

Shawnee State University

Digital Commons @ Shawnee State University

Occupational Therapy Research Projects

College of Professional Studies

Fall 12-2022

The Role of Occupational Therapy in Treating Developmental Trauma in Appalachia

Carrie A. Williams

Shawnee State University, williamsca2015@gmail.com

Follow this and additional works at: https://digitalcommons.shawnee.edu/ot_etd



Part of the [Occupational Therapy Commons](#)

Recommended Citation

Williams, Carrie A., "The Role of Occupational Therapy in Treating Developmental Trauma in Appalachia" (2022). *Occupational Therapy Research Projects*. 7.
https://digitalcommons.shawnee.edu/ot_etd/7

This OTD Capstone Project is brought to you for free and open access by the College of Professional Studies at Digital Commons @ Shawnee State University. It has been accepted for inclusion in Occupational Therapy Research Projects by an authorized administrator of Digital Commons @ Shawnee State University. For more information, please contact svarney@shawnee.edu.



The Role of Occupational Therapy in Treating Developmental Trauma in Appalachia

Carrie A. Williams

Post Professional Occupational Therapy Doctorate, Shawnee State University

Author Note

This study was presented as my Capstone project in fulfillment of my post-professional occupational therapy doctorate at Shawnee State University. I have no conflicts of interest to disclose.

Special thanks to Dr. Mikel Stone for her guidance during this study. Correspondence concerning this study should be addressed to Carrie A. Williams: williamsca2015@gmail.com

Abstract

This study aimed to investigate and determine the knowledge and education of occupational therapy practitioners who evaluate and treat developmental trauma in Appalachia and adjacent counties by answering the following research questions. 1.) What is the level of education, years of experience, and what formal diagnosis practitioners received on referrals? 2.) Are practitioners satisfied with resources to treat trauma histories? Do they participate in self-learning activities, and what disciplines do practitioners find in their self-learning education? 3.) What theoretical frameworks and assessment tools do practitioners utilize to develop treatment plans? 4.) What are the barriers to treatment when children have trauma histories? The study analyzed data collected from 80 practitioners, as a non-experimental, descriptive study, through an online survey offered to pediatric occupational therapy practitioners in Appalachia and adjacent counties. The instrument used was an author-developed, web-based survey containing 18 questions about practitioners' experience with developmental trauma. Practitioners offered insight into demographics, education, self-directed learning, diagnoses, barriers, and occupational therapy-specific theories and tools to assess developmental trauma. Pediatric practitioners with access to trauma-informed care resources can bring awareness to adverse childhood events (ACE) by identifying early signs of exposure and can implement evidence-based practice to reduce the developmental effects of childhood trauma. By understanding the barriers, education, and available resources, therapists can build a network specifically for pediatric occupational therapy practitioners in Appalachia for trauma-informed best-care practices.

Keywords: developmental trauma, occupational therapy, trauma-informed practice

The Role of Occupational Therapy in Treating Developmental Trauma in Appalachia

Rural Appalachia faces many barriers that can negatively influence health outcomes. Research has been completed regarding geographic location and Appalachia's social and health disparities (Hege et al., 2020). When comparing Appalachia to the rest of the country, the region has various health and social detriments that affect the health and well-being of its residents (Hege, 2020). Some examples of social and health detriments prevalent in the region are substance abuse, level of education, poverty, and access to healthcare (Rawson et al., 2022). Communities that experience levels of socioeconomic stress have an increased reporting of adverse childhood events (Hege, 2020). Adverse childhood events are childhood experiences that can include abuse and household dysfunction (Roy et al., 2019). Higher adverse childhood event scores in rural areas were closely associated with age, female, minority, divorced, less education, lower income, and being out of work (Chanlongbutra et al., 2018).

Appalachian Statistics

In 2019, Appalachia's population was 25.7 million (Appalachian Regional Commission, 2022). Ohio, Kentucky, West Virginia, Tennessee, South Carolina, North Carolina, New York, Maryland, Alabama, Pennsylvania, Georgia, Mississippi, and Virginia are the thirteen states that make up the Appalachia region. More than 400 counties within those thirteen states make up the Appalachian region. The median income in Appalachia is \$53,594, which is more than \$9,000 below that of other counties outside of Appalachia (Appalachian Regional Commission, 2022).

The population of children and youth under 18 in Appalachia in 2020 was 20.9% (Appalachian Regional Commission, 2022). Data from the Appalachian Regional Commission (2022) showed that over ten percent of its residents live in rural counties. Other important data to note is the education and poverty rates of the region. The average poverty rate is 14.7% in

Appalachia, and the number of children and youth under 18 living in poverty is 20.2% compared to the United States average of 17.5% (Appalachian Regional Commission, 2022). Over 84.2% of the Appalachian region graduated with a high school diploma vs. only 17.6% with a bachelor's degree (Appalachian Regional Commission, 2022).

Developmental Trauma Disorder

Understanding how adverse childhood events affect children is essential to improving trauma-informed care and providing practitioners with evidence to guide their practice.

Developmental trauma disorder is not recognized in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V) (Bremness & Polzin, 2014). The need for an encompassing diagnosis of the trauma children experience is vital because the criteria for posttraumatic stress disorder are related more to adulthood (Bremness & Polzin, 2014). Many children with a developmental trauma disorder diagnosis would not fit the post-traumatic stress disorder criteria because the criteria missed the effects of trauma on development (van der Kolk, 2017).

It was not until the DSM-III that recognized children might exhibit symptoms of trauma differently (Tedeschi & Billick, 2017). When applying the adult post-traumatic stress disorder criteria to children, a child risks being misdiagnosed, and appropriate treatment may not be recommended (Kaminer et al., 2005). Developmental trauma disorder was proposed to complement and extend the posttraumatic stress disorder diagnosis in childhood in the DSM-V (Spinazzola et al., 2021). However, due to a lack of empirical evidence, the diagnosis did not make it into the DSM-V (Spinazzola et al., 2021). The DSM-V recognized trauma diagnostic criteria applicable to adults, adolescents, children older than six, and PTSD preschool subtype (Tedeschi & Billick, 2017). Children may exhibit classic signs and symptoms of post-traumatic

stress disorder, such as intrusion, avoidance, negative alterations in cognition and mood, and hyperarousal (McLaughlin et al., 2022). Children may also present with symptoms not identified on established adult assessments (Kaminer et al., 2005). These symptoms include loss and lack of developmental skills, accidents, separation anxiety, attention difficulties, and psychosomatic conditions (Kamier et al., 2005).

Problem Statement

The increasing number of cases of children who have experienced trauma is alarming. In Appalachia, where adverse childhood experiences are high due to the socioeconomic status of many of its residents, occupational therapy practitioners' knowledge and education regarding trauma-informed care, sensory processing, and childhood development are essential when evaluating and assessing children with extensive trauma histories. Reviewing the literature revealed limited information on how occupational therapists address developmental or suspected developmental trauma for children with trauma histories.

Purpose of the study

This study aimed to understand occupational therapy practitioners' knowledge, education, and tools to evaluate and treat children and adolescents with trauma histories. The study sought to understand what self-directed learning practitioners participated in and what evidence-based assessments and theoretical frameworks occupational therapy practitioners utilized. The study also investigated the barriers practitioners experienced when addressing trauma histories in Appalachia.

Theoretical Framework

The Developmental and Sensory Integration frames of reference were the theoretical frameworks that guided this study. The Developmental frame of reference is essential to understanding child development and how skills should be attained. Lorens (1970) described ten premises for human development and occupational therapy. When addressing developmental trauma, it is vital to understand how trauma can interrupt and affect a child's development. A child moves through typical development and attains specific mastery of skills at certain levels. These skills include neurophysiological, physical, psychosocial, psychodynamic development, social language, daily living, and sociocultural skills (Lorens, 1970).

Ayres's Sensory Integration focused on neurobiology, how the brain organizes and interprets sensory information, and how sensory processing can impact learning and behavior (Lane et al., 2019). The inability to effectively process sensory information can negatively impact emotional and self-regulation (Fraser et al., 2017). Children who experience traumas may experience impacted behavioral regulation (Warner et al., 2013). Occupational therapy practitioners with training in sensory integration can offer knowledge and specific skills to address emotional and self-regulation deficits (Warner et al., 2013).

Significance

This study aimed to investigate and determine the knowledge and education of occupational therapy practitioners who evaluate and treat developmental trauma in Appalachia. With the increasing rates of adverse childhood events in Appalachia, it is essential for practitioners who work with at-risk children to have access to training and evidence to inform their practice (Whitney, 2020). Occupational therapy practitioners have the skill set and the experience to minimize the effects of trauma and promote adaptive responses to trauma

(Whitney, 2020). Knowledge regarding what education, assessment tools, and theoretical frameworks pediatric occupational therapy practitioners utilize can support and assist therapists by providing insight into what other pediatric therapists are using to treat children with trauma histories.

Literature Review

Childhood events such as abuse, neglect, and traumatic experiences are something that almost one-half of American children under eighteen have faced (Goddard, 2021). The original ACE study by Felitti et al. (1998) was the foundation on which adverse childhood events were defined, based on a sample of over 17,000 people from Kaiser Permanente's Health Appraisal Clinic. Adverse childhood events, better known as ACE scores, helped define childhood abuse, household challenges, and neglect (Goddard, 2021). The Felitti et al., 2018 study concluded that more than two-thirds of the participants reported one adverse childhood event (Goddard, 2021).

The Effects of Trauma on Early Development

Early identification and education about childhood trauma are imperative. Understanding and addressing traumatic events as early as possible can assist providers in building resiliency and reducing long-term adverse effects (Cprek et al., 2019). Exposures that happen during ages one to six can be damaging to development. Traumatic events during this age range are essential to identify because they occur during a sensitive time in brain development (Bartlett & Smith, 2019). The developing brain is vulnerable to stress, especially the stress response system, prefrontal cortex, hippocampus, and corpus callosum (Delima & Vimpani, 2011). Also, during this early brain development, bonding and attachments are vital for building positive relationships (Perry, 1999). These behaviors resulting from chronic stress can include poor self-regulation, increased impulsivity, and emotional responses such as high levels of experienced anxiety, aggression, and suicidal tendencies (Delima & Vimpani, 2011).

The Centers for Disease Control and Prevention (2019) found that toxic stress can change behavior, impulse control, and stress response. The stress response occurs through the limbic–hypothalamic–pituitary–adrenal axis (Delima & Vimpani, 2011). This system describes the

brain's interaction with the peripheral body through neural and hormonal systems that regulate the body's response to longer-acting stressors such as trauma (Delima & Vimpani, 2011).

Experiencing trauma during childhood can affect how children interact and cope with their environments due to the negative behavior and emotions associated with specific relationships (Perry, 1999). Early traumatic events in childhood can interfere with forming secure attachments, developing maladaptive coping skills, and poor social skills (Bartlett & Smith, 2019). When an adverse event happens in early childhood, more significant health issues can occur later in adulthood, and they can experience higher rates of PTSD and social and emotional problems (Cprek et al., 2019).

Long Term Effects

Exposure to adverse childhood events can have long-lasting effects on adulthood. A study by Noteboom et al. (2021) investigated reports of childhood trauma and their relationships with specific adult chronic physical disorders. It was found that childhood trauma could predict the development of adult physical disorders (Noteboom et al., 2021). Childhood trauma has been linked to substance abuse, attention deficit hyperactivity disorder, depression, anxiety, personality disorders, cognitive, social, and emotional deficits, and risks for chronic diseases later in adulthood (Dye, 2018). Chronic diseases linked to early childhood trauma include cardiovascular disease, diabetes, and cancer (Sanderson et al., 2021). Childhood trauma has been linked to increased risk for alcohol and substance use disorders, suicide, and other health risk behaviors throughout life (Merrick et al., 2019). Prevention of adverse childhood events can lead to a decrease in depression by 44%, chronic obstructive pulmonary disorder by 27%, health risk behaviors such as smoking by 33%, and such socioeconomic challenges as unemployment by 15% (Centers for Disease Control and Prevention, 2019).

Occupational Therapy's Role

Kingsley et al. (2020) discussed that an estimated forty-five percent of children experience or have been exposed to at least one adverse childhood event. Understanding the effects of trauma can lead to improved treatment options for children and may increase resiliency and prevent participation restrictions in society (Schmid et al., 2013). When discussing pediatric mental health conditions, it is essential to understand the occupational therapist's role in mental health. Children who experience a traumatic event may see a loss or decrease in participation in daily occupations such as activities of daily living, education, play, sleep, and social activities (Walker et al., 2022). Occupational therapists have the skills and education to promote healthy, safe environments for children to explore and learn or regain skills to participate in daily occupations (Walker et al., 2022). Occupational therapists also have the ability and skill set to teach parenting skills to promote carryover in the home (Walker et al., 2022). When building an occupational profile during an initial evaluation, it is vital to identify and address deficits, if any, to best support the child's engagement in their environment. Occupational therapists understand that a lack of engagement can lead to poor mental health and that active engagement in developmentally appropriate occupations can lead to a more positive outcome in mental health (Cahill et al., 2020).

Two areas where deficits are often found are sensory processing and the development of motor milestones. Both sensory processing and achievement of motor milestones are specific to each child. Sensory processing plays a significant role in a child's neurological system (Champagne, 2009). Processing patterns such as over or under-stimulation can influence occupational adaptation and performance (Champagne, 2009). Sensory processing is an area that can be aversively affected, and difficulty in emotional, behavioral, and functional consequences

may be found after a traumatic event (Champagne, 2009). Occupational therapists can create daily routines, modify the environment, and promote safe family activities to assist and support self-regulation in the home (AOTA, 2015).

Pediatric occupational therapy practitioners know developmentally appropriate behaviors and skills to identify early deficits or stress signs (Whitney, 2020). Understanding the nature of stress and the relationship between early childhood and lifelong health can assist occupational therapists in building resiliency and functional adaptive responses (Whitney, 2020).

Practitioners can promote functional adaptive responses by interpreting the occupational profile obtained during the evaluation. Determining what theoretical framework to derive developmentally appropriate, occupation-based treatments can provide the therapist with a framework to support children and families with trauma histories.

Conclusion

Understanding the knowledge and education of pediatric occupational therapy practitioners in Appalachia who evaluate and treat families with trauma histories is imperative. Insight into what theoretical framework, assessment tools, and education are utilized in trauma-informed care can improve our profession's knowledge and guide evidence-based practice for our patients. Strengthening our evidence-based practice through a trauma-informed lens is essential in supporting families and children with trauma histories. Completing research and contributing to the literature is one way an occupational therapist can support and treat children and families with trauma histories. Therefore, this study examined these research questions.

Research Questions

- 1.) What is the level of education, years of experience, and what formal diagnosis practitioners received on referrals?
- 2.) Are practitioners satisfied with resources to treat trauma histories? Do they participate in self-learning activities, and what disciplines do practitioners find in their self-learning education?
- 3.) What theoretical frameworks and assessment tools do practitioners utilize to develop treatment plans?
- 4.) What are the barriers to treatment when children have trauma histories?

Methods

Research Design

Approval for the study was obtained through Shawnee State University's Institutional Review Board on April 15, 2022. The study was conducted as a non-experimental, mixed-methods, descriptive study for data collection through an online survey offered to pediatric occupational therapy practitioners in Appalachia. The advantage of using an online survey is that it allows respondents to complete it independently (Portney, 2020). An online survey allows the researcher to gather data from a more prominent geographical location (Portney, 2020). This descriptive study provided data regarding pediatric occupational therapists' group demographics, self-directed learning, diagnoses, barriers, and occupational therapy-specific theories and tools to assess developmental trauma. The non-experimental design allowed the researcher to investigate the responses and compare the data across the participants' answers without manipulated variables. This allowed the researcher to collect and investigate data for context and added essential findings to the overall study. The study's design allowed the researcher to utilize qualitative and quantitative methods to analyze the data. The quantitative data gathered through the survey enabled the researcher to investigate and inform the study's objectives. The qualitative data collected allowed for comparing the "other" answers to survey questions and comparing to see if a theme occurred. The study did not collect sufficient data to complete a thematic analysis. However, this qualitative data is reported in the paper's results section.

Participants

The inclusion criteria to participate in the study were that participants must be occupational therapy practitioners (occupational therapists or occupational therapy assistants) who practiced in pediatric settings in states and adjacent counties identified by the Appalachian

Regional Commission. The exclusion criteria were pediatric practitioners who did not live in the required area and non-pediatric practitioners.

Setting

The online survey was conducted among pediatric practitioners practicing in settings including home health, schools, early intervention, and outpatient facilities across Appalachia and counties sharing a border with Appalachia.

Participant Recruitment

The participants were recruited through online platforms from the American Occupational Therapy Association's (AOTA) CommunOT, private occupational therapy Facebook groups, and public listserv e-mails from the Ohio Occupational Therapy Athletic Trainer and Physical Therapy Board (OTATPT) and the Kentucky Board of Occupational Therapy. The researcher also utilized snowball sampling for participation. The number of participants totaled one hundred thirteen who consented to the initial invitation to participate in the survey research, and eighty participants completed the survey.

Instrument

The instrument used was an author-developed web-based survey that contained 18 questions regarding demographics, self-directed learning, diagnoses, barriers, and occupational therapy-specific theories and tools to assess developmental trauma. See Appendix for the complete survey. Clicking on the survey link took practitioners to the consent form, where they could accept or decline participation. After getting consent, practitioners could begin the survey. They were not permitted to advance through the survey if they declined consent. The survey contained these example questions: I am interested in understanding how education impacts knowledge of developmental trauma disorder. Please indicate and specify your educational

background that contributes to your occupational therapy practice. Do you participate in self-directed learning to contribute to your knowledge of developmental trauma disorder?

Data Collection

The web-based survey was constructed through Survey Monkey, which contained open and closed questions, and took approximately six minutes to complete. Utilizing a web-based survey allowed the researcher to quickly obtain information and monitor the study's progress (Dillman et al., 2014). When the survey was posted, the participants had eight weeks to complete the survey. Eight weeks were utilized to assist in snowball sampling. The survey link was posted on two private Facebook groups for pediatric practitioners: the American Occupational Therapy Association's (AOTA) CommunOT and the researcher's public Facebook page. The researcher sent reminder emails and posts in week six. Data was captured and reported with tools and features found within Survey Monkey.

Data Analysis

Software programs allow for design flexibility to alter the program template and customize the design (Dillman et al., 2014). The data collected was calculated through Survey Monkey by frequencies. Survey Monkey features allowed the researcher to analyze and write a summary view of data; browse individual responses; create and export charts; use a filter, compare, and show rules to analyze specific data views; view and categorize open-ended responses and download the results (Momentive, 2022). Researcher utilized text analysis to identify and filter through responses to tag recurring words and themes for open-ended questions. Closed-ended questions were automated and charted on graphs for visual analysis.

Ethical Considerations

Informed consent for participation in the survey was obtained on the first page before entering the survey. Minimal risks to participation in the survey were discussed. Participation in the study was voluntary, and results were reported anonymously in Survey Monkey to protect the participants' confidentiality. There were no penalties or loss of benefits if a participant refused to take part in the study. Refusal to participate in this study did not affect the participant's relationship with Shawnee State University. The participants could choose to discontinue their participation without penalty or loss of benefits.

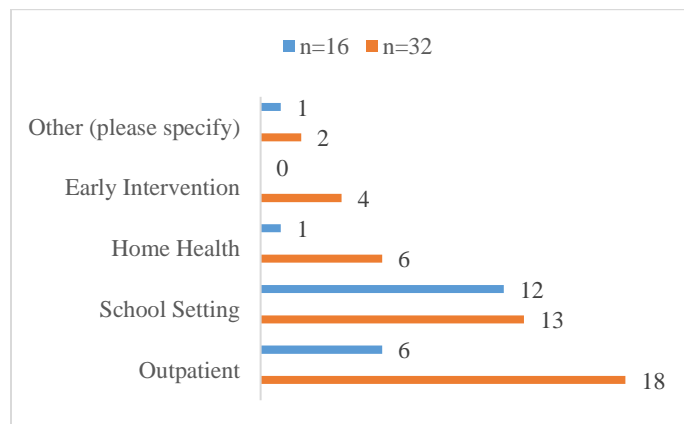
Timeline of the Project Procedures

The survey was made live on Survey Monkey on June 6th, 2022. The online survey was open for eight weeks. Four-week reminder online posts and emails went out to participants on July 4th, 2022. Six-week reminder online posts and emails went out to participants on July 18th, 2022. The survey ended on August 1st, 2022.

Results

Participant Data

Of the 113 participants who accepted the initial invite to participate in the survey, 80 (70.80%) participants consented to participate in the research study survey. Full and partially completed surveys were accepted. Thirty-two participants were excluded for not meeting the study criteria, as they did not work in a county identified as Appalachia, according to the Appalachian Regional Commission, leaving thirty-two participants that met the study criteria and participated in the survey. Sixteen additional participants were included in this study because the county they worked in shared a border with Appalachia. Including these participants in the data is crucial due to the proximity of Appalachia; there could be a crossover in care. This brought the total number of participants to 48. The participants worked in Ohio, Kentucky, and West Virginia. Counties in Ohio represented 32 participants, Kentucky had 14 participants, and West Virginia had 3 participants. One participant worked in both Kentucky and West Virginia. The participants in Appalachia adjacent were all from Ohio. The data will be identified throughout the results as Appalachian in orange and Appalachian adjacent in blue. The pediatric settings that participants worked in are reported in Figure 1.

Figure 1*Pediatric Practice Settings*

The responses indicated that a large portion of Appalachian participants worked in a pediatric outpatient setting, 56.25%, while Appalachian adjacent participants worked mainly in a school setting, at 75%. “Other” responses were for Appalachian providers, one private practice, and one children’s hospital outpatient setting. The “other” response for Appalachian adjacent settings in private practice. Appalachian occupational therapists were 29 of the participants, while occupational therapy assistants were 3 of the respondents. Appalachian adjacent participants were 15 occupational therapists and one occupational therapy assistant. Practitioner years of experience and the highest degree obtained are presented in Figures 2 and 3. Appalachian practitioners with 21+ years of experience mostly have bachelor’s degrees, while practitioners with 0-5 and 11-20 mainly hold master’s degrees. Appalachian adjacent participants with 21+ years of experience hold equal amounts of bachelor's and master’s degrees at 50%. Appalachian adjacent participants with 0-5 and 11-20 years of experience held mostly master's degrees.

Figure 2

Years of Experience

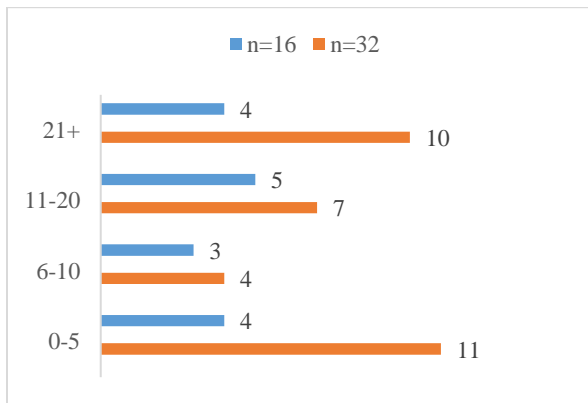
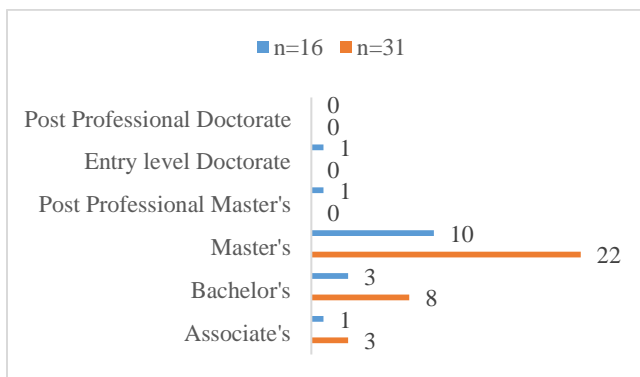


Figure 3

Highest Degree Obtained



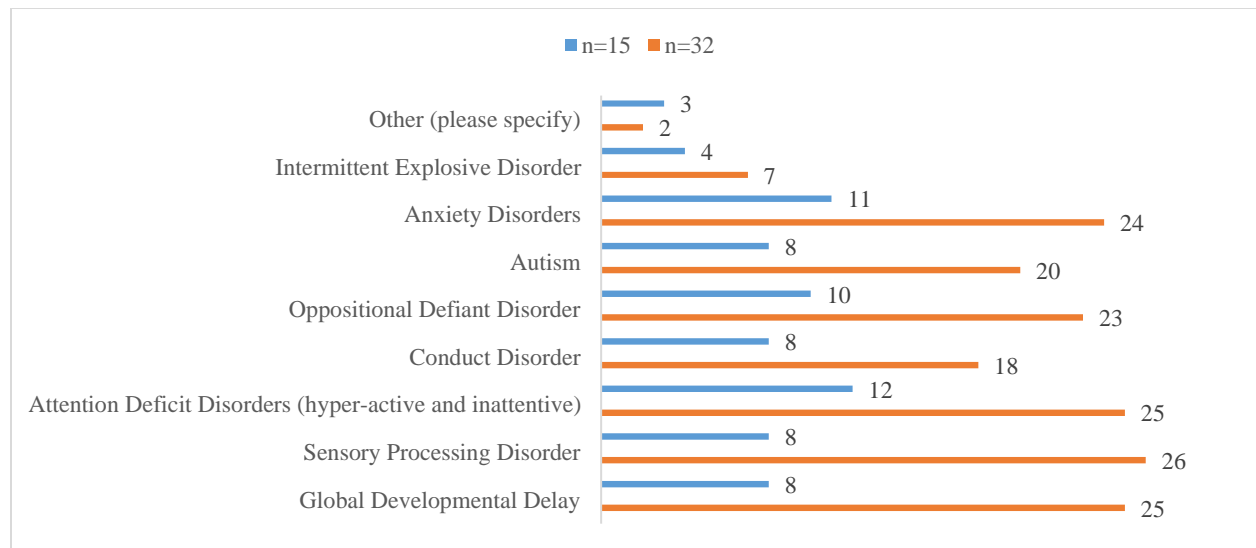
Knowledge of Developmental Trauma

To assess the knowledge of pediatric practitioners of developmental trauma, the survey asked if Appalachian practitioners’ occupational therapy education addressed trauma disorders; out of the 32 responses, 9 (28.13%) answered yes, and 23 (71.88%) answered no. Appalachian adjacent practitioner's answers were 7 (43.75%) yes and 9 (56.25%) no. The formal diagnosis of developmental or suspected developmental trauma disorders found on doctor's referrals to practitioners or in medical records to Appalachians was reported as 29/32 no, and 15/16 Appalachian adjacent providers reported not seeing the formal diagnosis. Diagnoses that are

accompanied by trauma histories are reported in Figure 4. Appalachian practitioners reported that sensory processing disorder was the most reported diagnosis at 81.25%, while global developmental delay and attention deficit disorders tied at 78.13%. “Other” responses (2) were identified as feeding and anxiety, pediatric epilepsy disorder, and psychosomatic symptomology. Appalachian adjacent practitioners report that 80% of diagnoses that accompany trauma disorders are attention deficit disorders. “Other” responses (3) for Appalachian adjacent providers for diagnoses were post-traumatic stress disorder, reactive attachment disorder, and specific learning disorder.

Figure 4

Diagnoses that Accompany Trauma Histories



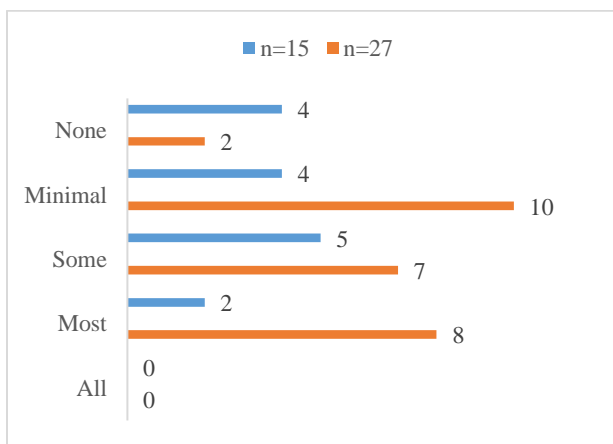
Resources to Treat Developmental Trauma

To understand how satisfied Appalachian practitioners were with their resources for treatment, out of 31 respondents, 18 (58.06%) were dissatisfied, 7 (22.58%) were satisfied, 4 (12.90%) were very dissatisfied, and 2 (6.45%) were very dissatisfied. Appalachian adjacent practitioners out of 15 respondents stated that 10 (66.67%) were dissatisfied, 2 (13.33%) were very satisfied, 2 (13.33%) were satisfied, and 1 (6.667%) was very dissatisfied. To determine if

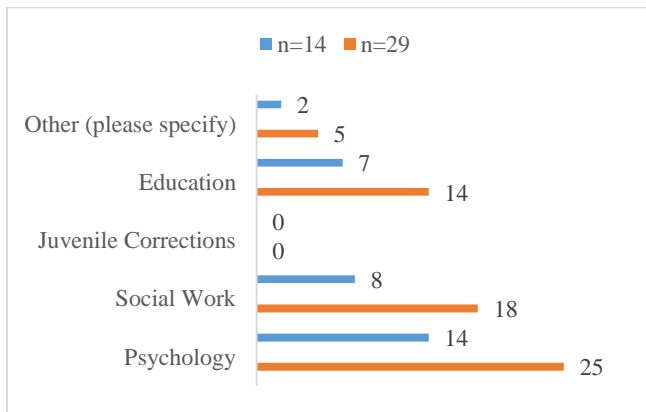
practitioners participated in self-directed learning, Appalachian participants responded, 25 (78.13%) stated yes, and 7 (21.88%) stated no. Appalachian adjacent providers reported that 12 (75%) participated in self-learning and 4 (25%) did not participate in self-directed learning. Appalachian and Appalachian adjacent participants responded when asked how much self-directed learning comes from within the occupational therapy profession, and Figure 5 shows their data.

Figure 5

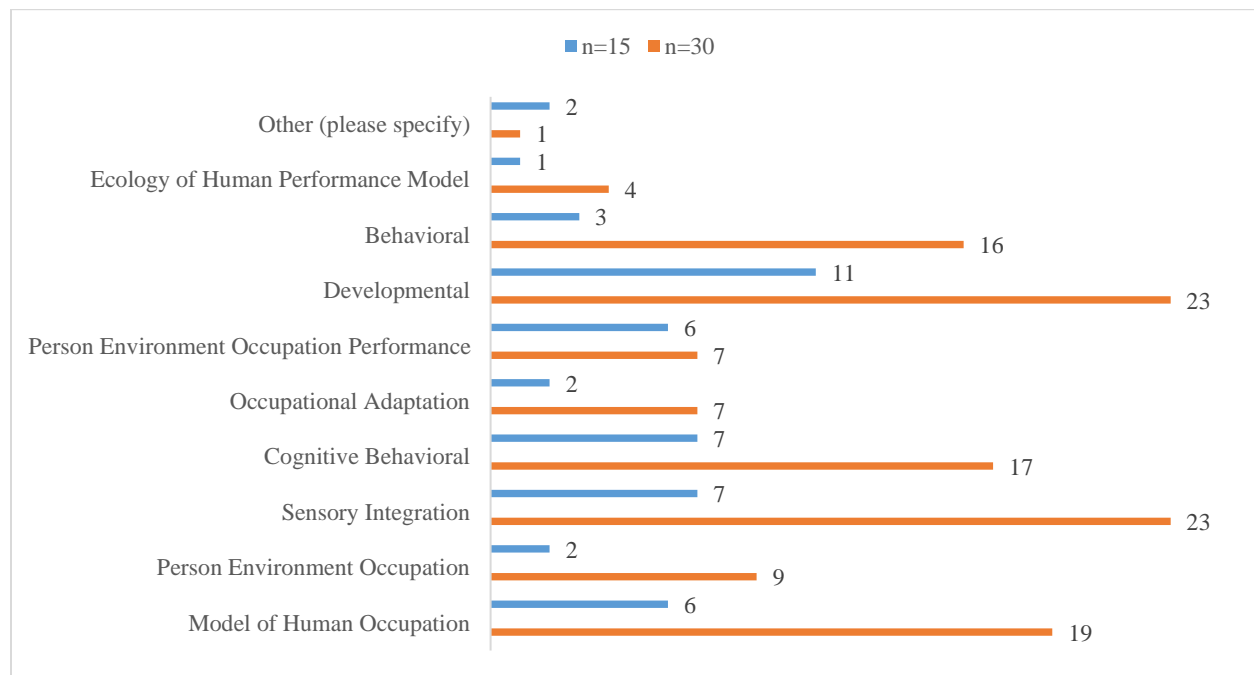
Self-Directed Learning from Occupational Therapy Discipline



Occupational therapy practitioners are accessing self-directed learning; however, minimal to some education comes from the profession. To determine what disciplines Appalachian and Appalachian adjacent practitioners obtained their learning materials, please see Figure 6 for what disciplines were utilized for their education and resources. The “other” responses included the SCOPE Buckeye Series, developmental pediatrics, mental health/behavioral counseling, mental health, and physical therapy. Appalachian adjacent participants’ “other” responses included social programming experts working with at-risk youth and general development websites.

Figure 6*Disciplines that Contribute to Trauma-Informed Care Education***Occupational Therapy Practitioner Tools for Trauma-Informed Care**

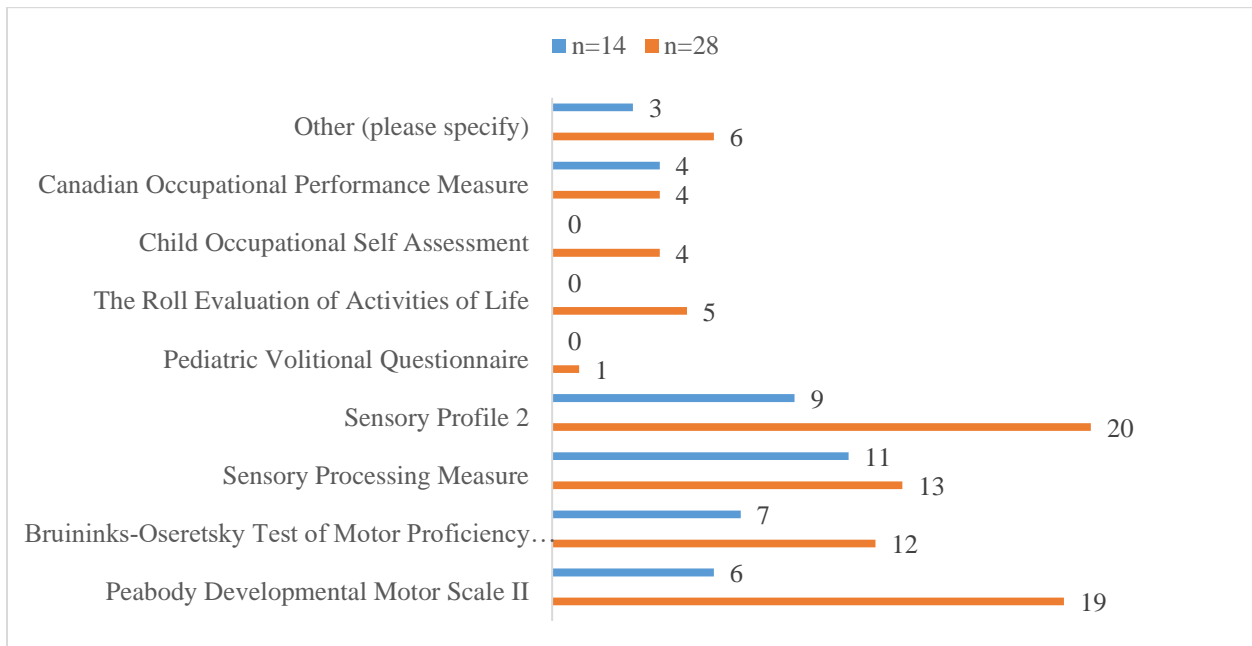
Participants answered what theoretical frameworks they utilized when treating children with developmental or suspected developmental trauma disorder. Their answers are shown in Figure 7. Most participants from Appalachia answers were found in two theoretical frameworks, Developmental and Sensory Integration. The “other” response was the Functional Behavior Assessment. Appalachian adjacent answers were primarily in the Developmental frame of reference. The “other” responses for Appalachian adjacent were trauma-informed practice, and another respondent did not feel like they had enough information; they were still learning.

Figure 7*Theoretical Frameworks*

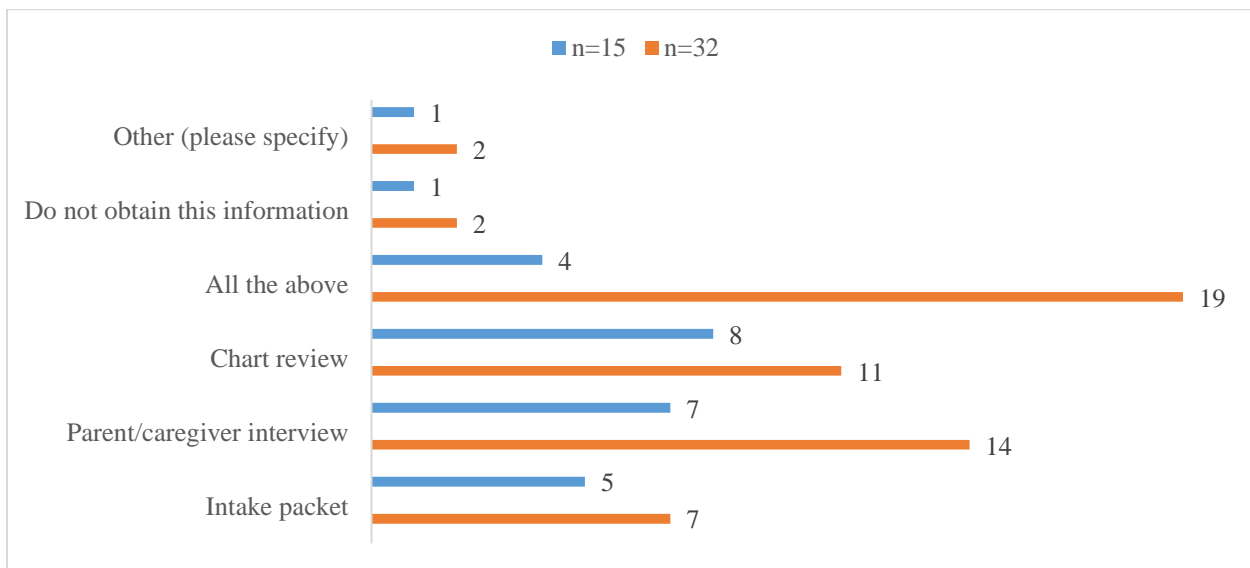
Knowledge of standardized assessment tools practitioners utilize to evaluate children with developmental or suspected trauma disorders was determined in Figure 8. Most Appalachian practitioners utilize the Peabody Developmental Motor Scales II and the Sensory Profile 2. The “other” responses included the Hawaii Early Learning Profile, clinical observation, play, Movement Assessment Battery for Children, the Miller Function and Participation Scales, Bayley 4, Panorama, and the Devereux Student Strengths Assessment (DESSA). Appalachian adjacent practitioners utilized the Sensory Processing Measure and the Sensory Profile 2 when assessing children with trauma histories. “Other” responses were the Beery-Buktenica Developmental Test of Visual-Motor Integration, an interview, and the Hawthorne Preschool Evaluation Scale.

Figure 8

Assessment Tools



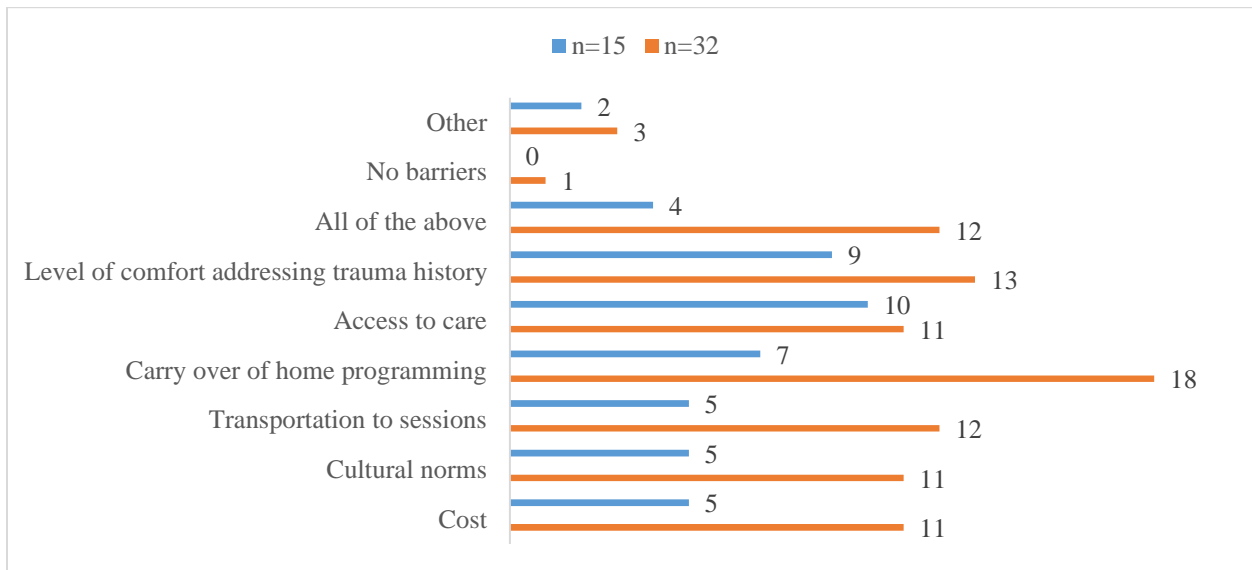
Participants were asked how they obtained trauma history, and background information during the evaluation is shown in Figure 9. Most Appalachian participants utilized chart review, parent/caretaker interviews, and an intake packet. The “other” responses included Children’s Protective Service and observation in the clinic. Appalachian adjacent providers utilized chart review and parent/caretaker interviews as well. The “other” response included a teacher interview.

Figure 9*How Trauma History and Background Information is Obtained*

Participants were asked if any barriers existed to treating developmental or suspected developmental trauma disorder in Appalachia. All participants recorded responses, and the data is presented in Figure 10. Carry-over of home programming was the answer that most practitioners identified as a barrier to treating developmental or suspected developmental trauma disorder reported by Appalachian providers. Access to care was the least reported barrier to evaluating and treating developmental or suspected developmental trauma disorder. Appalachian adjacent providers reported that access to care and level of comfort addressing trauma history is the most significant barrier to evaluating and treating developmental trauma disorder. “Other” (3) responses reported from Appalachian providers were time constraints, other staff and family understanding the impact of trauma, and the cultural secrecy embedded in family norms. “Other” (2) responses reported from Appalachian adjacent providers were parent acknowledgment and follow through, and trauma does not seem to be addressed with caregivers.

Figure 10

Barriers to Evaluating and Treating Developmental Trauma in Appalachia



Discussion

Over two-thirds of children report at least one traumatic event by age 16 (Substance Abuse and Mental Health Services Association, 2022). Examples of traumatic events are neglect, abuse, witnessing or experiencing domestic violence, and assault (Substance Abuse and Mental Health Services Association, 2022). In 2020, the United States Department of Health and Human Services (HHS), in its Childhood Maltreatment report, 1,750 children died of abuse and neglect (U.S. Department of Health & Human Services, 2022). This number was a 1.2% percent increase from the 2016 national estimate.

Occupational therapy practitioners can be essential in preventing and addressing developmental or suspected developmental trauma. The occupational therapy literature researched during this study regarding developmental trauma or suspected developmental trauma was limited. Understanding the impact of trauma on a child's ability to participate in their daily routine is essential for those working with children and families with trauma histories. Practitioners can utilize their skills and expertise in task analysis and environmental modifications to promote fun and safe activities for children (AOTA, 2015). Therapists' knowledge regarding what theoretical frameworks and tools pediatric practitioners utilize when evaluating, treating, and supporting children with trauma histories can ensure best-practice measures.

The results of this study suggest that pediatric occupational therapy practitioners are addressing developmental or suspected developmental trauma in their practice. Over 56% of Appalachian practitioners reported being dissatisfied with their resources to treat patients with developmental or suspected developmental trauma and utilized minimal educational resources from occupational therapy. This was consistent with Appalachian adjacent providers, who

reported 66.67% were dissatisfied with the resources available to evaluate and treat trauma histories.

Appalachian and Appalachian adjacent providers utilized Developmental and Sensory Integration frames of reference to evaluate and treat developmental trauma. This indicates that despite limited information regarding trauma-informed care for pediatrics, practitioners are addressing skill deficits that accompany children and adolescents with trauma histories. Due to brain development and the event's timing, children and adolescents can lose or not develop specific skills. Utilizing Sensory Integration techniques to improve regulation can be one way to improve skills in children and adolescents who experience trauma. Affect, and behavioral regulation affect children and adolescents (Warner et al., 2013). Medications are often utilized to treat behavioral regulation (Warner et al., 2013). Repeated trauma can interfere with neurobiology, and the ability to integrate sensory information risks becoming impaired (Van der Kolk, 2017). A therapist with experience in sensory integration can address self-regulation and the behaviors associated with dysregulation.

Appalachian (76.67%) and Appalachian adjacent (73.33%) providers utilized the Developmental frame of reference as groundwork for treatment interventions. During infancy and childhood, the most critical skill is forming secure attachments (Smith, 2022). Depending on the trauma, this may take away the experience or the ability to form these attachments in early childhood. Exposure to trauma also affects how the brain develops in early childhood and can produce deficits in cognitive functioning (Smith, 2022). Children's reactions to trauma happen on a developmental level (Wilburn, 2022). Understanding and implementing developmentally appropriate treatment interventions, along with teaching parenting skills, are ways that

occupational therapists can utilize the Developmental frame of reference and are key players in promoting or developing skills in children and adolescents with trauma histories.

When completing the literature review for this study, minimal research was found relating to evaluation tools and assessments that can guide practitioners in providing treatment interventions. Learning more about available strategies, resources, and education can promote and support practitioners to advocate for their profession and patients more effectively. The objectives met during this study assist with developing groundwork to which practitioners can access information on what assessments and frameworks to evaluate and treat developmental or suspected developmental trauma histories. Applying the data found during the study provides occupational therapists with information that can guide their practice.

Strengths

The strengths of this study are that it provides the profession with valuable data regarding how Appalachian providers, a region with increased adverse childhood events, are evaluating and treating patients with developmental or suspected developmental trauma histories. It also adds to the literature regarding what frameworks practitioners utilize with children who have experienced trauma. Understanding what practitioners use to evaluate and treat children with trauma histories can inform or expand on what others utilize in their practice. Most of the literature obtained came from the field of psychology. Utilizing what the field of psychology has to offer in behavior and development, with the overlap of occupational therapy's understanding of behavior and development, was determined to be a strength of this study.

Limitations

The limitations of this study are the small study size of 80 participants. Overall, 111 participants consented to complete the survey, but due to the inclusion/exclusion criteria, 32 participants were eliminated. Another limitation of this study is that it is population and region-specific. Therefore, these findings may not reflect the experience of practitioners for other populations that experience trauma or in other regions in the United States. A limitation of this study was that most of the information came from psychology and social work, not occupational therapy.

Implications for practice

Understanding how childhood trauma can affect a child's development is the framework for providing trauma-informed care in a pediatric setting. This study found that while a formal diagnosis of developmental trauma is not on referrals, practitioners often see children with trauma histories with other diagnoses. This study provided insight into what assessments and theoretical frameworks practitioners utilize to treat children with trauma histories. Sharing what tools are being used to treat children who experience trauma can only strengthen professional practice and build evidence-based practice models.

Practitioner insight into what education they access for their self-directed learning is also imperative. This study revealed that minimal education is being accessed from the discipline of occupational therapy. Completing this study could help add to the occupational therapy literature regarding childhood trauma and bring awareness to what practitioners in a specific region use as assessment tools. This study also revealed what barriers practitioners experienced when treating developmental or suspected developmental trauma histories in Appalachia. Insight into these

barriers can promote discussions regarding cultural and health literacy and address the Appalachian region's health and social detriments.

Future Projects/Research

Future projects may include guest speaker presentations at state or local organizations advocating for occupational therapy and our role in treating children with trauma histories. Future research could involve the data that could not be used due to the inclusion/exclusion criteria as a comparison of Appalachian practitioners' responses vs. non-Appalachian practitioners' responses within the same states due to all 80 participants, and their responses were from 3 states, Ohio, Kentucky, and West Virginia. Future research could also expand on what occupational therapists could do to address health literacy and health and social detriments in pediatric settings within Appalachia.

Conclusion

Rural communities that experience socioeconomic stressors are more prone to adverse childhood events (Hege, 2020). Adverse childhood events impact the lifespan and can predict adult health (Whitney, 2020). Pediatric practitioners with access to trauma-informed care resources can bring awareness to adverse childhood events (ACE) by identifying early signs of exposure and can implement evidence-based practice to reduce the developmental effects of childhood trauma. By understanding the barriers, education, and available resources, therapists can build a network specifically for pediatric occupational therapy practitioners in Appalachia for trauma-informed best-care practices.

References

- American Occupational Therapy Association (AOTA). (2015). Occupational therapy's role in mental health promotion, prevention, & intervention with children and youth: Childhood trauma. Retrieved September 3, 2022, from www.aota.org/practice/children-youth/mental%20health/school-mental-health.aspx
- Appalachian Regional Commission. (2022). Appalachian regional commission - Investing in Appalachia's economic future. Retrieved September 3, 2022, from <https://www.arc.gov/income-and-poverty-in-appalachia/>
- Bartlett, J. D., & Smith, S. (2019). The role of early care and education in addressing early childhood trauma. *American Journal of Community Psychology, 64*(3–4), pp. 359–372. <https://doi.org/10.1002/ajcp.12380>
- Blaustein, M. E., & Kinniburgh, K. M. (2015). When age doesn't match stage: Challenges and considerations in services for transition-age youth with histories of developmental trauma. *Focal Point: Youth, Young Adults, and Mental Health, 29*, 17-20. Portland, OR: Research and Training Center for Pathways to Positive Futures, Portland State University.
- Bremness, A., & Polzin, W. (2014). Commentary: Developmental trauma disorder: A missed opportunity in DSM V. *Journal of the Canadian Academy of Child and Adolescent Psychiatry, 23*(2), 142–415.
- Cahill, S. M., Egan, B. E., & Seber, J. (2020). Activity- and occupation-based interventions to support mental health, positive behavior, and social participation for children and youth: A systematic review. *The American Journal of Occupational Therapy, 74*(2), 7402180020p1-7402180020p28. <https://doi.org/10.5014/ajot.2020.038687>

- Center for Disease Control and Prevention. (2019). Preventing adverse childhood experiences (ACEs): Leveraging the best available evidence. Retrieved November 16, 2021, from <https://www.cdc.gov/violenceprevention/pdf/preventingACES.pdf>
- Centers for Disease Control and Prevention. (2019). Vital signs fact sheet: Adverse childhood experiences. Adverse Childhood Experiences Resources. Retrieved October 22, 2022, from <https://www.cdc.gov/violenceprevention/aces/resources.html>
- Chanlongbutra, A., Singh, G. K., & Mueller, C. D. (2018). Adverse childhood experiences, health-related quality of life, and chronic disease risks in rural United States. *Journal of Environmental and Public Health*, 2018, 1–15. <https://doi.org/10.1155/2018/7151297>
- Cprek, S. E., Williamson, L. H., McDaniel, H., Brase, R., & Williams, C. M. (2019). Adverse childhood experiences (ACEs) and risk of childhood delays in children ages 1–5. *Child and Adolescent Social Work Journal*, 37(1), 15–24. <https://doi.org/10.1007/s10560-019-00622-x>
- Crouch, E., Radcliff, E., Probst, J. C., Bennett, K. J., & McKinney, S. H. (2019). Rural-urban differences in adverse childhood experiences across a national sample of children. *The Journal of Rural Health*, 36(1), 55–64. <https://doi.org/10.1111/jrh.12366>
- Delima, J., & Vimpani, G. (2011). The neurobiological effects of childhood maltreatment: An often overlooked narrative related to the long-term effects of early childhood trauma? *Family Matters*, 89, 42–52. <https://search.informit.com.au/documentSummary;dn=717010661945019;res=IELAPA>
- Dillman, D.A., Smyth, J.D. & Christian, L.M. (2014). *Internet, phone, mail and mixed-mode surveys: The tailored design method*. Hoboken, NJ: WILEY.

- Dye, H. (2018). The impact and long-term effects of childhood trauma. *Journal of Human Behavior in the Social Environment*, 28(3), 381–392.
<https://doi.org/10.1080/10911359.2018.1435328>
- Felitti, V., Anda, R., Nordenberg, D., Williamson, D., Spitz, A., Edwards, V., & Marks, J. (1998). Relationship of childhood abuse and household dysfunction to many leading causes of adult death: The adverse childhood experiences (ACE) study. *American Journal of Preventive Medicine*, 14(4), 245–258.
- Fraser, K., MacKenzie, D., & Versnel, J. (2017). Complex trauma in children and youth: A scoping review of sensory-based interventions. *Occupational Therapy in Mental Health*, 33(3), 199–216. <https://doi.org/10.1080/0164212x.2016.1265475>
- Goddard, A. (2021). Adverse childhood experiences and trauma-informed care. *Journal of Pediatric Health Care*, 35(2), 145–155. <https://doi.org/10.1016/j.pedhc.2020.09.001>
- Hege, A., Bouldin, E., Roy, M., Bennett, M., Attaway, P., & Reed-Ashcraft, K. (2020). Adverse childhood experiences among adults in North Carolina, USA: Influences on risk factors for poor health across the lifespan and intergenerational implications. *International Journal of Environmental Research and Public Health*, 17(22), 8548.
<https://doi.org/10.3390/ijerph17228548>
- Kaminer, D., Seedat, S., & Stein, D. (2005, June). Post-traumatic stress disorder in children. *World Psychiatry*, 4(2), 121–125.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1414752/>
- Kingsley, K., Sagester, G., & Weaver, L. L. (2020). Interventions supporting mental health and positive behavior in children ages birth–5 yr: A systematic review. *The American Journal*

of Occupational Therapy, 74(2), 7402180050p1-7402180050p29.

<https://doi.org/10.5014/ajot.2020.039768>

Lane, S. J., Mailloux, Z., Schoen, S., Bundy, A., May-Benson, T. A., Parham, L. D., Smith

Roley, S., & Schaaf, R. C. (2019, June 28). Neural Foundations of Ayres Sensory

Integration®. *Brain Sciences*, 9(7), 153. <https://doi.org/10.3390/brainsci9070153>

Liming, K. W., & Grube, W. A. (2018). Wellbeing outcomes for children exposed to multiple

adverse experiences in early childhood: A systematic review. *Child and Adolescent*

Social Work Journal, 35(4), 317–335. <https://doi.org/10.1007/s10560-018-0532-x>

Llorens, L. (1970). Facilitating growth and development: The promise of occupational therapy.

[1969 Eleanor Clarke Slagle Lecture]. AOTA Press.

Merrick MT, Ford DC, Ports KA, et al. (2019). Vital Signs: Estimated proportion of adult health

problems attributable to adverse childhood experiences and implications for prevention

— 25 States, 2015–2017. *Morbidity and Mortality Weekly Report*, 68, 999–1005.

DOI: <http://dx.doi.org/10.15585/mmwr.mm6844e1external icon>.

McLaughlin, K. (2022). Posttraumatic stress disorder in children and adolescents: Epidemiology,

pathogenesis, clinical manifestations, course, assessment, and diagnosis (D. Brent & M.

Friedman, Eds.). uptodate.com. Retrieved October 18, 2022, from

[https://www.uptodate.com/contents/posttraumatic-stress-disorder-in-children-and-](https://www.uptodate.com/contents/posttraumatic-stress-disorder-in-children-and-adolescents-epidemiology-pathogenesis-clinical-manifestations-course-assessment-and-diagnosis#H3276263985)

[adolescents-epidemiology-pathogenesis-clinical-manifestations-course-assessment-and-](https://www.uptodate.com/contents/posttraumatic-stress-disorder-in-children-and-adolescents-epidemiology-pathogenesis-clinical-manifestations-course-assessment-and-diagnosis#H3276263985)

[diagnosis#H3276263985](https://www.uptodate.com/contents/posttraumatic-stress-disorder-in-children-and-adolescents-epidemiology-pathogenesis-clinical-manifestations-course-assessment-and-diagnosis#H3276263985)

Noteboom, A., Have, M. T., de Graaf, R., Beekman, A. T., Penninx, B. W., & Lamers, F. (2021).

The long-lasting impact of childhood trauma on adult chronic physical disorders. *Journal*

of Psychiatric Research, 136, 87–94. <https://doi.org/10.1016/j.jpsychires.2021.01.031>

- Perry, B.D. (1999). Bonding and attachment in maltreated children: Consequences of emotional neglect in childhood. *CTA Parent and Caregiver Education Series* 1(3). ChildTrauma Academy Press.
- Portney, L. (2020). *Foundations of clinical research: Applications to evidence-based practice* (4th ed.). F.A. Davis Company.
- Rawson, J., Thevenin, L., Balko, I., Seifarth, F., Meltzer, H., Dhumak, V., Bush, A., Kimble, W., Wen, S., & Ellison, P. (2022). Substance abuse and rural Appalachian pediatric trauma in West Virginia. *International Journal of Pediatrics*, 2022, pp. 1–5.
<https://doi.org/10.1155/2022/4906812>
- Roy, M., Bouldin, E., Bennett, M., & Hege, A. (2019). Adult food insecurity and the relationship with adverse childhood experiences among residents of Appalachian North Carolina. *Journal of Appalachian Health*, 1(3), 17–26. <https://doi.org/10.13023/jah.0103.03>
- Sanderson, M., Mouton, C. P., Cook, M., Liu, J., Blot, W. J., & Hargreaves, M. K. (2021). Adverse childhood experiences and chronic disease risk in the southern community cohort study. *Journal of Health Care for the Poor and Underserved*, 32(3), 1384–1402.
<https://doi.org/10.1353/hpu.2021.0139>
- Schmid, M., Peterman, F., Fegert, J. (2013). Developmental trauma disorder: Pros and cons of including formal criteria in the psychiatric diagnostic systems. *BMC Psychiatry*, 13(3). 1-12.
- Smith, M.N. (2022). Occupational therapy's role in the foster care system. *The Open Journal of Occupational Therapy*, 10(1), 1–6. <https://doi.org/10.15453/2168-6408.1850>
- Spinazzola, J., van Der Kolk, B., Ford, J. (2021). Developmental trauma disorder: A legacy of attachment trauma in victimized children. *Journal of Traumatic Stress*, 34, 711-720.

Substance Abuse and Mental Health Services Association. (2022). Understanding child trauma.

Retrieved October 23, 2022, from [https://www.samhsa.gov/child-trauma/understanding-child-](https://www.samhsa.gov/child-trauma/understanding-child-trauma#:~:text=At%20least%20in%207,this%20is%20likely%20an%20underestimate.)

[trauma#:~:text=At%20least%20in%207,this%20is%20likely%20an%20underestimate.](https://www.samhsa.gov/child-trauma/understanding-child-trauma#:~:text=At%20least%20in%207,this%20is%20likely%20an%20underestimate.)

Tedeschi, F., & Billick, S. (2017). Pediatric PTSD in the DSM-5 and the forensic interview of traumatized youth. *Journal of the American Academy of Psychiatry and the Law*, 45(7), 175–183.

The National Child Traumatic Stress Network. (2018). Effects. Retrieved September 13, 2022, from <https://www.nctsn.org/what-is-child-trauma/trauma-types/early-childhood-trauma/effects>

Toker, T., Tiryaki, A., ÖZçürümez, G., & Iskender, B. (2011). The relationship between traumatic childhood experiences and proclivities towards substance abuse, self-esteem, and coping strategies. *Turkish Journal of Psychiatry*, 22(8), 1–9.

U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2022). Child Maltreatment 2020. Available from <https://www.acf.hhs.gov/cb/data-research/child-maltreatment>.

van der Kolk, B. A. (2017). Developmental trauma disorder: Toward a rational diagnosis for children with complex trauma histories. *Psychiatric Annals*, 35(5), 401–408.
<https://doi.org/10.3928/00485713-20050501-06>

van Der Kolk, B., Ford, J., Spinazzola, J. (2019). Comorbidity of developmental trauma disorder (DTD) and post-traumatic stress disorder: Findings from the DTD field trial. *European*

Journal of Psychotraumatology, 10(1), 1-12.

<https://doi.org/10.1080/20008198.2018.1562841>

Walker, P., Gee, B., & Leonard, S. (2022). Occupational therapy's psychosocial role for young children transitioning out of foster care. *The Open Journal of Occupational Therapy*, 10(3). <https://doi.org/10.15453/2168-6408.2003>

Warner, E., Koomar, J., Lary, B., & Cook, A. (2013). Can the body change the score? Application of sensory modulation Principles in the treatment of traumatized adolescents in residential settings. *Journal of Family Violence*, 28(7), 729–738.

<https://doi.org/10.1007/s10896-013-9535-8>

Whitney, R. (2020). Self-regulation is crucial in protecting against the harmful effects of adverse childhood experiences: Critical role for occupational therapists. *The Open Journal of Occupational Therapy*, 8(1), 1–9. <https://doi.org/10.15453/2168-6408.1622>

Wilburn, V. G., Huber, M. E., Senter, D., & Stoll, H. B. (2022). Considerations for occupational therapists in developing community-level interventions for youth with high adverse childhood experiences (ACEs). *The Open Journal of Occupational Therapy*, 10(1), 1–7. <https://doi.org/10.15453/2168-6408.1800>

Appendix

The Appendix contains the questions that were provided in the survey for practitioners.

2.) Do you work in a state that is considered Appalachia? Check all that apply.

- a. Ohio
- b. Kentucky
- c. West Virginia
- d. Virginia
- e. Maryland
- f. North Carolina
- g. South Carolina
- h. Tennessee

- i. Alabama
 - j. Mississippi
 - k. Georgia
 - l. Pennsylvania
 - m. New York
- 3.) If yes, please identify the county or counties in which you work.
- 4.) What practice setting do you work in?
- a. Outpatient
 - b. home health,
 - c. school, hospital-based,
 - d. early intervention,
- 5.) How long have you been in practice?
- i. 0-5
 - ii. 6-10
 - iii. 11-20
 - iv. 21+
- 6.) Are you an OT or COTA?
- a. Occupational Therapist
 - b. Occupational Therapy Assistant
 - c.
- 7.) I am interested to understand how education impacts knowledge of developmental trauma disorder. Please indicate and specify your educational background that contributes to your occupational therapy practice.

- i. Associates
 - ii. Bachelors
 - iii. Entry Level Masters
 - iv. Post Professional Master's
 - v. Entry Level Doctorate
 - vi. Post Professional Doctorate
- 8.) Did your occupational therapy education have a course or address trauma?
- i. Yes
 - ii. No
- 9.) As a clinician, do you see the diagnosis of Developmental Trauma Disorder (DTD) stated on referrals or within medical records?
- i. Yes
 - ii. No
- 10.) If no, what diagnosis do you often see accompanied by a trauma history?
- a. Global Developmental Delay
 - b. Sensory Processing Disorder
 - c. Conduct Disorder
 - d. Attention Deficit Disorders (hyperactive and inattention)
 - e. Oppositional Defiant Disorder
 - f. Autism
 - g. Anxiety Disorders
 - h. Intermittent Explosive Disorder
 - i. Other

- 11.) If treating children/adolescents with DTD or suspected to have DTD, do you feel you have sufficient resources to evaluate and treat the child?
- i. Very Satisfied
 - ii. Satisfied
 - iii. Dissatisfied
 - iv. Very Dissatisfied
- 12.) Do you participate in self-directed learning to contribute to your knowledge of developmental trauma disorder?
- a. Yes
 - b. No
- 13.) If you are participating in self-directed learning, how much of your learning comes from the discipline of occupational therapy?
- a. All
 - b. Most
 - c. Some
 - d. Minimal
 - e. None
- 14.) What other disciplines do you obtain information for contributing to your self-directed learning? Select all that apply.
- a. Social Work
 - b. Psychology
 - c. Juvenile Corrections
 - d. Education

e. Other

15.)

What frame of reference or theory do you use when implementing interventions when treating individuals diagnosed with DTD or suspected to have DTD?

- a. Model of Human Occupation
- b. Person-Environment Occupation
- c. Sensory Integration
- d. Cognitive Behavioral
- e. Person-Environment Occupation Performance
- f. Occupational Adaptation
- g. Ecology of Human Performance
- h. Developmental
- i. Behavioral
- j. Other

16.) What assessments do you utilize to assess your patients with trauma histories? Please select all that apply.

- a. Peabody Developmental Motor Scales II
- b. Bruininks-Oseretsky Test of Motor Proficiency Second Edition
- c. Sensory Processing Measure
- d. Sensory Profile 2
- e. Pediatric Volitional Questionnaire
- f. The Roll Evaluation of Activities of Life
- g. Child Occupational Self-Assessment

- h. Canadian Occupational Performance Measure
- i. Other

17.) How do you obtain information during the evaluation regarding trauma history?

- a. Intake Packet
- b. Chart Review
- c. Parent/caregiver interview
- d. Do not obtain this information
- e. Other

18.) What barriers, if any, are there to treating individuals with developmental trauma in Appalachia? Select all that apply.

- a. Cost
- b. Cultural Norms
- c. Transportation to sessions
- d. Access to care
- e. Level of comfort addressing trauma
- f. Carryover of home programming
- g. No barriers
- h. Other

