses Response to Intervention (RTI) strategies to support student learning. She has noted that many of the students on her caseload have experienced trauma which affects their ability to participate in school. She hypothesizes that there are other students in general education who have also experienced trauma that may influence their ability to participate in school. She would like to implement RTI Tier II and Tier III interventions school-wide to aid with school participation with this population.

Review Process
Procedures for the selection and appraisal of articles
Inclusion Criteria:

- Participants age 3-13
- Diagnoses & Experiences: adverse childhood experiences, trauma, emotional behavioral disorder
- Interventions for Response to Intervention (RTI) Tier II and Tier III levels
- Must be able to be performed in a school setting

- Interventions should be able to be performed by occupational therapists, para-educators, or teachers.
- Peer Reviewed

Exclusion Criteria:

- Participants age 0-2, 14+
- Articles that are not peer reviewed
- Physical injury/disability treatments and interventions
- Trauma related to natural disaster, war-related violence, collective environmental trauma
- Interventions specific to populations (refugees or immigrants)
- Interventions solely for the community or parents
- Preventative intervention
- Psychological interventions requiring advanced certification
- Interventions at Tier I level
- Religious interventions

Search Strategy

Categories	Key Search Terms
Trauma	trauma, executive functioning, emotion* regulation, behavior* regulation, trauma-based, trauma-based care, emotional abuse
Intervention	Intervention, program, strategy, treatment, group intervention, occupational therapy, school-based social, emotional, and behavioral programs
School	school, school based, school-based
Age	child, childhood, school aged
Response to Intervention	Tier II, Tier 2, Tier III, Tier 3

Databases and Sites Searched
PubMed, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Cochrane Library, OT Seeker, OT Search, PsycINFO, ProQuest, PRIMO

Quality Control/Review Process:

We selected the following databases to search: PubMed, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Cochrane Library, OT Seeker, OT Search, PsycINFO, ProQuest, and PRIMO. To find studies, we began searching the databases with combinations of the key terms below. As available, we selected appropriate filters including Peer Reviewed, "childhood (birth to 12)," and "child: birth to 18" as needed. We used our inclusion/exclusion criteria to filter articles. We looked at titles and abstracts to determine which articles to further examine. We excluded trauma that was not generally applicable to the Puyallup school student population (e.g. natural disaster, war-related violence, collective environmental trauma, interventions specific for refugees or immigrants, and interventions for the community or parents of the children). We excluded preventative interventions.

Results of Search
Table 1. Search Strategy of databases.

Search Terms	Date	Database	Initial Hits	Articles Excluded	Total Selected for Review
Emotion* Regulation AND intervention	10/7/16	PubMed	1040	1039	1
Trauma AND Emotion* regulation OR Behavior* regulation AND Intervention	10/17/16	CINAHL	181	181	0
Trauma AND intervention AND school	10/17/2016	OT Seeker	4	4	0
Trauma AND Intervention AND child	10/17/2016	OT Seeker	8	8	0
Trauma AND Intervention AND childhood	10/17/2016	OT Seeker	3	3	0
Trauma AND program and childhood	10/17/2016	OT Seeker	0	0	0
Trauma AND school-aged AND strategy	10/17/2016	OT Seeker	0	0	0
Tier 2 trauma Intervention	10/17/2016	OT Seeker	1	1	0
Tier 3 trauma Intervention	10/17/2016	OT Seeker	1	1	0
Trauma AND Childhood	10/17/2016	OT Seeker	12	12	0

Trauma AND Intervention	10/17/2016	OT Search	25	25	0
Trauma AND Intervention AND school	10/17/2016	OT Search	3	3	0
Response to Intervention AND trauma	10/17/2016	OT Search	2	2	0
Trauma based Intervention	10/17/2016	OT Search	2	2	0
Trauma based care	10/17/2016	OT Search	3	3	0
Trauma AND treatment	10/17/2016	OT Search	43	43	0
Trauma AND treatment AND school	10/17/2016	OT Search	2	2	0
trauma AND intervention AND school based Filters: childhood (birth to 12)	10/17/2016	PsycINFO	194	191	3
trauma AND school AND group intervention AND Filters: childhood (birth to 12), Academic Journals	10/17/2016	PsycINFO	56	55	1
Tier 2 AND Response to Intervention AND trauma Filters: Peer Reviewed, childhood (birth to 12)	10/17/2016	PsycINFO	3	3	0
Tier 3 AND Response to Intervention AND trauma Filters: Peer Reviewed, childhood (birth to 12)	10/17/2016	PsycINFO	5	5	0
Trauma AND School AND Response to Intervention Filters: Peer Reviewed, childhood (birth to 12)	10/17/2016	PsycINFO	90	90	0
Trauma AND school-based program Filters: Peer Reviewed, childhood (birth to 12)	10/22/2016	PsycINFO	24	23*	1
Trauma AND treatment AND school AND tier II OR tier III Filters: child: birth-18 years	10/17/16	PubMED	19	19	0

emotional abuse AND school AND intervention Filters: child: birth-18 years	10/17/16	PubMED	258	257	1
tier 2 AND trauma Filter: child: birth- 18 years	10/17/16	PubMED	27	27	0
tier 3 AND trauma Filter: child: birth- 18 years	10/17/16	PubMED	22	22	0
Trauma AND intervention AND school Filter: child: birth-18 years	10/17/16	PubMED	2028	2028	0
Trauma AND child	10/17/16	Cochrane Library	47	46	1
Trauma AND intervention	10/17/16	Cochrane Library	202	202	0
Trauma AND child AND intervention	10/17/16	Cochrane Library	37	37	0
Promoting emotional competence in school-aged children The effects of the PATHS curriculum	10/17/16	PRIMO Search	9	9	0
Effects of mindful awareness practices on executive functions in elementary school children	10/18/16	PRIMO search	22	22	0
The incredible years teacher training series	10/18/16	PRIMO search	60	60	0
Effectiveness of school-based universal social, emotional, and behavioral programs: do they enhance students' development in the area of skills, behavior, and adjustment?	10/18/16	PRIMO search	13	13	0
Trauma AND school AND intervention	11/6/2016	ERIC	218	217	1

"*" – indicating duplicated article from previous search, not counted in second search

Table 2. Articles from citation tracking.

Article	Date	Database	Initial Hits	Articles Excluded	Total Selected for Review

Total number of articles used in review from citation tracking = 0				

Table 3. Articles from reference tracking.

Article	Date	Articles Referenced	Articles Excluded	Total Selected for Review
Park, S., Lee, J., Baik, Y., Kim, K., Yun, H., Kwon, H., Jung, Y., Kim, B. (2015). A preliminary study of the effects of an arts education program on executive function, behavior, and brain structure in a sample of nonclinical school-aged children. *Journal of Child Neurology, 30,* 1757-1766.	10/18/16	31	29	2
Coles, C.D., Kable, J.A., Taddeo, E., & Strickland, D.C. (2015). A metacognitive strategy for reducing disruptive behavior in children with fetal alcohol spectrum disorders: GoFAR pilot. *Alcoholism: Clinical and Experimental Research, 39,* 2224-2233.	10/18/16	39	38	1
Dackis, M.N., Rogosch, F.A., & Cicchetti, D. (2015). Child maltreatment, callous-unemotional traits, and defensive responding in high-risk children: An investigation of emotion-modulated startle response. *Development and Psychopathology. 27,* 1527-1545.	10/18/16	171	170	1
DeGregorio, L.J., & McLearn, S. (2013). The cognitive profiles of maltreated children in care and their education needs: Supporting good outcomes, *Children Australia. 38,* 28-35. doi.10.1017/cha.2012.47	11/4/16	72	71	1
Graziano, P.A., & Hart, K. (2016). Beyond behavior modification: Benefits of social-emotional/ self-regulation training for preschoolers with behavior problems. *Journal of School Psychology. 58*, 91-111.	11/4/16	79	77	2
Total number of articles used in review from reference tracking = 7				

Total number of articles used in review from database searches = 9
Total number of articles used in review from citation tracking = 0
Total number of articles used in review from reference tracking = 7
Total number of articles used in review from UPS Master's Thesis = 0
Total number of articles used in CAT = 16

Summary of Study Designs of Articles Selected for the CAT Table

Pyramid Side	Study Design/Methodology of Selected Articles	Number of Articles Selected
Experimental	__4.5_ Meta-Analyses of Experimental Trials _5_ Individual Randomized Controlled Trials _2_ Controlled Clinical Trials ___ Single Subject Studies	11.5*
Outcome	_0.5__ Meta-Analyses of Related Outcome Studies ___Individual Quasi-Experimental Studies _3__Case-Control Studies __One Group Pre-Post Studies	3.5*
Qualitative	___Meta-Syntheses of Related Qualitative Studies _1_Small Group Qualitative Studies ___brief vs prolonged engagement with participants ___triangulation of data (multiple sources) ___interpretation (peer & member-checking) ___a posteriori (exploratory) interpretive scheme ___Qualitative Study on a Single Person	1
Descriptive	___Systematic Reviews of Related Descriptive Studies ___Association, Correlational Studies ___Multiple Case Studies (Series), Normative Studies ___Individual Case Studies	0
Comments: AOTA Levels I - 9.5 II - 5 III - 0 IV - 0 V- .5 N/A - 1		TOTAL= *16*

"*" – indicating one of the articles provided both experimental and outcome data, therefore was counted as 0.5 in each category

Table Summarizing *Tier II Quantitative* Evidence

Author, Year, Journal Abbreviation	Study Objectives	Study Design/ Level of Evidence	Participants: Sample Size, Description Inclusion and Exclusion Criteria	Interventions & Outcome Measures	Summary of Results	Study Limitations
Coles, Kable, Taddeo, & Strickland, (2015). *Alcohol Clin. Exp. Res.*	Examine the effectiveness of GoFAR as an intervention to reduce disruptive behaviors and improve self-regulation skills in children with FASD	E2 - RCT AOTA I	$N = 27$, $n = 9$ control (no intervention), $n = 9$ GoFAR, n = 9 FACELAND. Families recruited from ped. neurodevelopmental exposure clinic. Inclusion: had problems with disruptive behavior, ages 5-10 yo, have a dx of FASD. Exclusion: none specified	Interventions; GoFAR, FACELAND, or control 5x, w/ parent training therapy sessions 5x & 1 BAT session. Outcome measures: DBRF, mastery of GoFar or FACELAND. Measurements were taken pre-mid-and post-tx.	Decrease in disruptive behavior for the GoFAR group at mid (*.762 change in latent trait) and post (*.719) tx and decrease for FACELAND post tx (*.577). No change for the control.	Pilot study, small sample size, parental report of outcomes.
Pears, Fisher, Kim, Bruce, Healey, & Yoerger, (2013). *Early Ed. Dev.*	Examine effectiveness of KITS curriculum to increase school readiness, and improve school functioning for foster children	E2 - RCT AOTA I	$N = 192$ families, $n = 102$ KITS, $n = 90$ control (received services offered by child welfare system). Non-kinship or kinship foster care in two counties in the pacific northwest, entering K in the fall, mono or bilingual English speaker, not involved in other tx.	Intervention; KITS- 24 sessions 2hrs/2x/wk in classroom 8 sessions caregiver training. Outcome measures: DIBELS, PIPPS, self-regulation composite.	KITS improved early literacy skills ($r2 = .26$), and self-regulatory skills ($r2 = .18$) Compared to control. No sig. effects on prosocial skills	Sample size was moderate, prosocial skills measured by caregiver reports, did not include many African American children.
Choi, Soo Lee, & Lee, (2008).	Effects of music intervention on	E3 - Controlled	$N = 48$, included score of K-CBCC above 60, understand	Intervention; 2 group music classes/ wk for 15 wks.	CBCC stat sig for Music intervention	Not a RCT; lack of randomization of

eCAM.	aggression and self-esteem in children w/ highly aggressive behavior	Clinical Trial AOTA II	content, 10-12 yo	Consisting of, singing songs, analysis of libretto, making musical instruments, playing instruments, song drawing, and writing. Outcome measures: CBCC, CAAI, and RSES	($p < .001$) and control ($p < .005$). CAAI stat sig for music intervention ($p < .001$) and control ($p < .005$) RSES stat. sig. for music intervention ($p < .005$).	participants to groups, more objectivity, long-term follow-up not addressed.
Pears, Fisher, & Bronz, (2007). *Sch. Psych. Rev.*	Examine the effect of play groups on social competence and self-regulation for foster children.	E2 - RCT AOTA I	$N = 24$ foster children, $n = 11$ intervention group, $n = 13$ control group. Foster children in Lane County Oregon entering K-2nd grade in 2002.	Intervention; 2-hour therapeutic playgroups 2x/wk for 7 wks targeting social competence and emotional/behavioral self-regulation. Outcome measures: CBCC, and emotion regulation checklist.	Intervention increased social competence skills ($p = .05$), and decreased lability ($p = .05$). No sig. results from teacher reports.	Small sample size, parents were not blinded to condition, 1st and 2nd graders had already attended school, which may impact their results compared to K.

Abbreviations: Alcohol - alcoholism, BAT - behavior analog therapy, CAAI - The Child Aggression Assessment Inventory, CBCC - The Child Behaviour Checklist, Clin - clinical, DBRF - Disruptive Behavior Record Form, Dev - development, DIBELS - Dynamic Indicators of Basic Early Literacy Skills, dx - diagnosis, Ed - Education, Exp - experimental, FASD - fetal alcohol spectrum disorders, hr - hours, K - kindergarten, K-CBC - Korean version of the Child Behavior Checklist, KITS - Kids in Transition to School, ped - pediatric, PIPPS - Preschool Penn Interactive Peer Play Scale, Psych - psychology, RCT - Randomized Controlled Trial, Res - research, Rev - review, RSES - Rosenberg Self-esteem, Sch - school, sig - significant, stat sig - statistically significant, tx - treatment, w/ - with, wk - week, wks - weeks, x - times, yo - years old

Table Summarizing the Tier II *QUALITATIVE* Evidence

Author, Year, Journal Abbreviation	Study Objectives	Study Design/ Level of Evidence	Participants: Sample Size, Description Inclusion and Exclusion Criteria	Methods for enhancing rigor	Themes and Results	Study Limitations
Santiago, Fuller, Lennon & Kataoka, (2016). *Psych. Trauma.*	Examine if adding a family component to CBITS intervention is more effective than CBITS alone.	Q3 Qualitative with less rigor AOTA level - N/A	15 low-income Latino parents were interviewed after participation in a modified CBITS program for their child that had a family component. 6 potential interviewees prevented from participating by disconnected phone numbers, no response to voicemails, or difficulty scheduling a time for the interview	Members of the research team reviewed the interviews but 2 members of the research team reviewed every interview separately for interrater reliability.	Adding a family component to CBITS is an acceptable, and feasible intervention for Latino families. Utilizing a family component is a way to provide culturally-sensitive care	Small *N* and similar demographics could potentially decrease generalizability. Only 20% of respondents were fathers so perception based on gender could not be determined.

Abbreviations: CBITS - Cognitive Behavioral Intervention for Trauma in Schools, Psych - Psychological

Table Summarizing the *Tier III Quantitative* Evidence

Author, Year, Journal Abbreviation	Study Objectives	Study Design/ Level of Evidence	Participants: Sample Size, Description Inclusion and Exclusion Criteria	Interventions & Outcome Measures	Summary of Results	Study Limitations
Thornback, & Muller, (2015). *Child Abuse & Neglect.*	Examine the relationship between TF-CBT & EF.	O2 - Preexisting groups w/ covariates AOTA II	*N* = 108 children (44 at follow-up), between 7-12 yo who had trauma, non-offending parent could participate, no substance use or psychotic dx, non-suicidal, no developmental disorder, Rx stable, no prior tx	Intervention; TF-CBT Outcome measures: CEMS, ERC, TSCC, TSCYC, CBCC.	Child reported dysregulation ($p < .01$), lability/ negativity ($p < .001$), Internalizing lability/ negativity ($p < .05$), Externalizing lability/negativity ($p < .01$) improved pre-tx to 6-month follow-up.	Self-report measures, child's inability to report accurately on their emotions, biases from parents, the inclusion of siblings, attrition rates.
Santiago, Katoaka, Hu-Cordova, Alvarado-Goldberg, Maher, Escudero, (2015). *Jour. Emot. Behav Disord.*	Determine the feasibility of adding a family component to the CBITS program and determine how the family component influenced outcomes of the CBITS program	E3 - non-randomized experimental trial AOTA II	Participants = low-income, primarily Latino family members. Control Group (CBITS only) = 19 parent-student pairs Experimental Group (CBITS + Family component) = 21 parent-student pairs.	Intervention; CBITS= 10 group sessions, 1-3 student sessions on trauma narrative, 1-2 parent education meetings. CBITS+Family= parents had 4-7 extra hours of intervention on coping, com. and psychoeducation. Outcome measures: PS on child's progress, parent involvement in school, CPSS, CDI, PSC.	Both groups showed significant decreases in student PTSD and depression sx ($p < .01$). CBITS + Family: increase in school involvement from pre to post-test ($p < 01$).	Small sample size, non-randomized groups, authors couldn't control for face-to-face time bias or clinician bias. No effect sizes calculated
Langley, Gonzalez, Sugar, Solis, & Jaycox,	Effectiveness of BB (CBT intervention)	E2 - RCT AOTA I	*N*=74 students in grades 1-5 *n* = 36 BB tx, *n* =38	Intervention; 10 tx sessions of BB & 1-3 parent ed mtgs	Immediate tx group showed stat sig improvements Child CDI, Child RI, Parent RI	Missing data was computed using an expected

(2015). *Jour. Clin. Child Adol.*	immediate tx compared to delayed tx		waitlist tx Inclusion: exposure to trauma, moderate PTSD sx. Exclusion: severe psychiatric disturbance, sexual abuse only trauma	Outcome Measures: CDI, SCARED-C, SDQ, ERC, SAS-SR-Y, TESI-C-Brief, RI, coping efficacy measure, satisfaction measures	and Child SCARED ($p < .001$), Parent CDI ($p = .003$). Delayed tx group also showed stat sig improvements Child CDI, Child RI, Parent RI & Child SCARED ($p < .001$), Child RI ($p = .016$). Child SAS was stat sig for both groups ($p < .001$)	average, Six of 13 African American participants did not complete the study, assessors were not blind to tx
Flook, Smalley, Kitil, Galla, Kaiser-Greenland, Locke, … & Kasari, (2010). *Jour. Appl. Sch. Psych.*	Examine the effects of MAPs program in the school setting for students ages 7-9 yo w/ and w/o EF deficits	E2 - RCT AOTA I	$N = 64$ students, $n = 32$ MAPs, $n = 32$ control (no tx). Children ages 7-9 were included from 4 classrooms.	Intervention; MAPs 30 min, 2x week for 8 wks, worked on awareness of self, others, and environment. Outcome measures: TESI-C-Brief, subsections, MI, BRI, & GEC.	Teacher scores on the TESI-C-Brief show improved EF in the MAPs group, ($p = .005$). Parent scores TESI-C-Brief also reported higher EF for MAPs group ($p = .02$).	Outcome measure sensitive to extreme lvls of EF dysfunction, teachers not blind to tx conditions

Coles, Kable, & Taddeo, (2009). *Jour of Devel. & Behav. Ped.*	Investigate if a math intervention maintained results 6-months post tx and presence of behavioral changes as indicated by caregiver report	O2 - Case-control, preexisting groups AOTA II	*N = 61, n =* 31 math group, *n =* 30 contrast group. Ages 3-10, w/ FASD, who did not have IQ < 50, had mental health dx, or not in stable housing	Intervention; Math tx, 2 wkshops, 6-wks of tutoring, individualized instruction, contrast group received individualized instruction. Outcome measures: Caregiver satisfaction measures, CBCC, teacher report form, math achievement, TEM, BECSR, Key Math-R/NU, developmental testing of premath concepts, NWT	Higher gains for math seen in the math tx group *p* < .02. Pre-to-post test results show a reduction of scores on the CBCC scores showing that behaviors improved. No statistical analysis was conducted	Effects may not be exclusive to children with FASD, self-selected sample, child's age, caregiver's age, being in a larger family, and more physical sx were associated with more gains

Abbreviations:* - statistically significant, adol -Adolescent, BB - Bounce Back, BECSR - Bracken Early Concept Scale Revised, behav - behavior, BRI - Behavior Regulation Index, CBCC - The Child Behaviour Checklist, CBT - cognitive behavioral therapy, CBITS - Cognitive Behavioral Intervention for Trauma in Schools, CDI - Children's Depression Inventory, CEMS - The Children's Emotion Management Scales, clin - clinical, com -communication, CPSS - Child PTSD Symptoms Scale, devel - development, disord - disorders, dx - diagnosis, ed - education, EF - executive function, emot - emotion, ERC - The Emotion Regulation Checklist, FASD - fetal alcohol spectrum disorders, GEC - Global Executive Composite, IQ - intelligence quotient, jour - journal, KeyMath-R/NU – KeyMath - Revised Normative Update, lvls - levels, MAPs - Mindfulness awareness practices, min - minute, MI - metacognition index, mtgs - meetings, NWT - Number Writing Task, ped - pediatrics, PS - parent satisfaction, PSC - Pediatric Symptoms Checklist, PTSD - posttraumatic stress disorder, RI - UCLA Posttraumatic Stress Disorder Reaction Index, SAS-SR-Y - Social Adjustment Scale-Self-Report for Youth, SCARED-C - Screen for Child Anxiety Related Emotional Disorders, SDQ - Strengths and Difficulties Questionnaire, sig - significant, stat - statistically, sx - symptoms, TEM - Test of Early Mathematics, TESI-C-Brief - Traumatic Events Screening Inventory for Children-Brief Form, TF-CBT - Trauma Focused Cognitive Behavioral Treatment, TSCC - The Trauma Symptom Checklist for Children, TSCYC - The Trauma Symptom Checklist for Children, tx - treatment, rx - prescription/medication, w/ - with, wkshops - workshops, wk - week, w/o - without, yo - year old

Table Summarizing the *Meta-Analyses/Meta-Syntheses/Systematic Review* Evidence

Author, Year, Journal Abbreviation	Study Objectives	Study Design/ Level of Evidence	Number of Papers Included, Inclusion and Exclusion Criteria	Interventions & Outcome Measures	Summary of Results	Study Limitations
Gillies, Maiocchim, Bhandari, Taylor, Gray, & O'Brien, (2016). *The Cochrane Collaboration.*	Examine the effects of psychological therapies on sx commonly seen in children who have experienced trauma.	E1- Meta-analysis of RCTs AOTA I	51 included trials. RCT, include children and adolescents exposed to trauma	Interventions: CBT, family therapy, EMDR, narrative therapy, psychoeducation, supportive therapy Outcomes: PTSD sx. as measured by the DSM-IV-TR or ICD-10. PQLIV, CDI, STAIC, CBCC, self-harm or suicidal behavior, loss to follow-up, & costs.	Psychological therapies for up to 1 month after tx to reduce sx of PTSD. CBT may be more effective than other tx.	Quality of the evidence included in the meta-analysis was low to very low, lack of evidence at follow-up after 1-month post
Rolfsnes & Idsoe, (2011). *Jour. Traumatic Stress.*	Review of school-based interventions targeted at reducing sx of PTSD	E1- Meta-analysis of related experimental studies AOTA I	19 studies. Inclusion: must be performed in a school setting, RE or QE, aim must be to reduce sx of PTSD, use standardized assessments, one alternative or no intervention group	Interventions: CBT, Play/Art, EMDR, and Mind–Body Skills, worksheets, imaginal exposure, meditative exercises, narrative approaches, hw, stress inoculation training Outcome measures: PTSS, CPSS	CBT interventions: medium to large effect sizes on PTSD reduction for 14/19 studies reported. Meta-analysis yielded effect size of $d = 0.68$ for mean effect size. Play, EMDR, Mind-Body skills are all promising.	Some studies had lack of standardized manual, lack of randomization, small sample sizes, wide participant age range, lack of independent assessors, unclear outcome measures, further research needed for play, EMDR, mind-body skills

Kowalik, Weller, Venter, & Drachman, (2011). *Jour. Behav. Ther. & Exp. Psychi.*	Investigate effectiveness of CBT for tx of pediatric PTSD	E1- Systematic Review of Related Experimental Studies AOTA I	7 studies. Inclusion: CBT intervention RCT, reported pre & post intervention scores on CBCC.	Intervention: CBT, NST, supportive unstructured psychotherapy, TF-CBT, CCT Outcome measure: CBCC	CBT interventions had greater average effect size for TP (.327, p=.003), INT (.314, p=.001) and EXT (.192, p =.004) than comparison group. The effect size for TCOMP (.054, p=.064) is not stat sig.	Small number of studies, methodological inconsistencies across studies, possible publication bias
Silverman, Ortiz, Viswesvaran, Burns, Kolko, Putnam, & Amaya-Jackson, (2008). *Jour. Clin. Child Adol.*	Review of psychosocial tx for children and adolescents exposed to traumatic events	E1–Meta-analysis of related experimental studies AOTA I	21 studies included. Inclusion: birth to 17 years old, youth exposure to trauma, RCTs must be rigorous, Exclusion: pharmacology, massage therapy, studies w/o randomization, comparison or outcomes	Interventions: AC, CBITS, CBT-SAP, CCT, CPP, CPT, EMDR, GCBT, ICBT, MHIP, NST, RPT, SAS-CBT, SGT, STC, stress inoculation training, TAU, TF-CBT Outcome measures: CDI, CBCC, Youth Self-Report Form, PTSS, K-SADS, IES	Effect sizes for CBT tx ranged from .15 to .50 for the four outcomes (i.e., PTSD, depression, anxiety, and externalizing). For PTSD, the use of CBT had an effect size of .50, whereas non-CBT had less than half that effect ($d = .19$).	Lack of manual/standardized program for CBT, wide age range, details of adaptations not included, lack of follow up
Gold, Voracek, & Wigram, (2004).	Examine the effects of music therapy on	E1- Meta-analysis RCT,	N =11 studies. Children & adolescents w/	Intervention; Music therapy vs. control/	Effect size for 11 studies ($d = .61$),	Quality of studies included in meta-analysis

Jour. of Child Psych. and Psychi.	children and adolescents with psychopathology.	O1- Meta-analysis of outcome studies AOTA I	psychopathology, compared music therapy w/ no tx, or another tx, tx vs. control, pre-test/post-test, & tx group only were included tx designs, excluded if only measured the effects of music, or music education, or an interaction among group members	no control/ verbal therapy. Outcome measures: GDS, ACh, CCRAS, observation, PHCSCS, CSEI, IC, HWIT, MBL, CBRF, ATRF	stat sig ($p < .001$). Overall music therapy was effective w/ variety of dx. Specifically, dx of behavioral problems had an effect size of ($d = .78$), and equally effective for children ($d = .54$) as for adol. ($d = .64$)	did not meet rigor standards and/or were not RCTs, detail and precision were lacking in review studies, effect sizes may be calculated inaccurately, results may be study specific and not generalizable across dx

Abbreviations: AC - Attention control, Ach - adjective checklist, Adol - adolescent, ATRF - Achenbach Teacher Report Form, Behav - behavior, CBCC - Child Behavior Checklist, CBITS - Cognitive Behavioral Intervention for Trauma in Schools, CBRF - Coopersmith Behavior Rating Form, CBT - Cognitive Behavioral Therapy, CBT-SAP - Cognitive Behavioral Therapy for Sexually Abused Preschool Children, CCRAS - Checklist of Communicative Responses/ Acts Score Sheet, CCT - Child-Centered Therapy, CDI - Child Depression Inventory, clin - clinical, CPP - Child-Parent Psychotherapy, CPSS - Child PTSD Symptoms Scale, CPT - Cognitive Processing Therapy, CSEI - Coopersmith Self-Esteem Inventory, dx - diagnosis, EMDR - eye movement desensitization and reprocessing, exp - experimental, EXT - external, GCBT - Group Cognitive Behavioral Therapy, GDS - Griffiths Developmental Scale, hw - homework, HWIT - Hamburg-Wechsler Intelligence Test, IC - Interpersonal Checklist, ICBT - Individual Cognitive Behavioral therapy, IES - Impact of Events Scale, INT - internal, jour - journal, K-SADS - Kiddie-Sads, MBL - Marburg Behaviour List, MHIP - Mental Health for Immigrants Program, NST - Non-Directive Supportive Therapy, PHCSCS - Piers-Harris Children's Self-Concept Scale, PQLIV- Pediatric Quality of Life Inventory Version 4.0, psych - psychology, psychi - psychiatry, PTSD - posttraumatic stress disorder, PTSS - PTSD symptoms scale, QE - Quasi-Experimental, RCT - randomized controlled trial, RE - Randomized Experimental, RPT - Resilient Peer Treatment, SAS-CBT - Sexual abuse specific-cognitive behavioral therapy, sig - significance, SGT - standard group therapy, stat - statistically, sx - symptoms, STAIC - State-Trait Anxiety Inventory for Children, STC - standard therapeutic care, TAU - treatment as usual, TCOMP - Total Competence, TF-CBT - Trauma-Focused Cognitive Behavioral Therapy, ther - therapy, TP - total problems, tx - treatment, vs - versus, w/o - without

Table Summarizing *Quantitative* No Intervention Evidence

DePrince, Weinzierl, & Combs, (2009). *Child Abuse & Neglect.*	Examine the hypothesis that children with familial trauma will have poorer EF skills than children exposed to non-familial trauma or no trauma.	O2- Preexisting groups w/ covariates AOTA II	*N* = 110 children, *n* = 44 familial-trauma, *n* = 38 non-familial-trauma, *n* = 28 no-trauma group. Volunteers, recruited from flyers in social service and mental health agencies.	No intervention was given. Outcome measures: WISC-IV, symbol search scale, Block design & vocabulary scales, Gordon Diagnostic System, Brief Test of Attention, Stroop Task.	Medium effect size of the relationship between familial-trauma and EF composite ($p < .01$), correlation of dissociated with EF composite ($p < .001$).	Relied on self-report, no data on age of onset, severity, recency, frequency, and/or chronicity of exposure to the trauma.

Abbreviations: EF - executive functioning, w/ - with, WISC-IV - Wechsler Intelligence Scale for Children-Fourth Edition

Summary of Key Findings:

Summary of Experimental Studies

Various forms of Cognitive Behavioral Therapy interventions have been found to reduce PTSD symptoms, depression, and anxiety in children age birth -13 who have experienced trauma (Santiago et al., 2015; Gillies et al., 2016; Rolfsnes & Idsoe, 2011; Kowalik, Weller, Venter, & Drachman, 2011; Silverman et al., 2008; Langley, Gonzalez, Sugar, Solis, & Jaycox, 2015). Sixteen articles were reviewed and synthesized. The following interventions have been shown to have significant results in school settings in reducing PTSD symptoms, depression, and related difficulties: CBITS (Santiago et al. 2015; Silverman et al., 2008), CBT (Gillies et al., 2016; Rolfsnes & Idsoe, 2011; Kowalik et al., 2011; Silverman et al., 2008), TF-CBT (Kowalik et al., 2011; Silverman et al., 2008), and Bounce Back (Langley et al., 2015). Additionally, GoFar (Coles, Kable, Taddeo, & Strickland, 2015), child & caregiver training (Coles et al., 2015; Pears, Fisher, Kim, Bruce, Healey, & Yoerger, 2013; Santiago, Fuller, Lennon, & Kataoka, 2016; Santiago et al., 2015) KITS (Pears et al., 2013), MILE (Coles, Kabble, & Taddeo, 2009), & MAPs (Flook et al., 2010) interventions appear to have a positive impact on performance of children's emotional and behavioral actions in the classroom; reducing negative behaviors, resulting in improvements in academic participation.

Summary of Outcome Studies

Research indicates there is a relationship between trauma and executive functioning. Four articles were reviewed and synthesized. For children who experience trauma, TF-CBT (Thornbeck & Muller, 2015; Coles et al., 2009; DePrince, Weinzierl, & Combs, 2009) and music therapy interventions (Choi, Soo Lee, & Lee, 2008; Gold, Voracek, & Wigram, 2004) may improve emotional regulation and decrease emotional lability or negativity.

Summary of Qualitative Studies

One qualitative study investigated the responses of parents whose children completed a CBITS program that also included a family component. Interview responses indicated that including parents in a family component to the CBITS program was beneficial, culturally appropriate, and an attainable addition to the CBITS intervention for school-aged children (Santiago et al., 2016).

Summary of Descriptive Studies

No descriptive studies were included based on our inclusion/exclusion criteria.

Implications for Consumers:

For students and their families who have experienced trauma, it should be noted that there are classroom interventions that may help to address emotional and behavioral issues and in turn may also improve academic performance (Pears et al., 2013; Flook et al, 2010; ; Rolfsnes & Idsoe, 2011; Santiago et al., 2015; Santiago et al., 2016). Some of these interventions have been shown to have significant impacts on decreasing problem behaviors in the classroom, increasing self-management skills, and increasing literacy skills or academic performance

(Coles et al., 2015; Coles et al., 2009; Choi et al., 2008; Flook et al., 2010; Gold, Voracek, & Wigram, 2004; Pears et al., 2013)

A family component was included in some of the CBITS, Bounce Back, and MILE interventions. In one study a group of parents reported that the family component was helpful, culturally acceptable, and feasible (Coles et al., 2009; Santiago et al., 2015; Santiago et al., 2016). Parents, teachers, and families should advocate for their children so that they can receive these services that may result in improved educational skills as well as improved emotional and behavioral skills.

Implications for Practitioners:

The bulk of the research supports the idea that CBT interventions are effective for reducing trauma symptoms (Santiago et al., 2015; Gillies, Maiocchim, Bhandari, Taylor, Gray, & O'Brien, 2016; Rolfsnes & Idsoe, 2011; Kowalik, Weller, Venter, & Drachman, 2011; Silverman et al., 2008; Langley, Gonzalez, Sugar, Solis, & Jaycox, 2015). There are a variety of types of CBT interventions available. CBT-based interventions specifically target PTSD symptoms, depression & anxiety, and other related complications. Interventions such as MAPs, KITs, and MILE target emotional and behavior related complications due to trauma (Coles et al., 2009; Flook et al., 2010; Pears, Fisher, & Bronz, 2007; Pears et al., 2013). The MILE intervention also contains a specific math component aimed at improving educationally relevant skills (Coles et al., 2009).

As occupational therapists, AOTA has stated that providing interventions to children in the school system who have experienced trauma is within our domain and scope of practice and (Petrenchik & Weiss, 2015). Occupational therapists should collaborate with teachers, paraeducators, and other professionals in the school system to recognize signs and symptoms of trauma in children, and work with the team to provide meaningful occupation-based interventions that may improve school participation. In order to reduce crisis situations and minimize the impact of traumatic experience(s), AOTA recommends continuing education and advanced training for practitioners working one-on-one with children who have experienced trauma (Petrenchik & Weiss, 2015). Practitioners who would like to determine the most appropriate CBT interventions for children who have experienced trauma should be intentional about the types of outcomes and influences they are looking for the interventions to provide. A holistic approach where the teacher, student, and parent are involved is suggested by Santiago et al., 2015; & Santiago et al., 2016. CBT interventions should also be implemented with an interprofessional approach to trauma due to the multifaceted impacts of trauma on children.

Implications for Researchers:

It has been found that school-based interventions can lead to reduced symptoms of trauma (Santiago et al., 2015; Gillies, Maiocchim, Bhandari, Taylor, Gray, & O'Brien, 2016; Rolfsnes & Idsoe, 2011; Kowalik, Weller, Venter, & Drachman, 2011; Silverman et al., 2008; Langley, Gonzalez, Sugar, Solis, & Jaycox, 2015). Symptoms of trauma may impact school performance, but our search did not identify studies that directly tied trauma interventions to school-related outcome measures. These studies need to be conducted because under IDEA school interventions need to be educationally relevant. Since trauma interventions in the

school systems need to be educationally relevant in order to be funded and approved; future research could examine the direct relationship between trauma and academic skills. There is research already that examines the relationship between trauma and PTSD inventories and other symptom-based outcome measures. A possible research question/topic could be what trauma based interventions directly impact course grades for elementary school aged children. In addition, CBT interventions are provided by mental health practitioners. As occupational therapists are mental health providers, it is within our scope of practice to provide research-based mental health interventions. It is recommended that continuing research is done on the role of occupational therapists providing trauma interventions including CBT. Occupational therapy researchers should collect data on emerging trauma interventions in order to create stronger evidenced-based literature for the role of occupational therapy within mental health and specifically within the population of children who have experienced trauma.

Bottom Line for Occupational Therapy Practice/ Recommendations for Better Practice:

Many students in the school system have been impacted by trauma (Langley, Gonzalez, Sugar, Solis, & Jaycox, 2015). The experience of trauma may result in decreased participation in school (Langley et. al, 2015, Kowalik, Weller, Venter, & Drachman, 2011). There are many types of school-based interventions that have been found to reduce the effects of symptoms resulting from trauma (Santiago et al., 2015; Gillies, Maiocchim, Bhandari, Taylor, Gray, & O'Brien, 2016; Rolfsnes & Idsoe, 2011; Kowalik et al., 2011; Silverman, et al., 2008; Langley et al., 2015). School-based interventions need to be educationally relevant, so it is important that occupational therapists in school settings are aware of and able to talk about and implement evidence-based interventions that may increase participation in the classroom for this population. Occupational therapists can collaborate with other health and school professionals to create and promote Tier II interventions that would promote school participation and improved educational goals and outcomes. To implement these interventions, occupational therapists can educate administration, teachers, and paraeducators about trauma and the necessary environmental adaptations and supports necessary to improve school participation. Collaboration among occupational therapists, parents, and caregivers to identify and address symptoms of trauma may also help provide best strategies to address behaviors and implement modified approaches to support participation.

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"*" indicates a reference that appears in the CAT table itself.
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Involvement Plan/Dates of Completion

        After meeting with Wendi Trummert and reviewing the evidence found, Wendi

emphasized that she wanted a product that she could use with children in her school district who

have experienced trauma. Wendi reported that due to time constraints, she was not able to further

research the school-based interventions we reported in the CAT paper. However, Wendi

requested a booklet with detailed protocols for the interventions. This booklet would allow

Wendi to develop treatment sessions and more easily review the interventions. Additionally, with

this new evidence-based research, Wendi can begin advocating for the use of various

interventions and negotiating with the school administration for the necessity of these

interventions.

        The final product is a booklet that details each intervention. For each intervention, we

provided information about the target population, details and instructions for implementing the

intervention, and information about purchasing the intervention or training required. After

reviewing the intervention manual, Wendi requested that we make a Bounce Back (Langley &

Jaycox, 2015) kit for her. She perceived that this intervention could potentially be effective in

her practice. We will stay in contact via email for three months with the clinical collaborator,

Wendi, in order to monitor the knowledge translation and the implementation of these

interventions into her practice.

        Organizational Contextual Factors: In general, the policies and practices of a school

environment can act as barriers to implementation of new treatment methods. The general

procedure for school occupational therapists is to have a treatment session with a child for 30

minutes once a week. This limited time frame can act as a constraint to implementing effective

treatment, especially if the child needs underlying factors to be addressed before focusing on

skills specifically related to classwork. Additionally, some of the evidence-based interventions

reported in our CAT table may need more than 30 minutes to be accurately administered. If an

occupational therapist in the Puyallup School District planned on utilizing a curriculum that

needed more than 30 minutes to implement, the occupational therapist would have to either

advocate for the need for increased time or consider other collaborative strategies to implement

the program. Depending on the principal or administration team of a particular school, the staff

can either bar or encourage new treatment procedures. This may be mitigated through teaming

with other professionals in the school to increase exposure to intervention concepts. For instance,

the occupational therapist could team with the school counselor or psychologist to implement

and collaborate on intervention and treatment that would suit the individual child best.

In addition, the cost of an intervention kit can be a barrier as the current Puyallup school

district policy is to provide $90.00 per year to cover costs associated with occupational therapy

interventions. This budget is a major prohibitory factor that may prevent the implementation of

the interventions we found during our search. However, Wendi stated that she can approach the

Parent Teacher Association and request funding for valuable interventions.

Departmental/ Individual Factors: Wendi supports the implementation of new treatments.

She has been able to justify and advocate for new treatments with her administration previously.

Within the department, Wendi also advocates for research-based interventions.

Wendi, April, Sarah, and Maria agreed on the following products:

1. A booklet of information/ protocols for interventions deemed effective through the

   research presented in our CAT table

2. One specific treatment intervention outlined in a more detailed manner so that Wendi can

   implement it into her current practice

April, Sarah, and Maria agreed on the following tasks:

1. Divide up the articles

2. Research the interventions in the articles so that we have a better, in-depth, understanding

    of the protocols in each intervention.

3. Write out details of assigned interventions for use in the booklet

4. Put the booklet together utilizing the interventions from the articles.

An outline of the scheduled dates for the completion of these tasks/products.

Task/Product	Deadline Date	Date Completed	Steps w/ Dates to achieve the final outcome
Divide up the articles	2/13/2017	3/1/2017	Each member chose 3-4 articles to review
Research the interventions in the article	2/17/2017	3/14/2017	Each member of the group researched the interventions in their articles. After researching the interventions, we compiled the information found in a uniform template for each intervention.
Write out details of assigned interventions for manual.	3/14/2017	3/14/2017	We met as a group to review the sections of the booklet we had created. We determined a schedule and process for how to edit the interventions write-ups.
Complete first round of edits	3/22/2017	3/22/2017	We each reviewed 3-4 of the intervention write-ups.
Complete final round of edits	3/24/2017	3/24/2017	Each person reviewed the final write-ups they had not yet read. This ensured that after one member completed a write-up, it was reviewed by two other members.
Put the booklet together.	3/22/2017	3/24/2017	Final edits to individual sections of the booklet were completed and the sections were compiled. We e-mailed this version to Wendi

			so she could decide if she was satisfied with the booklet and if she wanted us to create a kit for one of the interventions.
Review the booklet with Wendi	4/7/2017	3/27/2017	We met with Wendi to discuss the materials gathered. We determined that we would put together a kit for the Bounce Back intervention.
Complete manual and kit	4/5/2017	4/10/2017	All materials were gathered. All printed materials were organized for use for Wendi.
Present final product to Wendi	4/17/2017	4/10/2017	Wendi was presented with the kit and manual.
Collect feedback from Wendi	5/1/2017	4/17/2017	The satisfaction survey was presented to Wendi on 5/1/17 and was collected by this date.

We monitored the outcomes of our activities by meeting together as a group on the scheduled dates and reviewing the material we were each responsible for. We reviewed each other's sections to make sure that the material is detailed and clear. We added additional dates as needed when materials were not completed on schedule. We will meet with Wendi after one month, two months, and three months to see if the materials we have gathered and submitted to her are useful and feasible for practice. We provided her with a questionnaire that is to be collected at the noted increments to assess her satisfaction with the product. We will make modifications to the product as necessary. If there are difficulties with buy-in from the administrators, we will make an action plan to support mitigation of the administration's questions and concerns.

Knowledge Translation

The knowledge translation process went fairly smoothly because we were able to discuss some potential ideas about knowledge translation with Wendi during our December meeting at the end of the fall semester. We had discussed with Wendi what types of products might be most useful to her and as a group were able to consider different options and how we envisioned the final product before the knowledge translation process began.

Creating the actual involvement plan was one of the more challenging pieces of the knowledge translation process because creating a timeline is not always a straightforward process. We were not sure what would take the most time during this process and also had to consider when we could get feedback from Wendi. Because of all of this uncertainty, we originally created deadlines that were unrealistic. However, with thorough communication between team members and by reaching out to Wendi to check when she could meet with us for feedback, we were able to set more realistic expectations for the knowledge translation process.

The knowledge translation process started with the team members splitting up the articles to review and collecting the pertinent information Wendi would need to know if she were deciding whether one of the interventions would be an appropriate fit for a student. Completing the article reviews that made up the intervention manual was one of the portions of the process that took longer than expected for several reasons. Deciding what information to include and what to exclude was a challenge. We wanted to provide pertinent information that would be useful in the decision-making process. Additionally, it was important that the descriptions were not too lengthy as Wendi had mentioned during the December meeting that her time to read research articles and other documents were very limited. We wanted the article reviews to be very clinician-friendly but also provide adequate information about how much training was

required, what team members needed to be involved, how long the interventions were and what populations the interventions were most suited for.

During the group meeting in which we discussed the first draft of the article reviews, we determined the next best course of action would be to have each person review all of the article reviews. We created a rotation schedule in which each member reviewed articles over a period of a half-week to a week-long span of time. This also delayed our initial expected deadlines but certainly added to the quality of our article reviews and ensured that all of the reviews were in the appropriate format.

After determining the intervention manual was ready to send to Wendi, we set a date to meet with her. Giving her the manual and some sample intervention plans found either online or in the research articles ahead of time was beneficial and helped set us up for an efficient and effective meeting. At the brief meeting with Wendi, she indicated that she was most interested in learning more specific information about the Bounce Back (Langley & Jaycox, 2015) intervention. This helped us determine our next step, which was creating a Bounce Back (Langley & Jaycox, 2015) kit as part of to the knowledge translation process. While creating the Bounce Back (Langley & Jaycox, 2015) kit, one of the challenges we ran into was minimizing cost. Fortunately, we had access to printing resources through the school and this cut costs significantly. We made the decision to print the lesson plans for students in black and white print to limit costs and only printed the workbooks in color on our personal printers. In our kit, we wanted to include all of the items needed for the lesson plans such as small scissors, a milk carton, a small dry erase board, candy, and small prizes. However, there were certain books that were requested as part of the Bounce Back (Langley & Jaycox, 2015) curriculum which significantly added to the cost of our process and consequently, we made the decision not to

purchase those books with the belief that those books most likely could be borrowed from the

school library by Wendi when necessary. After gathering all of the printed materials and objects

needed for the lesson plans, the kit was put together without much difficulty.

Intervention Manual

Intervention	Trauma-focused cognitive behavioral therapy (TF-CBT)
Description of Intervention	Trauma-focused cognitive behavioral therapy (TF-CBT) is an evidence-based treatment model designed to assist children, adolescents, and their families in overcoming the negative effects of trauma. Components of the TF-CBT protocol can be summarized by the word "PRACTICE": • P - Psychoeducation and parenting skills—Discussion and education about child abuse in general and the typical emotional and behavioral reactions to sexual abuse; training for parents in child behavior management strategies and effective communication • R - Relaxation techniques—Teaching relaxation methods such as focused breathing, progressive muscle relaxation, and visual imagery • A - Affective expression and regulation— Helping the child and parent manage their emotional reactions to reminders of the abuse, improve their ability to identify and express emotions, and participate in self-soothing activities • C - Cognitive coping and processing— Helping the child and parent understand the connection between thoughts, feelings, and behaviors; exploring and correcting of inaccurate attributions related to everyday events • T - Trauma narrative and processing— Gradual exposure exercises, including verbal, written, or symbolic recounting of abusive events, and processing of inaccurate and/or unhelpful thoughts about the abuse • I - In vivo exposure—Gradual exposure to trauma reminders in the child's environment (for example, basement, darkness, school), so the child learns to control his or her own emotional reactions • C - Conjoint parent/child sessions—Family work to enhance communication and create opportunities for therapeutic discussion regarding the abuse and for the child to share his/her trauma narrative • E - Enhancing personal safety and future growth—Education and training on personal safety skills, interpersonal relationships, and healthy sexuality and encouragement in the use of new skills in managing future stressors and trauma reminders
Goal of Intervention	The goals of TF-CBT are to: • Reduce children's negative emotional and behavioral responses to the trauma • Correct maladaptive or unhelpful beliefs and attributions related to the traumatic experience (e.g., a belief that the child is responsible for the abuse) • Provide support and skills to help non-offending parents cope effectively with their own emotional distress

	• Provide non-offending parents with skills to respond optimally to and support their children
Length of Intervention	TF-CBT is a short-term treatment typically provided in 12 to 18 sessions of 50 to 90 minutes, depending on treatment needs.

Population	TF-CBT is appropriate for use with sexually abused children or children exposed to trauma ages 3 to 18 and parents or caregivers who did not participate in the abuse. Appropriate candidates for this program include:
	
	• Children and adolescents with a history of sexual abuse and/or exposure to trauma who:
	   o Experience PTSD
	   o Show elevated levels of depression, anxiety, shame, or other dysfunctional abuse-related feelings, thoughts, or developing beliefs
	   o Demonstrate behavioral problems, including age-inappropriate sexual behaviors
	• Children and adolescents who have been exposed to other childhood traumas (e.g., exposure to community violence, traumatic loss of a loved one) and show symptoms of depression, anxiety, or PTSD
	• Non-offending parents (or caregivers)

Training Required	It is recommended providers of TF-CBT be experienced therapists with knowledge and training in child development, who can assess and treat a wide range of child mental health conditions. Training is required for therapists to practice from a trauma-focused framework. Therapists who have received this training are also encouraged to seek out supervisors or consultants who have experience with the TF-CBT model. Therapists can access training in the TF-CBT treatment model through a certified introductory training course or web-based training program. To be certified, practitioners with a master's degree or higher must participate in a 2-day live training, participate in follow-up training or consultation twice a month for six months or once a month for 12 months, participating in nine out of 12 consultation or supervisory sessions provided by a treatment developer or graduate of the TF-CBT Train the Trainer Program. Further, a practitioner is also required to complete three different TF-CBT cases, where two or more of these cases include participation from caretakers. Practitioners must also pass a knowledge-based exam once they have met the above requirements.
Family Involvement	This program involves conjoint parent/child sessions. Family work is done to enhance communication and create opportunities for therapeutic discussion regarding the abuse and for the child to share his/her trauma narrative.

Primary Source	Cohen, J. A., Mannarino, A. P., & Deblinger, E. (2006). *Treating trauma and traumatic grief in children and adolescents.* New York, NY: Guilford Press.
Supporting Evidence	Thornback, K., & Muller, R. T. (2015). Relationships among emotion regulation and symptoms during trauma-focused CBT for school-aged children. *Child Abuse & Neglect. 50*, 182-192. https://tfcbt.org/

Intervention	Cognitive Behavioral Intervention for Trauma in Schools
Description of Intervention	The Cognitive Behavioral Intervention for Trauma in Schools (CBITS) program is a school-based, group and individual intervention. The program is ten weeks long and consists of ten group sessions and one to three optional individual sessions. Students learn skills to utilize relaxation techniques, imagery practices, and social problem-solving. Between sessions, students complete assignments and participate in activities that reinforce acquired skills.
Goal of Intervention	The CBITS program is designed to: • Reduce symptoms of post-traumatic stress disorder (PTSD), depression, and behavioral problems • Improve functioning, grades and attendance, peer and parent support, and coping skills.
Length of Intervention	10 weeks
Population	CBITS is intended for youth, ages 11–15 who have experienced a significant trauma and who have significant symptoms of post-traumatic stress disorder or depression. CBITS has been used with students from 5th grade through 12th grade who have witnessed or experienced traumatic life events such as community and school violence, accidents and injuries, physical abuse and domestic violence, and natural and man-made disasters.
Training Required	CBITS offers both online and in-person training. To learn more about online training or to take the online course, register at their website.The manual for CBITS is available for free to download as a PDF. For more information about in-person training, email info@cbitsprogram.org or call 703-413-1100, ext. 5118. Two types of training are offered: • **Online training** is free and gives you access to the videotaped training course, along with advice from the intervention developers and experienced CBITS providers, downloadable materials, a list of resources, and an online community where you can take part in peer-to-peer discussion boards, document sharing, and Ask an Expert. • **In-person training** is a 2 or 2 ½ day training at your site, consisting of session-by-session instruction, demonstrations, role-plays, and practice. Costs of in-person training vary depending on the number of trainees and location, and range from $4,000–$10,000.

Family Involvement	Family involvement not required
Primary Source	Jaycox, L. H. (2004). *Cognitive behavioral intervention for trauma in schools.* Santa Monica, CA: RAND Corporation.
Supporting Evidence	Santiago, C. D., Kataoka, S. H., Hu-Cordova, M., Alvarado-Goldberg, K., Maher, L. M., Escudero, P. (2015). Preliminary evaluation of a family treatment component to augment a school-based intervention serving low-income families. *Journal of Emotional and Behavioral Disorders, 23,* 28-39. Santiago, C. D., Fuller, A. K., Lennon, J. M., & Kataoka, S. H. (2016). Parent perspectives from participating in a family component for CBITS: Acceptability of a culturally informed school-based program. *Psychological Trauma: Theory, Research, Practice, And Policy*, *8*, 325-333. doi: 10.1037/tra0000076 https://cbitsprogram.org/

Intervention	Bounce Back: (BB) An Elementary School Intervention for Childhood Trauma
Description of Intervention	Bounce Back is an elementary school adaptation of Cognitive Behavioral Intervention for Trauma in Schools (CBITS) for middle and high schoolers. Bounce Back teaches many of the same cognitive and behavioral skills as CBITS, such as social problem solving, psychoeducation, and relaxation. Bounce back has additional components that include developing skills for feelings identification and tailors delivery to be developmentally appropriate for elementary aged children. Bounce Back teaches students strategies to cope with and recover from traumatic experiences, so they can get back to doing what they want to do and need to do. **Group Sessions** The clinician meets with a group of 4-7 students for an hour once a week for 10 weeks. Session content includes coping skills, feelings identification, relaxation exercises, positive activities, social support, and problem-solving. **Parent Sessions** The clinician reviews the skills the children are learning in Bounce Back so parents can support the children practicing the skills at home. **Individual Sessions** The clinician helps each child develop a "My Story" trauma narrative. Near the end of the program, the clinician meets with the parent and child to share the child's story.
Goal of Intervention	The goals for Bounce Back are: • Reduce symptoms of PTSD, anxiety, and depression • Build skills to enhance resilience to stress • Enhance students coping and problem-solving strategies • Impact students' academic performance by improving their attendance and ability to concentrate • Build peer and caregiver support
Length of Intervention	It is recommended that Bounce Back is implemented over 10 weeks with weekly 45 to 60-minute weekly group sessions plus two or three 45- to 60-minute individual sessions.
Population	This program was designed for children in elementary school grades Kindergarten through 5th grade (ages 5-11) who have experienced traumatic

	events. Groups are designed to include 4-7 students at a time. The program is also available in Spanish.
Training Required	Minimum provider qualification: Service providers should be master's level mental health clinicians. Supervisors should be licensed mental health professional with a Master's degree and with experience with cognitive-behavioral techniques and preferably child trauma. Bounce Back offers online and in-person training for educators. Register on their website to access the free online training and materials. If you'd like to schedule an in-person training, contact via email at info@bouncebackprogram.org or by phone at (703) 413-1100 x5118.
Family Involvement	Parents should attend 1-3 parent psychoeducational sessions. During these sessions, the clinician reviews the skills the children are learning in Bounce Back, so parents can support the children practicing the skills at home.
Primary Source	Langley, A. K., & Jaycox, L. H. (2015). *Bounce back: Adaptation of cognitive behavioral intervention for trauma in schools (CBITS) for K-5 elementary school students.* Berkeley, CA: Regents of the University of California.
Supporting Evidence	Langley, A. K., Gonzalez, A., Sugar, C. A., Solis, D., & Jaycox, L. (2015). Bounce back: Effectiveness of an elementary school-based intervention for multicultural children exposed to traumatic events. *Journal of Consulting and Clinical Psychology*, *83*, 853-865. https://bouncebackprogram.org/

Intervention	Mindful Awareness Practices (MAPs)- Specifically InnerKids
Description of Intervention	MAPs is based on classical mindfulness training but utilizes age appropriate exercises and games to tailor the program to children. These exercises are intended to increase sensory awareness, attentional regulation, bring the individual's attention to a moment-by-moment experience, as well as awareness of self, others, and the environment. Other exercises which are part of the program focus on reflection, meditation and educating children on how to complete body scans. InnerKids was included as an appendix to this article and has been included in this manual as the intervention protocol.
Goal of Intervention	The goal of this intervention is to improve executive functioning skills. These skills include behavioral regulation, metacognition, and overall global executive functioning control.
Length of Intervention	8 weeks: 30 min/session, 2x/week,
Population	This study included 2nd to 3rd-grade elementary school students, but the program is aimed at elementary school students. This intervention is most effective for students who have deficits in executive functioning and children with behavioral dysregulation.
Training Required	Individuals must complete a year-long Training in Mindfulness Facilitation through UCLA and demonstrate excellence in order to become Authorized MAPs teachers. However, the InnerKids Program offers books, workshops and training events for parents and professionals.
Family Involvement	Family involvement is not required.
Primary Source	Flook, L., Smalley, S. L, Kitil, M. J., Galla, B. M., Kaiser-Greenland, S., Locke, J., ... & Kasari, C. (2010). Effects of mindful awareness practices on executive functions in elementary school children. *Journal of Applied School Psychology, 26,* 70-95. doi: 10.1080/15377900903379125
Supporting Evidence	Contact: Susan L. Smalley, UCLA Semel Institute for Neuroscience and Human Behavior, 760 Westwood Plaza, Room 47-438, Los Angeles, CA 90095. E-mail: ssmalley@mednet.ucla.edu For program designed to teach professionals to be mindfulness facilitators, the UCLA website has information at http://marc.ucla.edu/certificationin-mindfulness-facilitation-c-InnerKids program training, events and information: http://www.susankaisergreenland.com/training-1

Intervention	Math Interactive Learning Experience (MILE)
Description of Intervention	MILE contains elements of premath, math, caregiver training, school consultation, "plan-do-review" strategy, visual/spatial training, and graphomotor skills. Caregivers received strategies for behavior management of the child as well as strategies to encourage self-regulation skills of the child. Other services such as social work, psychiatric, and transportation services were offered to the family. The math intervention program is tailored to address cognitive deficits such as teaching the internal problem-solving strategy of "plan-do-review". The curriculum was also designed to address visual-spatial deficits with visual aids and tactile aids to support learning. Individually-paced instruction, immediate performance feedback and "Handwriting without Tears" curriculum were also utilized to support instruction and goal attainment.
Goal of Intervention	The goal is to improve pre-math/math skills and school-related behaviors of children including improvement in math skills and in graphomotor (handwriting) skills.
Length of Intervention	6 weeks
Population	The program was designed for children ages 3 to 9 years who are at risk for math problems and have behavior problems that interfere with learning readiness. It was developed with children with fetal alcohol syndrome (FAS) and other disorders on the fetal alcohol spectrum (FASD) in mind as they can have a number of learning issues including a problem with math. http://www.emory.edu/msacd/Research/MILE.html
Training Required	MILE training materials are available as manuals and CDs. Training on using these materials is recommended to ensure procedures are carried out in the proper manner. To learn more about training, call (404) 712 - 9800 or emailing through this website: http://www.emory.edu/msacd/Research /MILE.html
Family Involvement	Caregivers attend 2 workshops to educate parents on the implications of FASD, special education information, advocacy techniques and methods to support behavioral regulation. Parents were also given a manual to support learning at home.
Primary Source	Coles, C. D., Kable, J. A., & Taddeo, E. (2009). Math performance and behavior problems in children affected by prenatal alcohol exposure: Intervention and follow-up. *Journal of Developmental & Behavioral Pediatrics, 30,* 7-15.

Supporting Evidence	Additional information can be found at: http://www.psychiatry.emory.edu/ PROGRAMS/GADrug/Feature%20Articles /Alcohol/Going%20the%20Extra%20MILE%20-%202006.pdf
	You can learn more about this program or volunteer to be a tutor by calling Kristen Mitchener, Ph.D. at 404-419-4253. Contact Dr. Claire Coles at the Maternal Substance Abuse and Child Development Project, Emory University School of Medicine, Department of Psychiatry and Behavioral Sciences, 1256 Briarcliff Road, N.E., Suite 324W, Atlanta, Georgia, 30306. Call 404-712-9800 Materials available at www.do2learn.com and https://www.fasdoutreach.ca/toolbox Learn more about training at http://www.emory.edu/msacd/Research/MILE.html

Intervention	GoFAR (Focus and Plan; Act; Reflect)
Description of Intervention	The GoFar program focuses on a core area of deficit identified in FASD; that is, on disorders of affective and cognitive control that are central to behavioral and adaptive disorders from infancy through young adulthood. By school age, such problems often present as attentional problems, deficits in executive functioning and disorders in conduct and behavior. GoFAR is developing methods to address these problems in young children by bringing together computer game technology and behavioral techniques for affective and cognitive control. GoFar is a computer based curriculum with five levels of challenge. The game is structured to prevent random exploration. The child can pick from three different "worlds of play" including land, undersea, and space. The methodology is based on previous work that suggests that a metacognitive technique (FAR: "F" Focus/Plan, "A" Act, "R" Reflect) is helpful in improving behavioral and educational outcomes in FASD. The child is instructed to use the GoFAR strategy to advance through the game; Focus and Plan, Act, & Reflect. GoFAR Intervention Sessions Include: • Evaluation of the child's behavior and emotional responding • Computer games • Learning parenting strategies to improve child behavior • Outcome testing to evaluate results
Goal of Intervention	This curriculum is designed to increase self-regulation, decrease impulsivity, and improve life skills.
Length of Intervention	This game is incorporated into a 10 week, manualized intervention program. The program lasts 10 weeks with each session lasting 60 minutes.
Population	Children diagnosed with Fetal Alcohol Syndrome (FAS) or other significant disability due to alcohol aged 5 to 10
Training Required	No training is required. If you are interested in volunteering to be part of GoFAR, you can call Sharron Paige at 404-712-9818. You will be invited to one of their free workshops where you can learn more about how prenatal alcohol exposure affects learning and behavior and find out how to qualify for GoFAR.
Family Involvement	GoFAR Intervention may include five parent training therapy sessions and one Behavior Analog Therapy Session.

Primary Source	Coles, C. D., Kable, J. A., Taddeo, E., & Strickland, D. C. (2015). A metacognitive strategy for reducing disruptive behavior in children with fetal alcohol spectrum disorders: GoFAR pilot. *Alcoholism: Clinical and Experimental Research, 39*, 2224-2233. doi: 10.1111/acer.12885
Supporting Evidence	For more information visit these websites: • http://www.emory.edu/msacd/Research/GOFAR.html www.do2learn.com

Intervention	Kids in Transition to School Program (KITS)
Description of Intervention	The Kids in Transition to School (KITS) Program, is a short-term, targeted, evidence-based intervention that helps children at high risk for school difficulties to be better prepared for school both socially and academically. It focuses on fostering social competence and self-regulation skills through therapeutic play groups. Children are taught regulatory and social competence skills in a classroom and then given opportunities to practice those skills in groups of unfamiliar children. This program targets problem-solving with peers, sharing, initiating/maintaining interaction, cooperation, recognizing emotions, problem-solving skills, managing negative emotions, and utilizing work-related skills. The intervention is provided two months prior to Kindergarten entry & continued the first 2 months of Kindergarten. There are two phases: 1. School readiness phase; 2 hours 2x weekly 2. Transition/ Maintenance phase; 2 hours 1x weekly The curriculum features three key components—the teaching and practice of: Early literacy skills: phonological awareness, letter-sound knowledge, letter identification, and understanding concepts about print Social-emotional skills: successfully entering peer groups, sharing, cooperation, maintaining social interactions, accurately interpreting the emotions of others Self-regulatory skills: capacity to regulate emotions/behaviors in different situations, inhibitory control
Goal of Intervention	The goals of the KITS program are: • Increase early literacy skills in children in foster care who are entering kindergarten • Increase social skills in children in foster care who are entering kindergarten • Increase self-regulation skills in children in foster care who are entering kindergarten • Increase caregiver involvement in early literacy activities • Increase caregiver involvement in schooling •
Length of Intervention	16 weeks; 2 sessions/week, 2 hours/ session
Population	The target population for this intervention is foster children and other children at high risk for school difficulties aged 4-6 who are entering kindergarten

Training Required	**Minimum Provider Qualifications**
	Playgroup supervisor: A Master's level education or higher in a clinical or education field. This person should also possess an understanding of behavioral and educational principles, supervisory skills, organizational skills, and a thorough understanding of the treatment model underlying the curriculum.
	Playgroup lead teacher: A Bachelor's degree or at least two years of coursework in a relevant field such as early education, special education, education, or psychology, and one year experience working directly with children in the 3-6-year-old age range. Experience following evidence-based curriculum practices. The lead teacher is instruction during playgroups.
	Playgroup assistant teachers: Bachelor's degree or coursework in a relevant field such as early education, special education, education, or psychology or related experience working directly with children in an early childhood education setting.
	There is 35-40-hour training available for staff on site. KITS Certification is also available.
	From: http://www.cebc4cw.org/program/kids-in-transition-to-school-kits/detailedresponsible
Family Involvement	Parents are expected to attend group meetings every other week. The 8-session parent workshop focuses on promoting parent involvement in early literacy and the use of positive parenting practices.
Primary Source	Pears, K. C., Fisher, P. A., Kim, H. K., Bruce, J., Healey, C. V., & Yoerger, K. (2013). Immediate effects of a school readiness intervention for children in foster care. *Early Education Development, 24*, 771-791. doi: 10.1080/10409289.2013.736037
	Pears, K. C., Fisher, P. A., & Bronz, K. D. (2007). An intervention to promote social-emotional school readiness in foster children: Preliminary outcomes from a pilot study. *School Psychology Review, 36,* 665-673.
Supporting Evidence	For more information visit: • www.kidsintransitiontoschool.org • http://www.cebc4cw.org/program/kids-in-transition-to-school-kits/detailed To receive the KITS manual and/or for training opportunities contact Katherine Pears: ○ katherinep@oslc.org

Intervention	Active Music Therapy
Description of Intervention	The intervention included active music therapy. In active music therapy, the therapist and patient are actively involved in playing music using instruments and voice. This music intervention includes singing songs, analysis of libretto, making musical instruments, playing instruments such as pianos and hand bells, song drawing and songwriting. There are 4 phases: 1. Building rapport 2. Accepting and understanding emotions 3. Catharsis phase (children played percussion instruments) 4. Accept their changed status and support themselves.
Goal of Intervention	The goal of the intervention was to reduce aggressive behaviors and improve self-esteem.
Length of Intervention	50 minutes of music intervention 2x per week for 15 weeks
Population	The target population was children with highly aggressive behavior. The students in the study were between 10-12 years of age.
Relevant Findings	This study found that a music-based intervention is beneficial for reducing anxiety and improving mood. Possible mechanisms include relaxation effects, which may modulate the endocrinal responses and stabilize autonomic nervous systems. Music intervention also has effects on the brain function resulting in neural network activation, and ultimately leads to activation of different regions of the brain if performed regularly. These effects also produce better physical and psychological function and therefore have beneficial effects on stress responses, reducing anxiety, improving mood and lessening pain perception.
Training Required	Three certified musical therapists were used in this study.
Family Involvement	None
Primary Source	N/A

Supporting Evidence	Choi, A., Lee, M. S., & Lee, J. (2008). Group music intervention reduces aggression and improves self-esteem in children with highly aggressive behavior: A pilot controlled trial. *eCAM, 7,* 213-217. doi: 10.1093/ecam/nem182

Satisfaction Survey/Outcome Monitoring

After presenting Wendi with a final intervention manual and the Bounce Back (Langley & Jaycox, 2015) intervention kit, we presented Wendi with a fourteen-question satisfaction survey to monitor the outcomes. Both qualitative and quantitative questions were presented so Wendi could rate different portions of the project and explain further thoughts. See Appendix A for full survey.

Effectiveness of Intervention Manual & Satisfaction Survey

Based on the clinical collaborator satisfaction survey, Wendi Trummert was satisfied with the products presented to her. Because it is nearing the end of the school year, it is not feasible for Wendi to implement the intervention kit we provided her with. However, Wendi's answers to the satisfaction survey indicated that she expected the final products would be effective tools for her practice in the future. Wendi indicated that she intends to use the intervention manual to help inform her decisions when deciding on appropriate interventions for students impacted by trauma. Wendi also indicated that future students could research school-based interventions for students with executive functioning deficits.

To further evaluate the effectiveness of the Bounce Back (Langley & Jaycox, 2015) kit and the intervention manual, the satisfaction survey could be re-administered in the following school year three months, six months, and nine months into the school year. An additional satisfaction survey could be created to target other members of the school-based team (teacher, school psychologist, principal, etc.) to determine their level of acceptance of the products, how it impacted their approach, and whether it was useful. We could also incorporate questions into this survey for other team members to find out whether they perceived a difference in behavioral outcomes, school outcomes, and overall well-being of students after receiving these

interventions. This would help us determine if there was a carryover of lessons of the Bounce

Back (Langley & Jaycox, 2015) program that were consistent with other administrators and

professionals working with children learning Bounce Back (Langley & Jaycox, 2015)

curriculum.

In addition, it would be helpful to have Wendi track data related to the performance of

the student in relation to progress through the Bounce Back (Langley & Jaycox, 2015) program.

More data related to school outcomes would significantly improve rationale and evidence to

justify services. Additionally, a less standardized option would be to note how students made

progress towards Individualized Education Plans, if applicable, as students worked through the

Bounce Back (Langley & Jaycox, 2015) program.

Overall Process

When we first began the process, we were each excited about the opportunity to learn

more about school-based interventions for trauma. We divided up applicable databases and each

student located a number of articles. Many of the articles that came up in our search were done

on collective community environmental trauma, which was not applicable to our clinician's

general population. As a result, we came up with definition of trauma to best match the types of

trauma experienced in the population our clinician served and thus altered our inclusion and

exclusion criteria. Once we specified our criteria, we found that we had over 30 articles that

appeared to fit our search criteria. We set out to write CAT tables on each of the articles but after

a discussion with our project mentor, we realized some articles did not meet the inclusion and

exclusion criteria.

Overall, we all enjoyed working with our clinician. She was very open and let us

determine what was feasible for us within the context of our project. She mentioned that CBT,

the intervention that was found to be strongly supported by evidence, may help supplement the variety of other intervention strategies already in practice. She said that it was a feasible intervention to use in her setting. Over the course of the project, we worked well as a team and navigated potential crisis well. We put together a final product we are all proud of and can be used by our clinician in her school.

Recommendations for Follow-Up

Future student research groups could follow up this research questions by completing projects that involve questions such as, "Which trauma based intervention is most effective for children with X diagnosis?", or "What interventions target X type of trauma?", or "What group interventions are most effective for shared traumatic experiences such as a natural disaster?". The current research covered a broad spectrum of diagnoses and traumatic events. We did not cover interventions for shared traumatic experiences as these interventions were excluded to keep our topic relevant for the community collaborator.

School-based interventions for children who have experienced traumatic events is an emerging area of practice and as such limited research has been conducted. Future research should further the body of literature by examining school-based occupational therapy interventions effectiveness in increasing academically relevant outcome factors such as reading and math scores, or social participation at recess. With this research we could better understand, justify, and implement trauma based interventions in the schools, and help children reach their academic mile-markers.

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Appendix A: Satisfaction Survey

University of Puget Sound
Clinical Collaborator Satisfaction Survey
April Crabtree, Sarah Ladderud, Maria Randall
Email: mrandall@pugetsound.edu; sladderud@pugetsound.edu; acrabtree@pugetsound.edu
Research Project Satisfaction Questionnaire

You recently received the Bounce Back Kit and our manual covering school interventions for elementary school children who have experienced trauma. We are seeking feedback to better understand what was beneficial to you and how this product could have been more helpful to you as a practicing clinician. We would greatly appreciate your feedback which should provide direction for any individuals continuing this research so that the results of the research will create a useful and effective end product.

	1 Strongly Disagree	2	3	4	5 Strongly Agree
1. The intervention manual will help inform my decisions when deciding on an appropriate intervention for students who have experienced trauma.					
2. Should there be an appropriate fit, I am likely to try out an intervention found in the manual in addition to Bounce Back.					
3. The intervention manual was easy to follow.					
4. I can share information from the intervention manual with my coworkers to increase acceptance or foster a team approach.					
5. Should there be students who would benefit from a trauma intervention, I plan on using the Bounce Back kit in the next academic year.					
6. The Bounce Back kit provides me with the tools I need to implement the program.					
	1 Strongly Disagree	2	3	4	5 Strongly Agree
7. The Bounce Back kit allows to implement the program efficiently and with ease.					
8. I felt satisfied with communication between the student therapists and myself.					
9. I was satisfied with the overall quality of the intervention manual.					
10. I was satisfied with the overall quality of the Bounce Back program kit.					

11. If you feel like the Bounce Back Kit could have been improved in any way, please explain how:
_____
_____
_____

12. If you feel like intervention manual could have been more useful, please describe what areas you would like to see improvement in: _____
_____

13. Do you have any additional research questions related to this topic that a student group could research next year? _____
_____

14. Please feel free to make any additional comments below about your experience: _____
_____
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