“Assuming There Will be Ups and Downs”: Exploring Trauma Awareness through the Lived Experiences of Registered Kinesiologists in Ontario

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Abstract

Background: At present, there is a movement in health care towards an approach that utilizes the components of trauma awareness to enhance care provision (Davis, Constigan, & Schubert, 2017; Felitti, 2017). Trauma awareness can be described as having three main elements: realizing the prevalence of trauma in society; recognizing the signs and symptoms of trauma in patients; and responding to the trauma survivor by fully integrating knowledge about trauma into practices and procedures (Klinic, 2013). Researchers recommend that the best way to achieve the highest quality of care is for health care providers to become trauma aware (Bartlett et al., 2015; Harris & Fallot, 2001; Kelzelman & Stravropoulos, 2012; Klinic, 2013; Ko et al., 2008). Literature on the effects of trauma explains that trauma histories can influence the adoption of avoidance behaviours which, in turn, can interfere with a patient's progress to achieve health goals such as exercise adherence (Clark et al., 2015; Kelzelman & Stravropoulos, 2012; Klinic, 2013). Given that 76% of Canadian adults report some form of trauma exposure in their lifetime (Van Ameringen, Mancini, Patterson, & Boyle 2008), an argument can be made that Registered Kinesiologists, relatively new regulated health professionals, need some foundational knowledge on trauma to help them identify related barriers that may explain why a person is avoiding exercise. To date, no studies have explored the notion of trauma awareness among Registered Kinesiologists in practice. Thus, advancing trauma awareness research in this context is both timely and warranted (Wayne et al., 2017). Not only will this information support the advancement of Kinesiology from professional and best practice standpoints (Ko et al., 2008), the patients themselves stand to gain a great deal in terms of quality care provision.

Purpose: The purpose of this qualitative study was to explore the concept of trauma awareness through the professional lived experiences of Registered Kinesiologists working in Ontario by

applying a step-wise interview process. Details of each Registered Kinesiologist's work experiences were gathered through three separate interviews in order to create a rich description of their trauma awareness as depicted through their realizing the prevalence of, recognizing, and responding to trauma in their practice.

Method: Registered Kinesiologists in Ontario who had a minimum of three years' work experience with patients were invited to participate in this phenomenological study. The participants engaged in a semi-structured, step-wise interview process delivered in person and over the telephone. Data were analyzed using content analysis that incorporated both inductive and deductive phases. Specifically, themes and subthemes were categorized into facilitators and barriers associated with each trauma awareness category.

Findings: Four Registered Kinesiologists were recruited and completed the interview series. In total, 13 main themes with 9 associated subthemes emerged as facilitators to trauma awareness (i.e., realizing = 2; recognizing = 5; and responding = 6 [9]), while 5 barriers with 5 associated subthemes were identified (i.e., realizing = 2 [2]; recognizing = 2 [3]; and responding = 1). Overall, the findings revealed that there are many lived experiences, past and present, that serve as facilitators for and barriers to the Registered Kinesiologists' trauma awareness. The realization that trauma experiences are highly common and personal; a recognition that there may be underlying issues the Registered Kinesiologist needs to address first, above and beyond the primary injury; and responding to a patient's trauma experiences by incorporating tailored and patient centred strategies, focusing on the therapeutic relationship, and maintaining professional self-awareness were identified by participants as integral for facilitating trauma awareness. Alternatively, a heightened focus on and the limitations of scope of practice governed by the College of Kinesiologists of Ontario (COKO, 2014), as well as Registered Kinesiologists' attitudes and practice-related challenges were commonly discussed as barriers.

Conclusion: Based on the lived experiences of these participants, Registered Kinesiologists do hold some foundational knowledge with regard to realizing the prevalence of trauma in society, and are also able to recognize signs and symptoms among trauma survivors. Additionally, the findings revealed several skills used within the practice of Kinesiology that are compatible with trauma awareness; however, aren't overtly taught or noted as being utilized exclusively for responding to a patient's past trauma. Taken together, these findings suggest that indeed, Registered Kinesiologists can and do respond to trauma within their scope of practice yet, may feel apprehensive about or inadequately prepared doing so. Supplementary training in trauma's prevalence and types could further enhance the knowledge base and confidence levels among Registered Kinesiologists to screen for and hold conversations regarding a patient's trauma while remaining within the scope of practice. Through taking a trauma informed care approach, treatment of the whole person can ensue, thereby increasing the efficiency and efficacy of the patient-provider relationship, ultimately enhancing the patient's overall quality of life.

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"Assuming There Will be Ups and Downs": Exploring Trauma Awareness through the Lived Experiences of Registered Kinesiologists in Ontario

Overview

Trauma arises from experiences or events that are overwhelming in nature (Clark, Classen, Fourt, & Shetty, 2015). Traumatic events can be shocking, terrifying, and devastating to the individual, and often result in intense feelings of terror, shame, helplessness, and/or powerlessness (Courtois & Ford, 2013; Klinic, 2013). The Klinic Community Health Centre (2013) established that regardless of the source, trauma has three common elements: it is unexpected; the person is unprepared for the traumatic event; and there is nothing the person could have done to stop it from happening. Seventy six percent of Canadian adults report some form of trauma exposure in their lifetime (Van Ameringen, Mancini, Patterson, & Boyle 2008). With such a high percentage of the population being affected by trauma, there is a growing body of research dedicated to exploring related psychological and physiological effects, as well as recovery from it (Hamberger, Barry, & Franco, 2019; Kelzelman & Stravropoulos, 2012; Ko et al., 2008; Lanius, Vermetten, & Pain, 2010; MiddleBrooks & Audage, 2008; Miranda et al., 2015; Stevens, 2012; Van Ameringen, et al., 2008; Viamontes & Nemeroff, 2009). These effects can have major implications for health care providers (HCP) in relation to both trauma specific and other health care services offered. Often, HCPs are in contact with patients and do not directly treat the effects of trauma because they may not know how, or it may go unrecognized (Kelzelman & Stavropoulos, 2012). Trauma Informed Care (TIC) is a model of practice that has been developed for HCPs to bridge the gap between those individuals who provide trauma specific services and those who do not (Ko et al., 2008). Specifically, TIC aims to equip HCPs who do not provide trauma specific services with the skills to be able to recognize and respond to its' symptoms (Klinic, 2013). The goal of TIC is to increase

opportunities within the health care system for people to heal from past trauma that may be affecting their health status. The TIC model teaches service providers to be aware that trauma might be linked to patients' behaviour so that they can then treat the whole person, rather than focusing only on a particular aspect (e.g., physical health). Trauma Informed Care does not require that patients receive trauma-specific care; instead, TIC educates HCPs to identify the trauma and acknowledge that the patient's past has links to current and future health risk behaviours (Klinic, 2013; Van Ameringen et al., 2008; Viamontes & Nemeroff, 2009). While TIC has been in existence for some time, its' use in health care has been limited to mental health professions. Given that trauma survivors make up the majority of patients accessing the health care system in capacities other than those which are psychologically oriented, investigating its utility in other areas is crucial (Brown & Finkelhor, 1986; Green et al., 2015; Hamberger et al., 2019; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Najavits, Weiss, & Shaw, 1997).

Kinesiology is a newer service within the health care field as it became regulated in 2013 (College of Kinesiologist of Ontario [COKO], 2013). The Kinesiology Act (2007) states that the scope of practice for Registered Kinesiologists involves "the assessment of human movement and performance and its rehabilitation and management to maintain, rehabilitate or enhance movement and performance (Chapter 10, section 3)." In summary, Registered Kinesiologists are movement specialists who promote health through the medium of physical activity (Hoffman, 2013). The practice of Kinesiology is an example of a field where trauma-specific services are outside the scope of practice, but where adopting the TIC model could be useful because of the inherent links between traumatic histories, the development of chronic illness and diseases, and the integration of human movement into treatment plans (Felitti et al., 1998; Van der Kolk, 2001; Viamontes & Nemeroff, 2009). At present, Registered

Kinesiologists are not formally trained to recognize the signs and symptoms of trauma, but this situation could change if TIC becomes part of professional competencies. Public Health Ontario (2012) reported that chronic disease was correlated to physical inactivity, and implied that by increasing physical activity, a person can lessen the risk of developing a chronic illness. For example, studies have shown that physical activity can decrease the risk of type-2 diabetes by 42%, cardiovascular disease by 33%, ischemic and hemorrhagic strokes by 31%, and 20-25% of colon cancers (Public Health Ontario, 2012). The Ontario Kinesiologist Association (OKA, 2019 b) claims that Registered Kinesiologists play an important leadership role in the prevention of injury and chronic diseases. Furthermore, the research in trauma shows that chronic conditions are greatly impacted by an individual's trauma history (Sledjeski, Speisman, & Dierker, 2008), suggesting that a trauma informed approach could potentially be beneficial to the practice of Kinesiology. As the recognized movement specialists in Ontario (OKA, 2019 b), adopting the TIC model as Registered Kinesiologists would mean treating the whole person; that is, helping individuals make the connection between health-related behaviours impacting their health status, and past trauma. To date, no studies have explored the notion of trauma and TIC among Registered Kinesiologists in practice.

What is Trauma?

The Diagnostic and Statistical Manual of Mental Disorders, fifth edition explicitly defines trauma as "the exposure to actual or threatened death, serious injury, or sexual violence, through one (or more) of the following: direct exposure, witnessing, learning about the occurrence of, or experiencing repeated or extreme exposure to traumatic events" (American Psychiatric Association [APA], 2013, p. 11). The fundamental principal across various definitions of trauma is that the event is not within a person's control, and the event itself does not determine whether it is traumatic. It is the individual's experience and perception of the

event that leads to the interpretation of the event as traumatic (Klinic, 2013). Traumatic events can include interpersonal incidents such as physical, emotional, sexual abuse, war, community violence, neglect, maltreatment, loss of a caregiver/loved one, natural disasters, terrorism, witnessing violence, or experiencing trauma vicariously. Trauma can also result from chronic adversity such as severe or life-threatening injuries, illness, and accidents (Klinic, 2013). Thus, trauma takes many forms and can occur at any stage of life. Traumatic events can impact a person's health, and cause profound effects, particularly during childhood (Felitti et al.,1998).

The seminal Adverse Childhood Experiences (ACE) study conducted by Felitti et al. (1998) heightened awareness of the prevalence and impact of childhood trauma on adult health and well-being. Specifically, adverse events experienced during childhood (e.g., psychological, physical, or sexual abuse; violence against a mother; or living with household members who were substance abusers, mentally ill, suicidal, or imprisoned) were purported to have long-lasting effects (Felitti et al. 1998). Felitti et al. (1998) discovered that the exposure rate of ACEs exhibited a graded relationship with the presence of diseases and negative outcomes experienced in adulthood. For example, ACEs can cause disruptions in neurodevelopment, which may lead to permanent social, emotional, and cognitive impairment (Felitti, et al. 1998). Moreover, these disruptions can potentially lead to the adoption of health risk behaviours, which can contribute to disease, disability, and social problems, not to mention early death (Felitti et al., 1998; Klinic, 2013; Van Ameringen et al., 2008). The research studies investigating the impact of ACEs suggest that the prevalence of trauma and related histories is higher than what is reported (Anda et al., 2006; Felitti et al, 1998; Nurius, Green, Logan-Greene, & Borja, 2015; Miranda et al., 2015; Van Ameringen et al., 2008), thereby demonstrating the importance of acknowledging this potential occurrence in practice.

Anda et al. (2006) looked deeply into the connection between ACEs and the neurobiological deficits they had on adults. One of their findings was that the damaging outcomes of ACEs affected a variety of functions and behaviours. The authors attributed this to the traumatic and chronic stress effects on differing brain structures and roles. They also found that there is a dose-response relationship between the number of ACEs experienced, and the adverse physiological responses activated during childhood (e.g., central nervous system issues). This finding was particularly noteworthy, as they also showed that there is a dose-response relationship between the number of ACEs experienced and the number of comorbidities present in adulthood. This cascade of events, from an initial survival response during childhood, to the impact and adaptations made from chronic exposure to a stressor, all represent a common pathway to a variety of important long-term behavioural, health, and social problems (Anda et al., 2006).

A significant element of trauma is that it is an event out of a person's control. It is not the event that determines whether it is traumatic or not, but the individual's experience and perception of the event (Klinic, 2013). Therefore, trauma itself can result from a wide range of events, which are impacted by magnitude, complexity, frequency, duration, and origin (e.g., whether the trauma came from an interpersonal or external relationship; B.C. Mental Health and Substance Use [MHSU], 2013). Trauma experiences are different for every individual, and they affect each person uniquely. What makes an experience/event traumatic is based on the individual's perspective.

Effects of trauma may be experienced through a single incident or repeated occurrences, and can affect individuals through the generations (see Table 1). In fact, the effect of a single or multiple traumatic event/s can even be passed down from one generation to the next. An example of this occurs when a child is being raised by a trauma survivor and experiences

intergenerational trauma (Trauma Informed Project [TIP], 2015). The result of this intergenerational trauma is that the trauma survivor passes on to the children, the coping behaviour that he/she has adopted to cope with past trauma. Because children often adopt behaviours of their parents, this then perpetuates a cycle (TIP, 2015). The TIP (2015) describes this concept of how a traumatic event can affect more than just the people involved directly in specific events, by categorizing the varying types of trauma. Table one describes these five types of trauma (TIP, 2015).

Table 1

Trauma Types:

Type of Trauma	Definition
Single Incident	• An unexpected and overwhelming event such as an accident, natural disaster, a single episode of abuse or assault, sudden loss, or witnessing violence
Complex or Repetitive	• Ongoing abuse, violence, war, and/or betrayal, often involving being trapped emotionally and/or physically
Developmental	• Exposure to early ongoing or repetitive trauma (infants, children, youth) involving neglect, abandonment, physical abuse or assault, sexual abuse or assault, emotional abuse, witnessing violence or death, and/or coercion or betrayal • Often occurs within the child's caregiving system and interferes with healthy attachment and development
Intergenerational	• Psychological or emotional effects experienced by people who live with trauma survivors • Coping and adaptation patterns developed in response to trauma passed from one generation to the next
Historical	• Cumulative emotional and psychological wounding over the lifespan and across generations emanating from massive group trauma • Collective traumas are inflicted by a subjugating, dominant population • Examples: genocide, colonialism (residential schools), slavery, and war • Intergenerational trauma is an aspect of historical trauma

(Adapted from: Framo, 1981; Heart, 1998; MHSU, 2013; Sotero, 2006)

The impact of traumatic events combined with a high prevalence of trauma suggests that individuals with trauma histories will be seen across all health care fields including

Kinesiology. Since Registered Kinesiologists will likely treat patients with traumatic histories, it stands to reason that using a TIC approach could enhance the efficacy and provision of care.

Trauma Informed Care

The TIC method was created as a response to trauma and neurobiology research about the negative effects of trauma on neural development (National Centre for Trauma-Informed Care [NCTIC], 2013). Trauma Informed Care is an organizational structure and treatment framework that involves realizing, recognizing, and responding to the effects of all trauma types (TIP, 2015). More specifically, it is a method of interaction between professionals and their patients. Trauma Informed Care increases the quality of care by facilitating individuals' understanding of their behaviour and its link to past trauma (NCTIC, 2013). Making the connection between behaviour and trauma allows the HCP to treat the whole person rather than focusing exclusively on symptomology (Clark et al, 2015; Elliot, Bjelajac, Fallot, Markoff, and Reed., 2005; Klinic, 2013; Substance Abuse and Mental Health Services Administration [SAMHSA], 2014). The HCP links behaviour and trauma by realizing the widespread impact of trauma and understanding potential paths for healing. For a HCP to be able to link a patient's health-related behaviour to past trauma, the HCP must become informed on what trauma is, and its potential effects on health status (SAMHSA, 2014). Becoming trauma informed teaches the HCP to recognize the signs and symptoms of trauma, and how to respond to trauma histories by fully integrating knowledge about trauma into policies, procedures, practices, and settings (Kelzelman & Stravropoulos, 2012; Klinic, 2013; MHSU, 2013; TIP, 2015).

In response to the widespread scope of practice pertaining to HCPs, the British Columbia Ministry of Health, Mental Health and Substance Use Branch, established four principles that create a framework in which TIC may be incorporated: Trauma Awareness, Safety and Trustworthiness, Opportunity for Choice, Collaboration and Connection, and

Strengths-based and Skill Building (Kelzelman & Stravropoulos, 2012; Klinic, 2013; MHSU, 2013). All of these TIC Principles can be taken into account when working with patients, regardless of trauma-specific training or professional scope (Elliott, et al., 2005; Klinic, 2013; MHSU, 2013; TIP, 2015)

Trauma awareness. Trauma awareness is the first principle in the trauma-informed framework (Kelzelman & Stravropoulos, 2012; Klinic, 2013; MHSU, 2013). Trauma informed care begins with building knowledge about the frequency and effects of trauma experiences and includes a review of the wide range of adaptations (such as avoidance), that individuals form in order to cope with the trauma (Hopper, Bassuk, & Olivet, 2010).

Safety and trustworthiness. Trauma survivors often feel unsafe, are likely to have experienced abuse of power in salient relationships, and may currently be in unsafe relationships or living situations; thus, physical and emotional safety are imperative when employing TIC (Kelzelman & Stravropoulos, 2012; Klinic, 2013; MHSU, 2013). Safety and trustworthiness can be established through practices including: welcoming intake procedures, adapting the physical space to be less threatening, providing clear information about programming, ensuring informed consent, creating crisis plans, demonstrating predictable expectations, and scheduling appointments consistently (Fallot & Harris, 2009). The safety of HCPs is taken into account as well. Trauma informed care demonstrates awareness of vicarious trauma and burnout: “Whether or not HCPs have experienced trauma themselves, they may be triggered by patients’ responses and behaviours” (MHSU, 2013, p.13).

Opportunity for choice, collaboration, and connection. Trauma-informed services create safe environments intended to foster a sense of self-efficacy, autonomy (choice), self-esteem, and individual control for those receiving care. The goal for HCPs is to communicate openly, equalize power imbalances in the therapeutic relationship, allow for the communication

of feelings without the fear of judgment, provide choices for treatment, and work collaboratively with the individuals seeking care (MHSU, 2013).

Strengths-based and skill building. Individuals who receive TIC are assisted with identifying their strengths and developing resiliency and coping skills. The HCPs role is to teach and model skills for recognizing triggers, calming, centering, and staying present (MHSU, 2013) while showing "an understanding of these needs of people who have experienced trauma. Together with individual interactions, service practices, and policies, they create a non-hierarchical and supportive organizational culture" (MSHU, p. 14, 2013). The principles of TIC represent the fundamental concepts that HCPs can use to enhance their standards of care. The Substance Abuse and Mental Health Service Administration (2014) has established a set of practices driven from the core principles that will help a HCP become trauma informed. The practices include:

i. Become trauma aware and knowledgeable about the impact and consequences of traumatic experiences
ii. Evaluate and initiate the use of appropriate trauma-related screening and assessment tools.
iii. Implement interventions from a collaborative, strengths-based approach, appreciating the resilience of trauma survivors.
iv. Anticipate the need for specific trauma- informed treatment planning strategies that support the individual's recovery.
v. Decrease the inadvertent re-traumatization that can occur from implementing standard organizational policies, procedures, and interventions with individuals, including patients and staff, who have experienced trauma or are exposed to secondary trauma (SAMHSA, 2014, p.4).

The primary role of TIC is to anticipate the impact that trauma can produce across the health care system (SAMHSA, 2014). Trauma informed care establishes processes to address the needs of those individuals and communities that have been impacted by trauma (SAMHSA, 2014).

TIC and Kinesiology

At the root of practicing Kinesiology is the notion that patients are empowered to look after their own health (OKA, 2019 c). By working with individuals in different environments, Registered Kinesiologists apply various subspecialties (e.g., gait assessment, exercise prescription, cardiac rehabilitation, ergonomics; OKA, 2019 b) to help patients create personal goals and encourage the achievement of optimal health and well-being. In order to increase the quality of care they provide, using the TIC framework means that all HCPs assume, as a universal precaution, that everyone has a trauma history (Klinic, 2013). Numerous studies have described the impact that trauma has on physical health, especially for those with chronic conditions (Schnurr & Jankowski, 1999; Seng, Graham-Berman, Clark, MacCarthy, & Ronis, 2005; Sledjeski et al., 2008). This suggests that Registered Kinesiologists will indeed see patients who have experienced trauma. Empowering others and establishing an empathetic, collaborative relationship through TIC is an opportunity for HCPs, such as Registered Kinesiologists, to expand their skillset to enable the recognition of and responses to a range of trauma exposure in their patients (Ko et al., 2008). To date, research has yet to establish if and how individual trauma histories impact the delivery of care that Registered Kinesiologists provide.

The goal for HCPs, including Registered Kinesiologists, is to deliver excellent standards of care (Ko et al, 2008). Researchers recommend that the best way to achieve the highest quality of care is for HCPs to become trauma informed (Bartlett et al., 2015; Harris &

Fallot, 2001; Kelzelman & Stravropoulos, 2012; Klinic, 2013; Ko et al, 2008; MHSU, 2013). However, each health care field recognizes and responds to trauma differently, and this is somewhat dependent on the scope of practice within each particular profession (Ko et al., 2008). For example, the mental health field approaches trauma by providing specific services that can directly treat trauma histories, thereby requiring the greatest amount of trauma awareness, knowledge, and skill among providers (Black, Woodworth, Tremblay, & Carpenter, 2012; Ko et al. 2008; Muskett, 2013). In addition, treatments provided by HCPs will be impacted based on their level of trauma awareness which will vary depending on the environment that the HCP is working in (Harris & Fallot, 2001; Klinic, 2013; Ko et al., 2008).

Bartlett et al. (2015) found that by educating and increasing HCPs level of trauma awareness, it created a shared language which improved communication, number of appropriate referrals, and the strength of HCPs professional relationships (Bartlett et al., 2015). While the environment that an HCP practices in might limit the degree of trauma awareness, Bartlett et al. (2008) argued that there needs to be a minimum level of trauma awareness so that a common language can be used to effectively communicate between different disciplines and their patients. Harris and Fallot (2001) further supported this concept by highlighting how a trauma-related understanding allows for a more holistic and integrated treatment plan at all levels of health care.

One of the core competencies for a Registered Kinesiologist is having foundational knowledge such that he/she can identify factors that influence exercise adherence and motivation (COKO, 2014). Literature on the effects of trauma explains that trauma histories can influence the adoption of avoidance behaviours (Kelzelman & Stravropoulos, 2012; Klinic, 2013; MHSU, 2013) which, in turn, can impact a person's adherence to exercise. An argument can be made that Registered Kinesiologists need some foundational knowledge on trauma to

help them identify trauma-related barriers that may explain why a person is avoiding exercise. Furthermore, there are interactions that Registered Kinesiologists have with their patients, such as touching, that could potentially be triggering for the individual. A trigger is anything that reminds the trauma survivor of the event/s, and sometimes the survivor's response is activated subconsciously (Clark et al., 2015). That is, when individuals experience trauma, their brains create associations to the memory that can be triggered without consciously being aware (Clark et al., 2015; Klinic, 2013). Having an increased awareness of trauma may help a Registered Kinesiologist to be more aware of his/her own behaviour, and recognize when an interaction may be a trigger for an individual.

There is evidence that TIC is an effective approach to health care (Azeem, Aujla, Rammerth, Binsfeld, & Jones, 2011; Goetz & Taylor-Trujillo, 2012; Morrissey et al., 2005); however, this evidence is limited to the mental health field which inherently demands an increased level of trauma awareness. Within the mental health field, trauma is assumed to be the root cause for individuals seeking help from a mental health care provider (Klinic, 2013; SAMHSA, 2014). That being said, trauma histories exist among individuals who seek all types of medical assistance across various health care disciplines (Klinic, 2013; SAMHSA, 2014). Individuals in need of medical assistance outside the mental health field may still have trauma histories, but their trauma histories are not the focus for their treatment. It is possible that Registered Kinesiologists may work with patients who have trauma histories that could have influenced the reason the individual is seeking treatment. Moreover, those trauma histories may interfere with the patient's progress to achieve the health goal that the Registered Kinesiologist is helping him/her to work towards (Clark et al., 2015). Given Kinesiology was regulated in 2013, these professionals are being integrated increasingly into the health services model (COKO, 2013; Wayne et al. 2017); thus, advancing the research that informs the practice in

Kinesiology is both timely and warranted (Wayne et al., 2017). More specifically, exploration into understanding the concept of trauma awareness among Registered Kinesiologists is required. Not only will this information support the advancement of the practice of Kinesiology from professional and best practice standpoints (i.e., research shows that all HCP will benefit from incorporating some aspect of TIC; Ko et al., 2008), the patients themselves stand to gain a great deal in terms of quality care provision.

Therefore, the purpose of this study was to explore the concept of trauma awareness through the lived professional experiences of Registered Kinesiologists working in Ontario by applying a step-wise interview process. Details of each Registered Kinesiologist's work experiences were gathered through three separate interviews in order to create a rich description of their trauma awareness as depicted through their realizing the prevalence of, recognizing, and responding to trauma in their practice. This simple and concise organizational description of trauma awareness, laid out by the SAMHSA (2014) and used often in the literature, offers a conceptual framework that lends itself to other health care fields where language regarding trauma may be limited (Hamberger et al., 2019).

Literature Review

Experiencing a traumatic event may have diverse consequences on an individual, with many different factors impacting how he/she responds (SAMHSA, 2014). Carothers (2020) suggests that by raising trauma awareness among HCPs, the quality of care provided toward a trauma survivor can improve. However, for a HCP to integrate trauma awareness into practice, it is important that he/she has an understanding of what this concept entails. The research regarding trauma and its impact prompted a group of health care workers to create an intervention that would educate HCPs on how to understand the widespread impact of trauma, recognize the signs and symptoms of trauma histories, and appropriately respond to the trauma

(Klinic, 2013; MHSU, 2013; TIP, 2015). The TIC approach was thereby created for HCP to be able to respond to an individual's trauma history effectively (SAMHSA, 2014). There are various models for incorporating TIC into practice and across organizations; however, trauma awareness is the key element to every trauma-informed model (SAMHSA, 2014). According to various resources (e.g., Elliot et al., 2005; Hamberger et al., 2019; Klinic, 2013; SAMHSA, 2014; TIP, 2015), a heuristic way of conceptualizing trauma awareness is by describing three main elements including: realizing the prevalence of trauma in society; recognizing the signs and symptoms of trauma in patients; and responding to the trauma survivor by fully integrating knowledge about trauma into practices and procedures. While describing trauma awareness through this format is not based on empirical evidence, it is accepted within the field of TIC as practical and based on the general views of practitioners (Hamberger et al., 2019; Klinic, 2013; Oral et al., 2016; SAMHSA, 2014).

Realizing the Prevalence of Trauma

Realizing trauma is an important initial aspect of a HCP's trauma awareness because it enables one to identify its' widespread impact and aids in understanding the vast routes for recovery (Klinic, 2013). A HCP who adopts a trauma informed framework through realizing understands that traumatic experiences are highly prevalent (Clark et al., 2015). The first step towards realizing is for the HCP to understand what constitutes a traumatic experience (SAMHSA, 2014). That is, one must understand that trauma is "any event that leaves an individual feeling overwhelmed" (Clark et al, 2015, p. 6). The event can be regarded as physically or emotionally harmful or threatening to the individual, leaving him/her with feelings of helplessness (SAMHSA, 2012). It can be limited to a single event, series of events, or set of circumstances, and experiencing a traumatic event can have lasting consequences on a person's physical, social, emotional, and/or spiritual well-being (SAMHSA, 2012).

Understanding the varying types of trauma (described in Table 1) aids in understanding just how pervasive trauma is in society; the prevalence of traumatic events affects a significant portion of the general population (Clark et al., 2015; Felitti et al., 1998; Green et al., 2015). Costello, Ernkanli, Fairbank, and Angold (2002) reported that 25% of children and adolescents have already experienced at least one traumatic event. Furthermore, according to Van Ameringen et al. (2008), 76% of Canadian adults disclosed having directly experienced a single or multiple traumatic event in their lifetimes. Considering the various types of trauma possible (Table 1), individuals can be affected by trauma even though they may not be directly involved in the event (MHSU, 2013; TIP, 2015). A traumatic event can affect significant others, family members, first responders and other medical professionals, behavioural health workers, broader social networks, and even entire communities (Ko et al., 2008; SAMHSA, 2014;TIP, 2015): "Family members frequently experience the traumatic stress reactions from the individual family member who was affected (e.g., angry outbursts, nightmares, avoidant behaviour, other symptoms of anxiety, overreactions or under reactions to stressful events" (SAMHSA, 2014, p. 12). Traumatic stress refers to potentially harmful experiences that elicit feelings of helplessness, intense fear, or horror, and are associated with an alarm response (Elbert, Rockstroh, Kolassa, Schauer, & Neurner, 2006). Traumatic stress reactions that are experienced by family members increase the risk of those individuals developing secondary trauma responses (SAMHSA, 2014). Additionally, Felitti et al. (1998) demonstrated that those who have experienced multiple ACEs are disproportionately likely to visit HCPs. Therefore, it is reasonable to expect that the rate of trauma in clients seen by Registered Kinesiologists could be even higher than that observed in the general population. In essence, realizing the prevalence of trauma is the first step toward becoming trauma aware (Klinic, 2013; MHSU, 2013; SAMHSA, 2014).

Recognizing the Signs and Symptoms of Trauma

Recognizing trauma history in patients is the second category used to describe trauma awareness. Compared to realizing, recognizing trauma is a more personalized awareness that focuses on each patient: that is, recognizing when an individual patient is displaying trauma-related reactions. Recognizing trauma also entails the HCP's understanding that a patient's current health status could be impacted by past experiences (Clark et al., 2015). A fundamental component of a HCP's trauma awareness is being able to recognize the signs and symptoms of trauma in patients, families, staff, and others involved in the health care system (Hamberger et al., 2019; Klinic, 2013; SAMHSA, 2014; TIP, 2015). As trauma experiences and the ways individuals cope are unique to each person, a helpful starting point for raising trauma awareness among HCPs is by enhancing understanding regarding the multi-faceted ways that trauma experiences can present.

There are many ways in which trauma can show up and affect an individual's health status including physical, cognitive, psychological, interpersonal, and behavioural realms (Cascade Behavioural Health, 2020; Haskell, 2001, 2003; Schachter, Stalker, Teram, Lasiuk, & Danilkewich, 2008). The long-term health effects of trauma can include: head trauma, brain injury, sexually transmitted diseases, physical inactivity, severe obesity, and other adult diseases such as ischemic heart disease, cancer, chronic lung disease, skeletal fractures, liver disease, and autoimmune disorders (National Association of State Mental Health Program Directors [NASMHPD]/ National Technical Assistance Center for State Mental Health Planning [NTAC], 2004). The impact of trauma occurring specifically during childhood plays a significant role regarding health outcomes in adulthood, whereby the individual's health-related quality of life is significantly reduced (Kassam-Adams et al., 2014). Felitti et al. (1998) explain that childhood trauma has not only immediate and multi-faceted consequences at the time of

the event, but also long-term effects based on maladaptive coping behaviours and neural adaptations that can lead to adverse health in adulthood (Felitti et al., 1998). Table 2 describes how childhood trauma and/or trauma experienced in adulthood can impact an individual's physical health, mental health, and well-being.

Table 2

Signs and Symptoms of Trauma:

Physical	Cognitive	Psychological	Interpersonal	Behavioural
Unexplained chronic pain or numbness Stress-related conditions (e.g., chronic fatigue) Headaches Sleep problems Breathing problems Digestive problems Sexual Dysfunction Easily startled Extreme Fatigue and exhaustion Tachycardia Edginess Extreme alertness; always on the lookout for warnings of potential danger	Intrusive thoughts of the event that may occur out of the blue Nightmares Visual images of the event Loss of memory and concentration abilities Disorientation Confusion Mood swings	Overwhelming fear Obsessive and compulsive behaviors Detachment from other people and emotions Emotional numbing Depression Guilt – especially if one lived while others perished Shame Emotional shock Disbelief Irritability Anger Anxiety Panic attacks	Frequent conflict in relationships Lack of trust Difficulty establishing and maintaining close relationships Experiences of re-victimization Difficulty setting boundaries	Substance use Difficulty enjoying time with family/ friends Avoiding specific places, people, situations (e.g., driving, public places) Social Isolation and withdrawal Lack of interest in previously enjoyed activities Shoplifting Disordered eating Self-harm High-risk sexual behaviours Suicidal impulses Gambling Justice system involvement

(Adapted from: Cascade Behavioural Health, 2020; Haskell, 2001, 2003; Schachter et al., 2008)

Coping with trauma over an extended period of time can have long-term consequences on health during adulthood (Felitti, 1998) while also placing a burden on the health care system (Chartier, Walker, & Naimark , 2010). In fact, Green et al. (2015) established that there is an increase in health care costs resulting directly from negative health outcomes related to individuals' trauma histories. Higher levels of health care utilization in adulthood have also been observed (Chartier, Walker, & Naimark, 2009). Taken together, these trends highlight the need for heightened awareness regarding the signs and symptoms of trauma across HCPs. This knowledge is imperative for enhancing recognition in practice and enabling an appropriate response.

Responding to Trauma

The final component to describing HCPs' trauma awareness is their ability to respond to a trauma survivor (Elliot et al., 2005; Hamberger et al., 2019; Klinic, 2013; TIP, 2015; SAMHSA, 2014). Responding to an individual's trauma means the HCP is incorporating knowledge about trauma and trauma history into procedures, policies, practices, and settings, as well as treatment plans (Klinic, 2013). Fundamentally, responding requires that the HCP integrate both the realization of trauma's prevalence and recognizing the signs and symptoms to address a patient's trauma experiences effectively. The TIC framework offers HCP's an opportunity to gain the skillset to integrate realizing and recognizing a patients past trauma and then offers a format to respond (SAMHSA, 2014). "Trauma-informed care embraces a perspective that highlights adaptation over symptoms and resilience over pathology" (Elliot, et al., 2005, p. 467). The approach takes into consideration the impact of trauma on all aspects of service delivery, and places priority on the individual's safety, choice, and control (Harris & Fallot, 2001). Trauma informed care involves building competencies among professionals and

organizations to institute standards and guidelines that support the delivery of trauma-sensitive services (Klinic, 2013; MHSU, 2013; SAMHSA, 2014).

The primary objective of TIC is to be able to recognize best practices, reduce the impact of trauma on survivors, and strengthen health outcomes (SAMHSA, 2014). Based on the primary goal of TIC, Elliott et al. (2005) formulated 10 principles for providing trauma-informed services:

1. Recognize the impact of violence and victimization on development and coping strategies.
2. Identify recovery from trauma as a primary goal.
3. Employ an empowerment model.
4. Strive to maximize choice and recovery.
5. Base the therapeutic relationship on a relational collaboration.
6. Create an atmosphere that is respectful of survivors' needs for safety, respect, and acceptance.
7. Emphasize strengths, highlighting adaptations over symptoms and resilience over pathology.
8. Minimize the possibilities of re-traumatization.
9. Strive to be culturally competent and to understand each individual in the context of his/her life experiences and cultural background.
10. Solicit consumer input and involve consumers in designing and evaluating services.

It is important to note that utilizing a trauma-informed approach when responding does not necessarily require disclosure of a traumatic event. Rather than being a specific treatment strategy or method, trauma-informed practice is more akin to an overall approach taken by the practitioner toward the therapeutic relationship (MHSU, 2013). There is a difference between

TIC and trauma-specific services, which directly treat the trauma. Thus, it is important for any HCP to be aware of trauma-specific services available to patients wishing to pursue treatment. For many HCPs, treating the actual trauma is outside their governed scope of practice.

Trauma-Specific versus Trauma Informed Care. There are HCPs who have advanced training and education to be able to provide specific interventions to treat individuals' behavioural adaptions to trauma (SAMHA, 2014): these are referred to as trauma-specific services (Klinic, 2013; SAMHA, 2014). Trauma-specific services offer a trauma-informed environment and focus on treating trauma through therapeutic interventions involving practitioners with specialized skills (e.g., conducting detailed assessments including mental health and substance use concerns). Trauma-specific services directly address the recovery process from traumatic experiences and facilitate an individual's recovery through specialized forms of counseling and interventions (Klinic, 2013; MHSU, 2013).

People who work in trauma specific services already have increased trauma awareness due to their specified training and work experiences. For example, those who treat individuals with Post Traumatic Stress Disorder (PTSD) are already acknowledging that these individuals have experienced an event in their lifetimes that has caused certain symptomology to develop (APA, 2013). The DSM-5 (APA, 2013) is a tool for HCP to be able to diagnose various illnesses and disorders. In the manual, there is a criterion for diagnosing PTSD, which acknowledges traumatic events as the catalysts for illness (APA, 2013). Therefore, those HCP who are able to diagnosis PTSD and treat the syndrome are working with heightened trauma awareness. That is not the case for HCPs who are practicing outside of trauma specific services. It should be noted that the majority of people who have experienced trauma do not develop or fully meet the criteria for PTSD (Cohen & Scheeringa, 2009; Kilpatrick et al., 2014). Thus, they may have effects of trauma (e.g., pervasive chronic conditions – ACEs) but won't

necessarily seek out trauma-specific services suggesting that a HCP with limited trauma awareness will likely be seen (SAMHSA, 2014). Further, research needs to be conducted to gain a deeper understanding of the trauma awareness in professions where the connection to trauma and health status is not as evident.

Trauma informed care is a model of practice that has been designed not only for trauma specific services, but for all levels of health care (Clark et al., 2015; Kelzelman & Stravropoulos, 2012; Klinic, 2013; MHSU; 2013; SAMHA, 2014; TIP, 2015). Trauma informed care works at the patient, staff, agency, and system levels using the core principles of trauma awareness: safety and trustworthiness, choice and collaboration, and building of strengths and skills. The HCPs can discuss the connections between trauma and health with all patients through identifying trauma symptoms or adaptations, and offering support and strategies that increase safety and reinforce the connection to HCPs (Clark et al., 2015; Kelzelman & Stravropoulos, 2012; Klinic, 2013; SAMHA, 2014). Cumulatively, the realizing, recognizing, and responding stages represent a comprehensive approach to trauma awareness that can be integrated into practice by HCPs, regardless of profession or scope of practice.

Providers of TIC

The principles of TIC are adaptable across health settings, placing emphasis on the importance of coordinating, as well as integrating services (SAMHSA, 2014). To date, little is known about how HCPs outside the mental health field interpret and understand the trauma experiences of their patients, and what strategies can be used when caring for individuals with trauma histories (Green et al., 2011). Without this knowledge, the literature has been limited to explaining in theory, where, why, and how TIC may be implemented. The goal of TIC is to improve health outcomes and maintain excellent standards of care for all systems by reducing the use of the health care system through the promotion of self-management (Ko et al., 2008).

One viewpoint of TIC is that various types of professions (not just in health care) need to become trauma informed so that more effective referrals can be made, thus ensuring that individuals are receiving the best care possible (Bartlett et al., 2015). Gaining a deeper understanding of how TIC is used in various disciplines can inform the need for its integration into a newly regulated health care profession, namely, Kinesiology.

The Education System. Ko et al. (2008) identified that schools are the ideal access point for children to be screened for traumatic events so they might start to receive the necessary help. However, most school-based health programs do not systematically screen, assess, or provide counseling or referrals for traumatic stress problems (Ko et al., 2008). The concept of trauma presents schools boards with a challenging predicament. How do the schools balance providing quality education with acknowledging that many students need help in coping with trauma simultaneously? The National Child Traumatic Stress Network in the United States (2008) reports that 40% of students have experienced or witnessed a traumatic stressor. The effects of trauma in the classroom can further manifest as one or more of the following: attention deficit hyperactivity disorder, conduct disorder, oppositional defiance disorder, reactive attachment, disinhibited social engagement, and acute stress disorder (Brunzell, Waters, & Stokes, 2015). Delaney-Black et al. (2002) suggested further that exposure to violence has been associated with decreased IQ and reading ability. One might argue that TIC could enable teachers to promote healing and growth in their classrooms. Yet, few teachers, school psychologists, counselors, and school social workers receive formal training about the impact of trauma on students and ways they can foster the achievement of better educational outcomes (Ko et al., 2008). Trauma informed models of teaching can be used to connect and engage students by focusing on improving self-regulation and building relational capacities (Brunzell et al., 2015). Trauma-informed teaching can also be implemented to assist any

struggling student to strengthen his/her capacity to learn (Minahan, 2019). While empirical evidence supporting the integration of a TIC model into the educational system is scarce, its potential value in this context has been well-recognized (Brunzell et al., 2015; Ko et al., 2008).

The Health Care System. The Canadian health care system is structured around the notion of conventional medicine: a model premised on the application of the scientific method and evidence-based practice for diagnosing and treating disease (Insel, Roth, Irwin, & Burke, 2012). Evidence-based practice means that healthcare professionals systematically find, appraise, and use current and valid research findings as the basis for health-related decisions. Diseases and conditions are caused by physical factors that are characterized by symptoms, such as pathogens, genetic factors, and unhealthy lifestyles (Insel et al., 2012).

The Canadian health care system is a hierarchal framework containing multiple professional disciplines and subspecialties, which creates a pace of informational flow and decision-making that is rapid. Interactions with HCPs are often brief and focused on the patient's presenting symptoms (Ko et al., 2008). These types of interactions can be difficult, painful, or even frightening for trauma survivors. Potentially, these experiences can create a barrier for trauma survivors to seek medical assistance in the first place (Clark et al., 2015). The health care system represents an important initial step for identifying traumatized individuals who are at risk for persistent traumatic stress (Ko et al., 2008). Routine visits to a HCP can also result in identifying trauma exposure or traumatic stress reactions (Alegria et al., 2002). In fact, numerous studies describe poor health outcomes (e.g., increased risk of circulatory, endocrine, and musculoskeletal conditions) or increased health care use for individuals who have been exposed to trauma (Schnurr, & Jankowski, 1999; Seng et al., 2005). These adverse health effects suggest that individuals who are exposed to trauma are not receiving appropriate medical attention at the necessary time. Thus, there is an opportunity to

establish a skillset among HCPs that will enable them to address a wide range of trauma exposure with their patients (Ko et al., 2008). The health care system is an optimal starting point to adopt traumatic stress interventions through the quality improvement and quality assurance processes that integrate a trauma informed approach. With the adoption of TIC by the health care system, individual practitioners could be adequately supported to integrate these principles into practice.

First responders. Compared to educators who may be working with trauma experiences on a more chronic basis, first responders are more likely to be the first HCP to interact with victims and witnesses acutely at the onset of a traumatic event. This situates first responders in a unique position whereby they can minimize immediate traumatic stress experienced by the affected individual(s) (Ko et al., 2008). By utilizing a trauma informed approach, first responders can address survivors and witnesses supportively, provide clear information about the status of the situation, develop safety plans, and help the traumatized individuals access trauma-specific services. Ko et al. (2008) reported that police officers who were provided support and training in TIC were able to decrease children's exposure to further upsetting incidents, provide them with containment and structure, and make the appropriate referrals within their regular activities. Trauma informed care can be used among police and first responders alike to assist personnel, and attend effectively to the immediate needs of trauma survivors (Ko et a., 2008).

Nurses. According to Kassam-Adams et al. (2014), TIC use among nurses should attempt to minimize potentially traumatic aspects of medical care while providing basic/emotional support and information to patients. Because nurses are in a pivotal position to tackle immediate distress, trauma informed practices can be used to determine which individuals require further assistance, and provide guidance on adaptive ways of coping

(Kassam-Adams et al., 2014). Yet despite these benefits, a lack of systematic incorporation of trauma informed practices exists (Kassam-Adams et al., 2014). For example, a study conducted by Kassam-Adams et al. (2014) revealed potential barriers to the integration of TIC within the paediatric nursing field including time constraints, worry about further upsetting children and families, lack of training, and confusing information on trauma-informed practices. Based on these findings (Kassam-Adams et al., 2014), dedicated training in TIC could relieve some of the potential barriers identified by augmenting a sense of competence among nurses when eliciting conversations about traumatic events. Moreover, according to Kassam-Adams et al. (2014), trauma-informed training needs to be career-specific. For example, part of a paediatric nurse's role is to educate parents and families on how to manage a child's illness or disability. Trauma-informed nursing care would then highlight specific skills related to helping patients and their families to manage emotional responses to difficult medical experiences (Kassam-Adams et al., 2014).

Training for trauma informed care

Trauma survivors' have expressed concerns about the treatment they receive and the HCPs who provide it (Clark et al., 2015). These concerns range from lack of provider experience or sensitivity, to inadequate care for injuries (including chronic medical conditions and mental health concerns), to creating an overreliance on medication (SAMHSA, 2014). Trauma survivors also cite the health care system's: lack of confidentiality, minimal access to medical forensic exams, and lack of trust or safety when a perpetrator is a medical or mental health practitioner (Clark et al., 2015). Every action that a HCP expresses impacts his/her patients in some way (Clark et al., 2015). Where they choose to assess patients, the questions they ask, and how these questions are asked all have the potential to re-traumatize an individual, and the person will not always be able to express clearly the negative impacts of the

treatment (SAMHSA, 2014). Healthcare professionals need to be aware of how a patient is behaving during an assessment, how the body language presents, and how the patient answers questions because, once in a state of hyperarousal, any communication will be ineffective (Clark et al., 2015).

The results of the research by Kassam-Adams et al. (2014) have broader applicability than to nurses alone; the authors note a lack of specific training for different professional bodies. Knowledge about trauma differs depending on the field or speciality of the health care provider. For instance, 86% of emergency room physicians incorrectly believe that injury severity is a risk factor for Post-traumatic Stress (PTS) symptoms (Ziegler, Greenwald, DeGuzman, & Simon, 2005), and 20% of primary care paediatricians feel competent in providing only brief interventions to assist patients with PTS reactions (Banh, Saxe, Mangione, & Horton., 2008). It seems reasonable that TIC training needs to be adapted to suit various fields in healthcare that would benefit from implementing this approach. To date, there has been only one study that has examined formalizing the training of TIC. Green et al. (2015) adapted a theory-based, evidence-informed approach about trauma and trauma care, into a six-hour course for primary care providers. The researchers called their training program "Trauma-Informed Medical Care (TI-Med)." The presentation focused on teaching clinicians, agency-based service providers, and frontline helpers how to respond to survivors of trauma. To promote TIC, the training objectives were to increase trauma awareness, develop patient-centred communication, encourage primary care providers to address psychosocial topics, and attend to the doctor-patient partnership. Green et al. (2015) tested their TI-Med course through a qualitative pilot study and assessed the effectiveness of TIC through a quantitative research study that evaluated the newly acquired skills of primary care providers. Overall, findings of this study revealed that adopting a TIC approach through the TI-Med training significantly

increased patient centredness. Green et al (2015) concluded that a trauma informed methodology is a promising approach to promote improved patient health and establish higher compliance with medical treatment plans. The development of the TI-Med course appears to be the first test and training course for HCP in TIC. Given its' success, it stands to reason that adapting it to other HCPs could be of benefit with regards to professional practice and patient-related outcomes.

Acquiring Trauma Awareness. The overriding belief of TIC is that trauma can pervasively affect an individual's well-being (SAMHSA, 2014). The model of practice reinforces the importance of:

> acquiring knowledge and skills regarding trauma to be able to meet the needs of individuals who have experienced trauma, and recognizes that individuals may be affected by trauma regardless of its acknowledgment; of understanding that trauma likely affects many patients who are seeking health services; and acknowledging that organizations and providers can re-traumatize patients through standard or unexamined policies and practices (SAMHSA, 2014, p. 8).

Understanding trauma and its effect on health status should inevitably lead to providing individualized care rather than applying protocols that have been over generalized (SAMHSA, 2014). The more HCPs who become trauma aware will create health care services that reflect a compassionate perspective of a person's symptomology (Fallot & Harris, 2009; Green et al, 2015; SAMHSA, 2014). Acquiring trauma awareness through TIC can also provide a platform for preventing more serious consequences of traumatic stress (Fallot & Harris, 2009). In light of these benefits, examining the use of TIC and awareness in a newly regulated profession is both timely and warranted.

Registered Kinesiologists

Trauma informed care offers HCPs a framework to guide their approach for treating patients (Raja, Hoersch, Rajagopalan, & Chang, 2014; SAMHSA, 2014). While the literature supports TIC practices (Clark et al., 2015; Kelzelman & Stravropoulos, 2012; Klinic, 2013; MHSU, 2013; SAMHSA, 2014), there is little evidence-based research showing how TIC can actually be implemented outside the mental health field. This may be because it is difficult for other professions to adopt the TIC model without the empirical evidence to support its use. Registered Kinesiologists use evidence-based research to inform their practice (Wayne et al., 2017). There are TIC courses offered across Canada; however, there is no standard, the training options vary in length, and no testing exists that examines if the HCP is capable of integrating the TIC framework into practice (Green et al., 2011). Without evidentiary support and little guidance outlining the type of training necessary to effectively use TIC in practice, it is clear that more research in this area is needed, especially in the province of Ontario where the regulatory body resides.

Part of being trauma aware as a HCP involves making connections that a patient's health status is a result of past experiences. Taking a holistic approach with individuals as part of this process is needed in order to get the proper help they need (Green et al., 2015). The field of Kinesiology inherently involves the application of a holistic approach to help people be physically active and lead a higher quality of life (Hoffman, 2013). Human movement and performance are a high priority for Registered Kinesiologists; however, the aim is to support the whole person, incorporating not just a person's physical body, but his/her cognitive and emotional attributes as well (Hoffman, 2013). Registered Kinesiologists are considered experts in body movement and work with individuals in preventing and managing chronic illness and injuries (Hoffman, 2013). A Registered Kinesiologist also focuses on prevention efforts and the

promotion of well-being, increasing work productivity, and achieving higher quality of life (OKA, 2019 b). As of April 1, 2013, Kinesiology has become a regulated health profession in Ontario governed by the College of Kinesiology of Ontario (COKO, 2013). The college is the regulating body for Registered Kinesiologists in Ontario and receives its authority from the *Kinesiology Act, 2007* and the *Regulated Health Professions Act, 1991* (COKO, 2013). Upon the passing of the *Kinesiology Act 2007* included a scope of practice that helps to unite the different focuses of practice that are within the field (OKA, 2019 b). Having an understanding of this scope is essential in order to identify how TIC might align with its competencies in practice.

Scope of Practice. The scope of practice for Kinesiology has been broadly defined as "the assessment of human movement and performance and its rehabilitation and management to maintain, rehabilitate or enhance movement and performance" (Kinesiology Act, 2007, chapter 10, section 3). This definition encapsulates the variety of settings where Registered Kinesiologists can practice, with the aim of improving health and well-being. Indeed, it is reasonable to suggest that Registered Kinesiologists need to be able to support the needs of trauma survivors due to the prevalence and pervasive impact of trauma (SAHMSA, 2014). The scope allows for the use of an assortment of modalities for a wide variety of patients; however, there are limits to what a member can and cannot do. The terms of practice and the limitations are more clearly defined through the core competencies and controlled acts (COKO, 2014).

Core Competencies. The College of Kinesiologists of Ontario has developed approximately 45 essential competencies for Registered Kinesiologists that outlines standards to enter into practice. The core competencies are also used as a guide for self-assessment as part of the college's quality assurance program. The self-assessment reflects on the Registered Kinesiologists practice in relation to the practice standards and core competencies and aims at

identifying areas for improvement (COKO, 2020 a). In summary, a Registered Kinesiologists uses the essential competencies to (COKO, 2014, p. 3):

- Understand practice expectations at initial registration and throughout their career.
- Plan continuing professional development and ongoing competence.
- Ensure that they meet the profession's minimum expectations.
- Assist in career progression.
- Communicate their role and standards of practice to other health care professionals and stakeholders, such as employers, government agencies, external accreditation bodies and the public.

Based on the scope of practice and the core competencies granted from the *Kinesiology Act 2007* and the *Regulated Health Professions Act, 1991,* the COKO can regulate the profession of Registered Kinesiologist's (COKO, 2014). However, what the competencies fail to acknowledge is trauma awareness, and how to respond when patients disclose a traumatic event that is affecting them. For a full description of core competencies and controlled acts, please visit the Standards and Resources of Registered Kinesiologists from the COKO website (COKO, 2020 b). In the context of TIC, while Registered Kinesiologists cannot provide trauma-specific services, there are no restrictions pertaining to holding conversations about or making inquiries into trauma. Thus, it is imperative that Registered Kinesiologists become knowledgeable about trauma-specific services, so they are able to refer patients who disclose a potentially traumatic event. Trauma informed care can be beneficial for a Registered Kinesiologist since it teaches how an individual's life story can impact health, when to refer the individual to trauma-specific services, and how to conduct the referral in a manner that will be the least re-traumatizing to the individual.

Services Provided by Registered Kinesiologist. The scope of practice of Kinesiology does overlap with other professions such as, physiotherapists, occupational therapists, and physicians; however, Registered Kinesiologists are considered to be movement experts (OKA, 2019 b). Registered Kinesiologists use evidence-based research to complete assessments, develop solutions, and focus on health prevention and well-being (OKA, 2019 b). Some of the services that a Registered Kinesiologist may provide are listed in Table 3.

Table 3:

Provided Services of Kinesiologists

Assessment	Clinical Kinesiology	Ergonomics
• Home Assessment • Assistive/Adaptive Devices Assessment and Utilization • Assessment of Attendant Care Needs • Functional Ability Evaluation • Transferable Skills Analysis • Critical Task Inventory and Evaluation • Return-to-Work Coordination and Implementation • Case/program Management • Automobile Accident or Disability claims Management • Gait Assessment	• Musculoskeletal Assessment • Postural Evaluation and education • Rehabilitative and Functional Re-training Exercise • Fitness Conditioning for Weight Loss, Cardiovascular Training, and Muscular Development • Diabetes Management Strategies • Cardiac Rehabilitation • Cancer Rehabilitation • Stroke Rehabilitation • Mental Health Management • Corporate Wellness Program Design and Implementation • Hydrotherapy	• Work Site Assessment • Physical Demands Analysis • Transferable Skills Analysis • Design/re-design of Home or Office Workstations or Industrial Workstations • Job Shadowing/coaching • Work Hardening Programs

(OKA, 2019 b)

Individuals working in environments such as those that treat addiction understand that their patients have trauma histories that have influenced their addictions (Hanson & Lang, 2014; Muskett, 2013). The working environment demands that these HCPs are aware of what trauma is, how it presents, and subsequently how to respond to it (Green et al., 2011, 2015; Petrie & Zatzick, 2010; Ziegler et al., 2005). In contrast, a Registered Kinesiologist may not have the training and work experience to recognize trauma, as there is a lack of trauma awareness within the entry-to-practice knowledge (COKO, 2014, 2020 a, 2020 b). While a

Registered Kinesiologist may develop some trauma awareness through his/her experiences on the job, it is typically up to the individual Registered Kinesiologist to seek out further occupational development regarding trauma.

Bartlett et al. (2015) found that increasing the level of trauma awareness by educating various HCPs improved communication across the different health care fields by creating a shared language. Creating the shared language then improved the referrals between HCPs and strengthened the relationships across different systems (Bartlett et al., 2015). The environment in which a HCP practices might impact the degree of trauma awareness for that HCP. But what Bartlett et al. (2015) are arguing is the need to have a minimum level of trauma awareness so that all HCPs can use their common language to communicate better between different environments. Harris and Fallot (2001) further support this concept by identifying that having a certain amount of understanding of trauma allows for more holistic and integrated treatment planning at all levels of health care. Despite calls for enhanced trauma awareness across HCPs (e.g., Bartlett et al., 2015; Ko et al., 2008) there is still uncertainty regarding the degree to which HCPs can be trauma informed while still upholding the limits of their specified profession. One of the core competencies for a Registered Kinesiologist is having foundational knowledge (COKO, 2014). Competency 1.7 under foundational knowledge explains that a Registered Kinesiologist needs to be able to identify factors that influence exercise adherence and motivation (COKO, 2014, p. 11). The literature on the effect of trauma explains that trauma histories can influence the adoption of avoidance behaviours (Kelzelman & Stravropoulos, 2012; Klinic, 2013; MHSU, 2013), which can then impact a person's adherence to exercise. An argument can be made that a Registered Kinesiologist needs some foundational knowledge on trauma so he/she can identify why a person might be avoiding exercise. Therefore, having a certain amount of trauma awareness could fall within this competency and

potentially increase a Registered Kinesiologist's ability to identify barriers to exercise for his/her patients.

Trauma Awareness for Registered Kinesiologists. Many individuals who are accessing the health care system have histories of trauma (SAMSHA, 2014). However, the majority of these individuals often do not recognize the significant effects of their trauma (SAMSHA, 2014). Similarly, treatment providers often avoid asking questions that elicit a patient's history of trauma, as they feel unqualified to respond to trauma-related problems (Ko, et al., 2008; SAMSHA, 2014). Thus, professional development to increase trauma awareness for all HCPs, including Registered Kinesiologists, is imperative to be able to respond to trauma histories and provide a holistic approach to care (Hoffman, 2013). Green et al. (2015) substantiates this notion with the finding that increased training regarding trauma showed an increase in patient centred care. Suggesting that Registered Kinesiologist's also need training in trauma as they are being integrated as part of health care teams (Wayne, et al., 2017). Gaining knowledge about the prevalence and potential consequences of traumatic events will help Registered Kinesiologists to customize their approach to individual specific needs (SAMHSA. 2014). Traumatic events have consequences for an individual's emotional, behavioural, cognitive, spiritual, and physical well-being, thereby solidifying the need for a holistic approach (SAMSHA, 2014). Given it is the goal for Registered Kinesiologists to address multiple components of an individual's wellness, increasing his/her trauma awareness will aid in this objective (Hoffman, 2013; Ko et al., 2010; OKA, 2019 c). Additionally, as Registered Kinesiologists are movement specialists' part of the goal is to change unhealthy behaviours to increase an individual's physical activity in connection with long term maintenance (Brawley, Gierc, & Locke, 2013). That being said, many of the obstacles to long term behaviour change are linked to trauma histories (Sweeney, Filson, Kennedy, Collison, & Gillard, 2018).

Gaining a greater understanding of how trauma histories are interrelated will be valuable for Registered Kinesiologists when developing effective strategies for prevention and intervention. Specifically, knowing a patient's trauma history could lead to increased adherence to treatment (Green et al., 2015). In order to implement a TIC model, Registered Kinesiologists need to become knowledgeable in trauma (trauma awareness). However, since there is no formal training in trauma, a baseline understanding of Registered Kinesiologists' knowledge of trauma first needs to be determined; this will provide insight into where further research is needed to advance the profession. While studies like Green et al. (2011) have evaluated HCPs' perspectives on trauma patients, to date, no qualitative studies focusing on Registered Kinesiologists and TIC exist, especially in relation to exploring the essence of what it means to treat trauma survivors outside of a mental health setting. Moreover, no studies have approached the concept of trauma awareness and the experiences of working with trauma survivors through the lenses of realizing, recognizing, and responding.

Purpose

The purpose of this study was to explore the concept of trauma awareness through the professional lived experiences of Registered Kinesiologists working in Ontario by applying a step-wise interview process. Details of each Registered Kinesiologist's work experiences were gathered through three separate interviews in order to create a rich description of their trauma awareness as depicted through their realizing the prevalence of, recognizing, and responding to trauma in their practice.

Method

Design of Study

This qualitative study employed a phenomenological strategy of inquiry which involves exploring lived experiences to understand their meaning in the context of individuals' lives

(Merriam & Tisdell, 2016; Seidman, 2013; Smith & Osborn, 2003). Specifically, Interpretative Phenomenological Analysis (IPA; Smith & Osborn, 2003) was applied to understand how the social and personal experiences of Registered Kinesiologists inform their trauma awareness. While the interpretative approach is used to explore individuals' lived experiences, it also seeks to incorporate an idiosyncratic understanding of each individual participant (Brooks & Wearden, 2006), his/her subjective reality, and how he/she interacts cognitively with it (Finlay & Ballinger, 2006). The IPA framework is grounded in phenomenology and hermeneutics (Breakwell, Hammond, Fife-schaw, & Smith, 2006): the process of interpreting the experience to bring meaning (Tuffour, 2017). Interpretative Phenomenological Analysis employs a double hermeneutic approach to inquiry by incorporating the researcher's own interpretations and perspectives of how the participants make sense of their experiences and trauma awareness (Breackwell et al., 2006).

In order to glean a rich account of the participants perception of trauma based on their history and experiences working in kinesiology, a series of semi-structured interviews were held. Specifically, this involved the completion of three interviews per participant, each with a different focus. Seidman (2013) recommends that this step-wise approach be taken in order to build upon previous findings, enable participants to reflect on their responses, and make adaptations to subsequent interview guides accordingly. Thus, the participants were asked to share their experiences working as Registered Kinesiologists and then reflect on those experiences.

Conceptual Framework. An important component of the research design is the conceptual framework that was used to organize and interpret that data (Breakwell et al. 2006; Merriam & Tisdell, 2016). To this end, the student researcher used the three principles of TIC: realizing, recognizing, and responding (SAMHSA, 2014) to address the study purpose.

Specifically, this involved exploring both the facilitators for and barriers to realizing, recognizing, and responding to trauma in practice.

Ontological perspective. Constructivism is formulated around the idea that multiple realities exist, and these realities are constructed through subjective experiences (Kowalski, et al., 2018). The implication is that we bring meaning to our lived experiences and make sense of the world based on our individualistic perspectives (Kowalski et al., 2018). This study incorporated a constructivist worldview because it is the student researcher's belief that participant perceptions are unique and created based on their own realities. That is, each Registered Kinesiologist's trauma awareness in constructed based on their individual experiences and how they make sense of those experiences working in the field.

Reflexivity. Reflexivity is the researcher's critical analysis of her own assumptions and biases in relationship to the study that may affect interpretations of the data (Bassil & Zabiewicz, 2014; Merriam & Tisdell, 2016**)**. Due to the double hermeneutic nature of IPA, there is a strong relationship between the data and the researcher's interpretations (Biggerstaff, Deborah & Thompson, Andrew, 2008). In IPA, the researcher's perspective is fully expected to inform how the data are interpreted and unravel the meanings that participants express (Brooks & Wearden, 2006). Because the researcher's perspective is so crucial to the analysis process, it was important for the student researcher to be aware of her influences on the data. Stating the student researcher's original position and assumptions regarding the subject of the research study enables a higher scrutiny of the integrity of the research interpretations (Finlay, 2002).

Researchers Position. I first learned about TIC from my dad who has been one of the pioneers in his field, encouraging agencies to adopt trauma informed policies. The more I learned about TIC, the more I realized just how prevalent trauma is in our society. Researching

TIC and reading articles advocating for all health care fields to adopt such an approach, I wanted to learn more about how it can be implemented. As a result, I took a TIC course through Klinic (a community health center) in Winnipeg, MB. After I completed the course and conducted further research on the topic, I realized that the definition of trauma is based on individuals' experiences and perspectives. Individuals' unique perspectives mean that what is traumatic for one person may not be traumatic for another. With this realization I firmly believe that it is important for all HCPs to practice TIC in order to be more sensitive to a person's past history; because, what the HCP might think is insignificant may, in reality, be significant for that individual. Furthermore, the very basis of TIC is the assumption that everyone has trauma and using this knowledge acts as a universal precaution for HCPs so that they can be more sensitive. This assumption may also potentially lead to acknowledging and treating root issues instead of treating surface symptomology. In doing so, the likelihood of return visits can be decreased and (ideally), quality of life for the patient, increased.

Along with my position regarding TIC and its value in practice, there are a number of assumptions that I make that inform my perspective. These assumptions include:

1. My educational background in Kinesiology will help me understand the shared experiences of the Registered Kinesiologists.
2. The Registered Kinesiologists who participate in the study will have a narrowed definition of trauma due to limited undergraduate training.
3. The Registered Kinesiologists will have some practices in place that are in line with TIC but do not have the language to describe it as such.
4. My training in TIC will aid my ability to be able to acknowledge the practices that are in line with TIC.

5. Registered Kinesiologists will have some barriers to working with their patients that will be the result of their patient's trauma history.
6. Most Registered Kinesiologists will not ask questions about a person's trauma history and will often avoid conversations related to trauma.

At the root of my assumptions it is my belief that Registered Kinesiologist's struggle to acknowledge that they treat trauma survivors. Furthermore, my background in kinesiology and TIC help me to interpret the experiences of the participants to understand what his/her awareness of trauma is. To aid in mitigating the influences of my assumptions, I reflected on my assumptions prior to each interview. Part of the reflection involved writing down my assumptions in a journal. Additionally, the journal also contained reflections of the interview where an assumption could have steered the conversation or where an initial interpretation could have been compromised based on an assumption (Bassil & Zabiewicz, 2014; Merriam & Tisdell, 2016). Upon reflecting on the assumptions, attempts to make adjustments to limit biases could be made in subsequent interviews and throughout the content analysis process (Merriam & Tisdell, 2016).

Participants. In line with the IPA approach, it was intended that a small sample size be recruited for this study (Breakwell et al. 2006). Breakwell et al. (2006) argue that "the main concern is to do justice to each participant's account and detailed analysis is time consuming" (p.327). Moreover, having a large sample size can potentially trap the researcher in a swamp of data leading to the production of superficial results (Breakwell et al., 2006; Lyons & Coyle, 2007). With this in mind, it was intended that four to six Registered Kinesiologists be recruited through the OKA using purposeful and snowball sampling techniques (Smith & Osborn, 2003).

When conducting qualitative research, it is important to be mindful of when the data become saturated; that is, no new themes emerge (Guest et al., 2006). Based on the type of approach used, the point at which data saturation is attained can vary (Fusch & Ness, 2015). Guest et al. (2006) suggested that data saturation may be reached with as little as six interviews. Thus, seeking to recruit four-six participants with a step-wise interview process meant that anywhere from 12-18 interviews would be completed, thereby surpassing the suggested minimum.

Inclusion Criteria. Registered Kinesiologists that were recruited had to be registered with the COKO because it is the regulatory body for the profession in Ontario that is responsible for ensuring protection of the public (COKO, 2013). Registered members of the COKO may be active or inactive (COKO, 2015). Active Registered Kinesiologists are those who have become registered with the COKO and are currently practicing Kinesiology (COKO, 2015). Inactive registration is for those who maintain their membership but are currently on parental, sick, or educational leave, or practice outside of Ontario (COKO, 2015). In order to capture an accurate account of the lived experience and avoid recall bias, prospective participants had to be classified as active to ensure that they are currently practicing as Registered Kinesiologist's. In addition to being an active member, participants had to be working with patients, and have a minimum of three years' work experience. Having this minimum amount of work experience allowed each participant the ability to reflect on those experiences and therefore have an understanding of his/her perception of trauma awareness. Participants were accepted into the study if they had gained their work experience prior to the licensing with the COKO (i.e., they were grandparented in).

Registered Kinesiologists were recruited through OKA as the organization that represents, advocates, and actively works on behalf of the Registered Kinesiologist as a professional (OKA, 2019 a). The OKA contact distributed a letter of information (see Appendix A) describing the research study to the organization's membership. All active Registered Kinesiologists who were members of OKA were invited to participate in the study. If interested, they were asked to contact the student researcher through email.

When participants responded to the information letter sent, the student researcher emailed the consent form to the potential participants to sign and return via email and to confirm that they met the criteria of the study. Upon gaining consent, the first interviews were scheduled and then conducted in sequence. All communication with the participants was conducted through email until the interview process commenced.

Procedures

A three-part, in-depth phenomenological interviewing approach was used to thoroughly explore the Registered Kinesiologists experiences, enable them to reflect on those accounts, and obtain a thick, rich description of trauma awareness (Breakwell et al., 2006; Lyons & Coyle, 2007; Seidman, 2013). The interview process followed a sequence of three, 30 to 60-minute interviews whereby each was given its own focus (Seidman, 2013) to support the reconstruction of the experiences associated with the Registered Kinesiologists' practice. A week was allotted between interviews to allow both the student researcher and the Registered Kinesiologists to reflect on the meaning of those experiences expressed in the interview prior (Seidman, 2013). The space between interviews permitted not only time for reflection, but an opportunity for the student researcher to engage in member checking: a process whereby the initial interpretations and data are presented to the participant for review so he/she can add, alter, or delete information (Lyons & Coyle, 2007; Seidman, 2013; Smith & Osborn, 2003).

This reflective process is fundamental to the IPA process so that meaning of the experiences can be fully expressed and constructed (Breakwell et al., 2006; Lyons & Coyle, 2007; Seidman, 2013).

During the first interview, the Registered Kinesiologist was asked to discuss his/her life history in relation to education, work, and career in order to put experiences working as a Registered Kinesiologist into context. In order to inform subsequent interview content, it was also during this first interview that the Registered Kinesiologists were asked to define in their own words, what trauma means to them. Ultimately, the aim of this first session was to gather a timeline of experiences that led each Registered Kinesiologist to the career he/she has today (Seidman, 2013). It was thought that these experiences would provide insight into where a Registered Kinesiologist might learn about the concept of trauma and how he/she perceives individuals/patients may be affected by it.

The second interview focused on each participant's current experiences working as a Registered Kinesiologist by asking questions that elicited detailed information (Seidman, 2013). The second interview expanded on the first by having the Registered Kinesiologists explore and share experiences pertaining to various strategies and techniques they implement in practice. Specifically, the Registered Kinesiologist was asked to describe and deconstruct details of his/her practice from history taking and treatment planning perspectives, as well as challenges experienced in practice. The purpose of gathering these details was to determine how trauma was perceived to present itself and how each Registered Kinesiologist may have responded to it.

The third interview involved the Registered Kinesiologist's reflections on the meaning of trauma in his/her practice (Seidman, 2013). The objective was to have the Registered Kinesiologist reflect on what had been previously discussed in the first two interviews to

explore more deeply, the lived experience and help them to make sense of the factors that combine to inform trauma awareness.

Each interview was audio recorded and transcribed verbatim shortly following each interview. Each interview transcript was then briefly analyzed prior to the subsequent interview to allow the student researcher to focus on a more direct line of inquiry using the interview guide. During the initial readings of the transcripts for each interview, passages were marked that the student researcher found compelling using the conceptual framework of TIC to distinguish between each "R." The marked passages were used to expand on in the next interview or were used to form broader themes during the data analysis process (discussed below). Following the interviews, analysis of the data was employed to transform the data into a rich description of trauma awareness within the practice of Kinesiology.

Informed consent. Prior to conducting the interviews, all participants were fully informed of the study purpose and participation through an information letter and consent form (see Appendix B). The information letter contained details outlining the purpose of the study, associated procedures, potential risks and benefits, and ethical issues such as data storage, anonymity, and data dissemination. The letter also described that the interviews were to be audio recorded and notes would be taken throughout. Participants were reassured that they had right to withdraw from the study at any given point without penalty and could choose not to answer any questions asked by the researcher.

Anonymity and Confidentiality. To ensure anonymity and confidentiality for the participants, they were assigned identifying numbers at the onset of coding. The student researcher removed any personal information pertaining to the participant names and contact information during data analysis.

Interview Protocol. An interview guide developed by the student researcher was used to provide a framework for each interview (see Appendix C). The questions were open-ended to stimulate responses that illustrated the Registered Kinesiologists' experiences and behaviours, values, feelings, knowledge, sensory, and background information as suggested by Patton (2015). The review of the transcripts from the first and second interviews for each participant provided additional focus for the subsequent interview.

Data Analysis

Participant demographic information was collated and summarized. The data collected in the interviews were audio recorded and later transcribed word for word. These transcripts were then analyzed using a content analysis approach (Elo & Kyngäs, 2007) in Atlas.ti: a software program used for qualitative and mixed methods analysis (Atlas.ti, 2019).

Content Analysis. Content analysis is a method of analyzing qualitative data such as interview transcripts (Elo & Kyngäs, 2007). The advantage of using this method is that one is able to digest large volumes of textual data and various resources can be used as corroborating evidence (e.g., notetaking; Elo & Kyngäs, 2007). The process of analysis involved two related phases: (1) Inductive content analysis was used to develop themes and subthemes that emerged from the data; and (2) Deductive content analysis was then applied to categorize the themes and subthemes into barriers and facilitators related to realizing, recognizing, and responding to trauma.

Inductive data analysis involves identifying themes that emerge through the data and are not pre-determined through reading and re-reading the data (Smith & Osborn, 2003). There are no presumptions made about the themes beforehand, as the findings are grounded in the experiences shared by participants (Smith & Osborn, 2003). The program Atlas.ti was used to organize and analyze the data. This inductive process included open coding and creating initial

categories based on each interview and participant. To begin the inductive process, Elo and Kyngäs (2007) recommend that the interview transcripts be read through repeatedly in order to derive as many codes to describe all aspects of the content. Therefore, as the transcripts were read through, quotes were highlighted that were deemed meaningful and a code was created to represent the quote. Then codes were grouped together to create categories within each interview. The categories were created to represent topics discussed in each interview and identify those that were salient for each participant.

The double hermeneutical nature of IPA incorporates the researcher's point of view and understanding of the data as a valuable component (Breakwell et al., 2006). In conjunction with the double hermeneutical portion of IPA, deductive analysis was conducted upon completion of the inductive phase (Breakwell et al., 2006). Deductive analysis relied on the researchers own interpretations and knowledge of the data based on her point of view regarding the meaning of trauma awareness. Once the initial categories were created, the data were then reviewed based on the researcher's expertise, and new categories were created. In deductive content analysis, the data are structured based on previous theories, models, and literature reviews that align with the aim of the study (Hsieh & Shannon, 2005; Polit & Beck, 2004; Sandelowski, 1995). Given the purpose was to describe the participants' trauma awareness, the structure involved grouping themes into realizing the prevalence of, recognizing the signs and symptoms of, and responding to trauma and then refining further into facilitators and barriers. In summary, the analytical steps taken were: detailed readings of the data to obtain a holistic perspective of each participant; identification of initial themes for each participant; re-review of initial themes and data based on the researcher's perspective and interpretations; redefining and condensing of themes to form subthemes for each participant based on the researcher's

interpretations in conjunction with the student's supervisor; and finally, confirmation of themes and subthemes in line with pre-determined structure (i.e., the 3 "R's").

Trustworthiness and Rigour

Rigour and trustworthiness are the means by which a researcher using the qualitative approach can demonstrate legitimacy, credibility, transferability, dependability, and confirmability of the research findings (Bassil & Zabiewicz, 2014). For the present study, rigour and trustworthiness were maintained through the application of the conceptual grounding framework, reflexivity, triangulation, member checks, peer debriefing, and an audit trail (Bassil & Zabiewicz, 2014; Baxter & Jack, 2008; Merriam & Tisdell, 2016). Each strategy is described below.

Reflexivity. The process started with the student researcher reflecting on her personal and professional experiences to embrace her psychological understanding of the subject under investigation (Moustakas, 1994; Walsh, 1995), as per the study design. Specifically, the student researcher reflected on her assumptions and biases prior to each interview by writing them down in a journal and reviewing them. After each interview the student researcher journaled her experience of conducting the interview and reflected on the interview content to evaluate if any of the student researcher's assumptions and biases affected the Registered Kinesiologist's answers throughout each interview. In the event that a discrepancy or evidence of bias was detected, the student researcher worked with the supervisor to identify avenues to remain neutral.

Member checks/respondent validation. Member checks involve exploring the findings with each Registered Kinesiologist after each interview, typically in the form of transcripts and/or notes (Smith & Osborn, 2003). Member checks were done throughout the interviews by the student researcher confirming interpretations of what each Registered

Kinesiologist shared, as well as by reviewing findings with the Registered Kinesiologists after preliminary data analysis was complete prior to the second and third interviews. This was done through the interview summaries and reviewing marked passages from the transcripts.

Peer debrief. Peer debrief is the process of checking the initial interpretations with a colleague or peer (Bassil & Zabiewicz, 2014; Merriam & Tisdell, 2016**)** in order to minimize research bias and remain true to the participants' meanings. Emerging findings were discussed and confirmed with the student researcher's supervisor throughout the data analysis process.

Audit trail. An audit trail is the detailed documentation of the methods, procedures, decisions, and the rationale for all decisions (Bassil & Zabiewicz, 2014; Merriam & Tisdell, 2016**)**. The journal kept for the student researcher's assumptions and biases also included the audit trail.

Results

Participants

In total, four participants were recruited and enrolled successfully between April and June 2017. Two Registered Kinesiologists contacted the researcher in response to the OKA ad. Two others were identified through snowball sampling via the OKA. The participants originated from southern Ontario, and the majority of their work experiences were derived through practicing in urban areas. The first interview focused on the participants' education and work history as a Registered Kinesiologist. Understanding the context of each participant's background was vital to the IPA process so that a complete picture of his/her trauma awareness (i.e., the phenomenon) could be captured through the remaining two interviews. Table 4 provides a summary of each participant's work experiences.

Table 4

Descriptive Information of Participants Work History

Participant	Gender	Education & RKin[1]History	Focus of Practice	Previous Employment	Current Employment
1 **(~24 years' work experience)**	Female	• BSc in Kinesiology • MSc and PhD in Kinesiology • "Grand parented in" as a Registered Kinesiologist	• Return to work planning • PDAs*[2] • FCEs*[3] • Ergonomics • Exercise prescription	• Rehabilitation and consulting services • MVA[4] insurers • Short-term disability adjudication	• Instructs future Kinesiologists • Researcher
2 **(~25 years' work experience)**	Female	• BSc in Kinesiology • "Grand parented in" as a Registered Kinesiologist	• Managing MSK[5] injuries • PDAs • FCEs • Return to work planning • Exercise prescription	• Rehabilitation for Developmentally delayed individuals • Rehabilitation services • Physiotherapy clinic	• Marketing and development of health promotion and injury prevention programs for employers
3 **(~3 years' work experience)**	Male	• Honours Bachelors of Kinesiology • Graduate Diploma in Professional Kinesiology • Wrote entry to practice exam to become a Registered Kinesiologist	• Exercise prescription and implementation	• Cardiac rehabilitation	• Cardiac rehabilitation
4 **(~ 30 years' work experience)**	Male	• Bachelor of Physical Education • MSc in Kinesiology • "Grand parented in" as a Registered Kinesiologist	• Exercise prescription and counselling • Return to work planning • Ergonomics	• Mobile fitness counselling • Back rehabilitation program • Cardiac care program • Diabetes fitness programs	• MSK*[5] rehabilitation • Ergonomic issues • Treating chronic disease with exercise

***1 Registered Kinesiologist; *2 Physical Demands Analysis; *3 Functional Capacity Evaluation; *4 Motor Vehicle Accident; *5 Musculoskeletal**

Interview Findings

In total, 13 main themes with 9 associated subthemes emerged as facilitators to trauma awareness (i.e., realizing = 2; recognizing = 5; and responding = 6 [9]), while 5 barriers with 5 associated subthemes were identified (i.e., realizing = 2 [2]; recognizing = 2 [3]; and responding = 1). It is important to note that throughout the analytical process, there were times where some themes/subthemes overlapped with one another and could have been placed in

more than one category (i.e., realizing, recognizing, responding). However, these were ultimately placed strategically to best represent each participant's viewpoint based on the student researcher's expertise in TIC and consultations with the supervisor. Within each realizing, recognizing, and responding section, facilitators will be described first, and barriers will follow. A summary of interview themes can be found in Figure 1.

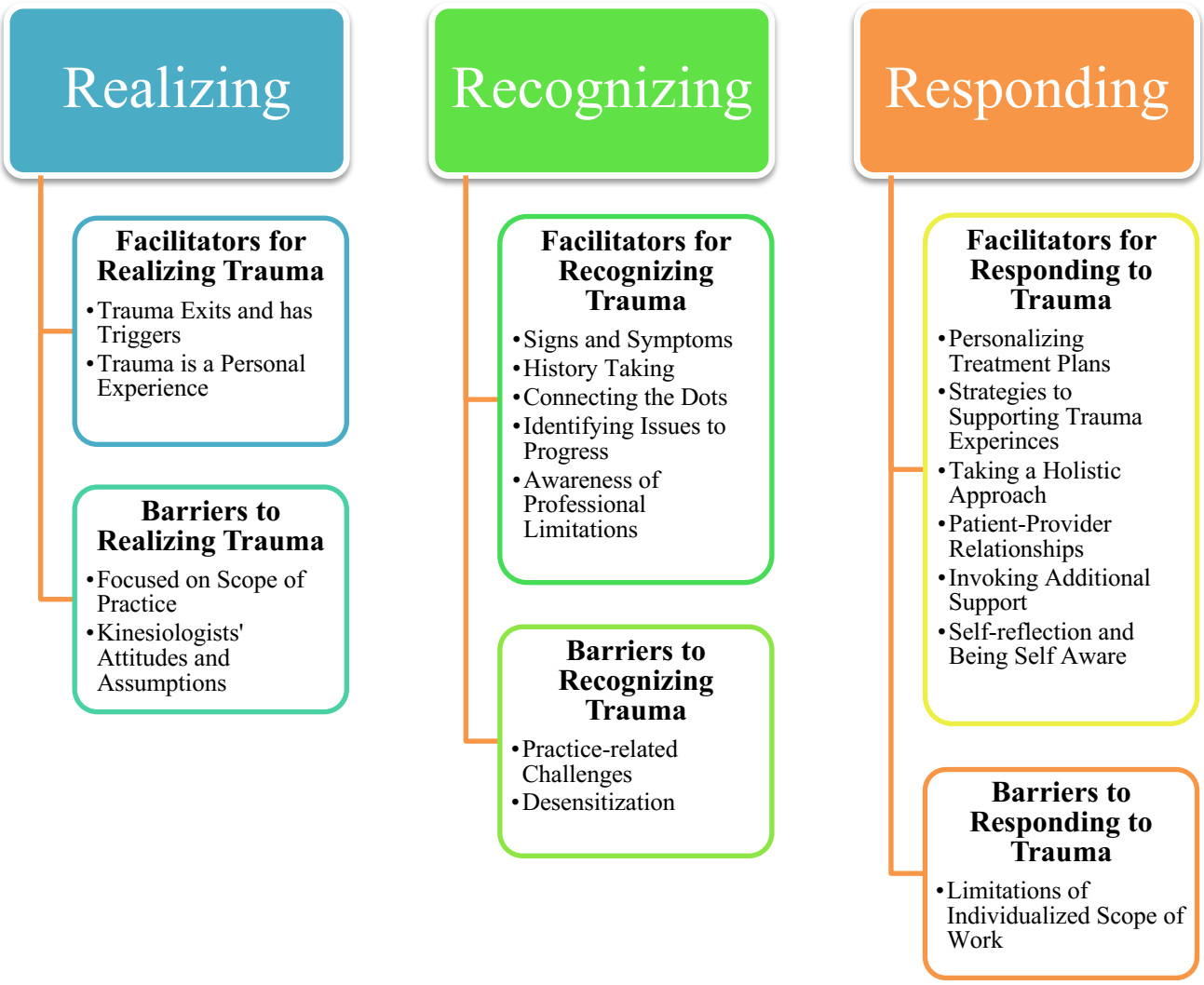

Figure 1. Interview Themes by Category. This figure provides a visual breakdown of the facilitators and barriers that were identified using a TIC lens.

Realizing

In the present study, participants identified two themes that served to facilitate their realization of the magnitude of people affected by trauma: *trauma exists and has triggers*, and *trauma is a personal experience*. There were also two additional themes that emerged which represented barriers to the Registered Kinesiologists' realizing the pervasiveness of trauma in society and within their practices. These included: *focused on scope of practice*; and *kinesiologists' attitudes and assumptions*. All themes are described in detail below.

Facilitators for Realizing Trauma. *Trauma exists and has triggers* represents the conceptualization that trauma and traumatic experiences are common and can be caused and/or set off by numerous events and situations. This awareness facilitates realizing the prevalence of trauma. This theme was salient, as all four participants identified how they perceived trauma to exist in society; three participants expanded on that understanding noting that past trauma can be triggered. *Participant one* defined trauma as an event/experience that changes a person and can be triggered by something apart from the event/experience. Based on her interpretation, she realizes anyone could have experienced prior trauma, thereby suggesting its' potential commonness. *Participant two* expressed that her perspective on trauma has expanded throughout her career, and that she gained the most clarity on how she defines it through working with developmentally challenged children. This widened lens enables her to realize the prevalence of trauma in her work. Similarly, p*articipant three* indicated that his definition of trauma has expanded over time through both his work experiences and conversations with his wife who is a social worker; he has realized increasingly how frequently individuals are impacted by trauma. *Participant four* expressed that he did not care for a broad definition of trauma but noted that he does see it within his practice. His focus on defining trauma and how it affects people was narrowed to experiencing chronic disease. He conveyed how a person

suffering from a chronic illness and going through the diagnosis and treatment process can be traumatizing.

Trauma is a personal experience highlights the fact that every individual will have a unique perspective on a traumatic event. Understanding that individuals will experience events uniquely facilitates the realization that trauma presents and affects people in diverse ways. This theme was particularly salient for *participant two* who articulated that through her work with a physiotherapist and psychologist, she learned that pain perception is different for everyone, and is both a physical and mental experience. This realization has since inspired her to focus on how her patients perceive their pain and/or injuries individually so that she can then adapt her approach. *Participant one* also spoke to how people experience situations differently, noting that they have many experiences in their lives that impact who they are and how they behave; combined, these enable the creation of a unique individual. *Participant three* shared that through his ever-broadening definition, he has come to believe that trauma has a range of effects and is based on a multitude of personal factors that are unique to the individual. *Participant four* did not have any comments that spoke to how trauma is a personal experience. Table 5 provides illustrative quotes pertaining to facilitators to realizing the prevalence of trauma.

Table 5

Facilitators for Realizing the Prevalence of Trauma

Trauma Exists and has Triggers
• "I feel like it's [trauma] anything … an event or an experience that a person goes through, and it sort of leaves this, this lasting sort of emotional scar almost on that person. And it's something that can be triggered. The event can be triggered; that scar can be triggered. It can be activated by something that may have nothing to do [with] that activity … So just something that just stays with someone. It becomes a part of their being almost. It's an event that stays with them, it changes in a way almost who they are." (Participant 1)
• "I think it's [trauma] a combination of what they've gone through in their life that has brought them to this moment and, you know? It's like the force tension relationship with muscles. You get to the point where you break." (Participant 1)
• "I thought, 'Well, I'm a kinesiologist. I don't deal with trauma.' But as we've been talking, you start thinking about the different things that you've dealt with and you just think 'Yeah. I guess I do [deal with trauma].' It's not like trauma like a paramedic or firefighter or a police officer would deal with, but…catching it at the tail end of it." (Participant 2)
• "Anything can be a trigger which kind of makes it difficult sometimes to kind of understand, or kind of comprehend. Because you're not sure why or how they are related to the trauma but that's because of the individual. But I think it can be anything that elicits a reminder of past trauma or current trauma and kind of heightened that sense." (Participant 3)
• "I just remember circling it in red, and when she saw the red circle around whatever the item was, it triggered her and she just started to cry and I was very much, like, in shock. I wasn't sure what had just happened or what I did … She automatically associated [the red circle] with a grade, but always a failure grade that she wasn't good enough or that she did something wrong and it wasn't up to her standard." (Participant 3)
• "For some people it's really traumatic to have an experience related to the heart." (Participant 3)
• "[O]ne day you're getting along as usual, and then the next day you're in the hospital worried about dying. That would be traumatic. And then, after you work through all of that, you come out in many ways a different person." (Participant 4)
• "Now that somebody has had a traumatic or semi-traumatic chronic disease experience, now they start to look at exercise and lifestyle issues as medicine." (Participant 4)
Trauma is a Personal Experience
• "I think it's just traumatizing to just be diagnosed with cancer…'How do you deal with that?'… everyone reacts differently from those diagnoses." (Participant 1)
• "If it's traumatic to them, it could be with them their whole life." (Participant 2)
• "Understanding that everybody's experiences can be completely different, even if they are in the same car accident for example. Even depending on the severity [of] a minor car accident may seem catastrophic to somebody whereas [a] catastrophic car accident to me may seem not too much to somebody." (Participant 2)
• "It [everyone experiencing events differently] broadens my knowledge and understanding it [connecting health status to trauma] kind of allows me to have different approaches with individuals." (Participant 2)
• "It [working with different populations] improved my sensitivity to a lot of things. It's more of the realization that everybody's different." (Participant 2)
• "I understand that, you know, everyone kind of has something in their life that has been negative if you will. [It] may not be to the extent of trauma, but it's something that has influenced them." (Participant 3)
• "I try to see everyone as an individual and all these experiences shape them in different ways, and just to have the same approach with everyone in the sense that you're trying to be understanding and empathetic and helpful along the way and not have these preconceived notions about a patient." (Participant 3)

Barriers to Realizing Trauma. Clark et al. (2015) noted that an HCP is not trauma aware if he/she conceptualizes trauma as rare and discrete events that have predictable consequences. Two themes (and associated subthemes) emerged from the interviews that aligned with this conceptualization, thereby serving as barriers to the realization of trauma's prevalence: *focused on scope of practice* and *kinesiologists' attitudes and assumptions* (pick up your socks; neutrality and objectivity).

Focused on scope of practice represents the participants' perceptions of how their own profession creates boundaries around the types of questions they ask when providing care. All of the participants admitted that those boundaries can simultaneously create limitations on the relationship depth they are able to develop with the patients and subsequent ability to inquire about (i.e., realize) trauma. According to the participants, focusing on scope of practice exclusively narrows the focus of the work to "surface problems." For example, all four participants commented that they have felt pressure to limit their questions and focus on the primary injury at hand. This was particularly prominent for *participants two and three* who stated that they could not explore diverse lines of inquiry based on their scope of practice. *Participant three* expanded on this point further expressing that at times, he is aware that he takes his scope of practice too seriously.

The second theme that emerged as a barrier to the realization of trauma was *Kinesiologists' attitudes and assumptions* which was delineated into two subthemes: *pick up your socks*, and *neutrality and objectivity*. *Pick up your socks* represents the attitude of some participants towards their patients and their health care and/or perceived traumatic experiences. *Participants two, three and four* conveyed instances where they believed people were overexaggerating a situation or trying to get out of participating in their own recovery process. *Participant four* spoke emphatically regarding the victimization profile of individuals and how,

for some, it is used as a crutch to not move forward. On the other hand, he noted that some patients are able to 'pick up their socks' and make positive strides, regardless of their past. These types of attitudes could serve to minimize personal experiences of trauma among patients, thus, hindering the overall realization of the commonness of trauma and its unpredictable consequences. The notions of *neutrality and objectivity* also emerged from comments provided by *participants one and three.* These individuals expressed that they need to remain neutral because they cannot let knowledge of a person's past trauma impact the care they are providing. This was highlighted as particularly important by *participant one* when the emphasis of her job was focused on return to work planning: a task that requires working closely with both the employer and the employee. Managing both relationships effectively required that she remain as objective as possible. Table 6 provides illustrative quotes pertaining to barriers to realizing the pervasiveness of trauma.

Table 6

Barriers to Realizing the Prevalence of Trauma

Focused on Scope of Practice
• "But it's not my place [to make trauma-related recommendations]. Sometimes we have provided some advice to them [employers], but my job is to try to respect the scope of my work." (Participant 1) • "I respect rules… You know, this is my role; that this is why I'm here. This is the parameters of why I'm here and… there's ethical obligations too." (Participant 1) • "You need a reason to why you're asking questions, and why you're collecting information and that type of thing. I think it's really; you know, you only collect relevant information. You may be missing a whole bunch of stuff. But yeah. I think it's more just because it's more relevant [to the injury] …the focus is really on the primary injury." (Participant 2) • "Sometimes I take it (scope of practice) too seriously…and sometimes it does cross… 'Am I overstepping my professional boundaries here?' Will they [the patient] understand that…it's not appropriate for me to have asked that question or to try to go down this pathway?'" (Participant 3) • "It's always a sensitive area to kind of get into past trauma. Because obviously, I don't want to trigger something, and not being a professional in trauma, I have to be very careful as a health professional to not step outside our standards of practice." (Participant 3) • "I'm not qualified to determine if someone has a mental health issue. I would continue to work within my scope to resolve whatever issues the patient has presented with in the first place." (Participant 4)
Kinesiologists Attitudes and Assumptions
Pick up your Socks • "I had one woman who spent four hours with me crying, so I had a very difficult time. I was exhausted after she left … she pissed me off because she was just … being a wimp." (Participant 2) • "I just assume that when they switch to this [home exercise] program that I'm not going to see them again or hear from them again [because they are not going to participate]." (Participant 3) • "That means, it's [definition of trauma] pretty handy to pull it out of your bag when you want. It's an enabling definition, and a victim opportunity." (Participant 4) • "Some people pick up their socks, do the best they can, try to leave. Well, you can't leave it all because of memories, but leave it [behind] as best they can. They try to move on with these kinds of issues and get on with life and participate [in recovery]. When we have this continual victimization profile, there's limited … purpose or motivation … to move forward and so forth." (Participant 4) • "Some people…don't like to move, they don't like to sweat, they don't like to feel any…discomfort.... They've been raised that way; their experiences have been that way. So, I wouldn't say that these are always baby people, but sometimes they are." (Participant 4) *Neutrality and Objectivity* • "When I do disability management, I try to really focus on, it's hard because like, you're actually just trying to focus on what the issue is." (Participant 1) • "You see the link [to past trauma], but…you just have to stay objective. It doesn't prevent them from doing their job." (Participant 1) • "Knowing this information [trauma history] beforehand is still trying to be a very neutral health professional and not let that knowledge kind of influence the way I interact with the patient." (Participant 3)

Recognizing

In the present study, participants discussed five themes that served to facilitate their recognition of trauma including *signs and symptoms, history taking, connecting the dots, identifying issues to progress,* and *awareness of professional limitations*. Two themes (with

associated subthemes) were identified as barriers to the participants' ability to recognize the signs and symptoms of trauma: *practice-related challenges* (*systemic obstacles, previous negative experiences impacting future care, and professional boundaries*); and *desensitization*. All themes and subthemes are described in detail below.

Facilitators for Recognizing Trauma. Being able to note s*igns and symptoms* associated with trauma is a key feature of recognizing. *Participants one, two, and three* expressed their views on what the signs and symptoms of trauma can look like. *Participant one* provided an example how she will "flush out" signs of a patient's trauma reactions in practice to get to the real problem. *Participants two and three* noted the multi-faceted reactions that individuals can have to trauma which may show up physically or psychologically, and how addressing the underlying issue first may be an important precursor to moving forward with the primary presenting concern. *Participant four* did not have any comments on the signs and symptoms of trauma either in theory or in practice.

History taking facilitates recognizing trauma when it is determined that a patient can be suffering from more than what he/she originally presented with (Bickley, 2013). This theme emerged through inquiries made into the Registered Kinesiologists' intake process. *Participants one, two, and four* have worked independently in practice, and noted that they often ask historical questions during the initial assessment to uncover potential barriers or other issues that might impede the recovery process. These participants shared work experiences that taught them to intuitively ask, 'What's really going on?' for each patient in anticipation of finding barriers. *Participant one* noted specifically that she found herself needing to gather a deeper history while conducting complex claims to understand everything that is happening in a patient's life. In contrast, *participant three* described how, as part of an interdisciplinary team, he learns about a patient's history from the nurse who conducts the initial intake. All of

the participants commented on how gathering a full patient history aids in understanding all facets potentially impacting a patient's health.

Extending beyond history taking, *connecting the dots* refers to recognizing ties between a person's current health status and events/experiences they have lived/are living through. All participants conveyed that health is multifaceted, and spoke about the importance of connecting the present with the past; however, this notion appeared to be particularly prominent for *participants one and three*. *Participant three* similarly expressed the value of recognizing how social and environmental issues may have a ripple effect in a patient's life which can impact the issue at hand, especially if they are out of his/her control. *Participants three and four* agreed that chronic illness is so multifaceted, it is vital to make a connection to the past so that they can effectively create treatment plans.

Identifying issues to progress expands "connecting the dots" to a deeper level whereby the Registered Kinesiologists discussed recognizing that, at times, there may be another factor that is influencing the patients' health that they had not previously discovered. All participants noted strategies that they use to help them identify underlying issues including asking the right questions, having open conversations, being understanding and acknowledging difficult experiences, and providing additional information. A common feature noted by *participants one and two* involved having to be somewhat of a detective to be able to grasp what an underlying issue really was. Both participants conducted return to work planning and commented that often, when a patient was failing to progress, it was the result of a negative work environment. They also recognized that they had to rectify those underlying concerns before they could fully address the primary issue. Similarly, *participant three* identified that in his experience, adverse work environments often create stress for his patients, which in turn, affects their progress. In addition, *participant one* highlighted how "digging" to get to the main

issue is important, describing how dealing with complex claims often led to establishing how unresolved concerns were acting as barriers to patient progress.

Awareness of professional limitations was the final theme to emerge regarding facilitators for recognizing trauma. The participants being aware of their limitations in practice is facilitative because they are noticing when they are working outside their comfort zones and addressing underlying issues proactively through other means. Participants articulated how every patient is not a success story, and there are limitations to the care they feel competent providing. *Participants two and three* agreed that they need to be mindful that there are times when they may not be equipped to handle a patient's reaction. For these two participants, the objective is to possess some self-awareness of this limitation, and then try to make the appropriate referral. Another limitation noted by p*articipant one* is the types of questions she can ask based on her scope of practice. She recognized that because of this restraint, she relies on the patient's family physician to take a more comprehensive look into a patient's history. In a similar vein, p*articipant four* described his awareness of professional limitations, recognizing that he needs to work in partnership with the patient and other types of allied health professionals in order to address the patient's needs. Table 7 provides illustrative quotes pertaining to the facilitators for recognizing trauma.

Table 7

Facilitators for Recognizing Trauma

Signs and Symptoms
• "My first and foremost is to try to flush out what's really going on and what the symptomology really is and what the problem really is." (Participant 1) • "Sometimes it [trauma?] doesn't affect them at all…and sometimes it can manifest itself in musculoskeletal pain and gastrointestinal pain and discomfort… I think it can certainly manifest itself physically or psychologically." (Participant 1) • "[E]verybody's reaction to a traumatic event can be completely different. How they cope with it, how long it takes them to deal with it… Someone who's been in a really bad car accident for example, some people are going to have bad dreams about it for years, and some people will be able to not have those kinds of reactions." (Participant 2) • "Because you work with that [psychological issues] all the time and often times you have to deal with that first before you deal with the physical stuff." (Participant 2) • "It could take some time to kind of understand what it [signs and symptoms of trauma] is… being reserved and shy and kind of holding back, or not even talking a lot. I think sometimes that's a big identifier (if obviously if language is not a barrier) it's just they don't want to express too much or learn too much" (Participant 3) • "I can kind of identify when people hesitate, or when they are reluctant to tell you about something… It's [Patients affected by trauma] something that's very prominent in my work. I experience it all the time and see how people have been affected by it [trauma] quite a bit." (Participant 3)
History Taking
• "They [complex claims] tend to present as 'I have depression, or I have anxiety, I have this, I have alcohol abuse, so I have this.' And you start digging to find out, 'Okay, what's going on here?'" (Participant 1) • [During intake; exploring barriers] "I would ask them how they got hurt. I'd ask them what was going on in their life at that point. What were they doing at home? What were they not able to do at home as far as different types of activities of daily living, and types of tasks and that sort of thing…you start a conversation… figuring out what's going on from the work environment, and about things like sleeping, eating, weight gain, and those types of things to get an idea of how things have changed physically…and how things have changed their life." (Participant 2) • "I guess you need to at some point stop and say 'What's going on?', and that's part of it too, the whole reassessment every two weeks and you see objectively if they're not getting better." (Participant 2) • "They [nurses] build another relationship with the patients and that's where [educational classes] all [patients] will speak to the nurses on a more personal level and identify 'Well, this happened to this patient, or this is going on with that patient' whether it's health or trauma or stress or an event is going on in their life." (Participant 3) • "[T]est the water and see well, if they may be receptive…I try to have a slow approach to it, to kind of ask the appropriate questions (Participant 3) • "You look for barriers [during the assessment] and see what can be done to mitigate those, and see if, finally see if, you can move them along the continuum of understanding." (Participant 4)
Connecting the Dots
• "One situation you always talk about in kinesiology is the social environment and the dynamic of 'Do I spend a dollar on four apples, or do I spend a dollar on a burger and fries? Which is going to fill me up?'…You can see how it relates and how she [this particular patient] ended up with heart disease. It's because of not being educated in how to eat properly, how to exercise, how to take care of herself, to go to regular appointments with doctors and stuff like that." (Participant 3) • "The heart issue is something that has affected their behaviour but has extended as far as their finances, their work and relationship strains. So, I try and look at the issue at hand, and try and think about how it ripples through everything else." (Participant 3) • "… life experiences[impact progress]. So, I know one thing is if somebody has been off on workers comp injury before, and they have been off work for a year before, their expectation is 'it's going to take me a year to get back to work now.' Part of the past life experiences is how they've dealt with injuries in the past and getting back to work will have an impact as well [on the treatment plan]." (Participant 2)

- "It's [trauma] life stuff that people go through, and diagnoses that people go through… Loss of a family member, or divorce. Those sort of life events that life always throws at you. That's why those tend to manifest themselves as mental health claims. Because they don't come out as physical claims, they don't come out as back claims or shoulder claims. They tend to be 'I have depression,' or 'I have anxiety.' 'I have this, I have alcohol abuse, so I have this.' And you start digging to find out, 'Okay, what's going on here?'" (Participant 1)
- "Usually there's something else going on too between the employee and the employer and it's not always just the employers fault, it's not always just the employee's fault, it's just issues that they have to work out, and it manifests itself into a back injury, or it manifests itself into a shoulder injury." (Participant 1)
- "Certain things in their [the patients] past may relate to the problem they are having today." (Participant 4)

Identifying Issues to Progress

- "Well, it means I had to figure it [underlying issue] out…I need to figure out… the right questions to ask and the right people to ask them to… often people do have some musculoskeletal condition as well but it's just that it tends to be magnified by [another complex issue]. It's often, people have issues as well but for me it just means it's a complex process, like, our job is complex." (Participant 1)
- "She wasn't getting better and I started talking to her about it [lack of progress], asking her about other things that she's doing like 'Are you doing exercise? What are you doing at home?' and that's when she brought it up…So, I found out that way. But yet really, it's usually when you sit down with the person and talk with them you figure it out." (Participant 2)
- "If you work in an environment that is always stressful, where you don't have a good relationship with your coworkers or your boss, you fear going to work every day. Being in that environment can extend to your personal environment too. It's easy to see how some people live with stress 24/7 and the repercussions of being stressed: with over eating, smoking, substance abuse, negative thoughts, poor relationships with their family members and friends…As time goes on I really realize that stress is a very big risk factor." (Participant 3)
- "I just try to be kind of very understanding and acknowledge that whatever they're going through is difficult and that it's tough enough for anybody. Then [I] ask, 'Is it okay that I ask you this question?' being very respectful about how they're feeling but to get consent to divulge into their issue." (Participant 3)
- "It's [stress and depression] something that we need to talk about…it doesn't have to be today or tomorrow it's whenever they're comfortable…it's something that can be a pretty big barrier in individuals and if not the largest barrier. And we need to address it before other things start to become affected by it." (Participant 3)
- "We were already working through with them for the MSK issue and so forth, and saying there's more happening here, and then in the meantime the doctors recognize that as well…and then they went off and started getting treatment…Sometimes they [patients] would withdraw and go and deal with their stress, mental health issue, and they may or may not come have come back later." (Participant 4)

Awareness of Professional Limitations

- "My first line of support is always somebody like a family physician, or somebody who can give me another more comprehensive look. That's [coping mechanisms] outside of my scope of practice." (Participant 1)
- "I wouldn't necessarily counsel them because it's not within my scope but just being supportive to them and [the patient] knowing that I was also trying to get them professional help if I needed to." (Participant 1)
- "Having an appreciation to even if the person's reaction [to a traumatic event] is more acute then I may or may not be able to handle it [the reaction] by myself." (Participant 2)
- "I'm mindful that sometimes, it isn't always … success … or their adherence is not going to be what you think. So sometimes, it's just trying to keep that in mind and to do what you can." (Participant 3)
- "My hope is that somewhere between those other health professionals, that they've maybe seen or heard something from them that makes them feel like making changes in some aspect of their lifestyle." (Participant 3)
- "We have to recognize our limitations and the value that we can add and work in partnership … with the patient." (Participant 4)
- "If we can come to a social reason [why an individual is not progressing], then sometimes it's best to refer them off because they might need some kind of medical work." (Participant 4)

Barriers to Recognizing Trauma. Participants shared aspects associated with the practice of Registered Kinesiologists that serve as barriers to recognizing trauma. There were grouped into two main themes and included: *practice-related challenges* and *desensitization*.

Several *practice-related challenges* were discussed by participants and grouped into three subthemes: *systemic obstacles, previous negative experiences impacting future care, and maintaining professional boundaries*. *Systemic obstacles* included how the participants practices are professionally structured (i.e., payment structure/running a ten-week program), and how various program formats create barriers for Registered Kinesiologists to recognize patient trauma. *Participants one, three, and four* were especially vocal on these issues noting obstacles such as the acute nature of the provider-patient relationship, lack of referrals from other health care providers to Registered Kinesiologists, and limited face-to-face and insufficient contact with patients serving as barriers to establishing rapport, providing quality care, and subsequently recognizing trauma. In addition to the systemic obstacles, *past negative experiences impacting how the participants provide care* were noted often by *participants one and three*. Specifically, for *participant three* the negative experiences of prescribing home programs to patients most often resulted in poor adherence and patient outcomes resulting in reluctance to now offer the option, despite the fact that it is part of his workload requirements. *Participant one* shared experiences of working in environments where the negative culture and dynamics created distractions and compromised the integrity of her work. Taken together, these types of adverse experiences impact the ability of these Registered Kinesiologists to carry out their roles effectively, including an inability to recognize trauma in their patients. *Maintaining professional boundaries* is the final subtheme associated with this theme. *Participants one, three, and four* verbalized how there is a professional distance needed to limit getting "into trouble" or too "in depth" with a patient. In addition, some of the participants expressed how

they would compartmentalize difficult or emotional experiences shared by patients. This was a particularly significant strategy for *participant one* who made comments in relation to maintaining balance and keeping distance when working with complex and mental health claims. She indicated that there were times her "inner monologue" wished the patient had not shared a certain experience. The overarching barrier to recognizing the signs and symptoms of trauma is that maintaining a professional boundary puts limits on what is discussed, asked about, and understood during interactions with patients.

Desensitization conveys the notion that some participants struggle to stay present with their patients and become numb to similar stories their patients are sharing. This was a recurring theme for *participants one and three*. *Participant one* shared that staying present with patients often became difficult because their injury experiences were often similar and sounded the same. *Participant three* shared similarly that when working strictly with cardiac patients, he frequently has to catch himself when he is not listening to a patient because he hears the same story 10 times a day. Desensitization is a barrier to recognizing because if the Registered Kinesiologist stops actively listening to what the patient is expressing, he/she may miss cues related to the signs and symptoms of trauma reactions. Table 8 provides illustrative quotes pertaining to the barriers to recognizing trauma.

Table 8

Barriers to Recognizing Trauma

Practice-related Challenges
Systemic Obstacles • "Doctors notes suck. Like, they don't give you enough information. It's usually just, you know, 'So-and-so needs to be off for 10 days.' Then what happens at the end of 10 days? Are they getting the right treatment? Or, can they be ready to come back at the end of the 10 days? …You know absolutely nothing from that." (Participant 1) • "There is a lot of diversity in our population…it could build more barriers because of the amount of diversity that there is. It could be overwhelming for health care professionals." (Participant 3) • "I have to be very trusting that they are doing what they're saying [exercising at home]. If I had a preference when I sometimes meet these patients, I would prefer them to come to the actual clinic to work with us closely because our interactions with the at-home program [patients] are very brief with a once a week phone call. And if I may be miss them, whether they're busy or they're working or they're out of town, it can be a long duration between encounters with that patient." (Participant 3) • "There's just too many constraints with finances that the ways I would like to go about it [conducting treatment], it's just not financially feasible …it's just very difficult to understand that it's not possible." (Participant 3) • "This is a major operational problem that you don't have a relationship with these people [those attending short term programs, or looking for quick fixes] because we're talking about patients, About someone who comes and goes at a program level or an issue level and Kin's need to be practicing much more like a family physician where you have a life long relationship." (Participant 4) • "It's not about 'Come in and take my program,' and our profession needs to get away from that. But unfortunately, nobody's paying us to have a relationship, but they pay us to run a 10-week program." (Participant 4) • "They [other HCP] don't even know who we are let alone use us [for referrals]." (Participant 4) *Previous Negative Experiences Impacting Future Care* • "When you get into workspaces, like even working with firefighters, like, I'm often the only woman in a room…There's definitely moments where you hear things that you wish you hadn't heard…So I'm always worried about my own safety, right?" (Participant 1) • "It [history taking] can be frustrating for health care professionals when they're trying to figure out a situation and ask the questions, and they're not getting the feedback that they need, which is kind of a barrier for them to provide the service that they need to." (Participant 3) • "They [the patient] will talk the talk but they won't walk the walk … They'll over the phone though, sound really committed and tell me everything I want to hear, but then I'll never hear from them again…every time I call them I'll never get through, or I'll never see them in the office, or they won't attend their appointments…I'm always hesitant but I have to offer it [at home program] because they're enrolled in our program." (Participant 3) *Maintaining Professional Boundaries* • "I'm really much more aware of my boundaries when I'm working with the patient, and you get yourself into trouble sometimes when you ask questions you shouldn't ask…[Y]ou learn, 'I'm here to do a job and remember what you're getting paid for and stick to that." (Participant 1) • "I think you just compartmentalize. For me…I think there's a part of you that has to balance the fact that it's a job." (Participant 1) • "I feel like there's times where you just need to pull back a little…you try not to get as in depth with them as what's going on…find that balance if you're finding that you're getting too involved." (Participant 1) • "Am I overstepping my professional boundaries here [asking certain questions]? Will the patient identify that? Will they [the patient] understand that and that it's not appropriate for me to have asked that question or to try to go down this pathway?" (Participant 3) • "You have to be a bit of a duck, let the water run off your back [when a patient discloses trauma]. You need to deal with your scope recognizing that their issues are affecting it [the original issue the individual is seeing the kinesiologist for] and if there's something that you can do in terms of your services, counseling,

etc., to mitigate those issues, and to help the person get on board [with the treatment plan] you can do that; but beyond that you just can't [deal with the issue].” (Participant 4) • “Keeping the professional distance sometimes, you have to put your foot down slightly and professionally and say, explain that this is not where you're going. I can’t talk to you about this stuff [topic’s outside your scope] etc.” (Participant 4)
Desensitization
• “It's (staying present) really difficult, especially because it's like, it's so re-occurring some of the things that happened. Like symptoms from medications, or the procedure, and you kind of become desensitized to these things because you see them every single day.” (Participant 1) • “You can't own other people's trauma being in healthcare because if you do, you just can't function; you can’t give them what they need.” (Participant 1) • “Sometimes it’s difficult to kind of be understanding because it happens so frequently…you become desensitized to it [the patient’s struggles/issues].” (Participant 3) • “I see about 4 or 500 patients and… it can easily be 10-15% of the patients come to see me for the same thing all the time. It’s tough. Or, I’ve heard this 10 times today, and I don’t really want to hear it again.” (Participant 3)

Responding

Participants in the present study explained how their knowledge and practices inform their understanding of trauma and subsequent ability to respond to patients in a trauma-informed manner. Six themes (with associated subthemes) arose as facilitators for responding. These included: *personalizing treatment plans (focusing on enjoyment and accommodations, managing ups and downs), strategies to support traumatic experiences (acknowledgement and empathy, educate and prepare them), taking a holistic approach (building self-efficacy, being patient centred), patient-provider relationships (honesty and transparency, building trust and rapport over time), invoking additional support,* and *self-reflection and being self-aware.* In contrast, one theme was identified as a barrier to the participants’ ability to respond to trauma via impacting their procedures and practices: *limitations of the individualized scope of work.* All themes and associated subthemes are described in detail below.

Facilitators for Responding to Trauma. *Personalizing treatment plans* relates to the participants’ viewpoint that trauma is a personal experience. As such, participants noted how they adapt their practices in a manner that is tailored to each individual. This then facilitates their ability to respond to trauma. There were two subthemes that emerged in relation to this

theme which included: *focusing on enjoyment and accommodating,* and *managing ups and downs*. All of the participants noted that an effective strategy when trying to evoke healthy behaviour change is to be accommodating to individual needs and make the process as enjoyable as possible. *Participants one* and *two* frequently discussed how having a toolbox of strategies enables them to adapt to various patient needs, thereby making the treatment plan more enjoyable. Specifically, they both shared that during return to work planning, they strategically shift incentives within a treatment plan to make tasks feel less like work. For example, instead of increasing a patient's walking tolerance on a treadmill, the Registered Kinesiologist will use a different activity the patient enjoys performing. For *participant three* accommodating was more salient then keeping the exercise program enjoyable. *Participant four* expressed how he accommodates patients by focusing on their unique personalities and seeking to develop lasting relationships. *Managing ups and downs* expands on the participants' strategy of being accommodating. This theme was more prominent for *participants one, three, and four* who conveyed that patients will experience ups and downs throughout the course of their treatments. Therefore, it is important that HCPs stay flexible with their approaches to administering the treatment plan in relation to what the patient is experiencing. The participants stressed the importance of expecting ups and downs to treatment and taking these experiences into consideration when personalizing plans. For example, according to *participant three*, being flexible with the ebbs and flows of a patient's life has been valuable for enhancing a patient's adherence to exercise.

Strategies to support traumatic experiences are techniques the participants use directly in response to the discovery of a patient's past trauma. The participants described two strategies integrated in their practices that facilitate their ability to respond to trauma including: *acknowledging and being empathetic;* and *educating and preparing the patient* on what they

are experiencing. *Participants one, three, and four* shared that when faced with a scenario where a patient is expressing distress, they feel it is important to acknowledge what the patient is going through and then try to be empathetic; that is, demonstrate they are 'there with them.' *Participant one* reflected how she believes that HCPs, in general, are naturally empathetic due to the inherent nature of helping professions and providing care. *Participant three* articulated that he finds using empathy to be more beneficial to his practice then sympathy. He further conveyed that acknowledging a patient's experiences and emotions works in tandem with expressing empathy as it is the first step in trying to put himself into their shoes. *Participant four* spoke about acknowledgement and compassion in the context of building relationships. He similarly communicated how these practices work together to support him and strengthen the partnership he has with his patients. *Participant two* did not speak to using acknowledgment and empathy as ways to respond to a patient's trauma. Rather, she expressed relying more on *educating and preparing* as a strategy to respond to a patient's suffering. Specifically, within *participant two's* work experience, she conveyed that she relies heavily on education regarding 'hurt versus harm' in response to a patient's struggle to progress. These types of conversations focus on the difference between treatment-oriented activities that are painful but necessary (e.g., psychologically, physically) versus those that cause more serious damage. She has found that these conversations go a long way in confirming with the patient that the work they are doing together is safe for them; this, in turn, can increase her patient's adherence to the treatment plan. This subtheme was the most noticeable for *participant two*; however, all participants conveyed using this strategy in their practices. For the others, educating and preparing their patients for upcoming treatment experiences took on various forms. *Participant one* described how she explains various treatments to patients in order to help them choose the plan best suited to their needs. *Participant three* works as part of a cardiac rehabilitation

program which requires that all patients participate in educational lectures. He believes that educating the patients on the impact of stress through this format is vital to their recovery. *Participant four* shared that he regularly instructs his patients on how they can become more independent. He also shared that when he has found himself in a situation where a patient is not progressing, he responds by educating the patient on what they can expect to see as outcomes of treatment. This educational process has translated to success for him professionally via uncovering underlying issues affecting progress or motivating patients to participate.

Taking a holistic approach reflects applying knowledge of trauma into practice by focusing on the unique strengths of individuals: empowerment and understanding each individual in the context of his/her experiences (two principles of a trauma informed approach) (Elliott et al., 2005) were highlighted. *Building self-efficacy* and *being patient centred* were discussed as strategies to facilitate responding by taking a holistic approach. *Building self-efficacy* among patients was emphasized by all participants and identified as a vital component to their job as a Registered Kinesiologist. This subtheme was particularly important for *participant four* as he discussed on several occasions how his whole purpose is to help his patients become independent lifestyle managers through building their belief in themselves to execute positive changes. *Being patient centred,* focusing on all dimensions contributing to a patient's wellness, was a subtheme that was primarily articulated by *participants one, two, and three*: that is, taking a humanistic approach in an attempt to consider the various perspectives on what the patient is experiencing.

Patient-provider relationships was a recurrent theme for all participants who described the value of nurturing a partnership to effect behavioural change and enable an effective response to a patient's trauma. Similar to building self-efficacy, participants conveyed that developing rapport is imperative. For example, *participant four* talked in depth about how

having a true collaboration with patients is needed in order to create and conduct an effective treatment plan. *Honesty and transparency,* and *building trust and rapport over time* were discussed often by all participants as important components for strengthening the patient-provider relationship. Specifically, participants noted that having trust creates an atmosphere of safety which then allows the patient to be open and vulnerable. With such an atmosphere in place, the Registered Kinesiologists explained that they are then able to address underlying issues. All of the participants emphasized that trust can make or break the relationship, and *participant three* and *four* also highlighted that it does take time to develop that trust. The temporal nature was also noted in the context of the patient-provider relationship whereby *participant four's* strategy is to develop rapport over years so that the patient is continually coming back to see him. However, *participants one* and *two* noted the challenges associated with developing trust and return to work planning in an acute setting where interactions are limited to seeing an injured employee once for an assessment. Regardless, participants agreed that fostering this relationship is an integral part of care provision and a facilitator to a trauma-informed approach when responding.

Invoking additional support integrates the participants' knowledge of trauma by first recognizing when a patient is in need of care that may be beyond their scope, and responding accordingly. In the context of trauma, participants discussed how a patient may be in crisis, and they respond by collaborating with another HCP who is better equipped to provide care. *Participant one* noted that she heavily relies on making referrals to family physicians, expressing that when a patient is not progressing, she often reaches out in an effort to collaborate and figure out what the barrier is, if any. *Participant two's role affords her* the opportunity to work in partnership with a psychologist; as a result, she described how she can now recognize when she needs to refer a patient to that specific HCP. *Participant three*

described how he works as a member of an interdisciplinary team, thereby ensuring constant collaboration with other HCPs. He admitted that he wishes a social worker, or a psychologist were additions to his team given their expertise in and experiences with trauma. *Participant four* verbalized many reasons an individual may not be participating in the treatment plan. In response to this recognition he tries to enlist all types of support ranging from family members to other HCPs. *Participant four* also divulged that although he frequently collaborates with family physicians, it is still difficult to have any type of collaborative relationship, because Registered Kinesiologists are still struggling for acceptance within health services.

Self-reflection and being self-aware was a salient theme for *participants one* and *three,* and relates to responding and trauma awareness in two ways: 1) using knowledge that everyone is unique to allow continual reflection on personal approaches to patient care and to ensure appropriateness; and 2) being mindful of the treatment plan and its impact, and how behavioural supports can be used to minimize the possibility of re-traumatization *Participant three* discussed on a few occasions over the interview series that being mindful of where the patient is emotionally, and adapting his own approach accordingly is a key component to the success of the program. Table 9 provides illustrative quotes pertaining to the facilitators for responding to trauma.

Table 9

Facilitators for Responding to Trauma

Personalizing Treatment Plans

Focusing on Enjoyment and Accommodating

- "It's [treatment planning] just being creative. I think that's the part about this line of work is how creative you can be and how you can think outside the box." (Participant 1)
- "I asked her what was important to her…What in her life did she miss that she couldn't do now?…We started focusing on walking her kids to the bus…because it's far more interesting for her to work on getting her kids to the bus."(Participant 2)
- "[Y]ou have a box of tools, and which ones you are going to use or how are you going to use them together? No situation is really ever the same." (Participant 2)
- "Ultimately, [it] just comes down to being accommodating [when working through barriers to progress] and to make them feel like I'm not pressuring them to accomplish something else on top of everything else that they have on their plate." (Participant 3)
- "I try to be as accommodating as I can in the sense that if I need to reschedule or follow up with them for a phone call and just make them aware that there's no pressure to attend every single class that they can still do well in the program and that we just maybe need to take like, a week or two for them to identify their other issues that are maybe affecting their health." (Participant 3)
- "You're a person and they're a person…It [treatment planning] gets tailored according to all the factors, like…your personality and theirs." (Participant 4)

Managing Ups and Downs

- "My inside is like, 'My gosh, okay.' And then my outside voice is very calm, and I say '[O]kay, well … thank you for disclosing that. Do you want to talk about it now, or do you feel you need to me to know that?'… Just having me know sometimes is helpful." (Participant 1)
- "[W]e [kinesiologists] understand that it takes time, and that there is going to be ups and downs throughout the whole process but that's why we are there to guide them along." (Participant 3)
- "We're working in a non-judgmental environment." (Participant 3)
- "There is a lot of changes that need to be made, but we don't expect them to make it overnight." (Participant 3)
- "Our whole objective is to create an independent, not a practitioner, but an independent lifestyle manager so that they're doing what they can. Recognizing where they're trying to go and … that things may go up and down over time." (Participant 4)

Strategies to Support Traumatic Experiences

Acknowledgement and Empathy

- "I think I just try to be kind of, very understanding and acknowledge that whatever they're going through is difficult and that it's tough enough for anybody." (Participant 1)
- "I tried to be understanding and empathetic right? Like, okay I can appreciate… not that I understand or not that I feel badly for you, but I hear what you're saying." (Participant 1)
- "[T]aking the time to get to know them, so that they understand. They know that you know what they're going through and what they've been through, and where they have to get to." (Participant 2)
- "Letting them know that it's okay. That it's okay to just be at the point that they are now." (Participant 3)
- "[Y]ou're trying to be understanding and empathetic and helpful along the way and not have these preconceived notions about a patient." (Participant 3)
- "I just try to be very respectful of how everyone is feeling. And trying to put myself in their shoes." (Participant 3)
- "So compassionate in our practice is 'Oh, that's terrible. I recognize that these things are challenges. Let's see if we can work around those challenges or participate and take a few steps in this direction.'" (Participant 4)

Educate and Prepare them

- **"**We bring close attention to stress when we do our lectures in class, because stress can be the biggest risk factor of it all." (Participant 3)

- "[H]elp them become more independent by providing information that they don't have and will be useful to their needs." (Participant 4)
- "It's making sure that they [a patient who is not progressing] have the right treatment... So, if they need treatment, if they're not coping, to make sure that I help them understand the journey towards getting the right treatment and understanding why that's beneficial to them." (Participant 1)
- "[T]ry and educate them and prepare them the best you can about what they're about to experience and then, it's not so scary." (Participant 2)
- "Tying in the information about why that's important to go back to work and, even talking about more, you know, what it's going to feel like going back to work. Like, it's going to be hard. It's going to be exhausting. You know, those types of things. So better prepare him in that sense, so he doesn't freak out about that." (Participant 2)

Taking a Holistic Approach

Building Self-efficacy

- "The whole idea is to give them tools that they need to carry through." (Participant 1)
- "That's my job is to improve their self-efficacy and to help develop their self-efficacy, and whatever it is they're doing." (Participant 1)
- "I would do things like daily logs [for goal setting]…I would send them home…and say, 'Here's your goals for this week and I want you to do the following kinds of things' and they would get back to me on what they did and how they felt, and that kind of thing." (Participant 2)
- "[Y]ou need to get them part of the process as well, so that they feel that their part of it and they know where you're going with it." (Participant 2)
- "I help the patient see that [success] in their progression over their time with us. Specifically, that they have accomplished something, and their efforts have resulted in something…Whether it's just an increase in their time by a couple minutes, or feeling better, or having a better quality of life. And I really try to hone in on that to make them feel like they have accomplished that [goal]." (Participant 3)
- "It's [getting patients to adhere to exercise] just trying to give them the encouragement that they are doing something, and they are doing really well at it, and that this process isn't going to happen overnight. That's what our program is for." (Participant 3)
- "If we're not doing that [building self-efficacy] we're not doing our job, …that's the end product of the whole thing [treating patients]." (Participant 4)

Being Patient Centred

- "It's [responding to trauma disclosure] just about creating a humanistic approach and knowing that they weren't alone and that they weren't walking through this journey alone." (Participant 1)
- "[L]ooking at people individually and assessing where they are at, you know, physically…but also from a psychosocial point of view as well, will give you a feel of what they're going through from that perspective." (Participant 2)
- "I just try to see everyone as an individual and all these experiences shape them in different ways. And just to have the same approach with everyone..." (Participant 3)
- "I think it's just trying to be very mindful of the whole picture not just the current moment of being in cardiac rehab. Because their lives completely extend outside our facilities." (Participant 3)
- "You need to consider the whole person when you use that holistic approach: when you consider all the angles of who they are, and where they are at, and where they're going." (Participant 3)

Patient-Provider Relationships

Honesty and Transparency

- "[The] transparency piece is important…being upfront about why they're there and what you can do…Open communication piece as well, is important…telling them where they are going to go, '[T]his is what I think you need' and communicating that kind of stuff." (Participant 2)
- "You have to be honest with them…You have to be nice about it obviously, and not tell them '[Y]ou're a complete motor moron'… you need to choose your words carefully." (Participant 2)
- "I finally said 'I've never been through anything like that. So, I really can't appreciate it. But I do know that getting you back to work and a regular routine is going to be good for you, and you can either spend all your time and energy focusing on the past or you can say, okay I'm going to start today and look forward.' And he took it very well, and I think he took it to heart." (Participant 2)
- "In terms of getting into areas you don't belong, you just have to make that clear '[T]his isn't my scope. I'm not the one to help with this. I'm sorry for your situation.'" (Participant 4)

- "Explain numerous ways about the partnership that you guys have, and what you can and what you can't do for them." (Participant 4)

Building Trust and Rapport Over Time

- "It takes probably upwards of a month of regular contact with somebody before they give you the key to what's preventing someone from moving forward." (Participant 1)
- "It's [motivating a patient] about the interpersonal skills of the person, and they have to trust you as well. I think that's important...developing a rapport with them." (Participant 1)
- "If they don't trust you or respect you or, you know, that type of thing…you can't get anything done." (Participant 2)
- "You need a good rapport really." (Participant 2)
- "They need to know that you're there for them and not for whoever is paying your bill." (Participant 2)
- "There are always things that happen behind the scenes, and it just takes time for people build that trust." (Participant 3)
- "The things I try to focus on are being warm and welcoming. Make them feel comfortable in the environment that they are in, and acknowledge whatever it is that they are feeling." (Participant 3)
- "[U]nderstanding who the individual is. Building that relationship and trust between them before you start to guide them through some of the questions [regarding past trauma]." (Participant 3)
- "This business needs to be about relationships as opposed to, you know, an emerge visit which is all about the condition and then move on." (Participant 4)

Invoking Additional Support

- "Okay, '[H]ave you talked your family physician about this [harmful coping mechanism]? 'Well, no. I'd like you to make an appointment with your family physician and I'd like you to talk to them about it.' And then, I'll reach out to them [family physician] and we will see, as a team, if we can figure out getting them [the patient] some support." (Participant 1)
- "If the education that I can provide with hurt versus harm to… deal with the pain behaviours. If that still seems to be the biggest thing that prevents them from getting back to work…I would refer to a psychologist or I would send them back to their physician." (Participant 2)
- "If the return to work barrier seems to be their [the patients] high pain response, then I would redirect them back to their family physician who would then make the referral hopefully." (Participant 2)
- "If [the employer] doesn't want that specific information in the report, I always follow up with a phone call to say '[Y]ou know, this is a problem. We should try to get them a psychologist, or get a referral for a psychologist.'" (Participant 2)
- "Our process was just to refer her back to her psychologist and express the whole scenario and do the routine follow-up." (Participant 3)
- "[H]elp provide coping strategies, enlist other people who interplay with why they're not participating [in the treatment plan]." (Participant 4)

Self-reflection and Being Self-aware

- "I think it's important to be [self-aware] though, not just in healthcare but in our jobs. It makes you a better version of yourself… doing self-reflection is really important." (Participant 1)
- "Sometimes we get really angry with somebody … we have this emotional response and we're really angry and we lash out. And usually, we're lashing out because we're hurt or because we're scared. It's usually some sort of protective mechanism that we're putting around ourselves and sometimes we don't even know that. It's taken me a long time and I'm still figuring it out, right? Why am I anxious today? Why my stress today? Why might this? Why might that?" (Participant 1)
- "A discussion we have a lot at work [during rounds] is about trying to be aware that you have become desensitized to it [a patient's story] because it's just so common." (Participant 3)
- "I think some things I have learned through throughout my education and work is you need to be reflective on both positive and negative because it will be beneficial. I try and take a moment throughout that day and reflect on scenarios or situations that have stood out. And '[W]hat did I do well? What did I not do well? And, [W]hat would I have changed, or will I do the same next time?" (Participant 3)
- "I have to be mindful of removing someone from the equipment to talk to them. It can kind of be destructive for the class because then they get concerned [for one another]." (Participant 3)
- "Being aware of you, as a health care professional, and the role that you play. And your interactions [are] very important." (Participant 3)

Barriers to Responding to Trauma. With regards to barriers that could inhibit the Registered Kinesiologists' ability to respond to trauma, one re-occurring theme emerged: *limitations of the individualized scope of work.*

Limitations of the individualized scope of work was derived based on three participants' experiences whereby they recognize that a patient is suffering from trauma; however, due to their scope, feel limited in terms of how they can effectively respond. These participants explained that while the College of Kinesiology of Ontario provides guidelines on scope of practice, their role can be narrowed further based on working parameters set forth by the companies/clinics that employ them. *Participants one, two*, and *four* were the only participants who discussed this notion. *Participants one* and *two* were particularly expressive and shared experiences where they felt limited in terms of how they could respond because of restrictions associated with the purpose of their work (i.e., return to work planning). Table 10 provides illustrative quotes pertaining to the barriers for responding to trauma.

Table 10

Barriers to Responding to Trauma

Limitations of the Individualized Scope of Work
• "I would never talk about coping mechanisms [with clients]. I would always refer." (Participant 1) • "You need to deal with your scope, recognizing that their issues are affecting it, and if there's something that you can do in terms of your services, counseling, etc., to mitigate those issues and to help the person get on board, you can do that. But beyond that you just can't [develop an attachment to resolving past trauma]." (Participant 4) • "Eventually [when progress is not made] the employer is '[W]e are going to take this into our own hands' which usually means that they are going to terminate them." (Participant 1) • "It's [compartmentalizing] the trauma of me having to tell someone…'[W]ell, I appreciate that you're going through that right now. But that doesn't mean that you're disabled. It doesn't mean that you can't work. You know, yes, you have stuff going on and you're in treatment. Let's talk about a work strategy.'… So sometimes that's a really hard thing for us to have to deliver, and for those people to hear." (Participant 1) • "Often times, I'll be doing an assessment [one off] on somebody [for a specific report to an employer] and seeing them for only four hours or something. And I'm disappointed in the treatment they have received and certainly wished that I could've treated them because I would have done a better job." (Participant 2) • "We don't really know how to do a really good job at accommodating people with mental health claims… Not only the employers, but the healthcare team doesn't know how to provide accommodation recommendations." (Participant 1)

Discussion

The purpose of this phenomenological study was to explore the concept of trauma awareness through a rich description provided by Registered Kinesiologists. Specifically, this involved inquiring into their realization, recognition of, and response to trauma in practice. Overall, the findings revealed that there are many lived experiences, past and present, that serve as facilitators for and barriers to the Registered Kinesiologists' trauma awareness. The realization that trauma experiences are highly common and personal; a recognition that there may be underlying issues the Registered Kinesiologists need to address first, above and beyond the primary injury; and responding to a patient's trauma experiences by incorporating tailored and patient centred strategies, focusing on the therapeutic relationship, and maintaining professional self-awareness were identified by participants as integral for facilitating trauma awareness. Alternatively, a heightened focus on and the limitations of scope of practice governed by the CKO (COKO, 2014), as well as Registered Kinesiologists' attitudes and practice-related challenges were commonly discussed as barriers.

At present, there is a movement in health care toward an approach that utilizes the components of trauma awareness to enhance provision of care (Davis, Constigan, & Schubert, 2017; Felitti, 2017). For example, researchers in the field of Rehabilitation are now examining the applicability and influence of addressing underlying trauma within their scope of practice (Linton, Flink, & Vlaeyen, 2018; Wenger, et al., 2018). Studying the practice of Kinesiology and trauma in this context is what makes the findings of the present study particularly valuable and unique. Moreover, this is the first study of its' kind to specifically explore a HCP's trauma awareness by describing how the participant realizes the prevalence of, recognizes, and responds to trauma. This is also the first qualitative study to do so. Integrating a series of interviews over time, each with their own purpose, enabled the discovery of in-depth views

through allowing participants to ponder previous responses and build upon their perspectives. Given that more than 89% of the population is affected by trauma (Kilpatrick et al., 2013), having a comprehensive understanding of how Registered Kinesiologists experience trauma in practice may serve to inform avenues for enhancing this knowledge within the profession and ultimately help reduce its' impact on a patient's health status (Ranjbar & Erb, 2019). Further discussion can be found below regarding the findings and how the combination of the participants' cumulative trauma awareness experiences relates to the practice of kinesiology.

Realizing

Facilitators. Realizing the prevalence and possessing a conceptualization of trauma is the first step towards being able to describe trauma awareness, and is a necessary precursor to recognizing and responding (SAMHSA, 2014). Trauma can be described as any stressful, distressing event/s that may have lifelong negative effects on health and well-being (Clark et al., 2015; Klinic, 2013; Ranjbar, & Erb, 2019). This definition places the impact of traumatic experiences on a vast continuum, and prompts the realization that traumatic experiences are common in society; what is deemed to be traumatic is based on the individual's personal experience with and perspective on the events (Clark et al., 2015; Klinic, 2013; Oral et al., 2016; MHSU, 2013).

Trauma is a personal experience. The themes *trauma is a personal experience,* and *trauma exists and has triggers*, both exemplify that these participants realize the continuum of trauma experiences, and that any situation may be traumatic for an individual. As participant two explained:

> I feel like it's [trauma] anything … an event or an experience that a person goes through, and it sort of leaves this, this lasting sort of emotional scar almost on that person. And it's something that can be triggered, the event can be triggered, that scar

> can be triggered. It can be activated by something that may have nothing to do [with] that activity … So just something that just stays with someone. It becomes a part of their being almost. It's an event that stays with them, it changes in a way almost who they are.

Two participants noted that being diagnosed with a chronic disease, in and of itself, can be traumatic, with participant four saying, "somebody that has had a traumatic or semi-traumatic [experience] has had a chronic disease experience." This belief speaks to their awareness that they specifically treat trauma survivors. Given the known association between the development of chronic disease and physical inactivity (Bryan & Katzmarzyk, 2011; Kokkinos, 2012), it is increasingly likely that Registered Kinesiologists will work with and treat individuals who have experienced this type of trauma. It is worthwhile to note that three of the four participants were grandparented into the profession suggesting that they had many years of accumulated experience. It may be the case that practicing for an extended period of time is necessary to enable these types of realizations in a trauma awareness context. In the absence of this experience, it is important that post-secondary kinesiology-oriented programs integrate the notion of trauma, its' prevalence, and its' relationship to chronic disease into their curriculum in order to prepare students for the reality of interacting with trauma survivors in practice.

Trauma exists and has triggers. The fact that these participants realized that trauma experiences can be *triggered* also shows heightened awareness, and that trauma can leave a lasting scar (MHSU, 2013). One participant shared his lived experience with regards to how his own unintentional behaviours triggered a patient's trauma; he did not understand why she reacted the way she did. This exemplifies, within the practice of Registered Kinesiology, how even the smallest unintended action can subconsciously trigger a traumatic experience. The

fact that only one participant spoke to identifying triggers while the rest merely acknowledged trauma could be triggered, may indicate that stronger trauma awareness, in general, is required. If a HCP does not realize that the patient could be affected by trauma, there is a greater chance that a trauma survivor could be inadvertently triggered by the HCP and his/her actions (SAMHSA, 2014). This could have negative implications for subsequent treatment.

While all of the participants clearly acknowledged that trauma exists, one study finding that could suggest Registered Kinesiologists need training to increase their awareness further is related to how trauma was defined. Even though they all provided the same broad description of trauma, similar to other research (Oral et al., 2016), none of the participants articulated realizing that trauma can be passed down through generations. Table one outlines different types of trauma including intergenerational and historical trauma (Framo, 1981; Heart, 1998; MHSU, 2013; Sotero, 2006). These two types describe how behaviours adopted from the original trauma survivor to cope with the event/s can be passed down the generations. For example, a mother who suffered the direct trauma (e.g., abuse) responds by using substances; her children then learn that behaviour as a coping mechanism and thereby end up suffering from something they did not actually experience directly. The implication of a HCP not realizing historical trauma could lead to inadequate or inappropriate care provision (Mengesha, Perz, Dune, & Ussher, 2018; SAMHSA, 2014). As noted by Clark et al. (2015): "When a provider does not know they are working with a survivor of trauma, their understanding of the individual, as well as the interventions and supports offered may be misdirected or ineffective" (p2).

One notable benefit of employing multiple interviews is the ability to observe the evolution of awareness over time. It appeared that three of the participants did not fully come to the realization that trauma was so prevalent in their practices until the third interview where

they spoke in the most detail and depth about their experiences. This delayed realization highlights increased trauma awareness, and could potentially imply that practitioners who experience trauma in practice do not, in fact, realize it in real time. In turn, this could have negative effects on care provision. For example, a potential trauma survivor's treatment plan could be misdirected by virtue of the Registered Kinesiologist not fully realizing how the prevalence of trauma experiences extend to the field of Kinesiology (Clark et al., 2015; SAMHSA, 2014). Enhanced professional development or mentorship training for new and seasoned Kinesiologists may be avenues to enhance awareness of the many different ways that trauma can show up in practice (Hamberger et al., 2019; Raja et al., 2015).

Barriers. While some facilitators for realizing trauma were discussed across participants, two salient barriers were noted often as limiting their ability to do so: *focused on scope of practice* and *kinesiologist's attitudes and assumptions*.

Focused on scope of practice. The findings within this theme suggest that there may be unique interpretations among Registered Kinesiologists with regards to scope of practice: that is, when/whether they can ask about trauma. Feeling the need to align patient interactions with their *scope of practice* was noted by participants as important and also limiting the questions they ask regarding the primary injury. Participant two's quote below summarizes all participant perspectives that they should only collect relevant information:

> You need a reason to why you're asking questions, and why you're collecting information and that type of thing. I think it's really; you know, you only collect relevant information. You may be missing a whole bunch of stuff. But yeah. I think it's more just because it's more relevant [to the injury] …the focus is really on the primary injury.

These sentiments emphasize focusing on the reason for the visit and show little concern for collecting information regarding past trauma. In contrast, Ranjbar and Erb (2019) dispute that notion at length by describing how beneficial screening for past trauma is within rehabilitation services, which encompass Kinesiology. Clark et al. (2015) claim that HCPs are not trauma aware if they focus on the patients "presenting symptoms rather than on understanding the context within which those symptoms developed" (p. 7). If a HCP believes that trauma is rare and discrete, then they truly are not aware about the prevalence of trauma (Clark et al., 2015). In essence, while the participants in the present study provided a number of comments highlighting their realization of trauma and its prevalence, it appears that feeling restricted by their scope of practice and even an inability to see how trauma is relevant in some cases may simultaneously detract from their awareness. Given the known benefits of addressing trauma in practice from a quality of care perspective (Clark et al., 2015; Hamberger et al., 2019, Layne et al., 2011; Raja et al., 2015; Ranjbar & Erb, 2019), this discrepancy highlights the need for additional education on and training in TIC for Registered Kinesiologists.

Kinesiologists' attitudes and assumptions. An additional theme that highlighted limited awareness regarding trauma's prevalence in practice was *Kinesiologists' attitudes and assumptions.* The participants expressed how interacting with various patients left them feeling frustrated and irritated with the patient at times. Participant two affirmed: "I had one woman who spent four hours with me crying, so I had a very difficult time. I was exhausted after she left … she pissed me off because she was just … being a wimp." Another attitude perceived to be a barrier to realizing the commonness of trauma involved the biases expressed towards certain patients. Participant four provided a synopsis that represented some general sentiments in this regard:

> Some people…don't like to move, they don't like to sweat, they don't like to feel any…discomfort.... They've been raised that way; their experiences have been that way. So, I wouldn't say that these are always baby people, but sometimes they are.

Whether these attitudes conveyed by the participants were intentional or subconscious emotions, they could still be viewed as destructive towards the patient (Grissinger, 2017; Whiting, 2007). The subconscious reaction may also be indicative of the HCP's personal trauma history, whereby the patient's behaviour triggers a traumatic response resulting in a negative attitude (Clark et al., 2015). Inappropriate attitudes, in particular, raise concern because they can lead to the misdirection of care, as well as damage the therapeutic relationship (Whiting, 2007). Moreover, unintentional stigmatization of patients may also occur (Arboleda-Flórez, FRCPC, FRCM, & Stuart, 2012). The harmful effects of stigmatization in health care have been specifically investigated when it comes to weight biases and impact on patient care outcomes (e.g., Phelan et al., 2015; Puhl & Heuer, 2010; Puhl, Phelan, Nadglowski, & Kyle, 2016). Stigmatization has been linked to reducing the strength of the therapeutic relationship and is attributed to lower quality of life for the patient and misdirected treatment plans (Link & Phelan, 2006; Markowitz, 1998; Major & O'Brien, 2005; Myers & Rosen, 1999; Phelan et al., 2015; Whiting, 2007). Furthermore, Phelan et al. (2015) argued that the stigmatization risks the quality of care the HCP provides and takes away from patient centred care. Additionally, the attitudes conveyed by HCPs could lead to re-traumatizing the trauma survivor whilst in the Registered Kinesiologist's care. Even subconsciously, reacting to a patient's behaviours can be felt by the patient and has direct effects on patient outcomes (Phelan et al., 2015). In essence, the HCP's behaviour towards the patient is paramount for mitigating potential triggers or re-traumatizing the patient (SAMHSA, 2014).

According to the literature, difficult behaviour exhibited by the patient can be attributed to trauma (Crosby et al., 2017; Oral et al., 2016). Thus, in order to reduce these types of attitudes (whether intentional or not), reactions of inquiry into past trauma and behaviour, as opposed to assumptions, should be the goal. Exploring a patient's history, instead of internalizing his/her reactions to challenging behaviours, would represent a more patient centred approach (Epstein & Street, 2011).

Overall, the participants in the present study displayed a keen sense of awareness regarding how broadly trauma is experienced in society and how it affects everyone differently. However, a discrepancy was also present whereby certain attitudes and assumptions simultaneously impacted their ability to realize trauma and its prevalence. The realization of the commonness of trauma appeared later in the interview series as part of the IPA process. This delayed realization could reflect why the discrepancy is seen. One important implication of this disparity is an inability to subsequently recognize and respond to trauma – an outcome that could be detrimental for some patients who may need assistance beyond their presenting concern. This finding speaks to the need for ongoing education in the field of Kinesiology to foster an understanding that indeed, trauma is a personal experience and may not 'show up' as one may expect.

Recognizing

Facilitators. Recognizing the signs and symptoms of trauma is paramount to a HCP's trauma awareness; the HCP must have the skillset to discern between signs and symptoms of the primary injury, and those related to trauma experiences (Clark et al., 2015; Elliott et al., 2005; Klinic, 2013; Raja, et al., 2015; Ranjbar, & Erb, 2019; SAMHSA, 2014). Physical signs of trauma can develop and present as chronic pain, gynecological difficulties, gastrointestinal problems, asthma, heart palpitations, and musculoskeletal difficulties (Hamberger et al., 2019;

MHSU, 2013). Physical signs of trauma can even present as small as headaches or vague complaints of aches and pain (Cascade Behavioural Health, 2020). As Registered Kinesiologists are human movement specialists and often treating musculoskeletal problems (OKA, 2020), it is not unreasonable to believe that their patients could experience such symptoms linked to trauma.

History taking. The first step towards a Registered Kinesiologist recognizing that a patient is exhibiting signs of past trauma is through history taking: a subjective information gathering process where the HCP is trying to create an understanding of what has happened to the patient and what they are suffering from (Bickley, 2013). In essence, history taking is really about gathering information on the patient's injury and life (Marshall & Woodley, 2016). Once obtained, the HCP evaluates the signs and symptoms the patient is experiencing and works to discern a diagnosis. While making a diagnosis is not within the scope of practice for Registered Kinesiologists (COKO, 2013), history taking was found to be a vital component of the participants practices in the current study. Similarly, this notion of history taking is shared across various health care fields, and contains a common step-by-step process: (1) Introduction; (2) Gain informed consent; (3) Obtain presenting complaint; (4) History of complaint; (5) Previous medical history prudent to the primary injury; (6) Medication and allergies; (7) Family history prudent to the primary injury; (8) Social history; and (9) Review of systems (Bickley, 2013; Medistudents, 2018). All participants noted using this process, or parts thereof, as a tool to understand what is happening with the patient. Participant two described going into depth via taking a history of the main complaint to "figur[e] out what's going on from the work environment, and about things like sleeping, eating, weight gain…to get an idea of how things have changed physically…and how things have changed their life." What is particularly important about history taking in a trauma informed context is the potential for the Registered

Kinesiologist to screen specifically for past traumatic experiences (Ranjbar & Erb, 2019). For example, Ziadni, et al. (2018) found that by expanding the history taking process to inquire about a patient's psychosocial past, a reduction in pain severity, sleep problems, and psychological symptoms was observed. Ranjbar and Erb (2019) similarly argue that a more biopsychosocial interviewing process that incorporates some form of trauma screening should be adopted by HCPs, specifically among those who work in rehabilitation. Such a model can significantly impact HCP understanding of hidden determinants and enable them to better utilize tools to assist with their management (Ranjbar & Erb, 2019).

In a physical activity context, Brawley et al. (2013) called for a change of approach for Registered Kinesiologists advocating that the field begin to address the social-cognitive factors that impact a patient's long-term adherence to physical activity. Recognizing the social-cognitive determinants associated with behaviour change is particularly advantageous for Registered Kinesiologists who are tasked with promoting long-term physical activity adherence and identified as physical activity specialists (Brawley et al., 2013; OKA, 2019 c). In essence, asking a more comprehensive set of questions could lead to identifying if a patient has suffered past trauma: information that becomes imperative when creating a viable treatment plan.

Recognizing signs and symptoms. With the drive to create an effective treatment plan, the information gathered within the history taking process is only useful if the HCP recognizes the signs and symptoms that are described by the patient as trauma-related. In the present study, a predominant finding across all participants was the recognition of psychological issues as a symptom of past trauma. For example, participant two expressed her awareness that she often has to address the psychological issues before she can tackle the primary injury. Participant one also recognized that conducting complex claims often meant that she had to "flush out all the symptomology," and that some of the behaviours exhibited by the patient

were not related to the primary injury. Participant three spoke in depth regarding the impact of stress on individuals' lives, and how he believes it is the biggest barrier to recovery: "[W]e bring close attention to stress when we do our lectures in class, and that I think stress can be probably the biggest risk factor of it all [heart condition]." Not only has stress been linked to aggravating chronic disease (Yaribeygi, Panahi, Sahraei, Johnston, & Sahebkar, 2017), it has also been identified as a symptom of past trauma (Cherewick, Doocy, Tol, Burnham, & Glass, 2016). When stress goes unmanaged and sustained over a long period of time, the nervous, immune, endocrine, and other systems can be affected negatively (Danese, & Lewis, 2017; Broyles et al., 2012). Thus, in a trauma awareness context, considering the influence of stress and applying a more biopsychosocial interviewing process appears to be particularly valuable for Registered Kinesiologists in practice.

Identifying issues to progress. The literature on trauma explains that the lack of patient participation, presenting as avoidance or procrastination, can be a prime sign that the individual has suffered from past trauma, and now uses avoidance as a coping mechanism (Clark et al., 2015; Cook et al., 2005; Skeffington, Rees, & Mazzucchelli, 2017). While the participants in the present study recognized that this behaviour creates a barrier to achieving goals and making progress, there was little mention linking this avoidance behaviour to past trauma. This finding suggests a gap between theory and practice whereby the participants verbalized how trauma can be presented; however, they were not necessarily recognizing a trauma survivor in real time. Consequently, if such signs and symptoms go unrecognized as being related to trauma experiences, getting the patient into the right treatment plan could be compromised (Elliot et al, 2005; Klinc, 2013; MHSU, 2013; SAMHSA, 2014). Moreover, it has also been shown that not explicitly recognizing the signs and symptoms of trauma can impede how engaged the patient is in treatment, and increase his/her risk of relapsing into health risk behaviours (Brown, 2000;

Janikowski & Glover, 1994). Raja et al. (2015) state that a HCP must first understand that maladaptive coping (e.g., smoking, substance abuse, overeating, high-risk sexual behaviour) may be related to trauma, and these behaviours have adverse effects. As noted previously, Bartlett et al. (2015) found that educating various HCPs in the language of trauma increased the level of awareness and improved communication between different HCPs. Furthermore, the study found that creating the shared language improved referral rates between HCPs and strengthened relationships across various health care fields (Bartlett et al., 2015).

Making the connection that some signs and symptoms align with being a trauma survivor is a critical component to truly recognizing trauma (SAMHSA, 2014). The participants in the present study showed that they recognize other factors that influence a patient's health which can run deeper than the primary injury. However, more training may be needed to increase trauma awareness among Registered Kinesiologists so they can explicitly connect maladaptive behaviours to past trauma and label related experiences as traumatic. This is especially important when considering how to respond to patients effectively.

Barriers. Beyond the facilitators discussed, participants also identified two main barriers to recognizing trauma: *practice-related challenges* and *desensitization.*

Working within an acute care model. One common thread within the *practice-related challenges* theme was the participants reports of feeling that their hands were tied due to *systemic obstacles.* Many of the barriers described by participants were related to the notion of having to work within an acute care model. Raja et al. (2015) recommended that HCPs consider whether they will have long or short-term contact with the patient because it is imperative that the provider feel competent to address a trauma disclosure should one arise. For example, two of the participants reported that a large barrier for them with regards to recognizing trauma was the structure of their work system – namely limited time (i.e.,

performing return to work planning via one three-hour patient assessment).

It is difficult to establish other issues the patient might suffer from in only one session, despite the recognition that gathering information regarding the whole person is valuable. A related main finding that emerged as a barrier to recognizing trauma involved connecting the physical and psychological experiences of patients. In some health care models, physical and psychological factors are compartmentalized in assessment contexts which creates unhelpful boundaries when trying to make associations between the two elements (Craik, 2011; Lewis & O'Sullivan, 2018; O'Keeffe, George, O'Sullivan, & O'Sullivan, 2019). A drawback of not recognizing that these two elements are connected is the tendency for an HCP to focus on alleviating physical symptoms only. While this approach plays a pivotal role within the health care system, this type of practice-related challenge falls short in addressing underlying psychological issues that could compound illness and disease (Ranjbar & Erb, 2019).

Chronic disease is one area that is often rooted in trauma; research has shown how the physiological and behavioural responses to trauma experiences set in motion a cascade of adaptations that lead to chronic illness (Danese & McEwen, 2012; Felitti et., 1998; Gillespie et al., 2009; Mcleay et al., 2017; Su, Jiminez, Roberts, & Loucks, 2015). Both participants' three and four made comments that they have had more success with those suffering from chronic conditions because they have had the time to be flexible and address unique needs as opposed to "pigeon holing" a patient into a pre-structured format. Registered Kinesiologists are being called upon increasingly to develop and deliver exercise treatment plans for chronic illness (OKA, 2019 c). More flexibility and time within their practices appears to be ideal in order to enable the development of relationships and recognition of any underlying psychological issues impacting a patient's physical health status and recovery (Elliott et al., 2005).

While perhaps viewed as time consuming and requiring extended effort, asking specific

questions regarding trauma may, in fact, help mitigate potential future obstacles to treatment and recovery (Hamberger et al., 2019). Using the history taking process to screen for trauma experiences could foster greater understanding of the 'whole individual' and potential factors influencing the patient's health. In a behaviour change context, the recognition that individuals are the experts on themselves is one empowering approach that has been shown to elicit positive changes (Irwin & Morrow, 2005). Using this lens to enhance trauma awareness may prove useful with regards to understanding how signs and symptoms can be reflective of an individuals' current condition and historical roots. Albeit an extra step, this screening could potentially alleviate practice-related challenges by preparing the Registered Kinesiologists to find other essential health risk behaviours they need to address within the treatment plan (Ranjbar & Erb, 2019).

Desensitization. One repeated finding among the participants was the notion of *desensitization* - that is, feeling numb or nothing in response to hearing a patient's story because they hear the same things so often (Zhang, 2019). Mechanisms of injury are often the same for specific injuries and quite often, certain behaviours are associated with certain diseases/illnesses (Nayduch, 2009). Consequently, it is not surprising that the participants reported hearing commonalities across patients. What is problematic about this information becoming habituated is that it suggests the practitioners have stopped actively listening to the patient. Partaking in active listening is an essential component of the therapeutic relationship (Diener, Kargela, & Louw, 2016). Consequently, if there is something that compromises a HCP's ability to comprehend all the minute details of a patient's story, the signs and symptoms of past trauma that may be unique to the patient could be missed. This could potentially impede the recovery process and past trauma may not be accounted for when developing the treatment plan.

Another factor related to the desensitization participants described is the notion of vicarious trauma: the cumulative effect that empathetic engagement with patient's trauma stories has on the HCPs themselves (Clark et al., 2015; Pearlman & Saakvitne,1995). The process of engagement can cause a negative transformation of the HCP's inner experience, thereby leaving him/her impacted adversely by the patient's trauma (Klinic, 2013). Clark et al. (2015) claimed that vicarious trauma is an inevitable hazard for HCPs working with trauma survivors. The desire to protect oneself described by all study participants is indictive that they too may have times where they feel overwhelmed with their work and use desensitization or compartmentalization as a tool to protect their own emotions. Working in complex claims, participant one spoke several times about how the work was draining, and she had to separate from the patient to protect herself. Indeed, Clark et al. (2015) discuss that many HCP who do not address vicarious trauma are at greater risk of becoming overwhelmed with their work, and without realizing it, often distance themselves from the patient as an attempt for self-protection. While empathy has been identified as a tool that HCPs can use to make connections to their patients (Sinclair et al., 2018), it is important to note that this practice can also leave HCPs feeling vulnerable to vicarious trauma (Saakvitne, Gamble, Pearlman, & Lev, 2000). In line with these study findings, Registered Kinesiologists may benefit from further training on how to recognize and address vicarious trauma experiences. In doing so, Registered Kinesiologists can better prepare themselves to adopt preventative measures to protect their own well-being (Clark et al., 2015) resulting in positive coping strategies that will enable them to be with their patients more fully.

When considering the facilitators and barriers associated with recognizing trauma, the notion of awareness appears to be a common thread. Registered Kinesiologists being aware of the signs and symptoms associated with trauma and connecting past experiences with current

presentation is imperative. Greater self-awareness regarding history taking and the potential impact of vicarious trauma are also important. The literature states that while addressing the primary injury is vital, this exclusive focus often falls short in addressing underlying factors, especially those that confound chronic disease (Ranjbar & Erb, 2019). Ranjbar and Erb (2019) emphasize that adequate training in signs and symptoms provides the groundwork for the HCP to feel secure enough to then screen for trauma and help address the root cause of the patient's health status (SAMHSA, 2014). Indeed, the OKA (2019) recognizes that Registered Kinesiologists are in the best position to develop and deliver exercise therapies for chronic illness rooted in trauma (Danese and McEwen, 2012; Felitti et., 1998; Gillespie et al., 2009; Mcleay et al., 2017; Su et al., 2015). Awareness is a vital component of this process so as to enable Registered Kinesiologists to respond to trauma accordingly in practice.

Responding

Facilitators. While recognizing has been referred to as the cornerstone of trauma awareness (SAMHSA, 2013), the HCP must be able to utilize that knowledge and understand how to integrate both realizing and recognizing a patients trauma into a response (Hamberger et al., 2019; Raja et al., 2015; Ranjbar and Erb, 2019). While not noted as trauma specific, findings revealed several skills that are compatible with a trauma awareness approach. The techniques employed by the participants represent both implicit and explicit procedures. Raja et al. (2015) support incorporating both types of strategies, referring to each as universal precautions (implicit), and specific tactics (explicit) that can be used to respond to a patient's past trauma.

Being patient centred. The number one universal precaution that Raja at el. (2015) advocate for is the use of a patient centred approach: a facilitator which was found to be salient across study participants. This particular way of being was noted often in relation to

personalizing treatment plans and *taking a holistic approach.* While not a practice that directly responds to a patient's trauma, the participants described being person-centred as important for addressing each individual's unique needs. Maintaining such a flexible approach also aligns with realizing, whereby trauma is a personal experience. According to Raja et al., (2015) a patient centred approach is founded on the premise that everyone is different and has novel experiences that shape their health status. Applying this approach then leads to engaging with patients in a collaborative, non-judgmental fashion which is significant when seeking to promote positive behaviour change (Kornhaber, Walsh, Duff, & Walker, 2016; Raja et al., 2015).

Maintaining a non-judgmental environment was particularly salient for participant three, as it is a strategy he invokes to *manage ups and downs* experienced by patients throughout the recovery process. All of the participants conveyed that assuming a patient will experience these highs and lows throughout their relationship together helps them prepare to better manage relapses. For instance, according to participant three, Registered Kinesiologists "understand that it takes time, and that there is going to be ups and downs throughout the whole process but that's why we are there to guide them along." Indeed, the patient centred approach is focused on the patient's needs, and success is measured based on what the patient deems meaningful and valuable (Epstein & Street, 2011). Study participants noted that adherence to physical activity is more successful when the focus is *on enjoyment and accommodating.* A prime example was noted by participant two:

> I asked her what was important to her…What in her life did she miss that she couldn't do now?… We started focusing on walking her kids to the bus…because it's far more interesting for her to work on getting her kids to the bus.

Accommodating a patient's unique likes and dislikes helps the treatment plan to be personalized. In turn, this enhances enjoyment levels and encourages greater participation and adherence (Brawley et al., 2013; Epstein & Street, 2011; Raja et al., 2015). When a HCP is trauma aware, he/she realizes that everyone has trauma, and that trauma impacts their health status (Clark et al., 2015; Klinic, 2013; MHSU, 2013; SAMHSA, 2014). This awareness then aids the HCP in adjusting to the unique needs of the patient and applying a patient centred approach accordingly (Epstein & Street, 2011).

Another benefit of using a patient centred approach is that it poses no harm to individuals who do not suffer from past trauma. Moreover, such an approach is deemed beneficial to the practice of Kinesiology in general, as it does not rely on having to specifically screen for past trauma to be able to respond (Raja et al., 2015). Therefore, Registered Kinesiologists who are not comfortable discussing a person's past trauma (e.g., as they might believe it falls outside the scope of practice) could still use this approach and indirectly address a patient's past trauma.

Taking a holistic approach and building self-efficacy. A large aspect of applying a patient centred approach is treating a patient holistically, which means treating the whole person (Epstein & Street, 2011). A salient finding discussed in this context involved building a patient's self-efficacy: a prominent component of trauma awareness (Elliott et al., 2005; Klinic, 2013; MHSU, 2013; SAMHSA, 2014). Elliott et al. (2005) stated that to be aware of trauma means that the HCP emphasizes individual strengths, highlighting adaptations over symptoms, and resilience over pathology. Findings from the Trauma Informed Project (2013) noted that to be trauma aware means the HCP fosters a sense of efficacy and self-determination. Participant four frequently commented on how one of his main goals is to encourage patients to participate in their own treatment by building their self-efficacy: "If we're not doing that [building self-

efficacy] we're not doing our job, …that's the end product of the whole thing [treating patients]." The holistic approach discussed by the participants can be an effective universal precaution taken to respond to a patient's past trauma, even if the HCP does not recognize the trauma overtly (Ranjbar & Erb, 2019; Elliott et al., 2005). Being person centred and building self-efficacy are both ways that lead to empowerment which is vital for a person who suffers from past trauma (Elliott et al., 2005).

Ranjbar and Erb (2019) outlined two principles for HCPs working in rehabilitation to incorporate into their practices that could similarly be applied by Registered Kinesiologists when responding to a trauma survivor. The first principle, empowerment, involves using "the patients' strengths, skills and preferences in the treatment process" (p.4). The second principle, choice, is "informing the patients of all available and efficacious treatment options" (p. 4). These two principles align with the practices that the participants described in *taking a holistic approach*. These are not only vital components for delivering patient centred care, but are also the cornerstones of behaviour change (Maizes, Rakel, & Niemiec, 2009). Brawley et al. (2013) contend that Registered Kinesiologists develop a patient's self-efficacy so that he/she is better able to cope with relapses and reframe problems, viewing them as challenges instead of obstacles. Similarly, as noted by participant four, the underlying goal of building a patient's self-efficacy is to "create a lifestyle manager." This then enables the maintenance of changes when the patient leaves the care of the Registered Kinesiologist.

Strategies to support traumatic experiences. Beyond being person centred, taking a holistic approach, and building self-efficacy, the participants identified other strategies to support traumatic experiences, namely *educate and prepare,* and *acknowledgment and empathy*. While the findings revealed that the participants do not directly educate patients about what trauma is, they do use education as a pivotal strategy in their practices to help prepare the

patient for the recovery journey. According to Cherry (2020), even without identifying or discussing a specific trauma, a patient's resolve can be strengthened, and self-efficacy that they can make the behaviour changes needed to achieve their goals can be fostered through education. Further, educating the patient on what trauma is, and the domino effect it can have on health supports the patient in acknowledging their own trauma, and normalizes the patient's experiences. Hence, healing can begin by increasing understanding that they had normal responses to an abnormal event (MHSU, 2013).

The expression of empathy was identified by participants as another salient tactic to respond to a trauma survivor and has, in fact, been shown to play a significant role in a HCP's trauma awareness (Clark et al., 2015). According to participant two: "[T]aking the time to get to know them, so that they understand. They know that you know what they're going through and what they've been through, and where they have to get to." Participant three similarly expressed: "[Y]ou're trying to be understanding and empathetic and helpful along the way and not have these preconceived notions about a patient." Indeed, research shows that when HCPs are empathetic and sensitive to patients' past experiences, they are more likely to engage in the treatment plan and in preventative care (Raja et al., 2015). That said, Ranjbar and Erb (2019) note that when a patient discloses a trauma experience, the HCP must be mindful to avoid delving into specific psychological content without trauma training. These authors recommend that HCPs respond with compassion and empathy instead. The use of compassion goes hand-in-hand with the participant's expression of empathy and has been established as a suitable tactic for responding to a patient's past trauma (Clark et al., 2015). Brown, King, and Wissow (2017) emphasize that having a compassionate attitude is fundamental to providing effective health care.

While both the literature (e.g., Sinclair et al., 2018) and participants agree that empathy and compassion play a significant role when providing quality care and responding to trauma, there are factors that can compromise the HCP's ability to do so that warrant mention. For example, participant one reflected on how she believes that HCPs, in general, are naturally empathetic due to the inherent nature of helping professions and providing care. However, she also talked about how practicing empathy means she needs strategies to protect herself from absorbing the effects of the patient's trauma via his/her story telling (i.e., vicarious trauma; Clark et al., 2015; Klinic, 2013). Therefore, the downside of integrating compassion and empathy into practice is that it can be extremely draining on the HCP. Pearlman and Saakvitne (1995) support the notion that vicarious trauma is inevitable and cumulative, and the HCP suffers from a negative psychological alteration as a result of the empathic engagement with a patient's trauma material. Therefore, the role of self-reflection is critical to a HCP in practice as a way to recognize and respond to how being empathetic affects them.

Self-Reflection and being self-aware. This strategy offers important benefits in practice for the practitioner and patient alike. Through ongoing self-reflection, Registered Kinesiologists can begin to recognize when they need to participate in their own self-care resulting from vicarious trauma. Additionally, self-reflection offers the Registered Kinesiologist an opportunity to bracket his/her own trauma history that may impact the therapeutic relationship (Klinic, 2013; SAMHSA, 2014). Engaging in self-reflective practices further benefits the patients as the HCP becomes increasingly mindful of his/her own behaviour and how it might increase the risk of re-traumatization. This goal of avoiding re-traumatization has been referred to as "well-rounded trauma awareness" (SAMHSA, 2014). By realizing they can be impacted by vicarious trauma and recognizing the signs and symptoms, Registered Kinesiologists can better prepare themselves to adopt preventative measures to protect their

well-being. They can then respond in kind to themselves, without using a coping mechanism that could be destructive to the patient (SAMHSA, 2014). Harris and Fallot (2001) write that there are many unsafe and common procedures within health care settings that retrigger trauma reactions and are experienced by the trauma survivor. Participants in the present study showed heightened awareness for this possibility through realizing that trauma exits and has triggers. For example, being mindful of how his own behaviour can trigger a patient was discussed by participant three:

> I just remember circling it in red, and when she saw the red circle around whatever the item was, it triggered her and she just started to cry and I was very much, like, in shock. I wasn't sure what had just happened or what I did … She automatically associated [the red circle] with a grade, but always a failure grade that she wasn't good enough or that she did something wrong and it wasn't up to her standard.

As discussed in relation to realizing, sometimes HCPs react and have negative thoughts towards challenging patients (i.e., *Kinesiologists' attitudes and assumptions*). Self-reflection and mindfulness can be useful tools for combating such attitudes while helping to reduce the risk of triggering a patient's past trauma and create a safe environment (Harris & Fallot, 2001; SAMHSA, 2014; MHSU, 2013). Moreover, the practice of self-reflection could also negate the impact of desensitization. For example, engaging in journaling or taking vocal memos might provide Registered Kinesiologists with the opportunity to reflect on their interactions with patients, including how they responded and why. In turn, this might enable them to recognize when they have become desensitized, thereby indicating a need for corrective behaviour and re-engagement via active listening.

Raja et al. (2015) outlined procedures to both implicitly and explicitly respond to trauma through the use of universal precautions and specific tactics. The findings from the

interviews showed that the participants already incorporate the suggested universal precautions via patient centred and holistic approaches. More explicit tactics such as education, building self-efficacy, and self-reflection were also noted as tangible responses. The literature supports how being patient centred benefits all patients, and promotes the achievement of a higher quality of life (Epstein & Street, 2011). However, it is important to be mindful of how practicing empathy can be linked to the experience of vicarious trauma. Additional training for Kinesiologists to better understand how they themselves can be affected by a patient's re-telling of his/her trauma could be useful for promoting professional well-being. This action of self-care among HCPs has been shown to aid in the provision of higher quality of care for patients (Clark et al., 2015; Sinclair et al., 2018).

Barriers. While the interview findings revealed several facilitators in the participants' practices enabling them to respond to a trauma survivor, only one barrier emerged: *limitations to individualized scope of work.* The participants conveyed that there are situations throughout a Registered Kinesiologist's career where his/her scope of practice is narrowed by an obligation to a specific task he/she was hired to perform. These restrictions then create a situation where the participants both realize and recognize underlying traumatic issues but are powerless to effectively respond to them. Focusing on addressing the barriers presented in realizing and recognizing trauma may be one avenue to attenuate this responding-oriented limitation given the three 'Rs' flow sequentially from one to the next. Comparatively, it is interesting to note that responding resulted in the fewest barriers. This might be explained by the fact that if the participants didn't realize trauma's prevalence, signs and symptoms may not have been recognized, thereby limiting awareness surrounding existing barriers to responding. Over the course of the interviews, it became increasingly apparent that a delayed realization existed whereby the participants do, in fact, treat trauma survivors. The IPA approach (Breakwell et

al., 2006) integrating a series of sequential interviews was integral in this regard as participants were able to reflect upon previous discussions with the student researcher and add to their views over time.

In summary, while the use of universal precautions (e.g., patient centred care) and specific tactics (e.g., empathy, education, self-efficacy enhancement) to effectively respond to a trauma survivor were identified by participants, there are still obstacles to overcome. The barriers were dominantly portrayed in association with realizing the prevalence and recognizing the signs and symptoms of trauma. Overcoming those barriers could potentially allow future Registered Kinesiologists to grasp their own trauma awareness fully, including the symbiotic relationship that exists between the HCP and patient in this context. In doing so, a domino effect could be observed whereby enhanced realization and recognition enable a positive response to trauma in practice. Applying this knowledge regarding trauma is vital when seeking to address long-term behaviour change (Brawley et al., 2013) and could potentially affect a patient's overall quality of life positively. As natural helpers in action, this "well-rounded trauma awareness" (SAMHSA, 2014) approach aligns with Registered Kinesiologists' scope of practice and primary goal of helping individuals to live a higher quality of life (Brawley et al. 2013).

Tying it all Together: Making Connections Between the Three "Rs"

Realizing, recognizing, and responding are vital components of a HCP's trauma awareness (Klinic, 2013; SAMHSA, 2014). While each "R" has a clearly defined purpose, they are all interconnected. One salient finding of the present study is the domino effect that was observed across the three 'Rs,' especially in relation to the barriers discussed. That is, when unresolved barriers exist within the earlier phases (i.e., realizing and recognizing), the ability of the HCP to subsequently respond to a patient's trauma becomes limited. What also became

increasingly apparent via analysis and discussion of the data was the fact that relationships and scope of practice were interwoven across the various themes, serving as both facilitators and barriers to trauma awareness. Each are discussed in detail below.

Relationships

Findings revealed that the participants highly value relationships: the therapeutic relationship (*patient-provider relationship*) and collaboration with other HCPs (*awareness of professional limitations*; *invoking additional support*) were noted as facilitators to recognizing and responding. However, they can all be applied as part of each “R" in an effort to enhance trauma awareness further. Wilson, Hutchison, and Hurley (2017) support this notion as they argue that the therapeutic relationship is the central component of an HCP utilizing his/her trauma awareness. Clark et al., (2008) similarly found the therapeutic relationship to be the single most important predictor for patient satisfaction – a noteworthy precursor and motivator for behavioural change (Greaves et al., 2011). As noted within the theme *patient provider relationship,* the participants believe that they need to build a strong relationship with their patients in order to be able to conduct effective care. They achieve this goal through *honesty and transparency* and *building trust over time*. Trustworthiness is a core principle for utilizing a trauma-informed approach and therefore, can be viewed as a core component of trauma awareness (Clark et al, 2015; Klinic 2013; Menschner & Maul, 2016; MHSU, 2013; SAMHSA, 2014). If a patient does not trust the HCP, then he/she may not communicate the information necessary for the HCP to recognize that they are a trauma survivor. This then limits the ability of the HCP to respond via creating an appropriate treatment plan. As noted by participant two: “If they don't trust you or respect you…you can’t get anything done.” If trust is not established early on, it will be challenging for the HCP to move past the realizing stage of his/her trauma awareness, thus impacting the relationship and quality of care provided negatively.

Elliott et al. (2005) contend that a fully developed sense of trauma awareness means that the HCP strives to create environments that take into account a patient and his/her needs such as safety, respect, and acceptance. This notion was evident within responding-oriented discussions surrounding empathy, acknowledgment, being person-centred, and building trust/rapport. Creating a safe environment for the patient in service of fostering the relationship has many benefits. First, putting conscious effort into making a safe space (e.g., through honesty and transparency) shows the patient that the HCP realizes vulnerabilities can be part of the treatment process. Realizing that trauma exists, is prevalent, and has triggers aligns with this practice. Second, a safe environment of non-judgement can empower the patient to disclose information more readily which can be useful for enabling the HCP to recognize signs of past trauma. Finally, the HCP can take the information shared to respond effectively, address the underlying trauma if possible, and create a holistic treatment plan that can be used to enhance quality of life (Raja et al., 2015).

Collaboration with other HCPs was also a notable finding as it relates to establishing relationships: specifically, when it comes to recognizing and responding to a patient's trauma. Collaboration is especially important when the HCP does not have trauma-specific training (Menschner & Maul, 2016; Ranjbar & Erb, 2019; MHSU, 2013; SAMHSA, 2014). One commonly discussed factor regarding the participants' collaborations with others involved referring patients back to family physicians (e.g., if a patient was exhibiting harmful coping mechanisms). Conversely, other participants would try to work side-by-side with other HCPs to address the underlying issue, especially if it was not included in their scope of practice directly. In light of these study findings, collaborating with others and utilizing the appropriate referrals may be an area to explore for future research in a trauma awareness context. Collaborating with others is a vital component when responding to a patient's past trauma

(Clark et al., 2015; Elliott et al., 2005; Klinic, 2013; Raja, et al., 2015), and as participant one commented "my first priority is getting them into the right treatment."

The COKO (2014) deems collaboration as a vital component to a Registered Kinesiologists' practice and it is included as a core competency. Domain four under Communication and Collaboration states the Registered Kinesiologist must be "able to communicate and collaborate effectively as a member of an interprofessional team." Yet, one challenge to collaborating with others that was identified by study participants involved the referral system. According to participant four: "they [other HCPs] don't even know who we are, let alone use us." He was referring to the fact that the health care system and care providers are still learning what Registered Kinesiologists do and how they can contribute to patient care. This is one of the reasons the OKA has established a "Find a Kinesiologist" section on their website (OKA, 2019 a).

There is literature that supports the notion that if Registered Kinesiologists maintain a certain level of trauma awareness, it will improve their communication with other HCPs and patients (Bartlett et al., 2008). Ranjbar and Erb (2019) support the use of collaboration as a core principle in addressing trauma within the rehabilitation field. The shared language that stems from an established view of trauma awareness was shown by Bartlett et al. (2008) to improve referrals and strengthen relationships across different health care systems. Fallot and Harris (2008) further discussed that health care settings implementing a standard of trauma awareness experienced greater collaboration and trust between HCPs. Taken together, these findings suggest that the collaboration process could be strengthened and potentially unified if Registered Kinesiologists, along with other HCPs, received a standard level of training on the effects of trauma to establish a common awareness, thereby facilitating improved interdisciplinary communication.

Scope of Practice. The scope of practice for Registered Kinesiologists was a clear topic of discussion throughout the interviews and a notable theme under each "R" as both a facilitator (e.g., *awareness of professional limitations*) and barrier (e.g., *focused on scope of practice*, *practice-related challenges*, and *limitations to the individualized scope of work*) to the participants overall trauma awareness. As the scope of practice thread spans across realizing, recognizing, and responding, it would make sense that this pivotal area be targeted in the future for enhancing trauma awareness among Registered Kinesiologists.

The scope of practice for Kinesiology states it is: "the assessment of human movement and performance and its rehabilitation and management to maintain, rehabilitate or enhance movement and performance" (Kinesiology Act, 2007, Chapter 10, Section 3). Brawley et al. (2013) emphasized that a Registered Kinesiologist should be considering physical activity when developing treatment plans, as health promotion and disease prevention require long-term maintenance of this health behaviour. Goal setting, feedback on progress, self-monitoring strategies, and self-efficacy enhancement are all part of this process (Brawley et al., 2013). The participants expressed that they use such techniques in practice as evidenced through the themes *educating and preparing* and *building self-efficacy*. Brawley et al. (2013) recommended specifically that Registered Kinesiologists develop self-efficacy as a mechanism for the patient to have a skillset to better cope with relapses. At present, the CKO (COKO, 2014) supports its members' trauma awareness through the core competencies which stress these health behaviour change skills.

While the scope of practice can facilitate Registered Kinesiologists' trauma awareness, it can also present a barrier. For example, *focused on the scope of practice* (Realizing) described how participants felt their scope created boundaries around the types of questions they could ask during assessments and throughout the care process. The implications of this

restriction included the potential to harm the therapeutic relationship and identification of existing trauma. One suggestion that was made to offset this limitation was the adoption of trauma screening during the history taking process (Recognizing). One common worry for HCPs is that they will open up " pandora's box" if they ask about trauma, so, they avoid the conversation all together (Clark et., 2015). However, it is promising that Havig (2008) found that 89% of patients indicated they would respond truthfully to a trauma screening question. Screening for trauma does not mean the HCP has to have specific trauma-oriented training and it does not mean the HCP has to then conduct psychological counseling regarding the trauma (Raja et al., 2015; Ranjbar & Erb, 2019). The primary benefit of doing so is that if trauma can be identified early on, the Registered Kinesiologist can then make a more appropriate and timelier referral (Bartlett et al., 2015) which does fall within the scope of practice for a Registered Kinesiologist (COKO, 2013; COKO, 2014).

Participants discussed how they can respond effectively to a patient's trauma disclosure through *acknowledgment and empathy*. Clark et al. (2015) similarly describe that acknowledging what the patient has experienced and their emotions around those experiences is an effective strategy when responding to a patient's trauma disclosure. As stated by participant one, "just having me know sometimes is helpful." Furthermore, Lietz (2014) found that the therapeutic relationship was enhanced when the HCP validated the patient's trauma experience which can also be achieved through empathy. This particular tool is explicitly recognized within the Registered Kinesiologist's scope of practice as a competency described in domain four "able to communicate with empathy and appropriate language with patients/clients."

In essence, kinesiology trainees should be reassured that the entry-to-practice exam helps to ensure that Registered Kinesiologists in Ontario have compatible skills to realize, recognize, and respond to a patient's past trauma. Moreover, as relationships, collaborations,

and making the most appropriate referrals are related to the scope of practice, an argument can be made that Registered Kinesiologists are in an ideal position to screen for and respond to past trauma in service of helping the patient to move forward in a positive way.

Strengths and Limitations

Strengths

A number of unique and noteworthy strengths exist for the present study. First, the IPA process involved exploring the participants' trauma awareness over three separate interviews; this procedure enabled a rich, thick description of trauma awareness (Breakwell et al., 2006; Lyons, & Coyle, 2007; Seidman, 2013). Having a specific purpose for each interview similarly aided in highlighting the participants true understanding of what trauma meant to them. Furthermore, the detailed description of the phenomenon (trauma awareness) was substantiated with the third interview which involved asking questions that promoted reflecting on meaning (Seidman, 2013). The reflection brought forth a number of the salient findings: one being the realization that the participants do, in fact, treat trauma survivors. Because the topic of trauma is a newer concept for Registered Kinesiologists to relate to, it was not surprising that the participants expressed that they initially found the notion of trauma in practice to be inapplicable. Without reflecting on their experiences over time, that realization may never have come to light. This three-part interview process highlighted that in order for the participants to recognize and respond to trauma, the realization that trauma exists in practice must first occur (Klinic, 2013; SAMHSA, 2014).

Another strength of the study involved its small sample size. Breakwell et al. (2006) argued that the main concern when using an IPA approach, is that justice be done to each participant's account of the phenomenon; a detailed analysis that is incredibly time consuming is required. With a sample of four, the student researcher was able to complete a highly

rigorous analysis of the data that included both an inductive and deductive approach (Elo & Kyngäs, 2007). In addition, the student researcher was able to stay focused on each individual and not be overwhelmed by the data (Breakwell et al., 2006; Lyons, & Coyle, 2007). A greater number of participants would have increased the amount of data, thereby risking its compression to the point that the integrity of the participants' experiences could have been compromised (Elo & Kyngäs, 2007).

The decision to deduce the participants' trauma awareness views into realizing, recognizing, and responding (as outline by SAMHSA, 2014) was also a significant strength. To my knowledge, this is the first study of its kind to explore data pertaining to trauma awareness in this way, especially among Registered Kinesiologists. In doing so, the specific facilitators and barriers for each category were realized and formatted in such a way that enabled the exploration of several tactics that Registered Kinesiologists already practice that have been established in the literature to be effective responses to trauma (Ranjbar & Erb, 2019; Raja et al., 2015). Moreover, the inductive analysis allowed the student researcher to stay true to what the participants expressed, thereby strengthening the rigour and trustworthiness of the data further (Elo & Kyngäs, 2007).

Lastly, while there is some literature related to the professional practice of Kinesiology (Wayne et al., 2017), there is none examining the concept of trauma awareness within the field. In comparison to other health professions (e.g., nursing, physiotherapy), Kinesiology is relatively green when it comes to regulation thereby strengthening the value and timeliness of this study. By capturing even a small sample of Registered Kinesiologists' in this context, more evidence-based research can now be developed focusing on the inclusion of TIC in practice and to enhance trauma awareness within the profession.

Limitations

One limitation of the present study was the rather homogenous sample of Registered Kinesiologist's recruited. Registered Kinesiologists generally practice in a wide range of settings that include clinical, assessment, and ergonomic environments (OKA, 2019 b). Recruiting for the present study was a challenge; anecdotally, reports from participants indicated that Registered Kinesiologists believe the research topic (i.e., trauma) is not relevant to the field. Due to the convenience sampling that occurred as a result, Registered Kinesiologist's from similar work backgrounds were enrolled. Three out of the four participants obtained a significant amount of work experience practicing in case/program management where they were consulting for insurance companies and/or employers. The purpose of IPA is to capture the essence of the participants' experiences (Brooks & Wearden, 2006). While the present study captured trauma, awareness experienced among those working predominantly within the case/program management setting, it failed to capture the essence of trauma awareness as it relates to other practice settings. Thus, transferability of the findings to all Registered Kinesiologists can be brought into question.

Another factor that may limit the transferability of the findings is that three of the participants were 'grandfathered in' to the profession (COKO, 2013). That is, practicing Kinesiologists in 2013 who could prove that they met the professional standards and competencies set by COKO (2013) were ushered into regulation and afforded the privilege of using the "Registered Kinesiologist" title. Currently, to use the title of Kinesiologist, the individual must complete a registration exam in order to demonstrate his/her baseline understanding (COKO, 2013). While the 'grandparenting' process was lengthy and very involved, it represents a very different experience of becoming a Registered Kinesiologist. Those who are 'grandfathered' typically have a great deal of experience from which to draw

and reflect on. Thus, it may be the case that practicing for an extended period of time is necessary in order to enable insights into trauma awareness. In the absence of such experience, transferability to newer Registered Kinesiologists may be somewhat limited.

Recommendations and Future Research Considerations

Registered Kinesiologists strive to help their patients to live a higher quality of life (Brawley et al., 2013). The TIC movement advocates that all HCPs (including Registered Kinesiologists) adopt some level of trauma awareness due to the prevalence of trauma in society and its effects on patient health status (Menschner & Maul, 2016). While the present study displayed that these Registered Kinesiologists have a foundational awareness of trauma and there are many skills used that are compatible with a TIC approach, there are several areas where enhanced training would be useful. Based on these findings, the following are recommendations for Registered Kinesiologists and the governing body to consider as a more trauma informed approach is called for:

1. *Enhanced professional development and/or mentorship training for new and seasoned Kinesiologists may be avenues to enhance awareness of the many different ways that trauma can show up in practice.* The delayed realization that the participants have, in fact, treated trauma survivors indicates that they may not have come to that realization without participating in the present study. In line with the aforementioned challenges associated with recruiting, Registered Kinesiologists may not be fully integrating the realization of the prevalence of trauma into practice and could benefit from more education in this regard.
2. *Further education regarding the various types of trauma (i.e., historical, generational) and how they can affect an individual is needed.* While the participants realized that trauma experiences are unique to the individual and result in a continuum of effects, a

gap remained: trauma can be passed down within families. Realizing that a patient may not have experienced or witnessed a trauma directly but has learned the negative coping behaviour from a loved one is vital to consider when developing any treatment strategy (Klinic, 2013). Particularly for a Registered Kinesiologist who is attempting to change a behaviour (e.g., physical activity) in order to achieve long term maintenance (Brawley, et al., 2013).

3. *Creating a common TIC language across HCPs is needed.* A Registered Kinesiologist must first understand that maladaptive coping (e.g., smoking, substance abuse, overeating, high-risk sexual behaviour) may be related to trauma, and that these behaviours can have adverse effects (Raja et al., 2015). Recognizing that various behaviours can be the result of past trauma allows for trauma to be explicitly identified. By establishing a common language to be used across health care professions with regards to trauma awareness and TIC, interdisciplinary relationships and referrals could be strengthened and care proficiency enhanced (Bartlett et al., 2015).
4. *Consider adopting a trauma screening process within the history taking protocol.* Challenging behaviours exhibited by patients could actually mean that they have suffered past trauma, and the resultant behaviour is a symptom of this experience (Crosby et al., 2017; Oral et al., 2016). Registered Kinesiologists could benefit from knowing more about the specific symptoms of trauma, and how taking a deeper patient history could be valuable for addressing root issues and treating the whole person. As Ranjbar and Erb (2019) established, the trauma screen can increase HCPs' understanding of hidden determinants and enable them to better utilize tools to assist with their management. Through bringing hidden determinants to the forefront, the

Registered Kinesiologist can then design a treatment strategy that is more holistic (Brawley et al., 2013; Irwin & Morrow, 2005).

5. *Further education on how to recognize and address vicarious trauma is needed.* HCPs who do not address vicarious trauma are at greater risk of becoming overwhelmed with their work, and without realizing it, often distance themselves from the patient as an attempt for self-protection (Clark et al., 2015). While empathy is a vital tool for responding to a trauma survivor and strengthening relationships (Sinclair et al., 2018), it can leave the Registered Kinesiologist feeling vulnerable and potentially elicit some form of vicarious trauma (Saakvitne et al., 2000). Self-reflection and being mindful was a salient finding for the participants and both are important for reducing the risk of patient re-traumatization (Harris & Fallot, 2001; MHSU, 2013; SAMHSA, 2014). Enhanced self-awareness and bracketing are also imperative for Registered Kinesiologists who might be more readily triggered so they can manage their own experiences while providing services.
6. *Educate Registered Kinesiologists on how to Educate their Patients*. According to Cherry (2020), even without identifying or discussing a specific trauma, a patient's resolve can be strengthened, and self-efficacy that they can make the behaviour changes needed to achieve their goals can be fostered through education. Educating patients on what trauma is, and the domino effect it can have on health supports the patient in acknowledging their own trauma, and normalizes the patient's experiences. Hence, healing can begin by increasing understanding that they had normal responses to an abnormal event (MHSU, 2013). Moreover, this education could serve to promote self-management and ownership of personal health which enhances compliance with treatment protocols.

Conclusion

More than 89% of the general population is affected by trauma (Kilpatrick et al., 2013). As movement specialists and professionals positioned to promote health and prevent chronic illness, Registered Kinesiologists are likely to encounter trauma among patients either directly or indirectly (Hamberger et al., 2019; Sweeney et al., 2018). Thus, having a comprehensive understanding of how Registered Kinesiologists experience and view trauma in practice will serve to inform future evidence-based research (Wayne et al., 2017,) as well as avenues for enhancing understanding within the profession, ultimately helping to reduce its' impact on the patient's (and provider's) health status (Ranjbar & Erb, 2019).

While the study design makes it difficult to generalize the findings, in-depth insights into trauma awareness as experienced by these Registered Kinesiologists were uncovered through interconnections made between realizing the prevalence of, recognizing the signs and symptoms of, and responding to trauma (SAMHSA, 2014). Realizing the prevalence of trauma is the first step towards being trauma aware, and has subsequent implications on the Registered Kinesiologist's ability to recognize and respond to trauma. The present study found that there was a heightened realization of the prevalence of trauma, believed to be common, yet uniquely experienced by each individual. Further education among Registered Kinesiologists in training or in practice was identified as a recommendation to strengthen understanding on the many types of trauma that exist, along with triggers and effects on health. This type of professional development could help reduce the risk of providing inadequate and/or inappropriate care provision (Mengesha et al., 2018; SAMHSA, 2014).

Recognizing the signs and symptoms of trauma is paramount to a HCPs trauma awareness; the HCP must have the skillset to discern between signs and symptoms of the

primary injury, and those related to trauma experiences (Clark et al., 2015; Elliott et al., 2005; Klinic, 2013; Raja, et al., 2015; Ranjbar, & Erb, 2019; SAMHSA, 2014). The findings of the present study suggest that there is an awareness regarding the signs and symptoms of trauma; however, at the same time, an inability to utilize that knowledge. Screening for trauma during history taking (Ranjbar & Erb, 2019) has been recommended as a structured way to acknowledge trauma may exist along with symptoms. In doing so, research has revealed a positive impact on the HCP's practice through increased understanding of underlying issues, and better utilization of tools to subsequently respond to hidden determinants. Recognizing the hidden determinants can also be associated with behaviour change, which is particularly advantageous for Registered Kinesiologists who are tasked with promoting long-term physical activity adherence (Brawley et al., 2013; OKA, 2019b). Hidden determinants can also be identified as underlying trauma and more appropriate referrals can thereby be made (Bartlett et al., 2015).

A number of facilitators were revealed in line with the responding category; the most, in fact, of all "R" categories, suggesting that Registered Kinesiologists have many skills that are compatible with a trauma awareness approach. The responding-oriented discussions surrounding empathy, acknowledgment, being person-centred, and building trust/rapport demonstrate that these Registered Kinesiologists have a strong foundation of trauma awareness (Elliott et al., 2005). Findings from the interviews revealed several strategies the participants integrate into practice that support responding to a patient's trauma. The techniques employed included universal precautions (e.g. patient centred care) and specific tactics (e.g., empathy, education, self-efficacy enhancement) that are supported by Raja et al. (2015). The specific tactics identified (e.g., education), while an effective response to a patient's trauma per the participants, may require that HCPs (e.g., Registered Kinesiologists) receive additional training

regarding understanding of what trauma is and its effect on health status. Supplementary education regarding the impact on trauma may also be necessary to promote competence when specifically educating patients on their own trauma. Educating patients on the normalcy and prevalence of trauma, its signs and symptoms, and the relationship it has on health status/behaviours has been shown to instigate the healing process (Cherry, 2020; Crosby et al., 2017; Elliot et al., 2005; Oral et al., 2016; MHSU, 2013), thereby enabling Registered Kinesiologists to recognize trauma survivors more readily (Crosby et al., 2017; Oral et al., 2016).

One common sentiment expressed across the three categories involved scope of practice whereby discussing a patient's trauma does not fall within the roles and responsibilities of a Registered Kinesiologist. The implications of restricting conversations in this manner can be potentially damaging to the therapeutic relationship and could re-traumatize the trauma survivor (Clark et al., 2015; Elliot et al., 2005; Hamberger et al., 2019; Ranjbar & Erb, 2019). The present study identified various areas where the Registered Kinesiologist can still have conversations regarding past trauma with patients and even respond, all while still remaining within the current scope of practice (COKO, 2013). Registered Kinesiologists should be reassured that by virtue of their training and regulation, they already have the tools to realize, recognize, and respond to a patient's past trauma: these findings corroborate this notion.

To further grow trauma awareness within the field of kinesiology, it would be beneficial for the CKO to implement a trauma screening process into the scope of practice (e.g., via history taking). Additionally, considering the adoption of a section within the core competencies that establishes a baseline foundation regarding what trauma is and its effect on health could be established. This would help to ensure that Registered Kinesiologists have the understanding to recognize the broad spectrum of signs and symptoms of trauma. Moreover,

supplementary training in trauma's prevalence and types could further increase the Registered Kinesiologist's confidence to then screen for and hold conversations regarding a patient's trauma, and still remain within the scope of practice. In doing so, Registered Kinesiologists can then respond to the identified trauma using one of the many tactics already identified to be present within the profession by the current participants. In essence, a trauma awareness lens taught within and advocated for by the profession of Kinesiology would serve to facilitate the Registered Kinesiologists' treatment of the whole person, including past trauma. In turn, this acknowledgement and treatment plan inclusion could serve to impact behaviour change positively, enhance the efficiency and efficacy of the patient-provider relationship, and ultimately enhance the patient's overall quality of life.

References

Alegria, M., Canino, G., Ríos, R., Vera, M., Calderón, J., Rusch D., & Ortega, A. N. (2002). Inequalities in use of specialty mental health services among Latinos, African Americans, and Non-Latino Whites. *Psychiatric Services, 53*, 1547-1555. doi 10.1176/appi.ps.53.12.1547

American Psychiatric Association (2013). *The Diagnostic and Statistical Manual of Mental Disorders* (5th ed.). Arlington, VA, United States of America: American Psychiatric Association.

Anda, R. F., Felitti, V. J., Bremner, J. D., Walker, J. D., Whitfield, C., Perry, B. D., Dube, S. R., & Giles, W. H. (2005). The enduring effects of abuse and related adverse experiences: A convergence of evidence from neurobiology and epidemiology. *European Archives of Psychiatry in Clinical Neuroscience*, *256*, 174-186. doi 10.1007/s00406-005-0624-4

Arboleda-Flórez, J., FRCPC, FRCM, & Stuart, H. (2012). From sin to science: Fighting the stigmatization of mental illness. *The Canadian Journal of Psychiatry, 57*(8), 427-463

Atlas.ti. (2019). Atlas.ti: The Qualitative Data Analysis & Research Software. Retrieved from https://atlasti.com

Azeem, M. W., Aujla, A., Rammerth, M., Binsfeld, G., & Jones, R. B. (2011). Effectiveness of six core strategies based on trauma informed care in reducing seclusions and restraints at a child and adolescent psychiatric hospital. *Journal of Child and Adolescent Psychiatric Nursing*, *24*(1), 11-15. doi: 10.1111/j.1744-6171.2010.00262.x.

Banh, M. K., Saxe, G., Mangione, T., & Horton, N. J. (2008). Physician-reported practice of managing childhood posttraumatic stress in pediatric primary care. *General Hospital Psychiatry, 30*, 536-545.

Bartlett, J. D., Barto, B., Griffin, J. L., Fraser, J. G., Hodgdon, H., & Bodian, R. (2015). Trauma-Informed Care in the Massachusetts child trauma project. *Child Maltreatment*, 1-12. doi:10.1177/1077559515615700

Bassil, K., & Zabkiewicz, D. (2014). *Health Research Methods: A Canadian Perspective* (1st ed.). Don Mills, ON, Canada: Oxford University Press.

Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report*, *13*(4), 544-559.

Bellet, P., & Michael, M., (1991). The importance of empathy as an interviewing skill in medicine. *Journal of the Americal Medical Association*, *266*(13), 1831- 1832.

Bessel, A., & van der Kolk, M. (2003). The neurobiology of childhood trauma and abuse. *Child Adolescent Psychiatric Clinic, 12*, 293-317.

B.C. Provincial Mental Health and Substance Use (MHSU) (2013). *Trauma-Informed Practice Guide*. BC, Canada: Author. (Original work published 2012).

Bickley, L. S. (2013). *Bates Pocket Guide to Physical Examination and History Taking* (7th ed.). Philadelphia, PA, USA: Williams and Walkins. (Original work published 1995).

Biggerstaff, D., & Thompson, A. (2008). Interpretative phenomenological analysis: A qualitative methodology of choice in healthcare research. *Qualitative Research in Psychology*, 5. doi 10.1080/14780880802314304.

Black, P., Woodworth, M., Tremblay, M., & Carpenter, T. (2012). A review of trauma-informed treatment for adolescents. *Canadian Psychology, 53*(3), 192-203. doi:101037/a0028441.

Brawley, L., Gierc, M., & Locke, S. (2013). Powering adherence to physical activity by changing self-regulatory skills and beliefs: Are kinesiologists ready to counsel? *Kinesiology Review*, *2*, 4-16. doi:10.1123/krj.2.1.4.

Breakwell, G. M., Hammond, S., Fife-shaw, C., & Smith, J. (2006). *Research Methods in Psychology* (3rd ed.). Thousand Oaks, California, USA: SAGE. (Original work published 1995).

Brooks, J. & Wearden, A. (2006). A critical evaluation of the use of interpretative phenomenological analysis in health psychology. *Psychology & Health, 21*, 87-108. doi:10.1080/14768320500230185.

Brown, P. J. (2000). Outcome in female patients with both substance use and posttraumatic-stress disorders. *Alcoholism Treatment Quarterly*, *18*(3), 127–139.

Brown, A., & Finkelhor, D. (1986). Impact of child sexual abuse: A review of the research. *Psychological Bulletin*, 99, 66–77.

Brown, J. D., King, M. A., & Wissow, L. S. (2017). The central role of relationships with trauma-informed integrated care for children and youth. *Academic Pediatrics*, *17*(7S), S94–S101. https://doi.org/10.1016/j.acap.2017.01.013

Broyles, S. T., Staiano, A. E., Drazba, K. T., Gupta, A. K., Sothern, M., & Katzmarzyk, P. T. (2012). Elevated C-reactive protein in children from risky neighborhoods: Evidence for a stress pathway linking neighborhoods and inflammation in children. *PloS one*, *7*(9), e45419.

Brunzell, T., Waters, L., & Stokes, H. (2015). Teaching with strengths in trauma-affected students: A new approach to healing and growth in the classroom. *American Journal of Orthopsychiatry*, *85*(1), 3-9.

Bryan, S. N., & Katzmarzyk, P. T. (2011). The association between meeting physical activity guidelines and chronic diseases among Canadian adults. *Journal of Physical Activity and Health,*, *8*(1), 10-17.

Carothers, J. (2020). *Trauma awareness and resilience: The basics.* Retrieved April 29, 2020, from https://www.slma.cc/trauma-blog/

Cascade Behavioural Health. (2020). *Symptoms. Signs & effects of psychological trauma.* Retrieved March 16, 2020, from https://www.cascadebh.com/behavioral/trauma/signs-symptoms-effects/

Chartier, M. J., Walker, J. R., & Naimark, B. (2009). Health risk behaviors and mental health problems as mediators of the relationship between childhood abuse and adult health. *American Journal of Public Health*, *99*(5), 847–854. https://doi.org/10.2105/AJPH.2007.122408

Chartier, M. J., Walker, J. R., & Naimark, B. (2010). Separate and cumulative effects of adverse childhood experiences in predicting adult health and health care utilization. *Child Abuse & Neglect*, *34*(6), 454–464. https://doi.org/10.1016/j.chiabu.2009.09.020

Cherewick, M., Doocy, S., Tol, W., Burnham, G., & Glass, N. (2016). Potentially traumatic events, coping strategies and associations with mental health and well-being measures among conflict-affected youth in Eastern Democratic Republic of Congo. *Global Health Research and Policy*, *1*, 8. https://doi.org/10.1186/s41256-016-0007-6

Cherry, K. (2020). *Self-efficacy and why believing in yourself matters.* Retrieved April 21, 2020, from https://www.verywellmind.com/what-is-self-efficacy-2795954

Clark, C., Classen, C., Fourt, A., & Shetty, M. (2015). *Treating the Trauma Survivor*. Routedge, United States: Taylor & Francis.

Cohen, J. A., & Scheeringa, M. S. (2009). Post-traumatic stress disorder diagnosis in children: challenges and promises. *Dialogues in clinical neuroscience*, *11*(1), 91–99.

College of Kinesiology of Ontario (2013). *Guidelines – Professional Misconduct – Scope of Practice, Controlled Acts and Delegation.* Retrieved from http://www.coko.ca

College of Kinesiologists of Ontario (2014). *Essential competencies of practice for Kinesiologists in Ontario.* Retrieved January 20, 2015, from http://www.coko.ca

College of Kinesiologists of Ontario (2015). *Inactive registration.* Retrieved from http://www.coko.ca/en/home/members/inactive-registration

College of Kinesiology of Ontario (2020 a). *Self-assessment.* Retrieved May 21, 2020, from https://coko.ca/CKO_Public/Public_Content_Records/Registered/Subcontent2/Self_Assessment.aspx.

College of Kinesiology of Ontario (2020 b). *Standards and Resources.* Retrieved May 21, 2020, from https://coko.ca/CKO_Public/Registered_Kinesiologists/Standards _and_ Resources/CKO_Public/Public_Content_Records/Registered/Standards_and_Guidelines.aspx?hkey=de66b0f2-c734-449e-824b-5ba38531cf84.

Cook, A., Spinazzola, J., Ford, J., Lanktree, C., Blaustein, M., Cloitre, M., … van der Kolk, B. (2005). Complex trauma in children and adolescents. *Psychiatric Annals, 35*(5), 390–398. https://doi.org/10.3928/00485713-20050501-05

Costello, E. J., Ernkanli, A., Fairbank, J. A., & Angold, A. (2002). The prevalence of potentially traumatic events in childhood and adolescence. *Journal of Trauma Stress*, *15*(2), 99-112.

Courtois, C. A., & Ford, J. D. (2013). *Treatment of complex trauma: A sequenced, relationship-based approach.* New York: Guilford Press.

Craik, R. L. (2011). A convincing case for the psychologically informed physical therapist. *Physical therapy*, *91*(5), 606–608. https://doi.org/10.2522/ptj.2011.91.5.606

Crosby, S.D., Somers, C. L., Day, A. G., Zammit, M., Shier, J. M., & Baroni, B. A. (2017). Examining school attachment, social support, and trauma symptomatology among court-involved female students. *Journal of Child and Family Studies, 26*, 2539-2546.

Davis, M., Costigan, T., & Schubert, K. (2017). Promoting lifelong health and well-being: Staying the course to promote health and prevent the effects of adverse childhood and community experiences. *Academic Pediatrics*, *17*(7S), S4–S6. https://doi.org/10.1016/j.acap.2016.12.002

Danese, A., & Lewis, S. (2017). Psychoneuroimmunology of early-life stress: The hidden wounds of childhood trauma?. *Neuropsychopharmacology: Official Publication of the American College of Neuropsychopharmacology*, *42*(1), 99–114. https://doi.org/10.1038/npp.2016.198

Danese, A., & McEwen, B. S. (2012). Adverse childhood experiences, allostasis, allostatic load, and age-related disease. *Physiology & Behavior*, *106*(1), 29–39. https://doi.org/10.1016/j.physbeh.2011.08.019.

Delaney-Black, V., Covington, C., Ondersma, S. J., Nordstrom-Klee, B., Templin, T., Ager, J., … Sokol, R. J. (2002). Violence exposure, trauma, and IQ and/or reading deficits among urban children. *Archives of Pediatrics & Adolescent Medicine*, *156*(3), 280–285.

Diener, I., Kargela, M., & Louw, A. (2016). Listening is therapy: Patient interviewing from a pain science perspective. *Physiotherapy Theory and Practice*, *32*(5), 356–367. https://doi.org/10.1080/09593985.2016.1194648

Dibley, L. (2011). Analyzing narrative data using McCormack's lenses. *Nurse Researcher, 18*(3), 13-19. Retrieved from http://nurseresearcher.rcnpublishing.co.uk/news-and-opinion/commentary/analysing-qualitative-data

Elbert, T., Rockstroh, B., Kolassa, I-T., Schauer, M., & Neuner, F. (2006). The influence of organized violence and terror on brain and mind: A co-constructive perspective. In Baltes, P., Reuter-Lorenz, P., & Rosel, F. (Eds) *Lifespan development and the brain: The perspective of bi cultural co-constructivism.* Cambridge, UK: Cambridge University Press.

Elliott, D., Bjelajac, P., Fallot, R., Markoff, L., & Reed, B. G. (2005). Trauma-informed or trauma-denied: Principles and implementation of trauma-informed services for women. *Journal of Community Psychology*, *33*(4), 461-477. doi: 10.1002/jcop.20063

Elo, S., & Kyngäs, H. (2007). The qualitative content analysis process. *JAN Research Methodology*, *62*(1), 107-115. https://doi.org/10.1111/j.1365-2648.2007.04569.x.

Epstein, R. M., & Street, R. L., Jr (2011). The values and value of patient-centered care. *Annals of Family Medicine*, *9*(2), 100–103. https://doi.org/10.1370/afm.1239

Fallot R. D., & Harris, M. (2009). *Creating cultures of trauma-informed care (CCTIC): A self-assessment and planning protocol.* Retrieved from https://www.healthcare.uiowa .edu/icmh/documents/CCTICSelf-AssessmentandPlanningProtocol0709.pdf.

Felitti, V. J. (2017). Future applications of the adverse childhood experiences research. *Journal of Child and Adolescent Trauma*, *10*, 205-206. doi.10.1007/s40653-017-0189-1.

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., … Marks, J. S. (1998). The relationship of adult health status to childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine*, *14*, 245-258.

Finlay, L. (2002). "Outing" the researcher: The provenance, process, and practice of reflexivity. *Qualitative Health Research*, *12*(4), 531-545.

Finlay, L., & Ballinger, C. (2006). *Qualitative research for allied health professionals: Challenging choices*. Chichester, England ;: J. Wiley & Sons.

Framo, J. (1981). The Integration of Martial Therapy Sessions with Family of Origins. In A. Gutman, & Knistern (Eds.), *Handbook of Family Therapy* (pp. 133-158). New York, USA: Brunner/Mazel.

Fusch, P. I., & Ness, L. R. (2015). Are We There Yet? Data Saturation in Qualitative Research. *The Qualitative Report, 20*(9), 1408-1416. Retrieved from https://nsuworks.nova.edu/tqr/vol20/iss9/3

Gillespie, C. F., Bradley, B., Mercer, K., Smith, A., Connelly, K., Gapen, M., … Ressler, K. J. (2009). Trauma exposure and stress-related disorders in inner city primary care patients. *General Hospital Psychiatry*, *31*(6), 505-514. https://doi.org/10.1016/j.genhosppsych.2009.05.003.

Goetz, S. B., & Taylor-Trujillo, A. (2012). A change in culture: Violence prevention in an acute behavioural health setting. *Journal of the American Psychiatric Nurses Association*, *18* (2), 96–103.

Greaves, C. J., Sheppard, K. E., Abraham, C., Hardeman, W., Roden, M., Evans, P.H., & Schwarz, P., & The IMAGE Study Group. (2011). Systematic review of reviews of intervention components associated with increased effectiveness in dietary and physical activity interventions. *BioMed Central Public Health, 11,* 1–12. doi:10.1186/1472-6963-11-1

Green B., Kaltman, S., Frank, L., Glennie, M., Subramanian, A., Fritss-Wilson, M., … Chung, J. (2011). Primary care providers' experiecanes with trauma patients: A qualitative

study. *Psychological Trauma: Theory, Research, Practice, and Policy, 3*(1), 37-41. doi:10.1037/a0020097

Green, B., Saunders, P., Power, E., Dass-Brailsford, P., Schelbert, K. B., Giller, E., … Mete, M. (2015). Trauma-informed medical care: ACME communication training for primary care providers. *Family Medicine*, *47*(1), 7-14.

Grissinger M. (2017). Disrespectful Behavior in health care: Its impact, why it arises and persists, and how to address it-part 2. *P & T: A Peer-Reviewed Journal for Formulary Management*, *42*(2), 74–77.

Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods, 18*(1), 59-82. doi:10.1177/1525822X05279903

Hamberger, L. K., Barry, C., & Franco, Z. (2019). Implementing trauma-informed care in primary medical settings: Evidence-based rationale and approaches. *Journal of Aggression, Maltreatment & Trauma 28 (4), 425- 444.* https://doi.org/10.1080/ 10926771.2019.1572399.

Hanson, R., & Lang, J. (2014). Special focus section: A critical look at trauma informed care among agencies and systems serving maltreated youth and their families. *Child Maltreatment, 19* (3), 275. doi:10.1177/1077559514557018

Harris, M., & Fallot, R. (2001). *Using trauma theory to design service systems. New directions for mental health services*. San Francisco, United States: Jossey-Bass.

Haskell, L. (2001). *Bridging Responses: A front-line worker's guide to supporting women who have post-traumatic stress*, Centre for Addiction and Mental Health Toronto, ON.

Haskell, L. (2003). *First Stage Trauma Treatment: A guide for mental health professionals working with women*, Toronto, ON: Centre for Addiction and Mental Health.

Havig, K. (2008). The health care experiences of adult survivors of child sexual abuse: A systematic review of evidence on sensitive practice. *Trauma, Violence & Abuse*, *9*(1), 19–33. https://doi.org/10.1177/1524838007309805

Heart, B. (1998). The return to the sacred path: Healing the historical trauma and historical unresolved grief response among the Lakota through a psychoeducational group intervention. *Smith College Studies in Social Work, 68*(3), 288–305.

Hoffman, S. (2013). *Introduction to Kinesiology: Studying Physical Activity* (4th ed.). Champaign, IL, USA: Human Kinetics. (Original work published 2000).

Hopper, E. K., Bassuk, E. L., & Olivet, J. (2010). Shelter from the storm: Trauma-informed care in homelessness services settings. *The Open Health Services and Policy Journal*, *3*, 80-100.

Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, *15*(9), 1277–1288. https://doi.org/10.1177/1049732305276687

Janikowski, T. P., & Glover, N. M. (1994). Incest and substance abuse: Implications for treatment professionals. *Journal of Substance Abuse Treatment, 11*, 177–183.

Kassam-Adams, N., Rzucidlo, S., Campbell, M., Good, G., Bonifaco, E., Slouf, K., … Grather, D. (2014). Nurses' views and current practice of trauma-informed paediatric nursing care. *Journal of Pediatric Nursing*, 1-7 http://dx.org/10.1016/j.pedn.2014.11.008.

Kelzelman, C., & Stravropoulos, P. (2012). *'The Last Frontier'- Practice Guidelines for Treatment of Complex Trauma and Trauma Informed Care and Service Delivery'*. Kirribilli, Australia: Adults Surviving Child Abuse (ASCA).

Kessler, R.C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress disorder in the national comorbidity study. *Archives of General Psychiatry*, *52*, 1048–1060.

Kilpatrick, D. G., Resnick, H. S., Milanak, M. E., Miller, M. W., Keyes, K. M., & Friedman, M. J. (2013). National estimates of exposure to traumatic events and PTSD prevalence using DSM-IV and DSM-5 criteria. *Journal of Traumatic Stress*, *26*(5), 537–547. https://doi.org/10.1002/jts.21848

Klinic: Community Health Care. (2013). *Trauma-Informed: The trauma-informed tool kit* (2nded.). Winnipeg, Canada: Klinic.

Ko, S. J., Kassam-Adams, N., Wilson, C., Ford, J. D., Berkowtiz, S. J., & Wong, M. (2008). Creating trauma-informed systems: Child welfare. education, first responders, health care, juvenile justice. *Professional Psychology: Research and Practice, 39*(4), 396-404. doi: 10.1037/0735-7028.39.4.396.

Kokkinos, P. (2012). Physical activity, health benefits, and mortality risk. *ISRN Cardiology*, *2012*, 1-14. doi:10.5402/2012/718789

Kornhaber, R., Walsh, K., Duff, J., & Walker, K. (2016). Enhancing adult therapeutic interpersonal relationships in the acute health care setting: An integrative review. *Journal of multidisciplinary healthcare*, *9*, 537–546. https://doi.org/10.2147/JMDH.S116957

Lanius, R. A., Vermetten, E., & Pain, C. (2010). The impact of early life trauma on health and disease. Cambridge, United States: Cambridge University Press.

Layne, C., Ippen, C., Strand, V., Stuber, M., Abramovitz, R., Reyes, G., … Pynoos, R. (2011). The core curriculum on childhood trauma: A tool for training a trauma-informed

workforce. *Psychological Trauma: Theory, Research, Practice, and Policy*, *3*, 243-252. 10.1037/a0025039.

Lewis, J., & O'Sullivan, P. (2018). Is it time to reframe how we care for people with non-traumatic musculoskeletal pain?. *British Journal of Sports Medicine*, *52*(24), 1543–1544. https://doi.org/10.1136/bjsports-2018-099198

Lietz, C. (2014). A case study approach to mental health recovery: Understanding the importance of trauma-informed care. Journal of Ethical Human Psychology and Psychiatry. 16, 167-182.

Link, B. G., & Phelan, J. C. (2006). Stigma and its public health implications. *The Lancet*, *367*, 528-529.

Linton, S. J., Flink, I. K., & Valeyen, J. W. (2018). Understanding the etiology of chronic pain from a psychological perspective. *Physical Therapy*, *98*(5), 315-324. https://doi.org/10.1093/ptj/pzy027

Lyons, E., & Coyle, A. (2007). *Analysing qualitative data in psychology*. Thousand Oaks, California, USA: SAGE.

Irwin, J., & Morrow, D. (2005). Health promotion theory in practice: An analysis of Co-Active Coaching. *International Journal of Evidence Based Coaching and Mentoring*, *3*(1), 29-38

Insel, P. M., Roth, W. T., Irwin, J. D., & Burke, S. M. (2012). *Core concepts in health* (Canadian ed.). United States: McGraw-Hill.

Markowitz, F. E. (1998). The effects of stigma on the psychological well-being and life satisfaction of persons with mental illness. *Journal of Health and Social Behavior*, *39*(4), 335-347. doi: 10.2307/2676342 .

Maizes, V., Rakel, D., & Niemiec, C. (2009). Integrative medicine and patient-centered care. *EXPLORE*, *5*(5), 277-289. https://doi.org/10.1016/j.explore.2009.06.008.

Major, B., & O'Brien, L. T. (2005). The social psychology of stigma. *Annual Review of Psychology*, *56*, 393-421. doi: 10.1146/annurev.psych.56.091103.070137.

Marshall, M., & Woodley, C. (2016). History taking and information gathering. In William E. G. Thomas, Malcolm W. R. Reed, & M. G. Wyatt (Eds.), *Oxford Textbook of Fundamentals of Surgery.* (pp. 569-574). New York, NY, USA: Oxford University Press.

McLeay, S. C., Harvey, W. M., Romaniuk, M. N., Crawford, D. H., Colquhoun, D. M., Young, R. M., … Lawford, B. R. (2017). Physical comorbidities of post-traumatic stress disorder in Australian Vietnam War veterans. *The Medical Journal of Australia*, *206*(6), 251–257. https://doi.org/10.5694/mja16.00935

Medistudents. (2018). *History Taking.* Retrieved March 18 2020, from https://www.medistudents.com/en/learning/osce-skills/other-skills/patient-history-taking/

Mengesha, Z. B., Perz, J., Dune, T., & Ussher, J. (2018). Preparedness of health care professionals for delivering sexual and reproductive health care to refugee and migrant women: A mixed methods study. *International Journal of Environmental Research and Public Health*, *15*(1), 174. https://doi.org/10.3390/ijerph15010174

Menschner, C., & Maul, A. (2016). Key ingredients for successful trauma-informed care implementations. Available at http://www.chcs.org/media/ATC_ whitepaper _040 616.pdf. Accessed April 25, 2020

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative Research: A Guide to Design and Implementation* (4th ed.)*.* San Francisco, CA: Jossey-Bass

Middlebrooks, J. S., & Audage, N. C. (2008). *The effects of childhood stress on health across the lifespan*. Atlanta, United States: Centers for Disease Control and Prevention, National Centre for Injury Prevention and Control.

Minahan, J. (2019). Trauma-Informed teaching strategies. *Educational Leadership*, *77*(2), 30-35.

Miranda, A., Salmei, J., King, L., Baldwin, J., Berry, E., Austin, D., ... Salihu, H. (2015). Adverse childhood experiences and health-related quality of life in adulthood: Revelations from a community needs assessment. *Health and Quality of Life Outcomes*, 13(123), 1-12. doi:10.1186/s12955-015-0323-4.

Morrissey, J. P., Jackson, E., Ellis, A. R., Amaro, H., Brown, V. B., & Najavits, L. M. (2005). Twelve-month outcomes of trauma-informed interventions for women with co-occurring disorders. *Psychiatric Services, 56*(10), 1213-1222. doi: 10.1176/ appi.ps.56.10.1213

Moustakas, C. (1994). *Phenomenological research methods*. Thousand Oaks, CA: Sage.

Muskett, C. (2013). Trauma-informed care in inpatient mental health settings: A review of the literature. *International Journal of Mental Health Nursing,* 1-9. doi:10.1111/inm.12012.

Myers, A., & Rosen, J. C. (1999). Obesity stigmatization and coping: Relation to mental health symptoms, body image, and self-esteem. *International Journal of Obesity*, *23*, 221-230.

Najavits, L.M., Weiss, R.D., & Shaw, S.R. (1997). The link between substance abuse and post-traumatic stress disorder in women: A research review. *The American Journal on the Addictions*, 6, 273–283.

National Association of State Mental Health Program Directors (NASMHPD) and National Technical Assistance Center for State Mental Health Planning (NTAC). (2004). *The damaging consequences of violence and trauma: Facts, discussion points, and*

recommendations for the behavioural health system. Washington, D.C., U.S. Department of Health and Human Services.

National Centre for Trauma-Informed Care (NCTIC). (2015, August 14). *Trauma-informed care and trauma services.* Retrieved from https://www.samhsa.gov/nctic/trauma-interventions

National Child Traumatic Stress Network, School Collaborative Group (2008). *Child trauma toolkit for educators.* Los Angeles: National Center for Child Traumatic Stress.

National Institute of Mental Health (NIMH) (2001). Helping children and adolescents cope with violence and disasters. Washington, DC: Department of Health and Human Services, Public Health Services, National Institute of Health.

Nayduch, D. (2009). *Nurse to Nurse: Trauma Care*. New York, NY, USA: McGraw-Hill Medical.

Nurius, P. S., Green, S., Logan-Greene, P., & Borja, S. (2015). Life course pathways of adverse childhood experiences toward adult psychological well-being: A stress process analysis. *Child Abuse and Neglect, 45,* 143-153. http://dx.doi.org/10.1016j.chiabu.2015.03.008.

O'Keeffe, M., George, S. Z., O'Sullivan, P. B., & O'Sullivan, K. (2019). Psychosocial factors in low back pain: letting go of our misconceptions can help management. *British Journal of Sports Medicine*, *53*(13), 793–794. https://doi.org/10.1136/bjsports-2018-099816

Ontario Kinesiologist Association (2019 a). *About OKA.* Retrieved from https://www.oka.on.ca/site/about/OKA?nav=sidebar

Ontario Kinesiologist Association (2019 b). *Discover Kinesiology.* Retrieved from https://www.oka.on.ca/site/kinesiology/discover?nav=sidebar

Ontario Kinesiologist Association (2019 c). *Position Papers.* Retrieved from https://www.oka.on.ca/site/advocacy/positionpapers?nav=sidebar

Ontario Laws and Statues. (*2007, S.O. 2007, c. 10, Sched. O*). *Kinesiology Act*. Retrieved from https://www.ontario.ca/laws/statute/07k10

Ontario Ministry of Health and Long Term Care. (1991, S.O. 1991, c. 18.). *Regulated health professions act,* Retrieved from https://www.ontario.ca/laws/statute/91r18

Oral, R., Ramirez, M., Coohey, C., Nakada, S., Walz, A., Kuntz, B., … Peek-Asa, C. (2016). Adverse childhood experiences and trauma informed care: The future of health care. *Pediatric RESEARCH*, *79*(1), 227-233. Retrieved from doi.10.1038/pr.2015.197.

Patton, M. Q. (2015). *Qualitative research and evaluation methods* (4th ed.). Thousand Oaks, CA: Sage

Pearlman, L. A., & Saakvitne, K. W. (1995). Trauma and the therapist: Countertransference and vicarious traumatization in psychotherapy with incest survivors. W W Norton & Co.

Petrie, M., & Zatzick, D. (2010). Collaborative care interventions in general trauma patients. *Oral and Maxillofacial Surgery Clinics of North America*, *22*(2), 261–267. https://doi.org/10.1016/j.coms.2010.01.002

Phelan, S. M., Burgess, D. J., Yeazel, M. W., Hellerstedt, W. L., Griffin, J. M., & van Ryn, M. (2015). Impact of weight bias and stigma on quality of care and outcomes for patients with obesity. *Obesity Reviews: An Official Journal of the International Association For The Study Of Obesity*, *16*(4), 319–326. https://doi.org/10.1111/obr.12266

Polit, D. F., & Beck, C. T. (2004). Nursing Research: Principles and Methods. 7th Edition, Lippincott Williams & Wilkins, Philadelphia.

Public Health Ontario. (2012). Taking Action to Prevent Chronic Illness. Toronto, ON, Canada: Ontario Agency for Health Protection and Promotion, and Cancer Care Ontario.

Puhl, R. M., & Heuer, C. A. (2010). Obesity stigma: Important considerations for public health. *American journal of public health*, *100*(6), 1019–1028. https://doi.org /10.2105/AJPH.2009.159491

Puhl, R. M., Phelan, S. M., Nadglowski, J., & Kyle, T. K. (2016). Overcoming weight bias in the management of patients with diabetes and obesity. *Clinical diabetes: A publication of the American Diabetes Association*, *34*(1), 44–50. https://doi.org/ 10.2337/diac lin.34.1.44

Raja, S., Hoersch, M., Rajagopalan, C. F., & Chang, P. (2014). Treating patients with traumatic life experiences: Providing trauma-informed care. *The Journal of the American Dental Association*, *145*(3), 238-245. https://doi.org/10.14219/jada.2013.30.

Raja, S., Hasnain, M., Hoersch, M., Gove-Yin, S., & Rajagopalan, C. (2015). Trauma informed care in medicine: Current knowledge and future research directions. *Family & Community Health*, *38*(3), 216–226. https://doi.org/10.1097/FCH.0000000000000071

Ranjbar, N., & Erb, M. (2019). Adverse childhood experiences and trauma-informed care in rehabilitation clinical practice. *Archives of Rehabilitation Research and Clinical Translation*, *1*(1-2), 1-8. https://doi.org/10.1016/j.arrct.2019.100003.

Saakvitne, K., Gamble, S., Pearlman, L., & Lev, B. (2000). *Risking connection: A training curriculum for working with survivors of childhood abuse.* Baltimore, USA. Sidran Press.

Sandelowski, M. (1995), Qualitative analysis: What it is and how to begin. *Research in Nursing and Health, 18*, 371-375. doi:10.1002/nur.4770180411

Schachter, C.L., Stalker, C.A., Teram, E., Lasiuk, G.C., Danilkewich, A. (2008). *Handbook on sensitive practice for health care practitioner: Lessons from adult survivors of childhood sexual abuse*. Ottawa: Public Health Agency of Canada.

Schnurr, P. P., & Jankowski, M. K. (1999). Physical health and post traumatic stress disorder: Review and synthesis. *Seminars in Clinical Neuropsychiatry, 4*, 295-304.

Seidman, I. (2013). *A structure for in-depth phenomenological interviewing*. Interviewing as Qualitative Research: A Guide for Researchers in Education and the Social Sciences, (4th ed., pp. 20-23). New York, NY, United States: Teachers College Press, Columbia University.

Seng, J. S., Graham-Bermann, S. A., Clark, M. K., McCarthy, A. M., & Ronis, D. L. (2005). Posttraumatic stress disorder and physiacl comorbidity among female children and adolscents: Results from servie-use data. *Pediatrics, 116*, 767-776.

Sinclair, S., Hack, T. F., Raffin-Bouchal, S., McClement, S., Stajduhar, K., Singh, P., … Chochinov, H. M. (2018). What are healthcare providers' understandings and experiences of compassion? The healthcare compassion model: A grounded theory study of healthcare providers in Canada. *BMJ Open*, *8*(3), e019701. https://doi.org/10.1136/bmjopen-2017-019701

Skeffington, P. M., Rees, C. S. and Mazzucchelli, T. (2017). Trauma exposure and post-traumatic stress disorder within fire and emergency services in Western Australia. *Australian Journal of Psychology, 69,* 20-28. doi:10.1111/ajpy.12120

Sledjeski, E. M., Speisman, B., & Dierker, L. C. (2008). Does number of lifetime traumas explain the relationship between PTSD and chronic medical conditions? Answers from the national comorbidity survey-replication (NCS-R). *Journal of Behavioural Medicine*, 341–349. doi: 10.1007/s10865-008-9158-3.

Smith, J.A. & Osborn, M. (2003). Interpretative phenomenological analysis, Qualitative Psychology: A Practical Guide to Research methods, Sage London

Sotero, M. M. (2006). A conceptual model of historical trauma: Implications for public health practice and research. *Journal of Health Disparities Research and Practice 1*(1), 93-108.

Stevens, J. (October 3, 2012). *ACES Too High.* Retrieved from https://acestoohigh.com/2012/10/03/the-adverse-childhood-experiences-study-the-largest-most-important-public-health-study-you-never-heard-of-began-in-an-obesity-clinic/

Su, S., Jimenez, M. P., Roberts, C. T., & Loucks, E. B. (2015). The role of adverse childhood experiences in cardiovascular disease risk: A review with emphasis on plausible mechanisms. *Current Cardiology Reports*, *17*(10), 88. https://doi.org/10.1007/s11886-015-0645-1.

Substance Abuse and Mental Health Services Administration (SAMHSA). (2014). *A Treatment improvement protocol: Trauma-informed care in behavioural services*. Retrieved from: https://www.ncbi.nlm.nih.gov/books/NBK207201/pdf/Bookshelf_NBK207201.pdf

Substance Abuse and Mental Health Services Administration. (2012). *Results from the 2011 National Survey on Drug Use and Health: Mental Health Findings*, NSDUH Series H-45, HHS Publication No. (SMA) 12-4725. Rockville, MD: Substance Abuse and Mental Health Services Administration

Sweeney, A., Filson, B., Kennedy, A., Collinson, L., & Gillard, S. (2018). A paradigm shift: Relationships in trauma-informed mental health services. *BJPsych advances*, *24*(5), 319–333. https://doi.org/10.1192/bja.2018.29

Trauma-Informed Care project (TIP). (2015). *What is TIC?.* Retrieved March 29, 2015, from http://www.traumainformedcareproject.org

Tuffour I. (2017) A Critical Overview of Interpretative Phenomenological Analysis: A Contemporary Qualitative Research Approach. *Journal of Healthcare Communications,2*(52), 1-5. doi: 10.4172/2472-1654.100093

Van Ameringen, M., Mancini, C., Patterson, B., & Boyle, M. H. (2008). Post-traumatic stress disorder in Canada. *CNS Neuroscience & Therapeutics*, *14*, 171–181.

Van der Kolk, B. (2001). The secret life of the brain. In. Grabin, D. (Executive Producer). [Television series]. New York: WNET.

Viamontes, G., & Nemeroff, C. D. (2009). Brain-body interactions: The physiological impact of mental processes-the neurobiology of the stress response. *Psychiatric Annals*, *39*(12), 975-984. doi: 10.3928/00485718-20091124-03.

Walsh, R. A. (1995). The approach of the human science researcher: Implications for the practice of qualitative research, *The Humanistic Psychologist*, *23*, 333-344.

Wayne, N., Ataman, R., Fischer, S., Smith, L., Lavriviere, C., Thomas, S., ... Mina, D. S. (2017). Developing a research agenda for the profession of kinesiology: A modified delphi study. *Translational Journal of the American College of Sports Medicine*, *2*(10), 51-56. doi: 10.1249/TJX.0000000000000034.

Wenger, S., Drott, J., Fillipo, R., Findlay, A., Genung, A., Heidem, J., & Bradt, J. (2018). Reducing opioid use for patients with chronic pain: An evidence-based perspective. *Physical Therapy, 98*(5), 424-433.https://doi.org/10.1093/ptj/pzy025

Whiting D. (2007). Inappropriate attitudes, fitness to practice and the challenges facing medical educators. *Journal of medical ethics*, *33*(11), 667–670. https://doi.org/10.1136/jme.2006.017947

Wilson, A., Hutchinson, M., & Hurley, J. (2017). Literature review of trauma-informed care: Implications for mental health nurses working in acute inpatient settings in

Australia. *International Journal of Mental Health Nursing*, *26*(4), 326–343. https://doi.org/10.1111/inm.12344.

Yaribeygi, H., Panahi, Y., Sahraei, H., Johnston, T. P., & Sahebkar, A. (2017). The impact of stress on body function: A review. *EXCLI Journal*, *16*, 1057–1072. https://doi.org/ 10.17179 /excli2017-480

Ziadni, M. S., Carty, J. N., Doherty, H. K., Porcerelli, J. H., Rapport, L. J., Schubiner, H., & Lumley, M. A. (2018). A life-stress, emotional awareness, and expression interview for primary care patients with medically unexplained symptoms: A randomized controlled trial. *Health Psychology: Official Journal of the Division of Health Psychology, American Psychological Association*, *37*(3), 282–290. https://doi.org/10.1037/hea0000566

Ziegler, M. F., Greenwald, M. H., DeGuzman, M. A., & Simon, H. K. (2005). Posttraumatic stress responses in children: Awareness and practice among a sample of pediatric emergency care providers. *Pediatrics*, *115*(5), 1261–1267. https://doi.org/10.1542 /peds.2004-1217

Zhang, M. (2019). *Desensitized to death: The culture of medical training.* Retrieved 7 May 2020, from https://hippocratesmedreview.org/desensitized-to-death-the-culture-of-medical-training/

Appendix A

Participant Information Letter

ON LAKEHEAD LETTERHEAD

Dear Potential Participant,

We graciously welcome your participation in a research study titled "Exploring the Experiences Among Kinesiologists to Identify the Extent of Trauma Awareness within the Profession", to be completed by Elizabeth Wall, a student in the Master of Science in Kinesiology program at Lakehead University under the supervision of Dr. Joey Farrell. Your participation is being requested, as you are a Practicing Registered Kinesiologist in Ontario.

My research project explores the concept of trauma awareness that is a key principle of Trauma Informed Care (TIC). Trauma Informed Care is an organizational structure and treatment framework that involves understanding, recognizing, and responding to the effects of all types of trauma. It takes into consideration the impact of trauma in all aspects of service delivery, and places priority on the individual's safety, choice, and control. The primary objective for Trauma Informed Care is to be able to recognize best practice, reduce impact of trauma on survivors, and strengthen health outcomes. The aim of the research study is to try and understand your experiences working as a Kinesiologist in relation to your own understanding of trauma and the effects that trauma may have in your practice.

If you agree to participate, I would like to speak to you on three separate occasions regarding your work, for approximately 30 to 60 minutes each time. The semi-structured interviews may be conducted either in person, through Skype, or through the Ontario telemedicine network. An interview guide for each separate interview has been created and reviewed by my supervisor. The questions are designed around the concept of trauma awareness, to help the conversation flow as we together explore your experience in working with as a Registered Kinesiologist. Each interview will we be audio recorded and stored digitally on a password protected computer that only the myself and my supervisor will have access to.

Following each interview, I will transcribe the information collected and the script will be reviewed and partial analysis will be conducted to inform preliminary key concepts that begin to emerge during the conversations. A summary of each interview will also be provided to you, via email prior to the second and third interviews, so that you can confirm or modify my initial interpretations. The summary of my initial interpretations for the final interview will be submitted for your review within a week following completion of the final interview.

Please understand that your participation in this study is voluntary and that at any point throughout the study you may decline to answer a question or withdraw completely without penalty or consequence.

Although there are no direct benefits associated with your participation, this study will help us understand the current knowledge base of trauma within the field of Kinesiology and it may provide insight if Trauma Informed Care may be an appropriate approach of practice for a Kinesiologist.

Throughout the interviews you will not be asked anything related to your own personal trauma; however, there is a potential risk that discussing the concept of what trauma is could elicit a degree of emotional distress. I will provide contact information for a counsellor who uses a trauma informed approach in her practice, and who may also provide telehealth counselling if you live outside of Thunder Bay. Information will also be provided for the

Thunder Bay Counselling Centre, should you wish to contact one of them, and they also offer online counselling as an option if you live outside of Thunder Bay or wish to remain anonymous. There are no other potential risks or harm that could be detrimental to your health or well being during the study.

Confidentiality and anonymity will be maintained at all times, and your identity will not be included in the findings of this study. This will be achieved by coding all the data collected with a participant number and/or a pseudonym to remove identity from these items, which will be kept separately from your consent form. Only my supervisor and myself will have access to the data collected during the course of this study, which will be securely stored in a locked filing cabinet or password protected computer at Lakehead University. The data, upon completion, will be stored for a minimum of five years within the School of Kinesiology in accordance with the Lakehead University policy.

If the information gathered in this study is published in a peer-reviewed journal or presented at a conference, participant anonymity and confidentiality will be maintained. Upon completion of the study, you are welcome to a summary of the research results, which you may indicate on the consent form.

If you have any questions or concerns at any point during this investigation, please do not hesitate to contact myself or my supervisor (contact information below). The Lakehead University Research Ethics Board has approved this study. If you have any questions related to the ethics of the research and would like to speak to someone outside of the research team please contact Sue Wright at the Research Ethics Board at 807-343-8283 or at research@lakeheadu.ca.

Thank-you for your consideration,

Yours truly,

Mrs. Elizabeth Wall
MSc Candidate
(807) 631-3408
ewall2@lakeheadu.ca

Dr. Joey Farrell
Faculty Supervisor
(807) 346-7754
joey.farrell@lakeheadu.ca

Appendix B

ON LAKEHEAD LETTERHEAD

Participant Consent Form

I have read and understood the material in the information letter. I hereby consent to my participation in the research.

I understand:

- The benefits of the study;
- I will be provided with information for counselling services as discussing the concept of trauma could elicit a degree of emotional distress;
- I may withdraw from the research at any point during the data collection period;
- I may choose not to answer any questions;
- All information gathered will be treated confidentially;
- All data will be securely stored by the student researcher while completing the research study, and will then be submitted to the School of Kinesiology, where the data will be securely stored a minimum of 5 years as per Lakehead University's policy;
- I will not be identifiable in any written documents or presentations resulting from this research;
- The results may be presented at a conference and/or published;
- The interviews will be audio recorded digitally and be securely stored on a USB stick with the transcribed data.

Yes ☐ No ☐

_____ _____ _____

(Print Name) (Signature) (Date)

Please scan the signed consent form and return it via email to the student researcher, Ms. Elizabeth Wall at ewall2@lakeheadu.ca

Please check the box below if you wish to receive a summary of the results of the project.

☐ Yes, please send me the project summary of results to the email address provided below.

Email address: _____

Appendix C

Interview Guide

The purpose of this research study is to explore the phenomenon of trauma awareness within the practice of Kinesiology using a semi-structured open-ended approach.

The aim of the research study is to try and understand your experiences related to how trauma histories in your patients present themselves in your practice, how you respond to disclosure of trauma histories and if trauma histories impact the therapeutic relationship you develop with your patients.

First Interview: Focused life History

- Purpose: The aim of this interview is to establish the context of your experience by focusing on your life history, gathering details about your education and work experiences.

1. Can you start by telling me a little about yourself, from where you went to school to what you do today?
2. Can you explain your educational background for me, by sharing more detail about what your experience was like in University?
3. Tell me about how you came to have the career you have today?
    a. Did you have other jobs other then the one you have today?
    b. Can you recreate a timeline from your education to today?
4. Why did you choose to become a Kinesiologist?
5. Can you describe what your current role is in your practice?
6. What kind of patients do you usually treat?
7. Describe what your goal/objective is with your patients?
8. Walk me through what a typical day at work is like for you?
9. What role does your place of work play in the community?
10. Does your place of work have a mission statement and if so what is it?
11. What does your work place try to achieve for the individuals who come to seek medical assistance?
12. What are some of the major lessons you have learned throughout your career?
13. Throughout your education, training and job experience has there been any point where you have specifically learned about trauma and the effects of trauma?

Second interview: Details of experience

- Purpose: The aim of this interview is to reconstruct the details of your experiences within the environments that you practice in.

1. We ended the last interview by you discussing some of your experiences where you have learned about the concept of trauma. How would your define trauma?
2. Has your concept of what trauma is changed throughout your career? If so:
    a. Have there been specific situations that have aided you in broadening your concept of what trauma is? What have they been?
    b. How has your understanding of trauma been influenced/shaped by your education and work experience?
3. From your perspective do you ever see/treat individuals who have experienced trauma? If so:
    a. Can you recall a specific situation/patient?
    b. What kind of trauma have your patients experienced?
    c. Have these trauma histories affected your experience of working with these individuals?
4. Walk me through your process when a patient first comes to see you, and your assessment process?
5. How important does a patient's history play a role in the therapeutic relationship you build with your patients, and how do you go about taking a medical history?
6. Do you ever ask questions that explore a patient's history that is not directly related to the reason why he/she has come to see you? If so:
    a. Tell me about a specific example when you have done so?
    b. What did you learn by exploring a patient's history more?
    c. How did that knowledge affect the creation of the treatment plan?
7. What information do you utilize in order to create a treatment plan for a patient?
8. How do you go about creating a treatment plan for your patients?
9. Have you ever experienced difficult patients where they did not adhere to the treatment plan you created? If so, tell me about some of those experiences and how you respond to them?
10. Has there been anytime where your approach with a patient wasn't working? If so, what happened during that situation?
11. Can you share an experience with a patient where you were able to provide excellent care and had a successful patient outcome?
    a. What was the patient outcome, and was that what you were working towards?
    b. From your perspective what were the factors that contributed to a successful outcome?

Third Interview: Reflection on the meaning

- Purpose: The aim of this interview is to reflect on your shared experiences from the past two interviews tho makes sense and create meaning of the factors that contribute to your concept of trauma awareness.

    1. Over the past two interviews we have discussed the concept of trauma, has your own definition of trauma changed? If so, how?
    2. A common definition of trauma is that "it is any experience that overwhelms an individual's capacity to cope". What does this definition mean to you?
    3. Have you learned anything about your practice from recalling your past experiences working as a Kinesiologist?
    4. From your experiences has your patient's past ever affected the reason why he/she has sought out your help? If so how?
    5. If a patient disclosed that he/she was under a lot of stress because of a traumatic event, how would you respond?
    6. What is your understanding of how a person may be affected by a traumatic event/s?

Appendix D

ON LAKEHEAD LETTERHEAD

Permission Letter to Ontario Kinesiology Association

Dear Ms. Sabrina Francescut, COKO President

My name is Mrs. Elizabeth Wall and I am currently completing my MSc in Kinesiology at Lakehead University. I am planning to conduct a research study titled "Exploring the Experiences Among Kinesiologists to Identify the Extent of Trauma Awareness within the Profession" under the supervision of Dr. Joey Farrell. I would like to investigate the current working knowledge of trauma and the understanding that Registered Kinesiologists maintain regarding the effects trauma on individuals.

There is a growing body of research regarding a treatment framework called Trauma Informed Care (TIC). Trauma Informed Care is an organizational structure and treatment framework that involves understanding, recognizing, and responding to the effects of all types of trauma. It takes into consideration the impact of trauma in all aspects of service delivery, and places priority on the individual's safety, choice, and control. The primary objective for TIC is to be able to recognize best practice, reduce impact of trauma on survivors, and strengthen health outcomes. That being said, a key principle of TIC is trauma awareness. Therefore I would like to explore trauma awareness among Kinesiologists to gather an understanding of the impact that trauma may have within the practice of kinesiology.

I would like to invite registered members to participate in a series of semi-structured interviews. I am seeking your assistance in the distribution of the recruitment document, via email, to all members of your association. The recruitment document is an information letter that describes the research study and invites Registered Kinesiologists to participate. Potential participants are informed in the letter that their involvement in this study is voluntary and that they may withdraw from the study at any given time. Please see the attached information letter, which provides a detailed description of this study.

Thank you for your consideration. I will follow up with you in a few days to discuss the project with you further and to answer any questions you may have.

Yours truly,

Mrs. Elizabeth Wall
Graduate Student Researcher
(807) 631-3408
ewall2@lakeheadu.ca

Dr. Joey Farrell
Faculty Supervisor
(807) 346-7754
joey.farrell@lakeheadu.ca

Cc: Stuart Moulton, COKO Executive Director

Appendix E

ON LAKEHEAD LETTERHEAD

Dear (Insert Participants Name)

I want to sincerely thank you for participating in this research study. I enjoyed our conversations and your feedback has provided in-depth understanding of your concept of what trauma awareness is.

Discussing the concept of trauma can affect people in various ways. I would like to provide you with contact information for two types of counselling services in case you have found yourself affected by our conversations in any way.

The first contact information is for Ms. Leanna R. Probizanski, MSW, RSW, from Healthy Foundations Counselling in Thunder Bay. Ms. Probizanski is a counsellor who uses a trauma informed approach in her practice, and who can provide trauma-specific services. Ms. Proizanski also offers telehealth counselling for those individuals living outside of Thunder Bay. She can be reached by phone at 807-684-1880, or by email through http://www.healthyfoundationscounselling.com/.

The second contact information is for the Thunder Bay Counselling Centre. Thunder Bay Counselling is the leading provider of personal and workplace support services. They are an independently operated, not-for-profit organization. Counselling, education and support services are provided by professional counsellors to help people make positive changes in their personal, family or work lives. The Thunder Bay Counselling Centre also offers online counselling as an option for those individuals living outside of Thunder Bay or who wish to remain anonymous. You can contact the center online at http://www.tbaycounselling.com/en/contact/, through email at community@tbaycounselling.com or by phone at 807-684-1880.

Again, I deeply want to thank you for your participation in this research study.

Yours truly,

Mrs. Elizabeth Wall
MSc Candidate
(807) 631-3408
ewall2@lakeheadu.ca

Dr. Joey Farrell
Faculty Supervisor
(807) 346-7754
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