# Exploring the Impacts of Media Use in the Classroom and Trauma

by

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The above committee determined that the thesis is acceptable in form and content and that a satisfactory knowledge of the field covered by the thesis was demonstrated by the candidate during an oral examination. A signed copy of the Certificate of Approval is available from the School of Graduate and Postdoctoral Studies.

**ABSTRACT**

Research has repeatedly shown that media can create trauma responses in viewers, but little has explored how classroom-based media can adversely affect students' wellbeing. There is a significant gap in trauma-informed training for educators, and teachers do not feel equipped to support students with a history of trauma or implement trauma-informed care principles. Therefore, this qualitative study sought to contribute to this gap by investigating the impacts of media used in classrooms on trauma responses in students to inform trauma-informed care practices for educators using media. Data was collected from social media to analyze the lived experiences of students who have had adverse reactions to media shown in classes. Findings demonstrated that media in classrooms can elicit trauma responses in students. Problematic topics were explored, as well as trauma-informed recommendations that can be used to inform educator pedagogy and trauma-informed care training for teachers using media as a teaching tool.

**Keywords:** trauma; media; adverse childhood experiences; trauma-informed care; pedagogy

**AUTHOR'S DECLARATION**

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## STATEMENT OF CONTRIBUTIONS

I hereby certify that I am the sole author of this thesis and that no part of this thesis has been published or submitted for publication. I have used standard referencing practices to acknowledge ideas, research techniques, or other materials that belong to others. Furthermore, I hereby certify that I am the sole source of the creative works and/or inventive knowledge described in this thesis.

## DEDICATIONS

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| | |
|---|---|
| ACE | Adverse Childhood Experience |
| PTSD | post-traumatic stress disorder |
| PYD | Positive Youth Development |
| STS | secondary traumatic stress |
| TIC | trauma-informed care |
| TIP | trauma-informed practices |
| VT | vicarious trauma |

# Chapter 1. Introduction

## 1.1 Introduction

The effects of movies and television on viewers' mental health and wellbeing have been an area of concern and extensive research since the early 1950s (Council on Communications and Media, 2009). Pediatricians, psychologists, educators, politicians, and parents have been specifically concerned about the impacts of media violence on children's psychological health and development (Council on Communications and Media, 2009; Strasburger et al., 2012). Studies have shown that exposure to media violence can increase anxiety, depression, social isolation, fear, aggressive behaviours, risk-taking behaviours, and post-traumatic stress in children and youth (Anderson et al., 2017; Leiner et al., 2016; Pfefferbaum et al., 2019). The National Television Violence study, one of the most extensive studies conducted on this topic, found that the highest proportion of violence portrayed on television was found in children's shows (Federman, 1997). Huston et al. (as cited in Council on Communications and Media, 2009) calculated that "by 18 years of age, the average young person will have viewed an estimated 200 000 acts of violence on television alone" (p. 1496). For example, Turkmen (2016) conducted a study in which they analyzed twenty-three of the top-grossing children's animated films and found that there was an average of 54 violent acts per film and "a violent act was shown, on average, every 1.7 minutes" (p. 7).

Today, thirty years after the original National Television Violence study (Federman, 1997), it is evident that media such as movies, television shows, documentaries, and news reports have become much more accessible to children and youth. Young people are constantly exposed to media due to social media platforms sharing millions of videos each day and the ability to watch on devices beyond the television, such as mobile devices and computers. According to the

American Academy of Child and Adolescent Psychiatry (2020), children ages eight to twelve spend an average of four to six hours a day on screens. Teens spend approximately 7.5 hours per day on screens (Canadian Pediatric Society, 2019) and 11 hours each week watching television (Stoll, 2022).

Due to the massive amount of media in young people's lives and the ease at which they can access or be exposed to horrific events or images, it is critical to understand the mental health effects of media on young people. As we are becoming more immersed in the digital age, we are witnessing greater access to advanced and violent media (Holman et al., 2020; MediaSmarts, 2022a), along with a rise in youth mental health problems (Anderson et al., 2017; Leiner et al., 2016). For example, special effects are becoming more realistic, and civilians can live-stream or share violent events in "real-time" through social media platforms (Holman et al., 2020). A specific concern on youth mental health is the impact of traumatization.

Trauma is defined as a direct or indirect experience of an event that involves actual or perceived threatened death, serious injury, or threat to oneself or others' physical integrity (Beck & Sloan, 2012). Compared to other mental health responses, the defining feature of trauma is that it causes intense fear, horror, or helplessness (Center for Substance Abuse Treatment, 2014). Trauma may manifest in a wide range of symptoms, including increased heart rate, stomach aches, being easily startled, intrusive thoughts, irritability, overwhelming fear, social withdrawal, difficulty concentrating and depression (Center for Substance Abuse Treatment, 2014; Klinic Community Health Centre, 2013). The severity of the reaction (mild to severe) can heavily impact a person's day-to-day functioning, such as their ability to work, learn, and maintain relationships (Cole et al., 2013; Dye, 2018; Phifer & Hull, 2016).

Individuals can experience secondary traumatic stress from watching or hearing about an event without directly experiencing it themselves (Bethell et al., 2014). Secondary trauma is an

emotional response elicited when an individual learns about the traumatic experience of another individual (National Child Traumatic Stress Network (NCTSN), 2017a). Watching footage of violent events on television or social media platforms can elicit secondary traumatic stress reactions in viewers (Bethell et al., 2014; Dick et al., 2021; Mrug et al., 2015; Thompson et al., 2019). For example, Murray et al. (2009) conducted a study using functional magnetic resonance imaging (fMRI) scans to monitor brain activity in children when watching violent video footage. The amygdala, the part of the brain that uses sensory information to identify threats and regulate fear responses (Janak & Tye, 2015; Olucha-Bordonau et al., 2015), was activated when participants watched violent media, thus demonstrating that the brain viewed the footage as a threat to the person's safety (Murray et al., 2009). This research cannot be ignored when we consider the volume of media youth are exposed to and the potential trauma impacts on their wellness.

We also have to consider the long-term effects of media violence and trauma. Sometimes youth may carry that trauma reaction into adulthood. This phenomenon has been highlighted on Facebook in recent years. In February 2020, the question "what movie traumatized you as a kid?" was posted across social media sites, encouraging users to comment and engage in conversations about movies that they believe had a negative psychological impact on them (KING5Evening, 2020). Thousands of comments were shared, and dozens of original posts were created with this same prompt across Facebook, Tik Tok, Reddit, Quora, Twitter, and Instagram, highlighting the effects of horror films, animated movies, and even film trailers that elicited trauma reactions. For example, Michele Troxel (2020) on Facebook commented that "The Exorcist," "Jaws," and "Carrie" "haunted me for years and I slept in the living room for months" when they were nine years old, and Linda Shockey (2020) shared, "Psycho…I couldn't take a shower, only baths, for a year after watching that movie." When we look at these examples, we

can see that the films elicited a trauma response in the young viewers due to the symptoms they remember experiencing afterwards. The overwhelming fear and intrusive thoughts leading to sleeping in the living room or only having baths were secondary trauma responses as the child built a connection between the movie scene and how it could be replicated in their life.

Some research has found that the more realistic or horrific the graphics are, the higher the risk of trauma (Lavoie et al., 2021). Similarly, finding a deep, personal connection to a setting or character can be a moderating variable as the viewer personally relates to the character or the setting in which the story is taking place (Laffier & Westley, 2022). These trauma responses are common in marginalized groups such as the LGBTQ+ and Black, Indigenous and People of Colour (BIPOC) communities, where representations are already limited, often portrayed negatively, and rarely have a "happy ending" (Laffier & Westley, 2022; McInroy & Craig, 2017; Rogers et al., 2021). Age and developmental stage are also critical moderating factors to consider when conducting psychological and educational research (Fritz & Arthur, 2017). Children and youth at varying developmental stages may find certain stimuli scarier than others (Valkenburg & Piotrowski, 2017). This is important to consider when evaluating the media content children and youth consume as it may elicit stronger responses depending on their stage of development (Valkenburg & Piotrowski, 2017).

Trauma impacts from the media may happen not only in the setting of a home but in schools as well. At the turn of the century, educators were encouraged to use media, pop culture, and real-world, relatable events in their lessons to engage student learning (Mateer et al., 2018; Mayer, 2014; MediaSmarts, 2022b; OD & EI, 2014). Now, media such as films, television shows, documentaries, news footage, and YouTube videos are integrated into millions of lesson plans globally (Barnwell, 2021; Goodspeed, 2022). Using movies, documentaries, television series, and other video sources (e.g., social media posts, news stories, YouTube videos) have the

potential to increase student engagement (Visco, 2019; Vrasidas et al., 2015; Wagner, 2018); provide real-life examples that align with the curriculum; introduce diverse perspectives and authentic voices into the classroom; and cultivate digital and media literacy skills in students (Goodspeed, 2022; MediaSmarts, 2022b).

Unfortunately, along with this initial encouragement of media use in the classroom, there was little discussion of potential trauma impacts on students (Laffier & Westley, 2022). Teachers are expected to cover potentially triggering topics in the curriculum, such as climate change and natural disasters (Ontario Ministry of Education, 2008, 2018a), genocide and discrimination (Ontario Ministry of Education, 2015a, 2018b), mental illness (Ontario Ministry of Education, 2015b, 2019), and the spread of viruses and diseases (Ontario Ministry of Education, 2008), which may cause a trauma response in students, depending on their previous life experiences and the connections they build to the lesson's content. It is estimated that 25-30% of students are affected by trauma (Gibson et al., 2014), and the prevalence of adverse childhood experiences (ACEs) has likely increased since the COVID-19 pandemic (Anderson et al., 2020). This means that at least one in every four students in the classroom has experienced a traumatic event, and these experiences can have negative implications for their learning and development (Howard, 2019).

In recent years, there has been a focus on trauma-informed care (TIC) and practices (TIP) in schools. TIC and TIP acknowledge the widespread impacts of trauma and provide services that support the individual needs of those affected by trauma (Hobbs et al., 2019). For TIP to be effective, all levels of an organization need to "buy in" to these practices (NCTSN, 2017b). In an educational setting, this means all educational personnel are trained in TIP, school policies and procedures integrate TIP, positive and restorative practices to student behaviours are utilized, and there are connections to community services (i.e., mental health services) available through the

school (Hobbs et al., 2019; NCTSN, 2017b; Thomas et al., 2019). There are numerous resources to guide teachers in trauma-informed practices. However, an area with little discussion, even within TIC literature, is classroom media and trauma. The research is clear that media can elicit trauma responses, but we are not exploring the potential impacts of classroom media enough (Gomes de Araújo et al., 2019; Hoge et al., 2017; Silver et al., 2013). Educators need to be aware of the effects the media they show in the classroom can have on their students in order to apply effective and supportive trauma-informed care and practices.

### 1.2 Research problem

Although a substantial amount of research has highlighted that media can elicit trauma responses (Gomes de Araújo et al., 2019; Hoge et al., 2017; Silver et al., 2013; Strasburger et al., 2012), there is little research exploring the media presented in classrooms and the impacts on youth and children specifically (Laffier & Westley, 2022; MediaSmarts, 2021). The research thus far has predominantly focused on how news reports, social media, and films viewed outside the classroom can impact their psychological wellbeing (Gomes de Araújo et al., 2019; Hoge et al., 2017; Holman et al., 2020; Strasburger et al., 2012). This is problematic considering the higher volume of media children and youth consume, their higher risk for experiencing trauma, and the rise in media integrated into 21st-century classrooms. Effective trauma-informed practices in schools need to consider the role of media in trauma.

Previous research highlighted how news coverage, TV shows, and movies could cause trauma reactions in children and youth (Dick et al., 2021; Gomes de Araújo et al., 2019; Laffier & Westley, 2022; Mrug et al., 2015). Real-world events highlighted through documentaries, news coverage, or social media clips can cause post-traumatic stress (PTS) in viewers (Otto et al., 2006; Stainback et al., 2020). For example, several studies have monitored the psychological effects of the media covering acts of terrorism, such as the events of September 11, 2001 (Otto et

al., 2006) and the Boston Marathon Bombings (Holman et al., 2013; Thompson et al., 2019). They found that prolonged exposure to video footage of these events correlated with increased symptoms of anxiety, intrusive thoughts, increased worry about future violent events and PTS symptoms (Otto et al., 2006; Thompson et al., 2019). Wang et al. (2006) found that children who viewed at least five minutes of terrorism-related events on television for several consecutive days were at a higher risk for "being emotionally reactive" and exhibiting "oppositional defiant problems" (p. 365). In addition to terrorism-related events, news coverage of natural disasters, including hurricanes, can elicit trauma responses in children (Dick et al., 2021). For example, Dick et al. (2021) found that children living up to 4500 kilometres away from Hurricane Irma's path still experienced signs of PTS from watching the events through the media. Repetitive news cycles of the COVID-19 pandemic and the fatal impacts of the virus globally also increased psychological distress, especially in adult viewers who were following COVID-19 news "very closely" (Stainback et al., 2020).

In addition to news coverage, we know that fictional media can have trauma impacts on children as well (Carelton, 2010; Gomes de Araújo et al., 2019; Till et al., 2019). For example, Till et al. (2019) found that outpatients who watched the popular young adult drama *13 Reasons Why* (Yorkey, 2017) were triggered after watching the end of the series, where the protagonist, Hannah, dies by suicide. Viewers watched her death occur, and the participants in this study shared that the series was triggering for them as they found similarities between Hannah and a friend of theirs who died by suicide (Till et al., 2019). The participants experienced nightmares connected to the scene and discussed how the show increased their suicidal ideation and thoughts about self-harming behaviours (Till et al., 2019). Gomes de Araújo et al. (2019) reported on a case study of a 10-year-old girl who watched a horror movie with her friend and six years later still displayed symptoms and fulfilled the *Diagnostic and Statistical Manual of Mental Health*

*Disorders, Fourth Edition* (DSM-IV) criteria for post-traumatic stress disorder (PTSD) due to watching the horror movie. Fictional movies such as these may be shown or even discussed in class as a way to integrate pop culture and engage the learner.

As per the curriculum, educators are required to cover topics including natural disasters, mental illness, world events, and the spread of viruses and diseases (Ontario Ministry of Education, 2008, 2015a, 2015b, 2018a, 2018b, 2019). The studies listed above about Hurricane Irma, *13 Reasons Why*, the events of September 11, 2001, the Boston Marathon bombing, and the COVID-19 pandemic all show that topics covered in classrooms have the potential to elicit trauma responses. Utilizing media to teach these topics can be effective as real-life footage and examples can show students how their learning applies to the "real world" and can increase engagement with the content. However, as the research has uncovered, media, presented in any context, can potentially elicit trauma responses (Dick et al., 2021; Gomes de Araújo et al., 2019; Holman et al., 2013; Thompson et al., 2019). Without considering the implications for students in classrooms, we are not designing safe learning spaces that promote student wellness (Dorado et al., 2016; Lacoe, 2020). Educational research has long proposed the need for safe spaces to promote student learning, wellbeing, and success (Lacoe, 2020; Morton, 2022). Safe spaces are where students feel they can be themselves, are accepted and belong, and are free from violence, harassment and harm (Downey & Greco, 2023; Lacoe, 2020). Trauma-informed practices in schools should promote safety in all areas; physical, emotional and psychological (Morton, 2022; NCTSN, 2017b). The goals of trauma-informed practices are to be aware of trauma responses, avoid retraumatization or traumatization, and promote safety and empowerment (Substance Abuse and Mental Health Services Administration, 2014). However, research has shown that teachers do not feel prepared to support students with a history of trauma or other mental health concerns (Gibson et al., 2014; Hobbs et al., 2019; Laffier, 2022a). Laffier (2022a) found that

78% of pre-service teachers did not feel they had enough knowledge or training on trauma-informed practices.

Therefore, trauma-informed research, especially in this digital age, needs to consider the impacts of media on children and youth. Unfortunately, this is an area with little attention (Laffier & Westley, 2022). The majority of research has explored media in general and not in a classroom context. Comstock & Platania (2017) stated, "trauma exposure and its resulting effects are far less researched among children compared to adolescents and adults" (p. 2). This is problematic since children are at higher risk of experiencing trauma, especially from media.

Additionally, there is little research-based support for teachers in understanding the links between media discussed or viewed in the classroom and trauma impacts. Organizations such as CommonSense Media have developed resources for how educators can facilitate difficult conversations with their students about what they see in the news (Knutson, 2021), and MediaSmarts (2022c) has created lesson plans for educators to teach students about the consequences of media violence. However, there are few resources for teachers to understand trauma impacts from media, how to choose trauma-sensitive media, and how to support students who are affected by media. The Office of Educational Technology in the United States Department of Education (2017) released several calls to action regarding technology use and early learners, one point stating:

> Longitudinal studies are needed to better understand how young children use and learn with technology and interactive media and its short-and long-term effects. This includes research to understand developmental shifts in children's use of technology at different ages and that maps the trajectory of children's learning and technology use over time, as well as the interaction between technology use and health related behaviors, including diet and physical activity. (para. 3)

They also stated that research is needed on how early educators make decisions about what technologies and what content to use and how to train and provide ongoing support for early educators in implementing technologies (Office of Educational Technology, 2017).

Without this knowledge, we cannot create effective trauma-informed tools for educators, provide effective teacher education, or provide adequate support for students. There are very few evidence-based resources for teachers to refer to as they create lesson plans using media in a trauma-informed way. Websites such as CommonSense Media or IMDb provide information such as age ratings and reviews for inappropriate content (Goodspeed, 2022; IMDb, n.d.). However, these are typically created for parents and not educators who need to plan for 25-35 students with varying mental health needs. In summary, more research is needed on the link between trauma and media in schools to develop effective trauma-informed practices within education.

### 1.3 Research purpose

To address this gap in research and inform trauma-informed practices in schools, this study sought to explore how individuals experienced trauma from media discussed or viewed in schools. This qualitative study aimed to identify how media shown in the classroom can impact students and how trauma-informed resources can be created to inform educators' pedagogy to support student wellbeing. The specific research questions that guided this study were:

Q1. How can the media shown or discussed in classrooms impact students, specifically in the area of trauma responses?

Q2. How can awareness of classroom media and trauma impacts inform teacher pedagogy and the creation of trauma-informed care for educators?

To explore these questions, a qualitative research design was used. It was essential to examine the lived experiences and perspectives of individuals who have been affected by the

media shown to them as students. Therefore, a phenomenological research approach was used whereby the experiences of a phenomenon, in this case trauma from media, were explored. Phenomenological studies can provide insight and find meaning within human experiences by investigating the lived experiences of individuals or a group of people (Neubauer et al., 2019; Webb & Welsh, 2019). This approach is especially valuable in uncovering psychological processes such as mental health and trauma (Webb & Welsh, 2019). Experts have stressed the importance of understanding trauma victims' experiences in order to develop trauma-informed care policies and practices (Center for Substance Abuse Treatment, 2014; Poole et al., 2017). Although phenomenology is often used to gain in-depth insight into a phenomenon, it can also be used to gain exploratory insight into a phenomenon in order to highlight future research needs. To gain insight, interviews, observations, or collections of personal writing may be used to uncover themes of experience (Guillen, 2019; Webb & Welsh, 2019). To investigate the phenomenon of trauma and media shown in classrooms, personal texts in the form of social media posts from Twitter and Reddit were collected and analyzed. In education, phenomenological studies can help understand students' perspectives and experiences so that pedagogy can be altered accordingly (Guillen, 2019). By understanding the relationship between media and trauma, educators will be better equipped to support their students, create safer classroom environments and use media effectively. For example, Russell (2012) found that of the 248 grade six to twelve teachers surveyed, 100% were using movies in their lessons at least once a month, but 83.7% stated they had no training related to using film in their teaching practice. Organizations such as CommonSense Media offer suggestions for educators, but ultimately the teacher will have to make the informed decision as to what media will serve the curricular goals as well as support the wellbeing of their particular group of students (Knutson, 2021). Incorporating TIP into educators' pedagogy can reduce the likelihood of secondary

traumatization or re-traumatization through media shown in the classroom, and teachers will be more confident when identifying appropriate content for their students.

### *1.3.1 Positionality*

My professional experiences as an Ontario-certified teacher, post-secondary support staff, and community youth leader led to a strong interest in this research area. While teaching preschool, middle school, and high school students, children and youth often talked about specific media that had an adverse effect on them, such as movies, television shows, YouTube videos, or content they were exposed to on social media platforms. They would share these examples during class discussions or informal conversations before or after class. These experiences were often echoed amongst the older students who had also engaged with the same media and had an adverse reaction. Sometimes the students would share that they felt unsafe or fearful from a video they watched on social media or that they could not stop thinking about a scene from a television series for its graphic nature or "hitting too close to home."

Post-secondary students shared similar experiences about troubling media informally during group discussions or one-on-one meetings. As these individuals were youth and adults ranging from 18 to over 40 years old, sometimes these conversations centred around current or past media that caused intrusive thoughts, heightened anxiety, trouble concentrating, or fear. While working in community programs with children and youth ranging from 3 to 18 years of age, as well as their families, I often heard parents share various responses that their child had to the news, social media posts, YouTube videos, or movies. In two specific cases, two children under five years old in recreation programs had extreme reactions to the content they were exposed to; one from watching natural disaster news on television and the other from watching YouTube Kids.

I was alarmed by the number of stories I was hearing from various age groups about the impacts of media on trauma. As an educator and community leader, I often used media myself in group settings without considering the possible trauma effects. When I searched the literature, there was little information and guidance for educators on this topic. This motivated me to conduct this study. I wanted to explore people's experiences of media and trauma and consider the implications for classroom settings. Similar to my leadership and educator approach, I wanted to come from a place of empathic understanding as a researcher. Many trauma experts stress the importance of empathic understanding when supporting individuals with a history of trauma (Wilson & Thomas, 2004). This includes refraining from judgment of experiences. Therefore, this research took an empathic approach to understanding the trauma reactions and experiences of students responding to media shown in the classroom.

### 1.4 Theoretical framework

Theoretical frameworks guide research studies by highlighting the existing theories that the research aims to support or expand (Gelso, 2012). This study is based on theories related to the topics of trauma and wellness. I explored the topic from a trauma-informed lens. Under this umbrella topic, trauma, the specific theories guiding the study were Positive Youth Development (Ministry of Children, Community and Social Services, 2012), Adverse Childhood Experiences (Felitti et al., 1997), vicarious traumatization (McCann & Pearlman, 1990), and trauma-informed care (Harris & Fallot, 2001). A brief description of these theories is provided in this introduction; however, greater detail will be completed in the literature review.

### *1.4.1 Wellness*

To explore the negative state of trauma and theories related to trauma, the study began with an understanding of wellness and mental health. The specific definition of mental health used for this study is from the World Health Organization (WHO):

> Mental health is a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community. It is an integral component of health and well-being that underpins our individual and collective abilities to make decisions, build relationships and shape the world we live in. (WHO, 2022, para. 1).

Mental health is intertwined with human development therefore, a theory of youth development was explored for this study: Positive Youth Development (PYD) (Figure 1.1). PYD was developed by the Ministry of Children, Community and Social Services (2012) in collaboration with a team of youth from across Ontario to incorporate their perspectives. Youth development is viewed from a holistic perspective; physical, emotional, cognitive, social, and spiritual self are all components of the youth. The context and environment affect these components of development.

**Figure 1.1**

*The Positive Youth Development framework adapted by the Ontario Ministry of Education (n.d.-a) from "Stepping Stones: A resource on Youth Development" by the Ministry of Children, Community and Social Services (2012).*


Source: *Stepping Stones: A Resource on Youth Development*, p. 17

The PYD framework is broken down into three core components that are essential to healthy development, wellness, and overall student success. The first component emphasizes that the "self/spirit" is central to the student's experience and constantly evolves and changes as they learn and grow (Ministry of Children, Community and Social Services, 2012). This is unique to each student where some may have specific values that are at the core of their sense of self, some may consider religion or culture to be the driving force of their sense of self, and others may find their sense of self is connected to their hobbies, interests or strengths (e.g., "artist," "athlete," "straight-A student," "gamer," etc.) (Ministry of Children, Community and Social Services, 2012). Various technologies that youth use align with the self and spirit, including social media. Social media platforms are digital environments that can be used for self-expression, engaging with others, and sharing perspectives or information (Byrne, 2017). Youth interact on these sites and express their interests, opinions, identities and experiences with others through their preferred medium (e.g., images, videos, text, or a combination) and build connections to other social media users (Allen et al., 2014).

The next core component is identified in the circle's second ring that demonstrates the student's cognitive, emotional, physical, and social health contributes to their overall wellbeing. Each of these areas is critical to student success and are all connected. In this framework, healthy growth and development of the mind, body, and spirit are central to a student's success at school and into adulthood (Ministry of Children, Community and Social Services, 2012). Technology use can positively and negatively affect each area of youth health. For example, youth on social media following “Fitspirational” content (i.e., content that motivates or shares healthy diet and exercise tips) can be both inspired to be more physically active and eat healthy, but also experience adverse psychological impacts such as negative feelings towards their own physical appearance and lower self-esteem (Easton et al., 2018). Social media platforms have been found to increase social health as users engage in these digital communities and find online friends with common interests (Allen et al., 2014). These sites have also been found to increase levels of loneliness and symptoms of depression in youth (Hunt et al., 2018).

Finally, the outer ring labelled "environment/context" highlights that the student's environment (e.g., where they grow up, what neighbourhood, socioeconomic status, family dynamics, history, and life events) also contributes to their growth and success. For example, a child growing up in a rural area will have different experiences from a child in an urban neighbourhood, or a student living in poverty will face different challenges than a student growing up in the middle class, and these pieces of a student's life should be considered in educational programming and supports (Ministry of Children, Community and Social Services, 2012). What can greatly affect all areas of development for children and youth is trauma.

### *1.4.2 Trauma*

This study utilized a current and evidence-based view of trauma. The World Health Organization defines trauma as a "response to a stressful event or situation (of either brief or long duration) of an exceptionally threatening or catastrophic nature" (WHO, 2019, F43.1). The defining feature of trauma is that it causes intense fear, horror, or helplessness. According to WHO (2019), trauma can occur from a direct or indirect experience, and it can involve an actual or perceived threat to oneself or another person's physical integrity. It depends on how a person perceives the situation and this is very important to consider. Experts have pointed out this is why we cannot judge nor compare what people are traumatized by in their life (Diamanduros et al., 2018; Laffier, 2022a; Perry & Winfrey, 2021). This perspective of trauma that considers real vs. perceived threat, fear and horror being central emotions, and direct or indirect experiences, is important when considering the individual experiences of youth in the digital age.

Youth may experience trauma from neglect, abuse, being in an accident, being a victim of or witnessing domestic or community violence, war, the sudden loss of a loved one, bullying, chronic illness, and experiencing a natural disaster (Peterson, 2018). Recent views of trauma consider the effects of technology on children and youth trauma. For example, exposure to violent or difficult content in media such as movies, social media, T.V., news articles or shows may also cause trauma.

### *1.4.3 Adverse Childhood Experiences (ACEs)*

The ACEs model was first presented by the Centers for Disease Control (CDC) and Kaiser Permanente healthcare organization in 1995 through their groundbreaking study that investigated the types of adversity children may be exposed to and how these experiences affected their health long term (CDC, 2021; Felitti et al., 1997). This model describes negative

events or situations in our childhood that impact our development and wellness as *adverse childhood experiences (ACEs).* They may include abuse, bullying, domestic violence, parental death, divorce, mental illness or substance abuse in the household, natural disasters, or witnessing violence (CDC, 2019; Public Health Ontario, 2020).

It is estimated that over 60% of the population has experienced at least one ACE, and approximately 25% have experienced four or more ACEs before they turn 18 (CDC, 2019). Children who have higher ACE scores have a higher risk for traumatization. Research in the digital age has expanded this model to consider unhealthy technology use or impacts as a potential ACE (Gottschalk, 2019). For example, cyberbullying or witnessing violence on TV (Nagata et al., 2022). In turn, children or youth with existing trauma or high ACE scores may engage in unhealthy relationships with technology (Nagata et al., 2022). Therefore, considering the role ACEs play in the development of problematic technology use, individuals may be at higher risk for vicarious traumatization or re-traumatization by engaging with digital media.

### *1.4.4 Vicarious traumatization theory*

McCann and Pearlman (1990) initially coined the term "vicarious traumatization" based on their work at The Traumatic Stress Institute and recognized the profound psychological impacts mental health professionals were experiencing while working with people with trauma. Vicarious trauma occurs when a person is indirectly exposed to a traumatic event, such as listening to someone share a traumatic experience (Cusick, 2022; McCann & Pearlman, 1990). The theory suggests that vicarious trauma may occur for the individual because they experience disruptions in their own schemata of safety, power, esteem, intimacy, or worldviews (McCann & Pearlman, 1990). The theory also suggests that individuals may experience the same symptoms as someone who directly experienced the trauma, such as difficulty concentrating, intrusive

thoughts, sleep disturbances, fear, helplessness, sadness, irritability, social withdrawal, or hypervigilance (McCann & Pearlman, 1990; Richardson, 2001).

Vicarious traumatization is common in individuals working in care-providing fields, such as social work, healthcare, or education, as there may be repeated exposure to the traumas of clients or students, which can impact their overall wellbeing (Guitar & Molinaro, 2017; Hayden et al., 2015). Children and youth can also experience vicarious trauma by learning about traumas that have happened to family members or friends and develop symptoms of trauma as a result (Howard, 2021; Pillemer, 2015). In this digital age, the extensive exposure to violence, disasters, and traumatic events through media (television, radio broadcasts, and social media) has become a source of vicarious trauma for many children and youth (Huang et al., 2022; Wang et al., 2006).

### *1.4.5 Trauma-informed Care*

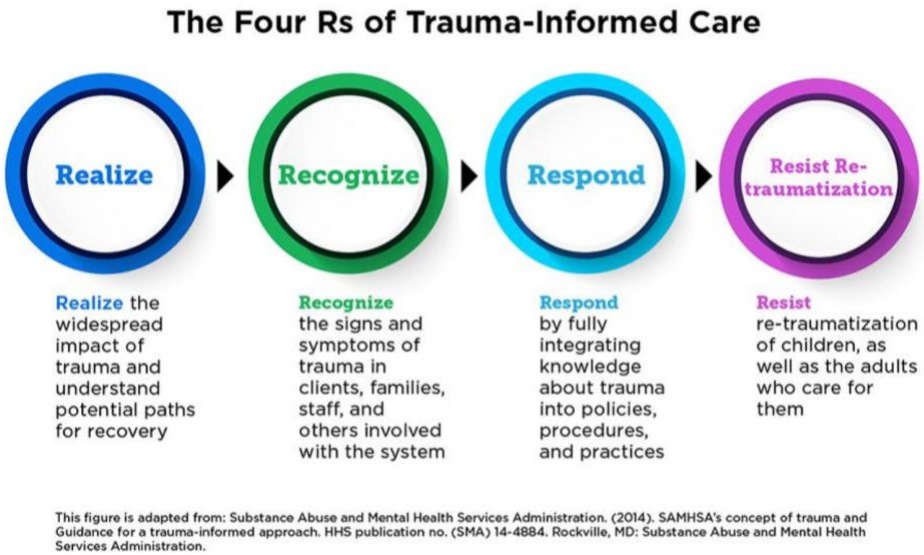
The recognition of the prevalence of trauma and ACEs in people's lives led to the theory and field of trauma-informed care (TIC). TIC theory was initially developed by Harris and Fallot in 2001 and was first introduced into service-providing fields, such as healthcare, to acknowledge the possibility that clients may have experienced trauma and that services should integrate TIC into their practices to provide the best support to the individual. TIC "takes into account an understanding of the prevalence and effects of trauma in all aspects of service delivery, and places priority on the individual's sense of safety, choice, empowerment and connection" (Poole et al., 2017, p. 10). These basic theoretical components of trauma-informed care have been outlined in various models, including the "Four R's" by the Substance Abuse and Mental Health Services Association (SAMHSA, 2014) and the "Five Guiding Principles of

Trauma-Informed Care" by the Institute on Trauma and Trauma-Informed Care (ITTIC, 2015) through the University of Buffalo. These models helped guide this research study.

The Four R's model outlines that each person within an organization must *realize* the widespread effects of trauma and how it can impact individuals, families, groups, and communities; *recognize* the signs and symptoms of trauma; *respond* by integrating trauma-informed care principles into all areas and levels within an organization; and actively *resist re-traumatization* of all parties (e.g., staff, clients, and families) (Bartlett & Steber, 2019; SAMHSA, 2014).

**Figure 1.2**

*The Four Rs of Trauma-Informed Care model by the Substance Abuse and Mental Health Services Administration (SAMHSA, 2014), adapted by Bartlett & Steber (2019).*




The model created by the Institute on Trauma and Trauma-Informed Care (ITTIC, 2015) outlines the five guiding principles of TIC, which include safety, choice, collaboration, trustworthiness, and empowerment (ITTIC, 2015). In this model, the first step is addressing the person's physical and emotional safety in the physical space and with their care provider.

Incorporating choice into the practice provides the individual with a sense of control, and collaborating with them in decision-making or planning can increase the effectiveness of the program or intervention. Building relationships based on trust, where boundaries are established and respected and expectations are clearly communicated, is critical in providing TIC. Finally, empowerment prioritizes the person's strengths and works on skill-building to enhance coping skills and build confidence.

For TIC principles to be effective, they must be implemented at the individual, organizational, and community levels (Center for Substance Abuse Treatment, 2014). For example, a trauma-informed workplace focuses on hiring trauma-informed staff and training current staff on best TIC practices so that each individual incorporates TIC into their role (Center for Substance Abuse Treatment, 2014). The organization integrates TIC into their policies and procedures, and support services are available through community partnerships to help individuals impacted by trauma (Center for Substance Abuse Treatment, 2014). The Four R's, Five Guiding Principles, and integration of TIC at all levels are critical when considering pre-service teacher education and professional development for educators supporting students with trauma.

**Figure 1.3**

*The five guiding principles of trauma-informed care outlined by the University of Buffalo's Institute on Trauma and Trauma-Informed Care (2015).*


# Chapter 2. Literature Review

In this chapter, research related to wellness, trauma, and trauma-informed care is explored. First, literature related to wellness, specifically children and youth wellness, will be reviewed. Connections to learning and student success will be highlighted. Then, literature on trauma and its impacts on learning are reviewed to understand the types and symptoms of trauma, along with how trauma can impair students' learning and success in a classroom environment. The role of media in wellness and trauma is explored, followed by an examination of how media is used in the classroom to establish the prominence of media in educational environments and potential risk factors. Finally, trauma-informed care (TIC) principles are explored in relation to education and pre-service teacher education to understand the importance of integrating TIC into classrooms and teacher pedagogy to mediate the effects of trauma.

## 2.1 Wellness

The term "wellness" or "wellbeing" takes a holistic approach in which the cognitive, emotional, social, and physical areas of a person's health are considered. When our needs are met

within each of these areas, we experience a positive sense of self and belonging (Ministry of Education, 2020). An individual's mental health can impact their cognitive, emotional, spiritual, and physical health and overall state of wellness. The World Health Organization (WHO) stated that “mental health is a basic human right. And it is crucial to personal, community and socio-economic development” (WHO, 2022, para. 1). It is helpful to view wellness from a holistic lens. Wellness includes all aspects of our health; physical, emotional, social, cognitive, and spiritual (Higgins & Goodall, 2021). When one aspect of our wellness is impacted, all other areas may be affected as well. For example, if our emotional wellbeing is good, we are more likely to fuel our bodies with healthy foods and have the motivation to be more active, which means our physical wellbeing will improve as well (Chappell, 2022). Similarly, regular physical activity can reduce feelings of stress and increase our moods (Chappell, 2022). If our stress levels are reduced, we are able to think more clearly, and our cognitive functioning improves (Palmer et al., 2014). These interconnected relationships between the various aspects of our health are critical to consider when we find ourselves struggling in any area of wellbeing so that we can make adjustments and improve our overall health (Laffier, 2022b).

When we experience changes or losses in life under varying circumstances, we may experience poor mental health and wellness. For example, mental health distress may be experienced when we go through a change or loss, and our regular coping skills are not working, so we feel overwhelmed or confused (Canadian Forces Morale and Welfare Services, n.d.). The intensity and length of time in this state are specific to each person and how quickly they can adjust, apply new coping skills or problem-solving strategies, or receive support if needed (Canadian Forces Morale and Welfare Services, n.d.; Laffier, 2022b; WHO, 2022). However, if signs and symptoms persist for several weeks and impair their day-to-day functioning, the person

may be diagnosed with a mental health disorder according to the *Diagnostic and Statistical Manual of Mental Health Disorders (5th edition)* (DSM-V) by a medical professional (American Psychological Association (APA), 2013).

Mental health disorders such as anxiety, depression, bipolar disorder, schizophrenia, phobias, addiction, post-traumatic stress disorder, and many others can have biological underpinnings such as genetics or chemical imbalances in the brain (Taquet et al., 2021). Our mental health impacts our emotions, behaviours, thoughts, feelings of connection to others, and ability to self-regulate (Canadian Mental Health Association, 2021). Depending on the severity of a person's symptoms, some mental health disorders can cause a significant decline in daily functioning, maintaining relationships, and academic or professional success (Bas, 2020; Klinic Community Health Centre, 2013). However, with effective coping strategies, a strong support system and a care plan, someone living with a mental illness can still experience mental health (British Columbia Ministry of Mental Health and Addictions, 2023; Laffier, 2022b).

Unfortunately, many children may experience mental health struggles as well. The World Health Organization (WHO, 2022) shared that in 2019, approximately 58 million children and adolescents were living with an anxiety disorder and about 280 million with depression. Eating disorders, anxiety, and depression are among the most prevalent mental health disorders in children and youth (Canadian Mental Health Association, n.d.; Ontario Ministry of Health, 2021).

Children and youth may experience a wide range of signs or symptoms when their wellness is declining. This may include mood swings, rebellious behaviours, changes in sleeping or eating patterns, a decrease in academic achievement, persistent worrying, or not doing activities that the child previously enjoyed (Ontario Ministry of Health, 2021). These signs or

symptoms may interfere with a child's ability to learn and succeed academically. As educators are in care-providing roles and integral to a student's support system, they need to understand how mental health impacts learning and strategies for cultivating positive mental health and wellness as their students grow and develop (Laffier, 2015; Moon et al., 2017).

### *2.1.1 Wellness and learning*

Research has shown that poor mental health can interfere with a student's ability to learn and succeed academically. The Canadian Pediatric Society (2023) reported that "twenty percent of Canadian children and youth will experience mental illness" (para. 1). This means that, on average, one in every five students in any given classroom may be struggling with a mental illness while trying to learn and succeed academically. The Centre for Addiction and Mental Health (CAMH) found that "over one-third (39%) of students indicate a moderate-to-serious level of psychological distress (symptoms of anxiety and depression). One-in-six (17%) students indicate a serious level of psychological distress (representing about 159,400 students)" (Boak et al., 2018, p. iv). Studies from psychology and neuroscience have found that when a person is under stress, their memory processes and ability to learn new information are impaired (Vogel & Schwabe, 2016). In thinking about students' academic success, if they are living in a state of stress or heightened anxiety, they do not have access to all of the areas of their brain that are responsible for retrieving past knowledge or forming new memories based on the information they have learned in class (Vogel & Schwabe, 2016). Academic assessments such as tests and examinations can prove extremely difficult for these students as they "blank out" during their tests and, consequently, do not achieve high grades (Vogel & Schwabe, 2016).

Students experiencing symptoms of depression, such as feelings of hopelessness, lower self-esteem, loss of energy, sadness, low moods, difficulty concentrating or making decisions, or

brain fog (Bartha et al., 2013; Wartberg et al., 2018), can find classroom tasks such as problem-solving or completing assignments more challenging (Ontario Ministry of Education, 2013). Depressive episodes can include low moods and motivation, leading to absenteeism and poor academic achievement (Askeland et al., 2019). A person in this state may try to self-isolate and avoid social interactions (Viduani et al., 2021). In a classroom setting, this may mean students find it challenging to create authentic connections with their peers, collaborate on tasks, and communicate with their teacher (Ontario Ministry of Education, 2013).

A person who has experienced trauma may live with any of the above symptoms. Trauma impacts the individual at every level of wellness, physically, emotionally, spiritually, and cognitively, and has significant impacts on a student's ability to learn, perform academically, connect socially, and succeed overall (Terrasi & Crain de Galarce, 2017).

### 2.2 Trauma

One aspect of wellness for children and youth is the presence or exposure to trauma. Compared to other mental health responses and disorders, the defining trait of trauma is that it creates intense fear, feelings of helplessness or hopelessness, and horror (Center of Substance Abuse Treatment, 2014). The high prevalence of trauma is a growing area of public health concern as trauma can have adverse effects on an individual's cognitive functioning and brain development, learning and memory, ability to form healthy relationships, and overall mental and physical wellbeing (Center of Substance Abuse Treatment, 2014; Dye, 2018; Peterson, 2018; van der Kolk, 2014). In 2021, "64% of Canadians reported being exposed to at least one potentially traumatic event during their life" (Statistics Canada, 2022, para. 7), and the World Health Organization's World Mental Health Surveys found that 70.4% of respondents across twenty-four countries experienced a traumatic event in their lifetime (Kessler et al., 2017).

Much of the early psychological research on trauma focused on war veterans and soldiers, initially using terms such as “soldier’s heart” following the American Civil War and then “shell shock” following World War I and II to account for their mysterious symptoms (Figley et al., 2017). Physicians and psychiatrists were puzzled by the symptoms the soldiers described, such as various pains, heart palpitations, difficulty breathing, reduced cognition, and loss of senses, but they did not have any physical injuries (Figley et al., 2017). Decades of research into the psychological symptoms these men were experiencing eventually led to the development and inclusion of post-traumatic stress disorder (PTSD) as an official mental health diagnosis in the *Diagnostic and Statistical Manual of Mental Health Disorders (DSM), Third Edition* in 1980 (Figley et al., 2017). Since then, however, research has shown that traumatic experiences span beyond extreme settings such as warzones and can also include neglect, abuse (physical, psychological, sexual), being in an accident, the sudden loss of a loved one, chronic illness, and natural or human-made disasters (Peterson, 2018). As stated in the definition, trauma is centred around the individual’s perception of threat. This means that two people who experience the exact same event may have completely different reactions depending on how they perceive it (Diamanduros et al., 2018).

Researchers have identified different types of trauma that a person may experience, including complex trauma, vicarious trauma, acute traumatic stress, collective trauma, historical trauma and intergenerational trauma. Complex trauma occurs when a person has experienced multiple, pervasive traumatic events throughout childhood or adolescence (Tanyu et al., 2020). These events typically involve harmful interactions with a caregiver or trusted adult. They may include abuse (physical, verbal, emotional or sexual), being a victim of or witnessing domestic violence, or experiencing neglect (Singh et al., 2021). Vicarious trauma occurs when an

individual learns about the traumatic event of another person and experiences a trauma response due to indirect exposure to the event (Cohen & Collens, 2013; McCann & Pearlman, 1990). This type of trauma is common in care-providing professions such as therapy and counselling, education, first responders, and social work (Branson, 2018; Cohen & Collens, 2013; Ormiston et al., 2022). Acute traumatic stress is a reaction to a single traumatic event, such as an accident, assault, or natural disaster and can last for hours or days after the event (Dye, 2018).

Collective trauma occurs when traumatic events are experienced by a group of people, and the events impact the foundation of the society in which they occur (Crosby et al., 2020). Collective trauma examples may include terrorist attacks, mass shootings, wars, natural or human-made disasters, or pandemics. Historical trauma is experienced by a specific cultural, racial, or ethnic group. It is the result of several traumatic events over multiple generations that have impacted the community, often leading to damaged cultural identity and negative psychological and social responses (Gone, 2013). Examples include genocide, racism, and the colonization of Indigenous Peoples in North America, and this trauma typically impacts the psychological and physical health of multiple generations (Gone, 2013). Intergenerational trauma is closely connected to historical trauma and occurs when trauma is passed down to younger generations within a family (Kirmayer et al., 2014). This often occurs in cultural groups who have experienced oppression, genocide, or colonization, but it can also happen in individual families with histories of abuse, neglect or other trauma. For example, older generations may develop mental health problems and poor coping strategies as a result of their own trauma, which can lead to domestic violence, low self-esteem and separating themselves from their families or culture (Kirmayer et al., 2014). The next generations may then experience trauma through the attachment bonds with their parents, witnessing or experiencing domestic violence, and

symptoms of parent's mental health such as parental anxiety, depression, or detachment (Kirmayer et al., 2014).

Regardless of the type of trauma, a traumatic event can elicit various responses that may impact the individual physically, emotionally, socially, and cognitively. Physical symptoms can include disruption in sleeping patterns and insomnia, heart palpitations, hypervigilance, changes in eating patterns (e.g., loss or increase in appetite), headaches, impulsivity and risk-taking behaviours, body pains, and avoiding reminders of the event such as activities, people, places, or sensory input (e.g., smells, sounds, tastes) (Center of Substance Abuse Treatment, 2014). Common emotional symptoms an individual may experience include overwhelming fear, sadness, guilt, anger, irritability, disbelief, emotional numbness or detachment, a sense of helplessness or hopelessness, and loss of interest in activities previously enjoyed (Bartlett & Steber, 2019; Peterson, 2018). Socially, the person may withdraw from friends, family, colleagues, or social situations; have difficulty forming healthy relationships and attachments due to loss of trust; self-isolate due to feelings of shame or guilt; or find it challenging to accept or feel love (Bartlett & Steber, 2019; Center of Substance Abuse Treatment, 2014). Finally, trauma can have significant impacts on the brain and cognitive functioning. The person may experience dissociation, intrusive thoughts connected to the traumatic event, difficulty concentrating, memory impairment, feeling confused or disoriented, experience vivid flashbacks of the event in which they re-experience the trauma as if it were happening in the present moment, and nightmares (American Psychiatric Association, 2022; Brewin, 2015; Klinic Community Health Center, 2013).

Trauma reactions may lead to mental health diagnoses, including anxiety, depression, dissociation, acute stress reaction or acute stress disorder, or PTSD (Center of Substance Abuse

Treatment, 2014). An acute stress reaction may last for hours to days following the event (American Psychiatric Association, 2022). This reaction can range in severity from a mild response (increased heart rate, feeling overwhelmed, intrusive thoughts, and constantly thinking about the event) to severe (extreme fear, rocking, disorientation, nausea). To be diagnosed with an acute stress disorder, the individual's symptoms must be disruptive to their daily life and may include nightmares and intrusive thoughts or emotional numbness (American Psychiatric Association, 2022). If symptoms persist and continue to impede the person's daily functioning for more than one month, they may be diagnosed with PTSD (American Psychiatric Association, 2022). PTSD symptoms can develop months or years after a traumatic event (Center of Substance Abuse Treatment, 2014). To be diagnosed with PTSD, there are four core criteria of symptoms including: (1) avoidance behaviours (avoiding stimuli, locations, or people that are a reminder of the trauma), (2) negative changes in mood and cognition (lower self-esteem or expectations of self, blaming self for the traumatic event, feeling numb or detached from self), (3) changes to arousal and reactivity (irritability, startled easily or hypervigilant), and (4) intrusive symptoms (reliving the trauma through flashbacks, nightmares, or intrusive thoughts about the event) (Center for Substance Abuse Treatment, 2014; Conti, 2021; Sareen, 2014).

Several factors in a person's life may influence the severity of a trauma response and the recovery process. A risk factor is a trait that increases the likelihood of problematic outcomes such as a mental health disorder (SAMHSA, 2019). These traits can be at the biological, psychological, family, community, or cultural levels (SAMHSA, 2019). Examples of risk factors include a family history of mental health disorders, living in poverty, exposure to trauma or high-stress situations, being the victim of or witnessing violence, and lack of access to services such as healthcare (Communities That Care Ltd., 2015). Low emotional intelligence, existing mental

health problems, and limited experience with adversity can also make a person more vulnerable to trauma (Blodgett & Dorado, 2016). A protective factor reduces the impact of a risk factor and, consequently, the likelihood of the person developing a mental health disorder following an event (SAMHSA, 2019). Examples of protective factors can be the presence of a trusted adult, being surrounded by a support network, supports and services such as healthcare being easily accessible, living or working in a predictable, calm environment, and positive relationships with family members (Communities That Care Ltd., 2015). Moderating variables, including age, personality traits, developmental stage, coping style and strategies, feelings of physical and emotional safety, and access to supports, often impact the severity of the trauma reaction and the recovery (Bethell et al., 2014).

### *2.2.1 Adverse Childhood Experiences (ACEs)*

Although traumatic events can occur at any point in the lifespan, it is well-documented that childhood trauma and adverse childhood experiences (ACEs) can have lifelong impacts on an individual's mental, physical, and emotional health (Public Health Ontario, 2020). An adverse childhood experience is defined as a potentially traumatic event that occurs before the age of 18 (Public Health Ontario, 2020). ACEs include physical, emotional, or sexual abuse; witnessing domestic or community violence; divorce; parental death; physical or psychological neglect; bullying; incarceration of a family member; death of a family member by suicide; or growing up in a household with substance abuse or mental health problems (Centers for Disease Control, 2019; Kostić et al., 2019; Schroeder et al., 2021). The Centers for Disease Control (CDC) reported that over 60% of the population in the United States experience at least one adverse childhood experience, and almost 25% experience four or more ACEs before they are eighteen (CDC, 2019). According to the Substance Abuse and Mental Health Services Administration,

over 66% of children reported at least one traumatic experience before age sixteen (SAMHSA, 2022). The more ACEs a child experiences, the higher the risk for traumatization (Bethell et al., 2013).

One of the most extensive studies investigating the prevalence of ACEs was conducted by Kaiser Permanente in collaboration with the CDC in 1995 and involved over 17 000 participants (CDC, 2021). The results of the study found that over two-thirds of the respondents reported at least one ACE and more than 20% reported three or more ACEs (CDC, 2021). Since then, researchers have continued to study correlations between high ACE scores and long-term health implications. Bellis et al. (2014) found that 47% of adults ages 18 to 69 in their study reported experiencing at least one ACE and that higher ACE scores were linked to more prevalent health-harming behaviours, including smoking, unplanned teen pregnancy, drug use, and engaging in violent acts. Basto-Pereira et al. (2022) surveyed 18 to 20-year-olds in Europe, South America, Africa, Asia, and Australia to investigate whether there was a relationship between ACE scores and young adult criminal behaviour. The researchers found that ACE scores of six or seven had a strong relationship with criminal behaviours and that physical abuse, sexual abuse, physical neglect, and substance abuse in the household were consistently connected to criminal behaviours across participants in all five continents (Basto-Pereira et al., 2022).

Monnat and Chandler (2015) found that individuals with a history of childhood trauma were at significantly higher risk for developing diabetes or having a heart attack. Research has shown that ACEs and childhood trauma also increase the likelihood of substance abuse and addiction (Bellis et al., 2014; Dye, 2018; Monnat & Chandler, 2015); obesity, high blood pressure, and stroke (Dye, 2018); mental illness (depression, anxiety, PTSD, dissociation, personality disorders) (Kim et al., 2021; SAMSHA, 2014); cancer (Alcalá et al., 2017);

cardiovascular disease (Godoy et al., 2020); and premature death (Public Health Ontario, 2020). All of these impacts present heavy economic and health-related stresses on countries. ACE-related illnesses are estimated to cost about 748 billion dollars in North America per year and 581 billion dollars in Europe as of 2017 (Bellis et al., 2019). In addition to experiencing trauma directly, children and youth can experience vicarious traumatization by learning about the traumatic events of another person and develop trauma reactions as a result.

### *2.2.2 Vicarious trauma*

Vicarious trauma (VT) is a type of indirect trauma in which the person experiences a trauma response by learning about traumatic events that have happened to another person (Cohen & Collens, 2013; Cusick, 2022). The terms "secondary traumatic stress" (STS) and VT are often used interchangeably. They both stem from learning about another person's traumatic experience (e.g., hearing about it, watching a video clip, or speaking to the person directly) and can cause PTSD-like symptoms (Comstock & Platania, 2017; Cusick, 2022). However, scholars have differentiated between the terms by considering the development of symptoms in which STS can occur after a single exposure, and VT develops over prolonged exposure to the trauma of others (Branson, 2018; Ormiston et al., 2022). VT is typically experienced by individuals in care-providing roles such as social workers or health care providers. Over time, the traumas they are repeatedly exposed to through their clients or patients alter their beliefs or worldview, and they may develop symptoms that impact their ability to perform optimally professionally and in their personal lives (Guitar & Molinaro, 2017; Hayden et al., 2015).

Research has shown that children and youth often experience VT by learning about traumas that have happened to family members or friends and develop symptoms of trauma as a result (Howard, 2021; Pillemer, 2015). This exposure to trauma can occur when parents,

grandparents, or other family members share their previous traumatic experiences with children (Dalgaard et al., 2016) or by observing the aftermath of a violent incident such as a victim's injuries (Howard, 2021; Thornton, 2014). When children learn about these events, their perception of the incident is formed as a memory and can manifest as intrusive thoughts, anxiety, avoidance behaviours, a heightened state of arousal, and changes in mood (Howard, 2021). Howard (2021) found that adolescents, girls, and Black children are at higher risk for experiencing vicarious trauma and "children may be directly traumatized by learning about the violent victimization of family and close friends" (p. 452) based on their evaluation of data from the National Survey of Children's Exposure to Violence 1. Exposure to community violence was also found to elicit trauma responses in children and youth (Howard, 2021). This age group can experience vicarious trauma from what they learn about in school. Direct and indirect exposure to trauma, and resulting symptoms, can impact a student's ability to process information, connect with others, and succeed academically.

### *2.2.3 Trauma impacts on learning and academic success*

The widespread impact of trauma and commonality throughout the general population has significant implications for education, as trauma can affect learning and student behaviours. Trauma has been linked to lower grades and high drop-out rates (Blaustein, 2013), and it is estimated that 25 to 30% of students are affected by trauma (Gibson et al., 2014). Approximately 66 to 85% of youth report exposure to trauma by the time they attend college, many of whom report multiple exposures (Read et al., 2011), and Galatzer-Levy (2012) found that as many as 50% of college students are exposed to a potentially traumatic event in their first year of post-secondary education. Research has shown that childhood trauma can impact brain development,

including impaired executive functioning, which controls the brain's ability to process, store, and retrieve information, and is critical to learning (Cross et al., 2017).

A person with a history of trauma can live in a near-constant state of "fight, flight or freeze" mode, meaning they feel they are under threat, even when no danger is present (Thompson et al., 2014). Our brains are programmed to detect and evaluate threats and then act upon the information by fighting or fleeing as a method of survival (Thompson et al., 2014; van der Kolk, 2014). The individual may also experience a "freeze" response in which they dissociate and become non-responsive to questions or instructions (Nelson, 2013; Thompson et al., 2014). Once the individual has experienced a threat, the brain stores this information so that if a similar threat arises, the brain knows how to react to keep us alive (van der Kolk, 2014). When an individual feels threatened, the amygdala is activated, and the prefrontal cortex shuts down, reducing the ability to process information and respond appropriately (Sandi, 2013). It is important to understand the role of the amygdala, hippocampus, and prefrontal cortex in the brain to see the implications for learning. The amygdala is the fear centre of the brain. It is responsible for detecting threats and initiating appropriate fear-response behaviours to remove the person from the dangerous situation or disarm the potential threat (Baxter & Croxson, 2012). For a person living with trauma, the amygdala is often activated as they may be more hypervigilant and constantly monitor their environment for potential threats (Bell et al., 2013). The hippocampus is integral to memory formation, retrieval, and emotional regulation (Barr, 2018; Yassa, 2023). This structure is involved in processing information and transferring it into long-term memory storage (Saladin et al., 2014). The prefrontal cortex is a highly evolved area of the brain responsible for behavioural and emotional regulation, memory formation and retrieval, shifting and maintaining attention, and supports the regulation of our thoughts,

problem-solving and planning (Saladin et al., 2014). These executive functioning skills are vital to learning and academic success (Samuels et al., 2016).

A brain that has been exposed to prolonged stress or trauma during developmental stages, including childhood and adolescence, can develop abnormally. Constant repetition of the fear response, and corresponding neural circuitry, can result in the overdevelopment of specific areas of the brain and the underdevelopment of others (De Bellis, 2014). For example, researchers using functional magnetic resonance imaging (fMRI) found abnormalities in the prefrontal cortex, such as reduced gray and white matter and lower activity during tasks involving memory, attention, and emotional cognition in youth who experienced trauma (Carrion & Wong, 2012). Carrion and Wong (2012) found that youth with a history of trauma and post-traumatic stress had reduced hippocampal activation during memory retrieval tests and lower accuracy scores in memory tasks compared to youth without post-traumatic stress.

In a learning environment, if the person is in a state of fear, they may find it very difficult to focus their attention on curricular concepts or new knowledge and are likely not going to be able to recall that information at a later date (Bell et al., 2013). Students may also become hypervigilant and respond quickly to a perceived threat (Center of Substance Abuse Treatment, 2014), which can cause distress when there is a change in their environment or schedule (Wright, 2014). In addition to hypervigilance, students may experience other physical symptoms such as stomach aches, headaches, or lightheadedness (Bell et al., 2013). Changes in behaviour (aggression, repetitive play, social isolation, or regression), difficulty regulating emotions, irritability, depression, lack of self-confidence, dissociation, flashbacks, or mood swings are also common (Bell et al., 2013; Cole et al., 2013; Gibson et al., 2014). Challenges with self-regulation are one of the most difficult areas for teachers to navigate because they often do not

know a student's trauma history and may misinterpret these intense emotional reactions, which can put the student at risk of re-traumatization (Berg, 2017; Krasnoff, 2015). Trauma can also disrupt a child's ability to learn and process language; retrieve verbal information (e.g., from a presentation or oral instructions); and the child may misunderstand verbal communication because they are focused on non-verbal messaging such as body language or tone (Terrasi & Crain de Galarce, 2017).

The neurological responses to trauma have clear implications for academic tasks such as completing assignments or assessments (Bell et al., 2013). Many of the symptoms highlighted in this section also point to how a student with a history of trauma may find it difficult to absorb new information or connect with their classmates (Bell et al., 2013; Cole et al., 2013). Environmental changes such as a supply teacher, loud noise, new furniture arrangement, or change in the class schedule may pose as triggers for students (Wright et al., 2014). Further, it is critical to consider how the content discussed in class can elicit trauma responses, including the media used to teach various curricular concepts.

### 2.3 The Role of Media in Wellness and Trauma

Technology can be viewed as a "double-edged sword" in which there are positive uses as well as adverse effects to be mindful of so that we reap the benefits of technology while mitigating the risks. Media has evolved significantly over the past few decades, and scholars have differentiated the various types of media into two categories: "traditional media" and "new media." Traditional media includes film, television, music, radio, newspapers, magazines, and books (University of Minnesota Libraries, 2016). New media focuses on internet-based media access such as social media, virtual worlds and video games, websites, blogs, YouTube videos and mobile apps (Hong & Zhang, 2020; University of Minnesota Libraries, 2016). Children and

youth appear to be using a combination of traditional and new media, especially with many traditional media forms now being made available on digital platforms and mobile devices.

It is estimated that children ages 8-12 spend about 4-6 hours per day on screens, and adolescents spend approximately 9 hours on their screens each day (American Academy of Child and Adolescent Psychiatry, 2020; Guttman, 2023; Seguin et al., 2021). According to the Canadian Pediatric Society, Canadian teens spend approximately 7.5 hours on screens per day (Canadian Pediatric Society, 2021) and 11 hours each week watching television (Stoll, 2022). This age demographic watches movies and television series predominantly on subscription video-on-demand (SVoD) platforms such as Netflix, Amazon Prime, and Disney+. Surveys have shown that there has been a consistent decrease in watching cable television and an increase in SVoD viewership over the past ten years (Matrix, 2014). Although Netflix releases minimal statistics surrounding viewership or subscribers' age demographics, it appears to be the most popular streaming platform among teens (Matrix, 2014; Stoll, 2022). Among children, YouTube is one of the primary sources of media entertainment, and it was recorded that children and youth ages 4-18 spent an average of 77 minutes per day on the YouTube mobile app and 52 minutes per day streaming content on Netflix in 2022 (Ceci, 2023).

Media can be an opportunity for children and youth to practice empathy and compassion (Common Sense Media, 2020); learn about current events around the world and history; explore the human experience within a fictional world; teach themselves new skills by watching videos; feel a sense of connection to their peers by sharing in the viewing and fan experience (Matrix, 2014); build a connection to the characters or video host (Matrix, 2014; Valkenburg & Piotrowski, 2017); see themselves represented in a positive way on screen (Rogers et al., 2021); or use it as a coping strategy during difficult times (Rideout & Robb, 2021). However, we must

also consider the risks of media causing trauma. As discussed previously, trauma causes feelings of intense fear, horror, or helplessness (Center of Substance Abuse Treatment, 2014), and trauma responses can come from witnessing an event. Individuals can also develop VT and STS responses by watching large amounts of media covering traumatic events, such as on the news or social media (Cusick, 2022; Secker & Braithwaite, 2021). Repeated exposure to another person's traumatic experience can increase the likelihood of an STS response or developing symptoms of PTSD, such as watching clips of interpersonal violence over and over (Comstock & Platania, 2017; Secker & Braithwaite, 2021). Studies have shown that children who regularly watched news coverage of traumatic events such as acts of terrorism (Wang et al., 2006) or mass shootings (Lowe & Galea, 2015) had a higher prevalence of trauma symptoms. Symptoms such as intense fear, hypervigilance, depression, heightened anxiety, dissociation, and brain fog can stem from trauma responses and significantly impact learning and student success (Bell et al., 2013; Cole et al., 2013).

Examples of VT reactions and perceived threats to oneself or fear through media are demonstrated throughout the next section. The current research predominantly focuses on adults, with some studies focusing on adolescents and even fewer focusing on children (Comstock & Platania, 2017). However, children have experienced traumatic reactions in schools from watching movies, reading stories, or learning about tragedies (Miller, 2018).

### *2.3.1 Case examples of media and trauma*

Psychiatrists, pediatricians, politicians, parents, and educational personnel have been concerned about the effects of media violence on child and adolescent development since the 1950s (Council on Communications and Media, 2009; Strasburger et al., 2012). Studies have shown that exposure to media violence can cause mild trauma responses in children after

watching graphic videos (Mrug et al., 2015) and an increase in aggressive behaviours, fear, depression, social isolation, anxiety, and symptoms of post-traumatic stress disorder (PTSD) (Anderson et al., 2017; Holman et al., 2020). These responses have been further demonstrated by observing increased brain activity when viewers are exposed to media violence. For example, Murray et al. (2009) used functional magnetic resonance imaging (fMRI) to scan children's brain activity when they watched video clips including interpersonal violence (e.g., a boxing scene from a movie) compared to non-violent videos. They found that the exposure to the boxing video activated the amygdala, demonstrating that the brain perceived the video footage as threatening (Murray et al., 2009). The hippocampus and several surrounding areas of the brain can also be activated, which affects the child's episodic memory retrieval (Murray et al., 2009). Other research has discussed how the more graphic or realistic the media is, the higher the risk for trauma (Lavoie et al., 2021). This is particularly important to consider as technology continues to advance, and computer-generated images (CGI) can create highly realistic scenes in fictional pieces as well as other technologies such as virtual reality simulations. News coverage of world events, climate change-related media, fictional movies, and television series have all been documented to create secondary trauma responses, including acute stress reactions and PTSD symptoms.

**Case Example A: World events, posttraumatic stress and collective trauma.** The majority of the population learns about world events by watching, listening to, or reading the news on television, radio, or social media posts (Holman et al., 2020; Silver et al., 2013; Thompson et al., 2019). When an event such as an act of terrorism happens, reporters immediately begin to cover the "breaking news" across news stations and, in recent years, social media platforms have created the ability for horrific events to be shared broadly within seconds

(Holman et al., 2020; Thompson et al., 2019). Researchers have found cases of PTSD, acute stress, heightened symptoms of anxiety and a stronger prevalence of symptoms of depression in people who watched large quantities of media following acts of terrorism (Pfefferbaum et al., 2019; Silver et al., 2013).

When a traumatic event affects a large group of people, such as a community, country, identity-specific group, or religious group, the psychological responses of the event can create collective trauma (Hirschberger, 2018). For example, the attacks on the World Trade Center on September 11, 2001 (9/11) affected not only the citizens of New York City or the state of New York but the entire country of the United States. The attacks have become a distinctive memory in the country's history that still impacts Americans and people internationally over twenty years later. Silver et al. (2013) found that participants who watched four or more hours of 9/11 news coverage had a 51% higher likelihood of developing acute stress. They also found that watching one to three hours per day put participants at higher risk for developing posttraumatic stress symptoms two to three years after the event (Silver et al., 2013). Similarly, Otto et al. (2006) studied how children and mothers were affected by watching news coverage of 9/11. They found that children under ten years old were at higher risk for developing symptoms of PTSD and that the severity of the symptoms was connected to the amount of media exposure following the attacks (Otto et al., 2006). These findings were consistent in a group of ten and eleven-year-old students in London, England, who self-reported posttraumatic stress symptoms up to six months after 9/11 due to watching footage of the attacks (Holmes et al., 2007).

Other studies investigating the impacts of media exposure following the Boston Marathon bombings found that prolonged exposure to media coverage of the event was associated with a higher risk of acute stress (Holman et al., 2013; Thompson et al., 2019). Adults

who viewed over six hours of media about the Boston Marathon bombings experienced increased levels of acute stress compared to those who had direct exposure to the attack (Holman et al., 2013). Posttraumatic stress symptoms were still reported six months after the bombings, and participants reported feeling worried about future events of violence (Thompson et al., 2019). Felix et al. (2022) studied the impacts of media coverage of acute mass violence events such as mass shootings. They found that adolescents with repeated exposure to events such as mass shootings through the media (news and social media platforms) had higher levels of anxiety and depression (Felix et al., 2022). The researchers stated, "media exposure to [acute mass violence] influenced personal threat appraisal, which was significantly associated to depression" (Felix et al., 2022, p. 6), which directly aligns with the definition of trauma and the perceived threat to oneself as a trauma response (Beck & Sloan, 2012).

The COVID-19 pandemic is another world event in which the media coverage of the spread of the virus contributed to trauma symptoms such as intense fear, hopelessness, heightened anxiety, sadness, grief, and fear of harm to loved ones (Chao et al., 2020; Mertens et al., 2020; Stainbeck et al., 2020). For example, researchers began collecting and publishing data early in the pandemic and investigated the impact of media exposure on fear and anxiety levels. Mertens et al. (2020) found that participants in their online survey reported increased fear in connection to higher media exposure. This study included exposure via traditional media such as television and news reports, and social media posts, and they found that participants' "most commonly reported concern and the best predictor of more fear of the coronavirus was concerns for the health of loved ones" (Mertens et al., 2020, p. 6). Stainbeck et al. (2020) found similar results in which participants who followed COVID-19 news "very closely" had greater psychological distress compared to those who followed the news "fairly closely." Finally, Chao

et al. (2020) found that adults in China who were engaging with social media regularly throughout the beginning stages of the pandemic experienced higher rates of anxiety, depression, and stress. These three studies demonstrate that media exposure can exacerbate trauma responses as an additional source of stress and trauma while communities are already experiencing collective distress and threat.

**Case Example B: Eco-anxiety and media communication on climate change.** Another area that is becoming more prominent in the literature is media's role in eco-anxiety (i.e., "ecological anxiety") and how watching footage connected to climate change and humanity's impacts on the planet can adversely affect viewers' mental health. Eco-anxiety, also called "climate anxiety," is an anxiety response that centres around the fear and uncertainty of climate change, the possible harm it could cause in the future, and the current threat to many people's physical wellbeing (Clayton, 2020; Hickman et al., 2021; Léger-Goodes et al., 2021). Research has found that eco-anxiety can impact anyone who is aware of climate change. Individuals who live in potentially threatened areas (e.g., under threat of natural disasters, extreme heat, or flooding) may experience heightened fear of losing their homes, personal belongings, and businesses and worry about the safety of their loved ones (Hickman et al., 2021; Léger-Goodes et al., 2021). However, eco-anxiety has become prominent in people who do not live in high-risk areas as well, as people think about the future and the "existential threat" (Kumar et al., 2021) that climate change poses to humanity. Hickman et al. (2021) surveyed 10 000 children and youth in ten different countries and found that over half reported feelings of sadness, anxiety, anger, and helplessness, "with 75% saying the future was frightening" (p. 869). Over 45% of the participants also reported that their thoughts and "feelings about climate change negatively affected their daily lives" (Hickman et al., 2021, p. 866).

While these age groups are taught about environmental sciences and humans' impacts on the natural environment throughout their elementary and secondary education, much of what they learn comes from the media they watch about the effects of climate change in different parts of the world. For example, the rise in natural disasters, including floods, wildfires, and severe storms such as hurricanes or tornadoes, are signs of climate change (Government of Canada, 2021; Trenberth et al., 2018; Xu et al., 2020). Directly experiencing a natural disaster is an example of a traumatic event and is also considered an ACE (Chrisman & Dougherty, 2014; National Child Traumatic Stress Network, 2018), but widespread news coverage can also create trauma responses in viewers who are geographically removed from the site of the destruction. For example, Dick et al. (2021) compared youth ages 9 to 11 in Florida and Southern California to see if media coverage ahead of Hurricane Irma in 2017 would influence post-traumatic stress (PTS) symptoms. They surveyed young viewers who were directly under threat from the storm (i.e., Florida residents) versus those geographically distanced from the hurricane and not under threat (Dick et al., 2021). The researchers found that the "effects of exposure to anticipatory self-reported media on child PTS were robust and uniform across youth, even among those who were over 4500 kilometres from the storm's path" (Dick et al., 2021, p. 1579). This study further demonstrated the profound impact media could have on children's perception of safety based on the fact that the children in Southern California still experienced heightened symptoms of PTS even though they were not under direct threat from the storm, and news coverage was in anticipation of the event and did not show the actual destruction during or afterwards.

Beyond the news, Ahn (2021) evaluated social media responses following the release of Netflix's docuseries *Our Planet* (Fothergill & Scholey, 2019), in which disturbing video sequences of walruses dying as a result of melting ice and lack of space in their habitats created

strong reactions. As a result of the outcry, Netflix released a reactionary tweet warning viewers of potentially triggering content in each of the seven episodes, including the timestamps (Ahn, 2021). Ahn also noted that parents began to warn other parents of the scene and provided timestamps so that the scene could be avoided if necessary, one stating that her son "started crying uncontrollably and it 'made him fearful of other nature shows'" (Ahn, 2021, p. 71). Nature documentaries have been a regularly used resource in the classroom. Showing footage of natural disasters or clips from a series such as *Our Planet* can be easily integrated into the science or social studies curricula. Video, especially those that are expertly shot by wildlife videographers and documentary filmmakers, have the potential to support students' interest in the natural world, their place in the world, and a sense of advocacy to protect it due to the beauty shown in the film (Ahn, 2021). However, observing harm to animals or the dire state of various ecosystems around the world can communicate messages of hopelessness and danger to children and youth and, consequently, evoke trauma responses.

**Case Example C: Movies, television shows, traumatic stress responses and suicide ideation.** Research has also shown that fictional media, such as movies and television series, can elicit traumatic stress responses in viewers of all ages. "Several studies have found that adults are no more resilient to the effects of exposure to traumatic media-based imagery than children" (Carleton et al., 2010, p. 207). For example, horror films have been documented since the 1970s with the film *The Exorcist*'s release in 1973 causing symptoms of PTSD in adult viewers such as heightened anxiety and fear, hallucinations, irritability, substance abuse, flashbacks, intrusive thoughts, and sleep disturbances (Carleton et al., 2010). Gomes de Araújo et al. (2019) identified thirteen case examples of "clinically significant distress reactions" (p. 365) and PTSD-like syndromes in children and youth after watching horror films. Of the thirteen cases, eleven

patients experienced “psychological reactions ranging from specific phobias to full-blown psychosis” (Gomes de Araújo et al., 2019, p. 366). In one example, a ten-year-old girl watched a horror movie at her friend’s house and then could not sleep in her own room and experienced “unbearable anxiety” (Gomes de Araújo et al., 2019, p. 362) for the next six years. Other symptoms included intense fear, and she “‘felt more afraid to leave home, especially at night,’” nightmares, intrusive thoughts, heart palpitations, and sadness as nighttime approached (Gomes de Araújo et al., 2019, p. 363). The recurring source of her fear was the supernatural being in the film who would appear in her mind when she tried to go to sleep. Similarly, Carleton et al. (2010) found that symptoms of an intense anxiety reaction in adults after watching a horror film lasted up to four weeks post-viewing.

Content that is triggering to viewers may also elicit trauma responses based on trauma history and the connection built between the fictional piece and the audience’s real life. The popular teen drama *13 Reasons Why* (Yorkey, 2017) released its first season in 2017 and created a lot of discussion and concern among mental health professionals, parents, and educators for its depiction of suicide in the season finale (Till et al., 2019). Some research indicated that the series provided an opportunity for parents and children or teens to talk about mental health at home and engage in conversations based on the plot points in the show (Scalvini, 2020). However, many government organizations released warning statements in reaction to the series as “copycat behaviours” (i.e., suicide attempts) began to increase amongst adolescents around the time the first season was released on Netflix (Quinn & Ford, 2018; Scalvini, 2020). Ayers et al. (2017) shared that Google searches for “suicide” rose for nineteen days following the release of the show (i.e., 900,000 to 1.5 million more searches than average) and identified this increase as a potential indicator for suicide ideation in viewers. Till et al. (2019) found that outpatients

experienced nightmares and increased suicide ideation following the series as the protagonist, Hannah, reminded them of a friend they had who died by suicide.

These case examples of fictional media demonstrate the significant impacts that movies and television series can have on viewers' behaviours and trauma responses. As with all psychological research, it is critical to consider various moderating variables that can contribute to whether an individual is at a higher risk for a trauma response than other viewers.

### *2.3.2 Moderating variables of media and trauma*

There are many moderating variables to consider when examining media's impacts on mental health and trauma responses. In their influential paper, Baron and Kenny (1986) defined a moderator as "a qualitative (e.g., sex, race, class) or quantitative (e.g., level of reward) variable that affects the direction and/or strength of the relation between an independent or predictor variable and a dependent or criterion variable" (p. 1174). Moderators help explain the "who," "when," and "under what circumstances" a relationship will take place between the independent variable (IV) and dependent variable (DV) (MacKinnon & Luecken, 2008). For example, when looking at the relationship between watching media and trauma, a moderating variable may be age, as watching violent media (IV) may be more likely to cause a trauma response (DV) in younger children as opposed to young adults. It is essential to consider moderating variables when conducting psychological research to identify specific groups that may be affected, test theories or hypotheses, measure the strength of the relationship between the independent and dependent variables, and be able to provide practical recommendations based on the information gathered (e.g., if there are differences between males and females, specific recommendations can be provided for each group) (MacKinnon, 2011).

A history of trauma can be a moderating factor. As the research shows, ACEs and childhood trauma present significant risks to long-term individual health. High ACE scores have also been associated with potentially unhealthy relationships with technology and increased risk for online victimization. For example, Nagata et al. (2022) found that youth who reported higher ACE scores were at higher risk for cyberbullying victimization. Jackson et al. (2021) found that youth 6-17 years old were three times more likely to engage in heavy digital media use (i.e., used digital media for over four hours per day) if they experienced four or more ACEs. Tudorel (2022) investigated the connection between ACEs, life satisfaction, and problematic internet or mobile phone use. The study found that individuals who reported high ACE scores also reported low life satisfaction and used technology as a way to cope and escape from stress (Tudorel, 2022). This led to problematic internet use and problematic mobile phone use in participants with lower levels of life satisfaction (Tudorel, 2022). As these studies highlight the relationship between increased technology use and high ACE scores, this may mean that these individuals are exposed to more media content and, consequently, may be at-risk for retraumatization or vicarious traumatization.

Building a personal connection to the story and previous experiences can be another moderating variable. Plot points, characters, images, sounds, and settings may remind the viewer of a traumatic event they experienced and elicit a trauma response. A person with a trauma history is in a heightened state due to the trauma (Terrasi & Crain de Galarce, 2017) and, therefore, may be triggered more easily than someone else. Secondary trauma responses can also come from watching media in which the viewer builds an emotional connection to a character or setting. For example, if a person sees themselves represented in a character for their appearance, interests, or identity, and something negative happens to that character, they may experience a

secondary trauma response because they have built a personal connection to the fictional person and believe it could happen to them, too (Laffier & Westley, 2022; McInroy & Craig, 2017). Due to the relatively limited positive representations of LGBTQ+ and Black, Indigenous and People of Colour (BIPOC) characters, viewers in identity-based, marginalized groups may be at a higher risk for a trauma response (Laffier & Westley, 2022; McInroy & Craig, 2017; Rogers et al., 2021). Realistic images are also a moderating factor. The more the scene looks real, the more it feels real, so the chances of the viewer being triggered or experiencing a trauma response are higher (Lavoie et al., 2021). This is important to keep in mind when considering the previous examples of watching news coverage of live events and how documentaries with real people and footage can affect the audience.

Although few studies about trauma and media focus on adolescents, and even fewer focus on children, age and developmental stage are always important moderating factors to consider in psychological and educational research (Fritz & Arthur, 2017). Children and youth at varying developmental stages may find different stimuli scarier than others (Valkenburg & Piotrowski, 2017). For example, younger children (2-6 years old) are more likely to be scared of monsters, large animals or insects, or ghosts (Valkenburg & Piotrowski, 2017). Older children (7-12 years old) become more afraid of physical harm, losing loved ones, accidents, kidnappings, or disasters being depicted in media because they can see those things happening in real life (Valkenburg & Piotrowski, 2017). In contrast, adolescents may have lingering symptoms of anxiety or stress from media involving themes of sexual violence, wars or nuclear warfare, political conflicts or existential crises (MediaSmarts, 2016; Valkenburg & Piotrowski, 2017).

For children and youth, the presence of a trusted adult can also be a moderating factor. Parents/guardians can engage in “co-viewing,” which means they watch the content together and

can discuss anything confusing or troubling to the child (Gottschalk, 2019). Parents and guardians can also act as protective factors by activating various parental control settings to filter what their children are exposed to. For example, YouTube Kids has a "Parent Resources" section on their website that demonstrates how parents can select age-appropriate content for their children, block certain content, and monitor what they are watching (YouTube Kids, n.d.). SnapChat and Meta (the parent company of Facebook and Instagram) have also produced "Family Center" options for parents to monitor their children and teens' interactions on their platforms (Meta, n.d.; SnapChat, 2023). However, YouTube Kids (n.d.) also states in their resources that "no system is perfect and inappropriate videos can slip through" (Select content levels based on your kid's age section, para. 3) and recommend consistent monitoring of youth behaviour on these platforms. In addition to filtering and monitoring content on social media, parents often try to select age-appropriate movies and television for their kids, but the ambiguity of the rating system for the content produced for this age group can make this difficult (MediaSmarts, 2021). Some research has shown that restricting what media youth can watch can actually make it more enticing to youth, which presents another risk factor as they may find ways to watch inappropriate content without their parent's knowledge (Valkenburg & Piotrowski, 2017).

Access to content is another moderating variable, as more children and teens can watch various media privately. In the past, youth would have had to watch television on the communal television set in the living room of the home, where parents could be more active protective factors as they would see what their child was watching more often (Te'eni-Harari & Yadin, 2019). Many children and youth now have televisions in their bedrooms (Beyens et al., 2016) or their own tablets, phones, or computers to access the content they want with increased privacy

(Beyens et al., 2016; Te'eni-Harari & Yadin, 2019). This poses another risk factor, as parents may not be able to track what their child is watching.

The amount of time spent consuming media is also a moderating variable. It is estimated that children and youth in Canada ages 2-17 years old spend approximately 11 hours watching television every week (Stoll, 2022). With the rise of video-on-demand programs and access to entire seasons of television at a time, youth are engaging in "binge-watching" behaviours, which is "defined as watching at least three episodes of a TV show in one sitting" (Stoll, 2022, para. 3). As teens feel the need to keep up with their friends and remain current with the television series their peers are talking about, they binge-watch the series to catch up (Matrix, 2014). Binge-watching can also be a strategy for coping with stress for this age group. The escapism associated with being immersed in a fictional space for hours can allow teens to separate themselves from the stresses of their lives. Some have compared it to "stress eating" or "comfort food" and discuss their emotional investment in the characters as if the fictional teens are part of their friend group (Matrix, 2014, pp. 129-130).

Beyens et al. (2016) found that adolescents are more likely to conform to their classmates' television viewing preferences compared to their peers who they have closer friendships with but are not in their class. The study showed that, over time, adolescents in grades seven through nine ended up aligning with the television show preferences of their classmates compared to their friends in other classes (Beyens et al., 2016). Researchers shared how these viewing preferences likely shifted so that adolescents could contribute to conversations with their peers in class and fit in socially (Beyens et al., 2016; Matrix, 2014). This may point to the idea that peer influence over media use and consumption could be a risk factor as youth may watch media they are uncomfortable with to keep up with their peers. Each of these

moderating variables and risk factors should be considered when evaluating what media should be integrated into the classroom to reduce the likelihood of secondary traumatization or re-traumatization.

### *2.3.3 Media use in the classroom*

Media has been used in education for over one hundred years (Russell, 2012). Today, educators worldwide integrate media such as movies, television series, documentaries, news reports, social media posts and YouTube videos into lesson plans every day. There are immense benefits to using media in the classroom, and with the amount of time students spend consuming media each day, educators can be a critical resource for teaching students about digital literacy, media literacy and digital wellness (Goodspeed, 2022). Using popular culture has been an effective way to increase student engagement in several curricular subjects and is often welcomed by students (Daniels, 2012; Russell, 2012; Visco, 2019).

Scholars have investigated various pedagogical approaches to utilizing fictional films and television series in the classroom to increase student engagement and improve content gains. For example, two professors at the University of Central Florida developed a *Physics in Films* course for non-science major students to encourage these individuals to engage with physical science (Efthimiou et al., 2006). The researchers found that using film improved understanding of content and heightened engagement in non-science students (Efthimiou et al., 2006). Science fiction films and television present a visual representation of science in the "real world" (Vrasidas et al., 2015), which can help viewers understand and connect to the content when they see how it applies to their lives. At the high school level, using science fiction film and television provides the opportunity to develop 21st Century skills, including digital literacy, scientific literacy, critical thinking, and effective communication (Prins et al., 2017; Tang, 2015; Turiman

et al., 2011). Using these mediums also encourages interdisciplinary teaching and learning (Vrasidas et al., 2015), which can help students build connections to other course content as they interact with the narrative from various perspectives (e.g., historical, literary, and social sciences).

Roslim et al. (2021) found that English language learners improved their oral communication skills and vocabulary after engaging with English-speaking films, and Kalra (2017) reported that students in an English as a foreign language (EFL) classroom had a more extensive vocabulary, better listening comprehension, and improved understanding of slang and colloquialisms compared to a group that did not use movies in the class. Kress & Watland (2016) incorporated films into a post-secondary online business class and reported that the use of films created more engagement with course content, online community-building amongst students and new perspectives of behaviours they may experience in their future workplace. Media resources can also integrate authentic and diverse perspectives into the classroom. For example, using documentaries, interviews, news reports, movies with accurate representations, or social media posts from individuals that can speak to the perspective the educator is looking for (e.g., a person with lived experience). Daniels (2012) found that incorporating documentaries into their introductory sociology course helped students connect sociological concepts to worldviews that differed from their own. One participant shared, "'I learned many new things about the ways other cultures and ethnicities live their life,'" and another stated the films provided new perspectives on "'things like gender inequality, religion and family. It gave me the opportunity to see how strong religion and family can affect the life of an individual especially from a different view than I was brought up with'" (Daniels, 2012, pp. 14-15).

While there are many positives to using media in the classroom, there is scant research on trauma-informed practices when incorporating media into learning. Russell (2012) investigated grades six to twelve social studies teachers' use of films in their classrooms and whether they had any training in using films effectively. 100% of participants reported using movies in their lessons at least once a month, with 83.7% stating they had no training related to using film in their teaching practice (Russell, 2012). Given the examples listed in the previous sections about how media can elicit trauma responses and the lack of training for educators, it is critical that this research is conducted to reduce the risk of trauma while also informing trauma-informed care practices for using media in the classroom.

**2.4 Trauma-Informed Care**

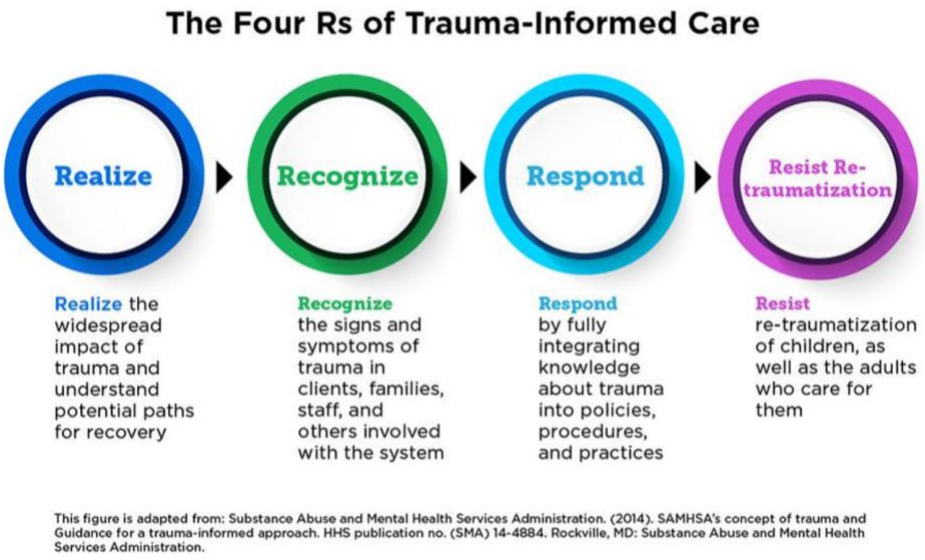
Trauma-informed care (TIC) is an approach that grew out of the United States medical field as practitioners recognized the need to take trauma into account when diagnosing and treating individuals. In 2001, when the U.S. Congress and the Substance Abuse and Mental Health Services Administration (SAMHSA) established the Donald J. Cohen National Child Traumatic Stress Initiative and the National Child Traumatic Stress Network, the national eye turned to learning more about trauma-informed care in pediatrics and in education. This occurred not long after the aforementioned landmark Adverse Childhood Experiences (ACE) Study. As awareness of the prevalence of trauma grew, trauma-informed care became more widely studied and promoted in various fields such as education, social services and emergency response.

The Substance Abuse and Mental Health Services Administration outline the basic principles of TIC in their "Four R's of Trauma-Informed Care" model (Figure 2.1). The four R's model describes the necessity for a trauma-informed organization or system to be able to *realize* the widespread effects of trauma; *recognize* the signs and symptoms in students, clients,

employees, or other members involved in the service or organization; *respond* to signs and symptoms by incorporating trauma-informed principles into policies and practices; and actively *resist re-traumatization* (SAMHSA, 2014).

**Figure 2.1**

*The Four R's of Trauma-Informed Care model adapted from the Substance Abuse and Mental Health Services Administration (2014) (Bartlett & Steber, 2019).*




Recognizing signs and symptoms includes understanding how trauma responses can look or sound different depending on age, gender, the type of trauma experienced, or the setting (Bartlett & Steber, 2019).

In addition to the four R's model, the five guiding principles of trauma-informed care include safety, empowerment, trustworthiness, collaboration and choice (Figure 2.2) (Institute on Trauma and Trauma-Informed Care, 2015; SAMHSA, 2014). These principles describe the importance for individuals with a history of trauma to feel safe in their surroundings; feel a sense of empowerment with focus placed on their strengths or building skills; trust the people around them such as an educator, service providers, healthcare professionals, or peers; have the

opportunity to be included in decision-making and collaborate on tasks; and that there are choices and a sense of control (Cole et al., 2013; SAMHSA, 2014).

**Figure 2.2**

*The five guiding principles of trauma-informed care outlined by the University of Buffalo's Institute on Trauma and Trauma-Informed Care (2015).*


These principles of TIC guide practitioners in many fields now, including education.

### *2.4.1 Trauma-informed care in education*

Educators that create calm, predictable classroom environments that are psychologically and physically safe for students can reduce the impacts of trauma as the student feels safe instead of under threat at school (Honsigner & Brown, 2019). They can build positive, trusting relationships with their students in which expectations are high, making mistakes is risk-free, and the focus is on skill-building and the student's strengths (Honsigner & Brown, 2019). Students want their teachers to create a safe learning environment (Dods, 2013), and research has shown that these trauma-informed spaces support students' ability to learn and self-regulate (Steele, 2017). However, it is widely documented that educators are not sufficiently trained in TIC and

do not feel equipped to support students with a history of trauma (Brown et al., 2020; Hobbs et al., 2019; L'Estrange & Howard, 2022; McClain, 2021; Phifer & Hull, 2016). Laffier (2022a) found that 78% of pre-service teachers felt unprepared to integrate TIC practices into their future classrooms and were not confident in their abilities to support students with trauma. For the purposes of this chapter, a search was conducted to identify how many pre-service teacher education programs (Bachelor of Education programs) offer trauma-specific training to teacher candidates in Ontario universities. By searching through program websites, academic calendars, and course descriptions of all Bachelor of Education programs for keywords "trauma" or "at-risk," only two of seventeen institutions offered electives or specializations in supporting students with trauma. One university offered a "Trauma-Informed Education" elective course, and another offered concentrations specifically focusing on at-risk children or youth, each with two courses focusing on understanding and teaching these populations. While most programs offered courses covering mental health topics and special education, this small sample demonstrates that there continues to be a gap in training on trauma-informed care practices for pre-service educators.

Not training teachers about the impacts of trauma on learning, development, and behaviours can increase the likelihood of re-traumatization in the classroom (Foreman & Bates, 2021). This is highly important as educators witness various student behaviours that may be misinterpreted as "acting out," misbehaving or disengaging (Brunzell, 2015; Day et al., 2015; Phifer & Hull, 2016). For example, an educator may discipline a student for disruptive behaviour by raising their voice, which may be triggering for the student, and they may react aggressively or withdraw as a coping strategy (Foreman & Bates, 2021). Trauma-informed educators ask, "What has happened to you?" as opposed to "What is wrong with you?" (EQUIP Health Care,

2017) and understand that when students are engaging in maladaptive ways, it may be because their emotional, cognitive, spiritual or biological needs are not being met and this is how they are communicating that need (Brunzell, 2015). These perspectives reduce the risk of re-traumatization as educators have a better chance of responding appropriately to the behaviour through a trauma-informed lens (Day et al., 2015). With the knowledge of trauma's impacts on behaviour and learning, trauma-informed educators can integrate practices such as the four R's to cultivate healthy learning environments and relationships with their students.

This training should also include how technology can be used in trauma-sensitive ways. As demonstrated in the previous section, Russell (2012) found that 100% of teachers surveyed said they used films in their lessons at least once a month, with 83.7% stating they had no training related to using film in their teaching practice. Hobbs et al. (2019) shared that a review of the TIC curriculum for pre-service educators did not suggest any inclusion of training for teachers on technology and trauma. This points to an essential gap as students use technology in every area of their lives, and more continues to be integrated into classrooms. Educators must understand how to mitigate the risks and reap the benefits of using technology and media in a classroom setting to support students' learning and wellness as they navigate life in this digital age.

In summary, the literature reveals that media can elicit trauma responses in children and youth through sources such as social media, television, movies, documentaries, or news reports. However, there are several gaps in the literature when it comes to media being shown in an educational environment and how classroom-based media impacts students. The literature to date predominantly focuses on the benefits of using digital media sources to enhance learning, but there is a gap in exploring the potential psychological risks of using media and whether problematic media can impact students in the short or long term. As demonstrated in this

literature review, there is very little opportunity for educators to be trained in trauma-informed ways of using technology in the classroom, and this training rarely, if ever, includes how to use media safely. These knowledge gaps need to be addressed first to have a better understanding of how media used in education can impact students so that evidence-based trauma-informed training can be developed for educators using media in their teaching practices.

# Chapter 3. Methodology

This chapter will discuss the research methods used for this study which aimed to explore the potential trauma impacts of media used in the classroom on individuals. The research questions for this study were:

Q1. How can the media shown or discussed in classrooms impact students, specifically in the area of trauma responses?

Q2. How can awareness of classroom media and trauma impacts inform teacher pedagogy and the creation of trauma-informed care for educators?

To answer these research questions, a qualitative, phenomenological approach was used whereby the public social media posts of individuals sharing their experiences of trauma from media in school were collected and analyzed.

## 3.1 Research approach and design

Since the aim of this study was to explore people's lived experiences of a phenomenon, a qualitative research design was chosen. Qualitative research examines non-numerical data to explore a specific phenomenon, such as human behaviours, attitudes, or experiences (Tenny et al., 2022). This approach provides the opportunity for researchers to obtain information about "how" or "why" a phenomenon exists by analyzing themes and patterns from participants' lived experiences through text, conversations, or observations (Tenny et al., 2022). For this study, a

qualitative design was best suited to examine how media in classrooms can impact students by analyzing social media posts, as these texts were written to share users' perspectives and experiences in an unfiltered way. The posts were not prompted by research questions but were shared independently as part of a phenomenon in which students have used social media platforms to engage in conversations about their experiences with adverse effects from the media shown in classrooms. Andreotta et al. (2019) highlighted that "social media data emerges from real-world social environments encompassing a large and diverse range of people, without any prompting from researchers" and that "participant behavior is relatively unconstrained if not entirely unconstrained" (p. 1767). As this study was exploratory in nature, social media's "unconstrained" environment for users to express their experiences was identified as an appropriate setting to investigate the research questions.

The research design for this study followed methods of phenomenology. Phenomenological research aims to "describe the essence of a phenomenon by exploring it from the perspective of those who have experienced it" (Neubauer et al., 2019, p. 91). Beverly (2017) stated that “using customized and commonly shared understandings, phenomenology explores all avenues of what it means to be human” (para. 2). One way to embark on this exploration is through hermeneutics (Beverly, 2017; Kalfe, 2011). Hermeneutics is “the study of written texts and their meaning” (Cambridge Dictionary, n.d.). These sources are valuable in phenomenological research because, over time, scholars identified that “to understand the life world we need to explore the stories people tell of their experiences” (Kafle, 2011, p. 191). We can do this by analyzing personal texts (Guillen, 2019), which is why social media posts were collected and analyzed for this study.

Written texts such as diaries have been used in phenomenological research as these personal texts "provide an intimate description of a person's everyday life" (Morell-Scott, 2018, p. 28). Social media is used similarly to personal diaries, as users post their individual thoughts and experiences in digital posts, which resembles a diary entry (Karfelt, 2019). Using personal diaries or, in this case, social media posts can be beneficial for exploring a phenomenon as it is non-intrusive due to the lack of influence by the researcher (e.g., by not asking questions or prompting the participant) (Morell-Scott, 2018). The experiences that were shared were authentic in the sense that the words were not altered, and posts were not prompted by a researcher. As the purpose of this study was to conduct exploratory research on peoples' experiences with media used in education, and not to investigate in-depth case studies of peoples' experiences, the social media posts were used to identify themes of experience (Guillen, 2019; Webb & Welsh, 2019).

Phenomenological experts such as Rosfort (2019) stress the value of hermeneutics in articulating "the reflective character of human experience as it manifests in language and other forms of creative signs" (p. 236). The value of language is also stressed by trauma experts such as Bessel van der Kolk (2014), who said, "language gives us the power to change ourselves and others by communicating our experiences, helping us to define what we know, and finding a common sense of meaning" (p. 38). The essence of an experience, including thoughts, emotions or views, can be expressed through lengthy written text or even brief text, such as a powerful statement on social media. Carl Rogers, a humanistic psychologist, stressed that it is essential to listen to people's messages and stories from a place of empathic listening and recognize that all stories have value regardless of how they are told (Rogers, 1951). Therefore, social media posts, even if they are brief or public, hold value for describing a lived experience. Exploring these messages, especially in relation to trauma, should come from a place of empathic understanding.

Trauma experts emphasize the importance of empathy in supporting people who have experienced trauma (Wilson & Thomas, 2004). To empathize means to engage in "the action of understanding, being aware of, being sensitive to, and vicariously experiencing the feelings, thoughts, and experience of another" (Merriam-Webster, n.d.). In order to gain insight into the experience of another human being, a person must be able to connect to something within themselves that knows that feeling. Empathic understanding requires some knowledge of a phenomenon to connect to and understand the experience, as well as a non-judgmental approach where there is no judgment of the person's experience. An empathic understanding of someone's lifeworld can lead to important insights, as documented in previous phenomenological research studies (Emiliussen et al., 2021). Therefore, empathic understanding was used when collecting, analyzing, and drawing conclusions from the social media users' lived experiences to exercise a trauma-informed approach to the research. The study began with a basic understanding of trauma (to connect to the experience). Then no judgments were made on the users' experiences of trauma, especially as they related to the validity or assumptions of traumatic experiences.

In education, phenomenological research is helpful in understanding and finding meaning behind students' experiences so that pedagogical approaches can be consistently improved upon and shared with educators (Guillen, 2019). Phenomenology methods were a suitable approach to answer the two research questions by analyzing the first-hand experiences of current and past students who have had negative encounters with the media they were exposed to throughout their education (Q1) while also obtaining information about what they wished their teachers had done differently (Q2). The information gleaned from the content analysis offered significant insight into past and current students' experiences with media and how pedagogical practices can be improved.

### *3.1.1 Data sources and collection*

Public data was used in this study by searching for public posts on social media platforms Twitter and Reddit. As per the Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council (Government of Canada, 2022), the following statement regarding research ethics board (REB) exclusion was made:

> Research does not require REB review when it relies exclusively on information that is: publicly available through a mechanism set out by legislation or regulation and that is protected by law; or in the public domain and the individuals to whom the information refers have no reasonable expectation of privacy. (Article 2.2)

Therefore, public data is easily accessible yet can be rich in information.

Both platforms are primarily text-based, but images, videos, and hyperlinks can be shared as well. On Twitter, users post short written texts, or "tweets," and have the ability to "like," "retweet or quote tweet," or reply to another person's tweet (Twitter, n.d.). On Reddit, content is organized into "communities" in which users can post their thoughts and multimedia content, comment on each others' posts to engage in conversations, and vote on whether they find the content interesting ("upvoting") or not ("downvoting") (Reddit Inc, n.d.). For this study, tweets, comments, and Reddit conversations were collected following multiple steps between January-April 2023.

The first step involved developing a list of potential search words that would be entered into the social media platforms' search bars and deciding which platforms would provide the best insight. From January 18-30, 2023, preliminary searches were conducted on Facebook, Twitter, Reddit, Tik Tok, and Instagram using various search strings and hashtags. Examples included

#traumatizedbyvideoinclass, #scaryvideoshowninclass, “trauma from media in class,” “traumatized by video watched in class,” “horrific video watched in class,” “graphic media shown in class,” and “shown traumatic video at school.” The results from these preliminary searches demonstrated that youth often use iterations of the word “trigger” to communicate that they experienced an adverse reaction. Therefore, “#triggeredbyvideoinclass” and “triggering video watched in class” were added to the search options to reflect the language youth are using. Twitter and Reddit provided the most content that was directly related to trauma responses from media shown or discussed in classrooms as part of lessons or educator pedagogy and, therefore, were selected as the primary data sources for this study.

Data collection took place in two waves. The first collection occurred from February 5-18, 2023, and a second collection took place between April 18-22, 2023, to account for any additional posts that were created between February and April so that the data included in the analysis was as up-to-date as possible for this study. The posts that were collected ranged in date from November 17, 2009, to April 11, 2023. The posts included in the study were located by entering four different search strings into the search bars of both platforms. To ensure all posts were available to the public, new accounts were created by the researcher on both Twitter and Reddit. These accounts allowed for complete access to the platform (i.e., by being logged in as a user) while still respecting individual users’ privacy. This meant that searches would only generate content that was available to the public from accounts that did not have privacy settings activated, as the researcher accounts did not receive permission from any private users to access their posts. The researcher accounts did not post questions or interact with any users on either platform; the accounts were solely used to access the publicly available data. The search results

were also less likely to be altered by algorithms from past activity on the sites because there was no search history or engagement with other users.

The search strings used were "traumatized by video in class," "horrific video watched in class," "shown traumatic video at school," and "triggering video watched in class." Each search string was entered into the search bar on Twitter and Reddit. Tweets and Reddit threads were included if the post mentioned the content was shown or discussed in an educational environment (e.g., using words such as "class," "classroom," "teacher," or a curricular topic such as "English," "history," or "health") and that the user believed it had an adverse effect on them or their classmates to ensure users' experiences were contained to an educational setting. Although the research questions explore student experiences, posts from adults sharing their prior experiences were pulled and included in the data collection. Posts were then selected based on the following inclusion criteria: (1) the post included an example or description of a piece of media that was used in a class that the user believed had a negative impact; (2) the post discussed physiological or psychological symptoms, behavioural signs or impacts on various areas of life as a result of media used in the classroom; or (3) the post offered trauma-informed suggestions or recommendations for using media in education. As previously discussed, iterations of the word "trigger" were often used to communicate an adverse effect or experience, and the same observation was found with the word “traumatized” throughout social media posts. Therefore, tweets, comments, and threads that used these words to help describe their experience were evaluated and included if they met the above inclusion criteria. If “trigger” or “trauma” were used without any context (e.g., “I was so triggered by the video we watched.”), the post was not included.

All selected posts were copied into a spreadsheet using Google Sheets, and the account username, post, and the date of the post were recorded. An additional step was taken for tweets that went "viral," meaning that the tweet was retweeted, quoted, and liked hundreds of times within a short period and reached further than the original user's follower network (Nixon et al., 2018). For this study, two tweets received over ten thousand retweets and over one hundred thousand likes. The comments from these tweets were stored in a separate spreadsheet to keep the content from those additional, larger conversations together. If a comment led to a sub-thread of posts that met the inclusion criteria, they were also collected. These threads stemmed from the original post and provided further insight into the research questions as users engaged in conversations about their experiences with media in the classroom.

On Reddit, over two hundred search results were generated from each search string (see Table 3.1). Posts that included language about media shown in an educational environment in their headline were clicked on, and the comments within the thread were read and copied into the spreadsheet if they met the inclusion criteria. Threads that were considered had anywhere from 1 to 139 comments. Comparatively, search results from the search strings ranged from 3 to 57 tweets on Twitter, but several tweets led to much larger conversations. Comments on multiple tweets exceeded 100, and those that met the inclusion criteria were analyzed. Overall, 403 tweets and 81 Reddit posts (including initial thread posts and comments) were included in the analysis for a total of 484 social media posts ($N = 484$).

**Table 3.1**

*Search results and the number of original posts included in data collection.*

| Search string | Platform | Number of search results | Number of posts included from search results |
|---|---|---|---|
| traumatized by video in class | Reddit | 231 | 1 |
| shown traumatic video at school | Reddit | 245 | 6 |
| triggering video watched in class | Reddit | 229 | 4 |
| horrific video watched in class | Reddit | 212 | 0 |
| traumatized by video in class | Twitter | 57 | 10 |
| shown traumatic video at school | Twitter | 3 | 1 |
| triggering video watched in class | Twitter | 18 | 14 |
| horrific video watched in class | Twitter | 29 | 19 |

### *3.1.2 Data analysis*

As is typical in phenomenological research, it is important to explore themes of personal experience (Aguas, 2022; Alhazmi & Kaufmann, 2021; Neubauer et al., 2019). To do this, content analysis was used to analyze the data in this study. The main goal of content analysis is to take a large body of data and systematically organize it into a summary of key points based on the themes and consistencies found within the text (Erlingsson & Brysiewicz, 2017). The subjective nature of the social media posts provided the opportunity to analyze users' lived experiences as described in their own words to better understand how students of various ages,

ethnic backgrounds, socioeconomic statuses, mental health and trauma histories, and in different countries perceive the media used in classrooms. The qualitative approach to analyzing these texts allowed the researcher to identify themes and commonalities within students' lived experiences in a systematic and objective way by using specific codes and inclusion and exclusion criteria (Aguas, 2022; Bengtsson, 2016).

Bengtsson (2016) outlined four major stages of content analysis, including (1) *decontextualization,* in which the researcher familiarizes themselves with the data to get a sense of the bigger themes and identify possible codes; (2) *recontextualization,* in which the data is reread with the list of codes to ensure all content is accounted for and any unrelated content is removed; (3) *categorization* in which data is coded based on categories that have been identified in the previous two steps; and (4) *compilation* in which the researcher analyzes and draws conclusions from the analysis. These steps were followed in the data analysis for this study. A directed content analysis approach was used to analyze the social media posts. Directed content analysis is applied when the research questions are based on current theories or research, with the goal being to expand upon the current theories (Hsieh & Shannon, 2005). This approach is more structured as existing research and theories can help build the initial coding scheme and provide predictions about the possible relationships between the variables under investigation (Hsieh & Shannon, 2005).

Content analysis allowed for both a deductive and an inductive approach. A deductive approach to content analysis is used when the research questions are based on current theories and prior knowledge, guiding the data analysis and code development (Kyngäs & Kaakinen, 2020). Comparatively, an inductive approach analyzes the data abstractly and without influence from theories or frameworks to identify the codes openly (Kyngäs, 2020). For this study, in the

deductive approach, a base understanding of trauma, healthy human development and wellbeing allowed the researcher to come from a place of empathic understanding when exploring the social media users' experiences with trauma. This core knowledge helped to understand how their experiences fit within the current knowledge of trauma, especially vicarious trauma. However, an inductive approach was also used in which any and all themes of experience were explored, whether they fit with the current research or not. This dual approach aligned with the empathic understanding approach in which the base knowledge allowed the researcher to connect the social media users' experience to something while maintaining an open mind and approaching each person's experience without judgment. Content analysis also provided the opportunity to explore beyond themes and look at frequency (Vaismoradi et al., 2013). For example, examining the common signs and symptoms that people were experiencing and the most desired recommended trauma-informed care practices.

Directed content analysis was used for this study in several steps. First, the data was reviewed to identify larger, overarching themes throughout the social media posts that may align with current trauma theories. To do this, each post was read, and brief notes were made about common themes, such as topics that elicited responses, symptoms that were shared repeatedly, and possible trauma-informed care recommendations. The second step involved creating a coding chart based on current theories. Trauma theory, including the ACEs framework, vicarious traumatization theory, signs and symptoms of trauma, and examples of traumatic events outlined in the literature (e.g., victim of abuse, loss, witnessing violence, etc.) informed the code. The literature surrounding trauma-informed care theory, including the Four R's model (SAMHSA, 2014) and the Five Guiding Principles model (ITTIC, 2015), were also used to create the code. This was an iterative process in which the data was reviewed several times to "progressively

[lead] to refined focus and understandings" (Srivastava & Hopwood, 2009, p. 77) of the social media users' experiences with classroom media and trauma. The research supervisor, a licensed psychotherapist, also reviewed the coding to enhance the reliability of the coding process and used her professional experiences supporting individuals who have experienced trauma to help inform the code.

Moderator variables were also investigated throughout the data analysis, and literature surrounding the impacts of moderating variables in psychological research informed the code. A moderator affects the strength or direction of a relationship between the independent and dependent variable in a study and helps explain the "who," "when," and "under what circumstances" a relationship will take place (MacKinnon & Luecken, 2008). It is essential to consider moderating variables to identify specific groups that may be affected, test theories or hypotheses, measure the strength of the relationship between the independent and dependent variables, and be able to provide practical recommendations based on the information gathered (MacKinnon, 2011). Understanding the role of moderating variables is critical to investigating the relationship between media and trauma to offer applicable trauma-informed recommendations for educators working with students of varying ages, developmental stages, socioeconomic backgrounds, and trauma histories. Therefore, moderating variables (such as age or history of trauma) that were present in the social media posts were also coded and analyzed.

The third step involved following the coding chart to identify themes within the social media posts based on trauma theories. Each post was closely analyzed for specific language describing (1) symptoms or trauma reactions, (2) examples of a traumatic event or topic, (3) moderator variables, and (4) trauma-informed care principles and coded on an analysis spreadsheet. Moderator variables, including age, personal connection to the content, history of

mental health or trauma, the presence of a trusted adult, and graphic or realistic media, were coded. Many individual posts offered data in more than one of these categories and were coded accordingly. For example, if a symptom such as nausea was described as a response to watching a video about sexual assault, both "nausea" and "sexual violence" would be coded for that post. During this stage, "significant statements" (Aguas, 2022, p. 11) (i.e., specific language that aligned with each code) were copied from the original post and included next to the code in the spreadsheet to be used in the fourth and fifth steps of the analysis. To ensure the data was coded consistently, the codes assigned to the posts were reviewed periodically to make sure posts with similar content were coded the same. After each post was coded, each unique user from Reddit or Twitter was assigned a code with a "P" to symbolize "participant" followed by a number (e.g., P1, P2…P403) to protect the identity of the users.

The fourth step involved reviewing the posts that were assigned the same code(s) and analyzing the specific language used in the text to identify any commonalities, such as similar symptoms, recommendations, or media content that affected students (see Table 3.2 for a data sample). If titles of books, short stories, movies, documentaries, or television series were offered without context, an online search for a plot summary was conducted to better understand the users' posts and the potential themes they were referring to. Sources including goodreads.com and Google Books were consulted for short stories and novels, and IMDb (Internet Movie Database) was used for movies, documentaries, and television series.

**Table 3.2**

*Sample of data content analysis including specific language extracted from posts related to each theme (note: inappropriate language was edited by author).*

| **Post** | **Possible Moderator** | **Trauma response** | **Media/Content Type** | **TIP Recommendation** |
|---|---|---|---|---|
| Like when my middle school had an assembly and showed everyone the Columbine video. Then acted surprised when almost everyone in the school had to go to counseling🙄 I'm not gonna lie I had to sleep in my moms bed for weeks after that, at 12 years old | age (“12 years old”) | - sleep disturbances ("had to sleep in my moms bed for weeks after that") | - violence against children ("Columbine video" - school shooting) | - professional intervention ("almost everyone in the school had to go to counselling") |
| // rape , suicide i remember in the seventh grade my french teacher made us watch a film where a little kid literally gets molested by a priest and is later on they find out that he hung himself, and my teacher did not warn us about the scenes 😐 | age (“grade 7”) | N/A | - violence against children ("little kid")<br>- sexual violence ("molested by a priest")<br>- suicide ("hung himself") | - trigger warning ("my teacher did not warn us about the scenes") |
| How is Boy in The Stripped Pyjamas appropriate for a 4th grade class? We were like 10/11. Kids were crying from the book and this b**** made us watch the movie next. Cried for a week and I couldn't even explain to my immigrant parents why I was upset. [image of young girl laying on a pool deck with hand in the pool water] | age (“4th grade class” 10-11 years old) | - crying ("Kids were crying"<br>- prolonged impact ("cried for a week") | - Holocaust ("The Boy in the Striped Pajamas" – book and movie)<br>- violence against children (characters in book and movie are children) | N/A |

| Post | Possible Moderator | Trauma response | Media/Content Type | TIP Recommendation |
|---|---|---|---|---|
| I hope the girls in our class gc that are telling us the timestamps of the triggering moments in the video we need to watch for class so people can skip them know that they are very much appreciated | N/A | - avoidance behaviour ("timestamps of the triggering moments so people can skip them") | N/A | - trigger warnings ("timestamps") |
| tw // overdose , gore we had to watch an 'educational' video on drug use and it was mostly people having ods and ice attacks and it was awful, another time we watched a movie about a tsunami and it was full of graphic gore and now I just look away and zone out | N/A | - avoidance behaviour ("look away")<br>- dissociate ("zone out") | - mental health (substance abuse – "drug use" "ods and ice attacks")<br>- natural disaster ("tsunami")<br>- gore ("full of graphic gore") | N/A |

In three instances, there was extensive attention given to the same topic. The attacks on the World Trade Center (9/11), The Challenger space shuttle explosion, and media used in pre-service paramedic training generated 69, 66, and 56 comments that met the inclusion criteria, respectively. These three topics were analyzed separately as case examples to see whether they provided additional insight into potential moderating factors, symptoms, or trauma-informed care recommendations based on the shared experience of the users.

The final step included drawing conclusions based on these commonalities, as well as the social media users' unique experiences, to inform trauma-informed care recommendations for educators. These recommendations were developed in consultation with the research supervisor, who is a licensed psychotherapist and works with individuals of all ages who have experienced

trauma. The Five Guiding Principles of Trauma-Informed Care model (ITTIC, 2015) also informed the recommendations, as commonalities, such as participants wanting trigger warnings or choices within assignments, pointed to the Five Guiding Principles as these practices may provide feelings of safety or choice. The conclusions were also used to compare how the lived experiences shared on social media differed from or supported current research in trauma and trauma-informed care practices.

### 3.2 Limitations

It is important to acknowledge the limitations of this study. One limitation is that due to the nature of qualitative research, the results are not always generalizable (Leung, 2015). To mitigate this, a large sample size that consisted of a wide range of participants (e.g., varying ages, socioeconomic statuses, ethnicities, and trauma histories) was utilized to investigate a variety of lived experiences to ensure the phenomenon was not an anomaly or isolated to a specific population. Another limitation is that the length of the posts was relatively brief, so users did not always have the opportunity to go into depth with some of their comments. As the posts were public data, there was no opportunity to follow up with the social media users and receive further information about their experiences or verify the details of the event. Therefore, some posts were interpreted by the researcher. It is also important to note that there may have been elements of performativity within the social media users' posts and interactions, as the researcher could not corroborate their experiences with follow-up questions. However, due to the unique nature of trauma and the fact that trauma is based on the person's perception of an event, a non-judgmental approach to each post was taken to remain open to all experiences as each participant described them.

# Chapter 4. Findings

This research aimed to answer two questions (1) How can the media shown or discussed in classrooms impact students, specifically in the area of trauma responses? and (2) How can awareness of classroom media and trauma impacts inform teacher pedagogy and the creation of trauma-informed care for educators? The social media posts that were included in this study were posted between November 17, 2009, and April 11, 2023. The findings from this study suggested that media shown in classrooms can have adverse effects on students and elicit symptoms that affect their physical, emotional, and cognitive health. Social media users highlighted several topics that created these responses ranging from learning about sexual violence, war, mental health problems, natural disasters, and watching horror films, among others. The severity of the responses appeared to be impacted by several moderating variables, including age, personal connection to the content, history of mental illness or trauma, adults' reactions to media, amount of time spent engaging with the content, and how graphic or realistic the content was. Posts also included trauma-informed recommendations for using media in the classroom, such as providing trigger warnings, alternative assignments, multiple mediums to consume content, and the opportunity to discuss with the educator when content may pose a risk to the student or if the media elicits an unpredicted response. These findings are described further in this chapter.

## 4.1 Findings for Research Question 1: How can the media shown or discussed in classrooms impact students, specifically in the area of trauma responses?

To investigate the first research question, the public posts were examined to identify experiences of trauma from media used in schools. First, the topics that students experienced as traumatic in the school setting are discussed. Next, the trauma reactions they experienced from the media are discussed. Examples of posts will be highlighted as well.

### *4.1.1 Traumatic topics*

To identify how media shown or discussed in classrooms impacted students, it was essential to consider *what* was being shown and possible curricular topics or themes that elicited trauma responses. The majority of the posts described specific topics that were troubling to viewers, including explanations of scenes, titles of films, or directly stating the subject matter (e.g., "domestic violence" or "eating disorders"). Physical harm or threat to a person or group of people and observing human suffering were the most prominent themes shared through the social media posts. Therefore, several sub-categories were used to identify specific content that was troubling to viewers. For example, descriptions of physical harm from movies about the Holocaust were assigned the "war/genocide" code. In contrast, several posts discussing graphic media used in driver's education courses described physical harm in the form of accidents involving death or serious injury and were coded accordingly. Table 4.1 provides the key findings based on troubling media content and topics described by users. Posts that discussed The Challenger space shuttle explosion ($n$= 66) were not included in this table, as the entire conversation surrounding this event is based on an accident involving serious injury or death and will be discussed in greater detail in the coming sections.

**Table 4.1**

*Topics and content covered in various media sources that students perceived as having an adverse impact on themselves or their peers.*

| **Physical harm displayed** | | **Mental health and emotional suffering** | | **The unknown, threatening, or abnormal** | |
|---|---|---|---|---|---|
| War/genocide | 24 | Eating disorders | 12 | Natural disasters | 4 |
| Sexual violence | 25 | Substance abuse | 8 | Horror film/supernatural | 6 |

| Physical harm displayed | | Mental health and emotional suffering | | The unknown, threatening, or abnormal | |
|---|---|---|---|---|---|
| Violence against children | 23 | Anxiety | 1 | Medical/human body | 19 |
| Self-harm | 11 | Depression | 2 | Specific phobias | 3 |
| Suicide | 26 | Grieving | 2 | | |
| Murder/execution/ torture | 35 | | | | |
| Accident involving serious injury or death | 18 | | | | |
| Violence against animals | 15 | | | | |
| Domestic violence | 4 | | | | |
| Abortion | 3 | | | | |

Media that discussed or showed scenes of sexual violence were one of the most common topics that affected students. This topic was incorporated into the classroom through reading literature and watching movies and documentaries. Literature, including poetry, was highlighted by P52 (2020), who shared, “my ap lit teacher made my break out group closely analyze a poem about graphic rape, and i had a panic attack afterwards,” and P118 (2020) tweeted, “recently had to read a book that was damn near revolved around rape for my english class and I literally couldn’t even do the assignments for it + purposely missed class bc it was hella triggering.” Experiences watching movies and documentaries about sexual violence were also described, such as “my Shakespeare class watched Titus Andronicus and I had to leave at the r*pe scene to puke” (P6, 2020), “in the seventh grade my french teacher made us watch a film where a little

kid gets molested by a priest and is later on they find out that he hung himself" (P24, 2020), and "we had to watch a documentary about grooming and showed on screen a very realistic acted scene of a teenager getting raped" (P113, 2020). The majority of the posts in this category specifically noted that children or youth were the victims of sexual violence in both fictional and non-fictional media used in the classroom.

Visual and written media sources that were used to teach students about mental health problems were also prominent throughout the posts as potentially traumatic topics, particularly as students learned about eating disorders, substance abuse and self-harm. Posts discussing learning about eating disorders demonstrated that this topic can be problematic to individuals with a history of eating disorders. For example, "My teacher showed us pictures of people w anorexia to shock us into not becoming anorexic. Guess whose anorexia got triggered by it -hint it's mine :)" (P141, 2020) and "we watched a super triggering ed documentary in health class yesterday and i feel like i've been inspired to get worse again. i wanna be skinny like the girl in the video" (P261, 2022). Comparatively, graphic content surrounding substance abuse was highlighted as problematic through tweets such as, "i had to watch a 30 minute video TWICE and all the people were taking drugs and they showed so many dead bodies i wanted to cry" (P47, 2020), and "In drug class we watched this video about od'ing amd dying from drugs but it was actually so triggering watching him rail tf out of coke" (P266, 2016). Media depicting self-harm was troubling to students as well. One user shared that they learned about Indigenous Peoples in their history class "and in the packet it vividly described a little girl cutting herself and wanting to die and my friend had panic attacks over it and I had to stop reading, we got NO warning," (P36, 2020) and P93 (2020) posted "in grade 9 social studies we had to watch a movie where this guy slit his leg like 20 times in a extremely long scene and it was very

traumatizing💔." Each of these examples demonstrated that watching or reading about mental health problems can be triggering to students and elicit trauma responses. In addition to eating disorders, substance abuse and self-harm, suicide was another difficult topic that was often connected to these examples, such as overdosing from substance abuse or self-harm behaviours leading to suicide.

Media that contained scenes involving suicide were discussed in great detail in several social media posts. For example, P48 (2020) shared, "in 4th grade my teacher made us watch a kid hang himself and i still can't get over it," P11 (2020) tweeted, "the guy was holding a bottle of pills and was about to kill himself and was writing a note for his mom and stuff and i got hella triggered and actually got up and left the room lol" while watching a video about bullying, and P94 (2020) posted that their history teacher "showed us a video of a man at a protest in the 60's or something calmly set himself on fire until he f***ing died and that was the most traumatizing thing I've ever had to witness." This topic specifically elicited strong responses from viewers, some of which had lasting impacts, as highlighted by not being able to "get over it" and footage being "the most traumatizing thing" a student had seen.

Social media users also remembered the impacts of the media used to teach them about war and genocide. Movies, video clips, and books that were used to teach students about the Holocaust were discussed the most often in this category. Students shared, "had to watch a Holocaust video where they were throwing dead bodies into a mass grave. In excruciating detail. We asked her to give us a warning next time and she said no. We had Jewish students in that class" (P143, 2020), "my history teacher showed us a video of naked dead children from the concentration camps, being thrown into a giant grave" (P127, 2020), and "I remember bursting into tears being shown bodies and corpses from the Holocaust in class at age 11/12" (P133,

2020). Specific examples of media, including the book and movie adaptation of *The Boy in the Striped Pajamas* (Herman, 2008) and a short story titled "The Shawl" (Ozick, 1980), were also provided in connection to lessons on the Holocaust. Other films used in lessons about war, such as *All Quiet on the Western Front* (Mann, 1979) and *Apocalypse Now* (Coppola, 1979), were shared as sources of adverse responses from viewers.

There was also an emphasis on showing graphic content depicting violent deaths or executions. For example, "In 5th grade my teacher showed a video with people burnt alive and naked and in our text books there were pictures of a guy hanging from a tree" (P22, 2020), "English teacher showed us a documentary about community's in some foreign country and she showed actually footage of actually people getting shot in the head/ body/etc and I had to go to the bathroom and cried for so long" (P29, 2020) and P126 (2020) tweeted,

> i had to watch a video of a girl who got stabbed and killed by her toxic boyfriend for my final. also had to a movie about kids who got into a car accident and one of them died. i got so triggered during that, and i cried.

The graphic nature of media showing human-against-human brutality in scenes of war, genocide, murder, and sexual violence, as well as the physical and emotional suffering people experience through mental illness, all demonstrated that these topics, among others, can elicit trauma responses in students.

### *4.1.2 Trauma reactions*

Many social media users shared the symptoms and trauma responses they experienced from the content they engaged with in class. Out of the 484 posts collected, 204 included symptoms of trauma responses. Crying, shock, intrusive thoughts, and avoidance behaviours were mentioned most often, and more severe responses such as fainting, nightmares, paranoia

and dissociation were also experienced. Table 4.2 outlines a complete list of responses related to the physical, emotional and cognitive impacts shared, including the number of times each symptom was mentioned.

**Table 4.2**

*Frequency of symptoms of trauma responses shared by social media users, including the physical, emotional and cognitive impacts of media used in an educational environment.*

| **Physical symptoms** | | **Emotional symptoms** | | **Cognitive symptoms** | |
|---|---|---|---|---|---|
| Sleep disturbances | 1 | Fear | 19 | Dissociation | 2 |
| Avoidance behaviours | 25 | Changes in mood | 17 | Flashbacks | 17 |
| Nausea | 15 | Shock | 35 | Nightmares | 2 |
| Fainting | 2 | Numbness | 1 | Intrusive thoughts | 24 |
| Difficulty breathing | 5 | Dread | 1 | Paranoia | 1 |
| Body pain | 1 | Heightened anxiety | 6 | | |
| Shaking | 1 | Depression | 3 | | |
| Dizziness | 1 | Crying | 37 | | |
| | | Panic attack | 12 | | |

Avoidance behaviours were one of the most common trauma responses. For example, students “literally had to get out of class cause I could not watch the video” (P4, 2020), “felt so ill and wanted to leave so badly” (P80, 2020) and “purposely missed class bc it was hella

triggering" (P118, 2020). Beyond physically leaving the room or avoiding class altogether, other avoidance behaviours, although more subtle, included skipping specific chapters in books, looking away from the screen when leaving the room was not an option, or, as P148 (2020) shared, "we were lucky if we were able to close our eyes and plug our ears." This desire to escape or avoid unpleasant stimuli also extended into the online learning environment, as demonstrated by P269's (2021) tweet,

> Whenever I'm in civics class I always have to hover over the "leave meeting" button since she doesn't give warnings whenever we're gonna watch something that has gore or triggering topics and we're watching a video rn and Im terrified because some kind of gore could just show up.

Psychological avoidance through dissociation was also demonstrated by P149's (2020) tweet, sharing, "we watched a movie about a tsunami and it was full of graphic gore and now I just look away and zone out."

Intrusive thoughts were prevalent and exemplified the long-lasting impact that media can have on a student. Students explained these effects by sharing specific incidents, such as learning about the assassination of President John F. Kennedy, in which a video was shown and the student "saw him get shot in the head I still see it sometiems it was like 2 weeks ago but it still haunt me" (P37, 2020); or watching gorey media about a smallpox outbreak during a war and "it was just a reenactment but got damn it was really triggering and put me in a bad head space for a few days because I wasn't expecting it" (P92, 2020). These examples express that the shock from both media sources and resulting intrusive thoughts elicited an acute stress reaction, as the scenes continued to create adverse effects on the students for days after they viewed them.

Media in a classroom environment triggered flashbacks for some students, P116 (2020) sharing, "I had to watch a documentary about sexual assault in the military and it was so hard for me to watch I broke down sobbing and kept on having flashbacks everytime I tried watching it." In other instances, media created flashbacks for students years after they saw the content. P147 (2020) stated, "in 4th grade the teacher put on a historical movie and we had to watch a person be decapitated 😃 it was very graphic and i can still vividly see the image in my head," and P168 (2020) shared that in grade 5 “The sub put on ‘The Teacher Ate My Homework.’ It was terrifying at 10. I vividly remember a doll bleeding from its eyes… yah I don’t know why we watched that.” These posts further demonstrate that the media shown in classes can have long-lasting effects, in which individuals can still picture “vivid” details from horrific scenes they watched at school years later.

Nausea and crying were two other prominent symptoms shared using varied descriptions. Posts describing nausea included language such as “feel like throwing up” (P19, 2020), “having to look at pictures of it made me nauseous” (P51, 2020), “literally almost threw up” (P269, 2021), and that the student had to leave the room “to puke” (P6, 2020). Iterations of the word “cry” were included in 33 posts as well as “burst out in tears” (P255, 2012) and “a LOT of tears” (P199, 2022) to describe the emotional response to media discussed in a classroom.

One occurrence in the data shared a detailed description of how a documentary in a nutrition course caused paranoia due to a personal connection the viewer made to the film. The tweets by P120 (2020) described:

> Once in my nutrition class we had to watch a documentary on how the government doesn't really regulate the food industry or something and it included a story of a little boy who ate a burger and then died weeks later from a disease he caught from the food.

> The thing that stood out the most to me was that the child was always thirsty and would constantly talk about water. It was really upsetting to someone like me who was and is still struggling with depression and anxiety at the time I also have younger siblings and it made me paranoid that something like that could happen too my siblings.

This example, as with the ones previously mentioned, demonstrates that the media shown in classrooms can elicit trauma responses that range from mild to severe reactions and can have long-lasting impacts on the viewer. Moderating variables play a role in the severity of a reaction, such as building a personal connection to the content, as shown in this example, or the age at which someone is exposed to harmful media, among others.

### *4.1.3 Possible moderating variables*

The data showed several possible moderating factors through the social media posts, including age, personal connection, realistic graphics, adults' reactions, presence of a trusted adult, the amount of time spent consuming the media, and history of mental health or trauma. Although age was not recorded for each post, some users shared that they felt watching troubling media at a young age may have impacted trauma responses. For example, P289 (2021) posted, "why the f*** was we six watching this in school??? like ion even think we processed this s*** correctly" when referring to watching footage about 9/11, and P76 (2020) tweeted, "How is Boy in The Stripped Pyjamas appropriate for a 4th grade class? We were like 10/11," to which P77 (2020) commented "Aren't the boys in it like 10??? The kids in it don't even really grasp what's happening that's horrible." P77's comment specifically shows that age could be a moderating factor not only for watching content that is inappropriate for a specific age group based on their stage of development but also because they could build personal connections to the characters who were of similar age.

Personal connections were the most common moderating factor displayed in the posts. These connections ranged from current events in the student's life, such as P96's (2020) experience sharing, "In highschool I was forced to watch a "gun violence psa" that involved watching someone get shot. My dad had been shot the day before and was in critical condition," as well as identity-based connections such as P138 (2020) posting, "Im black and hate watching videos or learning abt slavery. Its just triggering and annoying like we existed b4 slavery and after civil rights this isnt all our history. Its so draining." Realistic graphics were also emphasized for eliciting stronger responses in viewers. For example, users shared, "The teacher showed us footage so raw that we literally saw people on the ground after they jumped, yk like swished and I was like AYO I KNOW IM A SENIOR BUT CHILL WTF MAN" (P298, 2020) when watching 9/11 footage, and "it was extremely graphic. No 14/15-year-old should be forced to watch people drop dead and leave dead or dying family members behind, or watch people suffer in general. There's no excuse for that" when watching a documentary about genocide (P132, 2020). The "raw" and "extremely graphic" footage elicited a shock reaction in both students, and the second tweet highlighted the general confusion among students as to why they are being "forced to watch" graphic content.

The presence of a trusted adult is another moderating factor. One example from P9 (2020) shared a parent's role in intervening in problematic media use, explaining, "my dad had to call so many people because my teacher assigned a class of freshman 2 readings where child r word and abuse were graphically described . it wasnt for an assignment, the teacher just wanted to 'spark discussion' 😀😄😀." Adults' reactions to a traumatic event or media and the amount of time spent watching the content were both moderating variables and are explored in detail in the next

section's case studies focusing on The Challenger space shuttle explosion and teaching students about 9/11, respectively.

Finally, mental health and trauma histories were often discussed throughout the social media posts. In addition to the eating disorder examples previously examined, P66 (2020) shared their experience in which they told their, "old grade 11 English teacher I couldn't read 'Speak' because I had really bad PTSD, and she went as far as to ignore the doctors note that literally said: do not make him read this book." For context, *Speak* is a young adult novel by Laurie Halse Anderson (1999/2011) about a teen girl who is sexually assaulted at a high school party. Similarly, P125 (2020) discussed the role of trauma histories by describing their experiences with school shootings and documentaries, tweeting

> My college had a scary active student shooter threat once. Within a week my English professor played a very detailed documentary about school shootings. He later then played a film that featured a very graphic school shooting. I had to leave the room.

The "very detailed" and "very graphic" nature of the documentary and film, in addition to the student's trauma history and how quickly they were exposed to the media, can all play a role in their trauma response and exemplifies that multiple moderator variables can influence the severity of a trauma reaction simultaneously.

The findings uncovered in this section pointed to themes and topics that educators should be aware of as potentially traumatic content that they discuss in the classroom. Understanding the common signs and symptoms that media can elicit is also important to inform educator training on trauma, and knowing about potential moderators is critical when planning and delivering lessons. All of the information from this section can be used to inform trauma-informed care practices and recommendations, which will be explored further in the next section.

## 4.2 Findings for Research Question 2: How can awareness of classroom media and trauma impacts inform teacher pedagogy and the creation of trauma-informed care for educators?

As outlined in Table 4.1, specific topics were commonly shared across social media users concerning adverse reactions or experiences with media shown in their classrooms. The data also uncovered several trauma-informed recommendations that social media users shared as actions they wished their teacher had taken before or during instruction. These recommendations are discussed in this section.

### *4.2.1 Trauma-informed recommendations from social media users*

Users' most common critique was that they felt they should have been warned before watching graphic media or engaging with the difficult subject matter. Many shared iterations of "we got NO warning" (P36, 2020), “at least offer proper warnings” (P111, 2020), or "no warning whatsoever, and it was so out of the blue i was shocked" (P42, 2020), communicating that they believe they should have been warned before the content. There was even a sense of gratitude for instructors or peers that provided warnings, such as "My teacher said a little trigger warning recently while we were watching a movie and said that it was important even though it spoiled the movie and I have so much respect for him," (P146, 2020), and "I hope the girls in our class gc that are telling us the timestamps of the triggering moments in the video we need to watch for class so people can skip them know that they are very much appreciated" (P268, 2021). The prevalence of this recommendation throughout the posts demonstrates that students feel they should be provided with a trigger warning so that they can engage with the content in a way that is safe for them. This could mean looking away, leaving the room, or skipping past scenes that could be harmful to them.

Skipping explicit content and verbally discussing or summarizing what happened, integrating pauses, and using shorter video clips were also discussed. P247 (2018) suggested "teachers could skip over certain graphic parts& discuss what happens instead," and P104 (2020) tweeted they watched "Le Huitieme Jour, which ends in one of the protagonists (Georges, who had Down Syndrome) commiting suicide. She didn't warn us about this and we watched it as a class rather than alone, so no pauses," which shows they believe they should have been warned, and that pauses may have helped break up the content.

Social media users also shared that they wanted to have the option to leave the room and come back, alternative assignments, and multiple mediums for content with difficult subject matter (e.g., watching a video or reading an article on the same topic). For example, P112 (2020) shared

> One of the best things my 8th grade English teacher ever did was offer alternative assignments to us when we were studying the Holocaust. I don't think any of us took the alternatives but the fact that we had the option was so important.

Similarly, P55 (2020) tweeted that they were "very thankful for my world history teacher in 10th grade who knew that violence/gore and yelling was a trigger and offered to excuse me or give alternate assignments when we had to watch war movies and stuff like that." These comments acknowledging students' positive experiences when their teachers offered alternative assignments and options to leave the room highlight the importance of integrating these trauma-informed practices into the classroom.

Finally, multiple examples of the educator's role in preparing the lesson and supporting students were discussed. One user pointed out that "it would have been great if my teacher could have had some recognition to the fact that even a mention of that stuff can be very triggering for

some people let alone talking about it for an hour straight" (P84, 2020) for a lesson that discussed suicide. Two posts also emphasized that it is critical for educators to consider how personal histories or current events in the students' lives (e.g., within the school environment, local community, country, and the world) may influence the learning. P115 (2020) tweeted, "they made my entire grade continue to do our final english assignment of romeo and juliet after a girl in our grade killed herself," and P173 (2020) shared their experience with watching the film *The Sweet Hereafter* (Egoyan, 1997) in class. For context, this film centres around a school bus accident that kills over twelve children in a town (Egoyan, 1997). The tweet shared,

> We were supposed to watch it on 9/11 but class was canceled that day. So, we watched later in the week only to be interrupted by a bomb threat. Finally watched a week later. Needless to say, we were all depressed and, probably could've skipped it. (P173, 2020)

Both of these examples show how current events can already impact students' psychological wellbeing, so educators may need to adapt or alter the media content they use in the class to prevent causing additional harm. Overall, all of the recommendations from the data point to ways educators can integrate trauma-informed practices into their pedagogy to reduce the risk of vicarious traumatization or re-traumatization in students. This has also been further demonstrated through shared experiences on social media, such as learning about world events and participating in first responder training programs.

#### *4.2.2 Case examples of student experiences and educator pedagogy*

Three specific topics were prominent in the social media searches and provided additional insight into trauma-informed care practices for educators, as well as the role of moderating variables. Posts that discussed watching media connected to the attacks on the World

Trade Center on September 11, 2001 (9/11), the live-viewing of The Challenger space shuttle explosion, and pre-service paramedic training are outlined below.

**Case Example 1: Attacks on the World Trade Center (9/11).** The conversations and posts about 9/11 footage being shown in classrooms elicited similar trauma responses (e.g., heightened anxiety, avoidance behaviours, mood changes, crying, fear, shock, body pain, difficulty breathing, flashbacks, intrusive thoughts, and panic attacks) as the other media content. Specific examples of trauma responses include “the videos they showed us sent me into a panic attack and i couldn’t breathe” (P305, 2021), “the image of some dude trying to climb down but slipping and falling is burned into my brain” (P311, 2021) and “I remember how anxious I was every 9/11 and I cried my heart out just cause I didn’t wanna see people throw themselves out of buildings” (P326, 2020). In addition to describing symptoms, there was a strong emphasis on the young age at which students are shown footage. For example, P296 (2021) posted, “i cant believe that schools are allowed to show us graphic videos of it every single year starting from like 3rd grade????” to indicate that this content may be inappropriate for young students and elicit adverse responses.

How much time students spend watching the footage in their classrooms was emphasized in numerous posts. Users highlighted, "They showed it in every single classroom, 9 classes a day, all 3 docs, and the suicide jumpers videos in every single class" (P287, 2021), and "My contemporary issues teacher dedicated 2 full weeks out of 12 to watching 9/11 footage" (P304, 2021). The repetitive nature of the footage and watching “videos of people dying over and over and over every single year" (P302, 2021) was also shared several times in the data as one reason for heightened symptoms and responses.

Finally, the intense emotion communicated through media, such as recordings of last phone calls or letters to family members who died, and the role of personal connection to the attacks (e.g., a family member died or living in New York) were mentioned in multiple instances. The descriptive nature of videos of a victim's last moments elicited strong responses. P303 (2021) tweeted,

> no because they literally made us watch a video yesterday of a phone call from one of the people that was stuck in the building, and you can literally hear the building start to collapse. you could hear the screams like... why do schools just. think thats fine for a bunch of kids.

Another user connected to a story from a child's perspective, sharing, "i was in 7th grade and it was this girl reading a letter to her dad who passed that day over time and it was so f*****g heartbreaking" (P275, 2021). This example may showcase that the age of the student listening to the letter made a personal connection to the girl in the video who lost her father, which enhanced the response. Other personal connections that were shared involved a geographic connection (i.e., living near New York) and losing a family member in the attacks. For example, P291 (2021) posted

> since i grew up about 45 miles outside of new york city, it was the only thing talked about for many years. i watched many documentaries in class and we had survivors speak to us in assemblies. i'd come home crying, do my own research, and cry some more.

and P324 (2020) tweeted, "hahaha, the way some of my poli sci classes show graphic footage from 9/11. it's so much fun repeatedly rewatching an event that I lost family members to 😐." Each of these posts exemplifies the role of moderator variables in watching traumatic events, including age, the amount of time spent watching, and personal connections to the content. The

majority of these posts focused on engaging with media about 9/11 in the years following the attacks, but, as the next case study will show, watching or reading about trauma from a historical perspective can elicit different reactions compared to watching a tragedy live in class.

**Case Example 2: The Challenger space shuttle explosion.** The Challenger space shuttle explosion in 1986 was viewed live in many classrooms across North America. The social media posts collected for this study highlighted symptoms experienced by students as well as educators, such as fear, shock, intrusive thoughts, flashbacks, emotional outbursts (e.g., screaming, crying), fainting, confusion, sadness, and horror. Users described the shock and horror through tweets such as, “We were watching it on the schools TV and the collective gasps, the crying out, the screams, my own included, with that awful sight...I have never forgotten it” (P179, 2022), “The 9th graders were watching it live in the classroom next to mine. Out of nowhere, the door flew open and kids spilled into the hallway crying & screaming” (P186, 2022), “I felt frozen watching” (P204, 2022), and “Watching it in live in class, I was in 6th grade. Everyone screamed at first and then went completely silent in total shock.  Many of us were silently crying” (P216, 2022). The shock was emphasized by the “awful silence” (P210, 2022), “deafening silence” (P185, 2022) and the “silence for a long time afterward” (P209, 2022) that people remember experiencing and that watching the footage “was a loss of innocence kind of moment” (P233, 2022).

One of the main differences between watching The Challenger space shuttle explosion compared to students describing their experiences with media about 9/11 was the memories of teachers' reactions in the classroom and their influence on students. Students repeatedly described how the explosion affected their teachers and shared memories, including, "I distinctly recall the sound of her scream as we watched. Then she fainted" (P192, 2022), "My teacher burst

into tears and immediately turned it off. She pulled it together to get us through the day but man" (P182, 2022), and P206 (2022) recalled

> When it exploded we all looked at the teacher & she walked out of the classroom. She came back in a few minutes later, eyes red & voice shaky & said... I'm sorry for stepping out of the room but I needed a moment to pull myself together. It was sad.

These vivid details, remembered thirty-six years later, exemplify the effects of adult reactions on children's trauma responses and how the distress experienced by their teachers left a long-term impact on their memory of that day.

The data also mentioned heightened responses due to personal connections to the astronauts, that their teachers had applied to be part of the mission, and the sudden change from excitement and anticipation to shock and horror. Christa McAuliffe, the teacher who was onboard, was discussed numerous times as people felt a personal connection to her. Posts shared, "We were all especially excited that a female schoolteacher was onboard. The tragic loss felt all the more personal" (P193, 2022) and "My teacher knew McAuliffe. She'd told us all about her friend and space. They'd stayed in touch. McAuliffe wrote us. I remember our teacher being so proud. Remember the explosion. The silence. And my teacher running out of the room" (P181, 2022). The anticipation and build-up of the event as a heroic and historical launch, and then the shock of the explosion, elicited strong responses as well. For example, P210 (2022) tweeted, "A triumphant celebration suddenly turned into a funeral. Pure shock," and this sentiment was echoed by P195 (2022), stating it "went from excitement to disbelief to sorrow very quickly," and P188 (2022) sharing, "we had been discussing and anticipating for weeks. It was the most confused and scared and sad I had ever been. And I have carried it with me, like so many, since." Watching this event live was a key differentiating factor in this case example compared to any

other posts across the data. The shared experiences by social media users demonstrated that live-streaming content could be a risk factor when using media in the classroom due to the unpredictability and subsequent challenge of supporting students in the event something goes wrong.

**Case Example 3: Pre-service paramedic training.** One Reddit thread consisting of 56 comments discussed the role of media in pre-service emergency response training professions, specifically a paramedic training program. This conversation included the perspectives of instructors and students. The comments focused on both the relevance of using media as teaching tools to show real-life events, such as injuries or scenes a future paramedic may work on, but also several concerns about the content being shared and the intention behind the media use. Several users expressed that instructors may use media to make students uncomfortable or shock them, not necessarily for educational purposes.

An interesting theme about the role of media in education was discussed throughout this thread. Reddit users talked about whether a student's ability to handle watching media should be a potential measure of whether they were well suited for the career. Two individuals believed that the ability to handle graphic imagery should not determine whether a person will be a competent paramedic, P362 (2022) stating, “I would never in a million years think playing videos like this equates to ‘training’, or seeing if ‘people are cut out for it’ etc” and “Watching gore does not equal being a good paramedic” (P362, 2022) and P367 (2022) sharing

> the videos in class made me wickedly uncomfortable. It was the helplessness of watching a child slowly die in the road while you sit there and watch, or a security camera recording of a negligent discharge and a man bleeding out alone. It was way too much and it doesn't resemble our jobs at all. I totally disagree that it means someone isn't cut out for EMS.

Seven other people disagreed and said that if a person cannot handle graphic images or videos in class, they are likely not fit for the profession. Examples of this side of the argument include “In this age of bloody video games and the news glorifying violence for ratings if you can't handle the video media there's no way you could handle it in the field” (P387, 2022) and “I think if someone can’t handle a graphic video/picture then any kind of emergency responder role is probably not the right line of work” (P345, 2022). The notion that media could be used as an informal way to gauge paramedic competence is an intriguing observation, as many other posts discussed how videos were actually more likely to elicit a negative response compared to providing care to a person on the job.

Eleven comments mentioned that users experienced stronger reactions from videos shown in a class than actually arriving at and working on a call as a paramedic. Some stated, “I’m worse with videos than with actual gore” (P361, 2022), “when it’s actually in front of me, it doesn’t bother me at all.. Just something I have to fix. When I see it through a phone, then it bothers me” (P348, 2022), and “Handling gore videos and handling real life gore are 2 unrelated things. Some people can do one and not the other. Personally, I find the videos worse” (P380, 2022). Many of these posts highlighted the point that being on the job and providing care is a different experience as the paramedic looks to solve a problem by identifying injuries and the best way to treat them. One user described

> I squirm when I watch videos like that and find them disturbing, but on scene it is very different. Seeing a video of someone with a fractured limb makes me feel a little funny, but being in front of someone in pain from the same injury elicits a very different reaction for me. I am focused on a task at hand and am witnessing the aftermath of those injuries. (P364, 2022)

These perspectives bring to question what role these examples of graphic media play in pre-paramedic training or how they can be used more effectively and safely.

One critique users pointed out was that pre-service paramedics are often shown videos of an accident taking place, with several elaborating that this provides little educational value as these first responders usually arrive after the accident and do not see it happen. For example, P383 (2022) said, “Showing videos of it happening compared to the aftermath has always felt diffrent. Very rarely will you see someone going through the process of getting injured,” and this was echoed by several users stating, "Those are not things you will see... you will see the aftermath of those things several minutes later” (P372, 2022) and “you’re not seeing the person get hit by the train: you’re there for the aftermath. It’s very different, your response is different, your role is different” (P362, 2022). These examples suggest that showing specific parts of video clips may be more effective for students, where they are shown the “aftermath” and how to treat the injury as opposed to the entire scene.

Educator pedagogy was also highlighted several times. Some users pointed out that they understood the value of the media when they could see how it applied to real-life events that they would see in the field. Others shared the importance of engaging in discussion and examining the content within the context of the profession and debriefing after the videos as opposed to passively viewing. Finally, specific trauma-informed practices outlined by instructors, such as warning slides right before graphic content was shown and a general rule that students could step out of the room as needed, were also discussed.

Overall, the results from the data demonstrate the prevalence of trauma reactions in response to media shown in the classroom, potential topics that can be traumatic to students, and moderator variables that might be considered when using media in education. Social media users

also revealed specific trauma-informed recommendations based on their experiences that can be used to inform teacher pedagogy and trauma-informed care practices.

# Chapter 5. Discussion and Recommendations

Based on the findings outlined in the previous chapter, it is evident that media shown or discussed in classrooms can elicit symptoms of trauma responses in students. The information shared by social media users on Twitter and Reddit combined provided over twenty recommendations for how media can be used in the classroom in a trauma-informed way, which has significant implications for educator pedagogy and training. This chapter will explore the findings within the context of trauma theories and trauma-informed care principles from the existing literature and conclude with trauma-informed recommendations for educators using media in the classroom.

## 5.1 How can the media shown or discussed in classrooms impact students, specifically in the area of trauma responses?

As discussed in previous chapters, the defining feature of trauma is that it creates extreme fear, feelings of helplessness or hopelessness, and horror (Center of Substance Abuse Treatment, 2014). Psychological research has shown that trauma can manifest in a wide range of symptoms that impact the individual's physical, emotional, cognitive and social health (Bartlett & Steber, 2019; Center of Substance Abuse Treatment, 2014). The analysis in this study found that the social media users often experienced physical, emotional and cognitive symptoms due to the media they were exposed to in their classes.

### *5.1.1 Trauma responses*

The symptoms that users shared on social media aligned with many theories, including wellness, trauma, secondary traumatic stress, and vicarious traumatization. Across the data, it

was evident that students' physical, emotional, and cognitive health was impacted based on the symptoms they shared in reaction to engaging with media in their classroom. Although students did not discuss symptoms pertaining to social wellbeing (e.g., self-isolation or withdrawal, difficulty forming healthy relationships, or accepting love) (Bartlett & Steber, 2019), the impacts on the other three areas of wellness were profound and directly aligned with symptoms of trauma. The majority of the topics that evoked trauma reactions aligned with the definition of trauma in which the event involved actual or perceived threatened death, serious injury, or threat to oneself or others' physical integrity (Beck & Sloan, 2012). As students witnessed death, serious injury or threat to others' physical integrity through video clips, movies, documentaries, books, and short stories, they experienced vicarious trauma responses. The findings from this study supported vicarious traumatization and secondary traumatic stress theories, as each trauma response was due to learning about the traumatic event of another person or group of people (Cohen & Collens, 2013; Cusick, 2022) through media.

Examples of acute stress reactions were demonstrated multiple times as posts included information about symptoms lasting for hours to weeks following the exposure to the media in the classroom, which aligns with the criteria for an acute stress response (American Psychiatric Association, 2022). Although symptoms, including intrusive thoughts, nightmares, and numbness, were described, there was not enough information about whether the symptoms disrupted the person's daily life, which would point to a possible acute stress disorder diagnosis (American Psychiatric Association, 2022).

Within trauma literature, the "fight, flight, or freeze" response is often referenced as the brain and body react to a potential threat and prepare to fight against that threat, flee, or freeze (Thompson et al., 2014; van der Kolk, 2014). This was reflected in the social media posts, as

avoidance behaviours were one of the most common responses. Examples such as leaving the room, skipping specific parts of a video or story, and purposely missing class were all examples of the “flight” response as students recognized the threat and took various actions to avoid it. The “freeze” response was exemplified in zoning out behaviours, which is a protective mechanism that individuals use to psychologically remove themselves from the situation so that they do not experience the negative emotions or triggers associated with the stimulus (American Psychiatric Association, 2022). The intense fear and horror that was expressed across many posts also supported trauma theory and the definition of trauma, as students reacted to what they perceived as disturbing media. Many of the topics that evoked these responses touched upon ACEs and how students found it particularly difficult when the media content involved harm to children.

### *5.1.2 Exploring students’ experiences and the ACEs model*

The ACEs model outlines several potential traumatic events that occur in childhood that can have lasting impacts (Public Health Ontario, 2022). Many of the topics that elicited trauma responses can be categorized as an ACE (e.g., sexual abuse, domestic violence, death of a loved one, or bullying). Watching media in which a child experiences trauma or violence against children was a common topic that individuals shared had an adverse effect. For example, P127 (2020) described, "my history teacher showed us a video of naked dead children from the concentration camps being thrown in a giant grave;" P173 (2020) shared that she watched *The Sweet Hereafter* (Egoyan, 1997) at school, which is a film that centres around a school bus accident that kills over twelve children; and P169 (2020) mentioned watching "The Lady in White. The whole P7 class (10-11 year olds) traumatized by a ghost story about a girl murdered at school WTAF." This is important to consider as educators incorporate videos and stories with young characters or children in order to connect with their students. As demonstrated in previous

research, adverse responses may be enhanced when viewers see themselves represented in the media they engage with (Laffier & Westley, 2022; McInroy & Craig, 2017). Therefore, the role of representation should be considered as students may experience flashbacks or intrusive thoughts from an ACE in their own childhood or build the connection between what is happening to the child in the story and how that could be replicated in their own life.

One of the more prevalent ACEs is sexual violence, and this topic was prominent in social media posts. Students shared that there were graphic displays of sexual violence that were either shown in videos and movies in their class or described “in detail" (P88, 2020) in books they read. P145 (2020) specifically pointed out the potential harm this could cause for students with a history of sexual assault by stating,

> My school has everyone sign a contract and watch stuff on consent and sexual assault/harassment they play examples of sexual assault and harassment to REALLY get the point across. So a victim who knows quite clearly what stuff is, has to sit thru it and take a quiz on it.

This post highlights that although a "contract" was signed and permission was given for students to be taught these topics, someone who is a victim would still have to sit through the lesson and attempt to perform an assessment (i.e. a quiz). The Centers for Disease Control and Prevention (CDC) reported that "about 1 in 4 girls and 1 in 13 boys in the United States will experience child sexual abuse" and that these numbers are likely much higher due to the large volume of incidents that are never reported (CDC, 2022, para. 2). The tweet above points to the suffering a victim may experience by engaging with media on this topic, regardless of parental consent. Sometimes, parents do not know that their child has been a victim of sexual violence and, therefore, would not realize the content presents a higher risk for re-traumatization.

Comparatively, a Reddit user shared their personal experience in a thread about how media is used when teaching students about abortion, which led to conversations about sexual assault. They said

> This is a TW to anyone…… but I learned in 6th grade I was getting SA'd by my uncle because when we were learning about the reproduction I asked a lot of questions and got CPS called and a group of therapist/psychiatrist. So I think learning at a young age can help kids in those situations. Thought it was normal from 8-12. (P333, 2022)

Both perspectives are essential to consider when teaching students about topics such as sexual violence. Although someone may be aware that they are a survivor of sexual violence, for others, it may be their version of reality or what is "normal" (P333, 2022). By learning about it in a trauma-informed way, educators can act as protective factors for students and intervene as necessary.

Understanding the significant impact that media can have on students is essential to inform trauma-informed care recommendations for using media in education. The first step in implementing the recommendations revolves around increased awareness for educators on the impacts of classroom media so that these strategies can be used effectively.

### 5.2 Research Question 2: How can awareness of classroom media and trauma impacts inform teacher pedagogy and the creation of trauma-informed care for educators?

The findings from this study provided specific experiences and recommendations that can be used to inform trauma-informed care strategies for educators. The lived experiences that were shared highlighted several moderating factors that aligned with the current research, and educating teachers about these variables may help support student wellness and reduce the risk of re-traumatization. As social media continues to spread news and potentially traumatic media

from around the world, in live-time, it is important for educators to know how to have difficult conversations with students when something unpredictable happens and is brought into the classroom. The role of moderating variables and how educators can approach traumatic events are explored deeper in this section.

### *5.2.1 Understanding the role of moderator variables*

The results from this study highlighted the importance of understanding the role of moderator variables so that educators can make more informed decisions about the media they choose to use in the classroom and how to use it safely and effectively. As discussed in the previous chapter, moderating variables including building a personal connection to the content (McInroy & Craig, 2017), graphic or realistic media (Lavoie et al., 2021), age (Fritz & Arthur, 2017), presence of a trusted adult (Gottschalk, 2019), history of mental health or trauma (Nagata et al., 2022), and the amount of time spent engaging with the problematic media (Silver et al., 2013) were all discussed by social media users. Each of these has been supported by previous research. For example, building a personal connection to the content has been demonstrated to heighten viewers' responses as they can see how a negative event may happen to them or someone in their life based on seeing themselves represented in that media (Laffier & Westley, 2022; McInroy & Craig, 2017). This was displayed repeatedly through users sharing that the people in the stories were similar to their age, were part of their identity-based group, including the LGBTQ+ and BIPOC communities, or the specific example of a classmate dying by suicide and then discussing a text such as *Romeo and Juliet* (Shakespeare, 1597/2011) in which both characters die by suicide.

The posts commenting on the realistic or graphic media used also aligned with current research that found more realistic graphics can increase the chance of a trauma response (Lavoie

et al., 2021). This is important to consider when teachers are selecting media. From an educational point of view, having realistic content is valuable to teach the topic accurately. However, as the findings have shown, this may put users at-risk for secondary traumatization, and the "shock factor" may not always be the most effective approach.

A history of mental health and trauma were also prominent moderating factors as posts described individuals with a history of eating disorders as being particularly at-risk for experiencing a trauma response from media discussing food or eating disorders. Content depicting self-harm and suicide was also common in the data, with some users sharing that they had lost friends to suicide and found the media and discussion in class to be very difficult. Till et al. (2019) found similar results when working with outpatients who had watched *13 Reasons Why* (Yorkey, 2017) and experienced increased suicide ideation because the protagonist had reminded them of a friend who died by suicide. Each of these moderating variables will have varying impacts on the individual student, but it is critical that educators are trained on possible moderators that may influence the severity of a reaction so that they can select appropriate media. Understanding moderators may also help teachers identify sources of trauma when unpredicted responses come up in their students so that they can get to the root of the reaction and support them accordingly. Sometimes, the unpredictability of breaking news or world events may be a source of trauma that is brought into the classroom in conversations or through the spread of the news on mobile devices. Therefore, educators should be trained on how to support and address these events so that students can process them in a healthier way.

### *5.2.2 Teaching world events and comparing disaster viewing experiences*

Two of the three case examples from this study examined the impacts of watching historical, disaster-related media in the classroom. Research has shown repeatedly since the

attacks on the World Trade Center (9/11) on September 11, 2001, that exposure to large quantities of media showing acts of terrorism can increase symptoms of PTSD, anxiety, depression, and acute traumatic stress (Pfefferbaum et al., 2019; Silver et al., 2013). The results from this study found that social media users reflected many of these symptoms and emphasized how much 9/11 footage is shown in their classrooms around and on the anniversary of the attacks. The repeated nature of viewing and in large quantities supports the previous research (Silver et al., 2013; Thompson, 2019) as trauma responses such as "anything 9/11 related sends me into a panic attack" (P314, 2020) and "as I got older I emotionally couldn't handle watching the live footage 9/11 videos and I really don't know why because I wasn't even alive then" (P321, 2020). These two examples, among others, show the prolonged impacts of how repeated exposure to media can elicit trauma responses, which supports the findings of several other researchers (Holman et al., 2020; Pfefferbaum et al., 2019; Silver et al., 2013; Thompson, 2019).

Comparatively, The Challenger space shuttle explosion in 1986 was live-streamed across North America and shocked millions of viewers. There was less emphasis on the amount of time spent watching this footage, but a strong presence of how the teachers' reactions impacted the students. As care providers, students often look to their teachers to protect them or help them make sense of the world, and the severity of a child's trauma response may be impacted by how the adults around them react (Thompson, 2014). This is not to say that educators cannot express emotion, but when they experience a shock or traumatic event, they, too, need to ensure they receive the appropriate supports so that they can then care for their students. Teachers should be trained on trauma-informed approaches to having difficult conversations so that if they respond similarly to the way the teachers reacted during The Challenger broadcast, they will know how to talk about their reactions and, ideally, mediate the impacts on their students.

From a trauma-informed approach with respect to comparing these case examples, there appeared to be a difference in social media users' feelings towards their educators in which students discussed how teachers "force" them to watch footage of 9/11 each year as a curricular choice. However, the tone of The Challenger tweets was much more empathetic and understanding that exposure to this media was largely out of the teachers' control. Another difference is the unpredictable nature of watching live-streamed events compared to pre-recorded ones. With technology and the ability to live stream on mobile phones, almost anyone can watch tragedy strike in real-time (Holman et al., 2020). Students expressed, "it's beyond unnecessary and it is a traumatic event. just bc the teachers saw it live when it happened doesn't mean we as kids have to see the footage too" (P275, 2021) as though it is the teachers intentionally pushing trauma onto them, as opposed to The Challenger explosion in which the students are sharing in the grief with their teachers instead of placing blame. For example, a teacher "sat on the floor sobbing and kids leaned against him" (P217, 2022) and "I watched it happen while sitting in my 3rd grade classroom and all of us were asking the teacher what happened and she was crying and we all started crying" (P196, 2022). These case examples, along with all of the other examples shared in the social media posts, provided valuable insight into how educators can approach using media in the classroom in a trauma-informed way, regardless of whether they are selecting the media ahead of time or reacting to it. Specific trauma-informed recommendations based on the lived experiences of past and current students are outlined in the next section.

### 5.3 Trauma-informed care recommendations for media use in the classroom

Overall, the social media posts emphasized the importance of educator training on the Four R's of Trauma-Informed Care model. Students demonstrated the need for educators to *realize* the widespread nature of trauma, especially when selecting media to use in class; the

importance of being able to *recognize* the signs and symptoms in students when media elicits a trauma reaction; *respond* appropriately to these reactions and provide support for the student; and *resist re-traumatization* by integrating trauma-informed practices into all areas of pedagogy, but specifically when using media in the classroom.

The Institute on Trauma and Trauma-Informed Care (ITTIC) at the University of Buffalo's "Five Guiding Principles of Trauma-Informed Care" model includes safety, choice, collaboration, trustworthiness, and empowerment as the key principles of TIC (ITTIC, 2015). In their own words, social media users shared many recommendations that align with these five principles. For example, trigger or content warnings were by far the most common request from students. This was demonstrated by users saying directly that they should have been warned ahead of graphic content and was emphasized by students stating that they had "so much respect" for their teacher, even though they "spoiled the movie" (P146, 2020). The gratitude towards educators who included warnings shows that students may prefer to be warned instead of shocked. This also likely built trust between the student and teacher because the teacher shared information that protected the students from potential psychological harm. The example of students taking the initiative and providing timestamps for their peers also showed that they recognized when content could be difficult for some viewers and engaged in trauma-informed practices independently.

This appreciation appears to be elevated when instructors offer choices within the assignments or media content, which aligns with the second principle of TIC (ITTIC, 2015). P31's (2020) psychology teacher "said someone was murdered at the beginning and told us where to skip to to not see it and said if we didn't want to watch it she'd give us a different

assignment." Providing choices is a way to build trusting relationships with students and can empower them to take control of their learning.

Based on the recommendations, "I wish…" statements, and outrage expressed in the Twitter and Reddit posts, Table 5.1 provides recommendations for incorporating TIC principles when using media in a classroom setting.

**Table 5.1**

*Guiding principles of trauma-informed media use in education. Adapted from the "Five Guiding Principles of Trauma-Informed Care" by the Institute on Trauma and Trauma-Informed Care (2015).*

| Guiding Principle | TIC Recommendations for Media Use |
|---|---|
| Safety | ● Trigger and content warnings should be included before engaging with potentially traumatizing media so students feel more prepared for what is to come.<br>● Consider moderating factors when selecting media, such as age, ethnicity, and any possible personal connections students may make to the content that puts them at-risk for a trauma response. Note: often, teachers will not know about students' personal history, so creating a safe classroom environment where students can talk to the educator and peers are supportive will be critical in situations when media has caused a trauma response. |
| Choice | ● Provide the option to leave the room and come back at any point while the media is being shown.<br>● Alternative media options or mediums (e.g., multiple videos to choose from; choosing between reading a story or watching a video).<br>● Options for assignments when discussing difficult subject matter. |
| Collaboration | ● Collaborating with all members of the student's support system is critical. Parental consent forms or notifications about media should be utilized to ensure parents are aware that their child may be exposed to challenging subject matter. This also provides the opportunity for the student to be exempt as the parent may be more aware of their trauma history than the teacher. |

| Guiding Principle | TIC Recommendations for Media Use |
|---|---|
| | ● Co-viewing the media with students can provide the opportunity for the instructor to offer context, pause and discuss content, and check-in with students before, during and after media use. |
| Trustworthiness | ● Implementing trigger and content warnings from the beginning of the course and using them consistently builds a sense of trust between the educator and students.<br>● Follow through with what you promise. (E.g., if students are told they can do an alternative assignment without penalty, that should be implemented; if you say there is no gore in the scene, make sure there is no gore in the scene).<br>● Recognition by the teacher when the topic is challenging to talk about.<br>● Be available to speak to students and provide them with appropriate support if classroom media elicits a trauma response. |
| Empowerment | ● Providing timestamps or page numbers so that students are in the "driver's seat" and can decide whether they will watch or read a specific scene.<br>● Offering choices with assignments or media can also create a sense of empowerment. |

Table 5.2 offers recommendations specific to the lesson planning process. This table was developed by taking the recommendations that the social media users shared in their posts that informed Table 5.1 and applying them to lesson planning models, including the backward design model (Wiggins & McTighe, 2011) and the three-part lesson plan structure recommended by the Ontario Ministry of Education (n.d.-b). The “preparing lesson” column was informed by the backward design model, which follows three phases. First, the educator identifies what they want students to be able to do or understand by the end of the lesson (Bowen, 2017). Then, the instructor considers appropriate assessment methods that will demonstrate whether students have

achieved the learning goal or not (e.g., assignments, essays, tests, or practice problems) (Bowen, 2017). The third step is planning the instruction and how the teacher will design the learning experience so that students can successfully perform the assessment and, therefore, achieve the learning outcomes (Bowen, 2017). This theory informed the "preparing lesson" recommendations by focusing on the backward design model's second and third stages. As the curriculum will outline the learning objectives and desired outcomes, trauma-informed care practices can be applied to the assessment selection and instructional design stages. For instance, as demonstrated by the social media users, educators can consider what is going on in the world around their students to inform what is appropriate media to include in a lesson (i.e., stage three of backward design) and adjust their selection based on what will align with the assessment and learning outcomes, while maintaining psychological safety.

The three-part lesson plan structure includes "minds on," "activation," and "consolidation" stages. It was consulted for the "beginning," "during," and "after" the lesson columns (Table 5.2) to offer considerations for integrating trauma-informed care when using media at each point in a lesson (Ontario Ministry of Education, n.d.-b). For example, "minds-on" activities typically introduce students to the lesson's content and attempt to activate or assess prior knowledge that the students may have on the topic (Ontario College of Teachers, 2010). For example, as part of the "minds on" activity, educators can begin the lesson by talking to students about potentially problematic subject matter that is about to be explored "so [they] can prepare [themselves] for the lesson" (P135, 2020). During the "activation" stage, when students are engaging with the content (Ontario College of Teachers, 2010), teachers can integrate pauses in their lesson so that they can "skip over certain graphic parts& discuss what happens instead" (P247, 2018). At the end of the lesson, in the "consolidation" phase, teachers can assess students' learning through

formative assessments in which they can identify and address any learning gaps or misconceptions from the lesson (Trumbull & Lash, 2013). This stage may be an effective time to "debrief after each video or class" and "discuss what you feel" (P387, 2022). Table 5.2 provides further considerations on how to incorporate trauma-informed care practices, as suggested by the social media users, to design lesson plans using media.

**Table 5.2**

*Trauma-informed care considerations for various stages of lesson planning.*

| Preparing lesson | Beginning of lesson | During lesson | After lesson |
|---|---|---|---|
| Consider the age and developmental stage. Common fears and executive functioning skills should be considered during the planning stage while selecting media. | Build in time at the beginning of the lesson plan to provide a content warning when difficult or potentially problematic subject matter is being taught. | Skipping graphic content and discussing or summarizing it instead. (E.g., if watching an entire film, skip through explicit scenes and tell students what happened.) | Provide the opportunity for students to ask questions or bring concerns forward at the end (e.g., as a class, privately with the instructor, or in small groups). |
| Evaluate what is happening around the students (e.g., in the school environment, local community, country, world, etc.) before showing content, as this may heighten trauma responses or mental health symptoms. | Explain the "why" behind the activity or why a specific media has been chosen for the lesson. This way, students see how it applies to their learning as opposed to being shown something graphic for seemingly no reason. | Integrate pauses or use short segments of the content. | Debrief what was watched or discussed. Engaging in these conversations can help students make sense of what they saw and build connections to the learning. |

| Preparing lesson | Beginning of lesson | During lesson | After lesson |
|---|---|---|---|
| If applicable, check the student's individual education plan (IEP) for potential triggers that may be documented. Select media accordingly. | Offer an invitation to talk to the teacher before a class and be available for students to come to you if they are concerned about media in the class or need to opt out. | Check-in with students throughout the lesson to ensure they feel safe or whether something needs to be changed in the learning environment (e.g., a pause to discuss, lower volume, or turning media off). | Record any observations from the class (e.g., changes in student behaviours or mood, points made in conversations, etc.) and follow up with students during the next class. |

### 5.4 Conclusion and future research

The goal of this study was to explore how media shown or discussed in classrooms can impact students, specifically in the area of trauma responses, and how increased awareness of classroom media and trauma impacts can inform teacher pedagogy and trauma-informed training for educators. By consulting the lived experiences of past and current students who shared their thoughts, perspectives, and experiences on Twitter and Reddit, it is clear that media used in classrooms can elicit trauma responses in students. Social media users provided insight into the physical, emotional, and cognitive reactions they experienced as a result of media used in their learning environments, and an overwhelming amount of attention was focused on how being vicariously exposed to the trauma and suffering of other people can create strong trauma responses. The posts also included trauma-informed recommendations for educators, including examples that aligned with each of the Five Guiding Principles of Trauma-Informed Care model (ITTIC, 2015; SAMHSA, 2014). Teachers can use these recommendations to inform their approach to using media so that they can reap the many benefits of incorporating media into their classrooms while creating a safe learning environment that reduces the risk of traumatization.

As this study was exploratory in nature, future research could further examine students' lived experiences through in-depth analyses of how students perceive the media used in their classrooms. Exploring educators' perspectives on this topic would also add valuable insight into this research area and could be used to inform training, professional development and resources for teachers using media in their pedagogy. In addition to individual educators' teaching practices, the recommendations outlined in this study and in future research can inform policy on using media in the classroom. For example, policies could incorporate more extensive screening protocols for media that will be used in the schools, including digital and print-based media and mandate that teachers are trained on how to use media and technology safely in their classrooms. To make meaningful change, however, all levels of a system must "buy in" to integrate trauma-informed care practices (National Child Traumatic Stress Network, 2017). One of the key ways to integrate TIC at the individual, organizational, and community levels is to provide training and resources for service providers. As outlined in Chapter 2, there is minimal trauma-informed training for pre-service teachers in Ontario's Bachelor of Education programs. Hobbs et al. (2019) found that there was little to no inclusion of trauma-informed training in technology use for pre-service teachers. This gap in the research demonstrates the need to develop trauma-informed care training for pre-service and current teachers so that they implement these practices and provide better support for their students, especially in this digital age.

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