POST-TRAUMATIC STRESS DISORDER IN ABORIGINAL PEOPLE IN CANADA:

Review of Risk Factors, the Current State of Knowledge and Directions for Further Research

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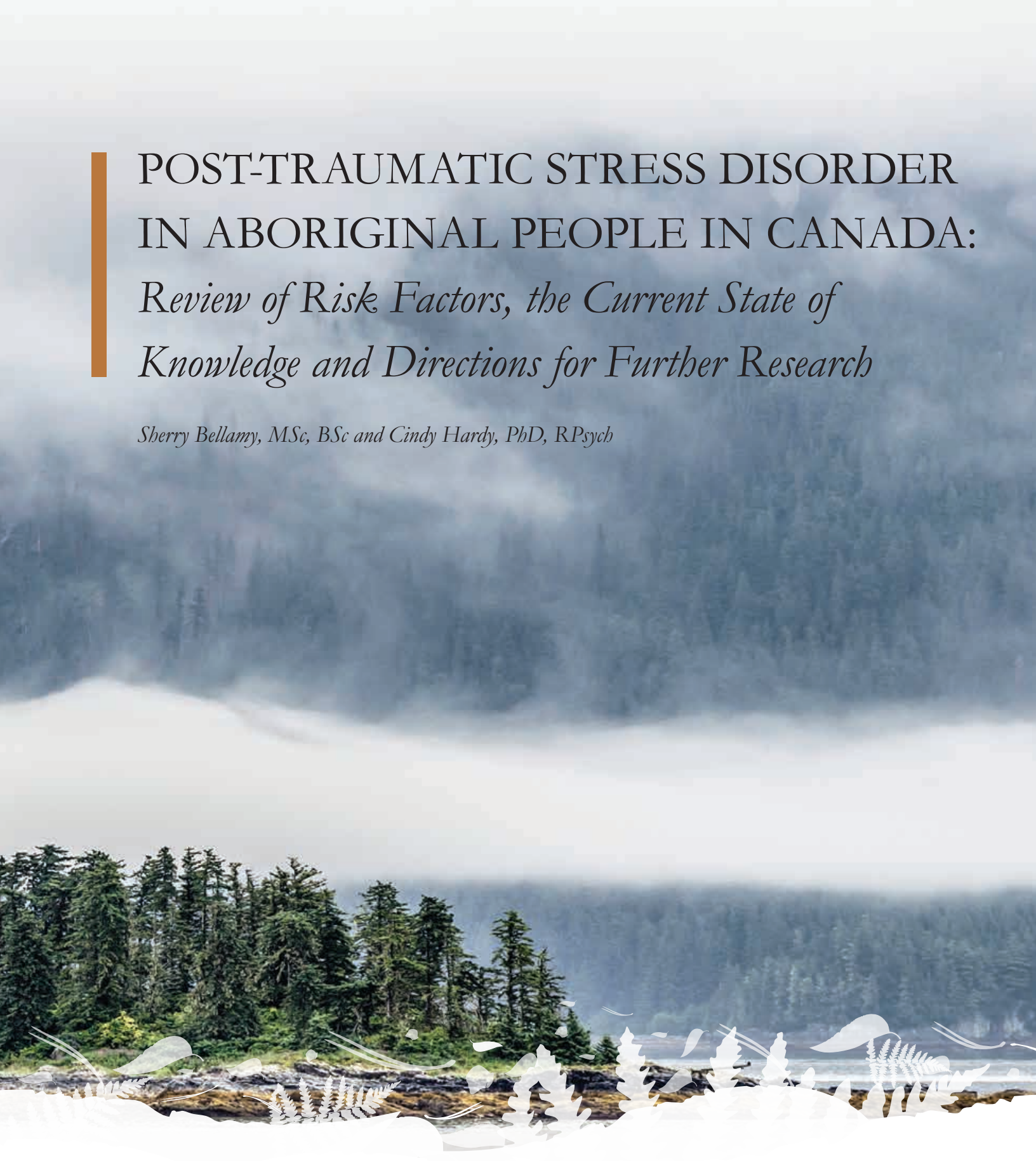

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EMERGING PRIORITIES

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INTRODUCTION

The *Diagnostic and Statistical Manual of Mental Disorders – 5th Edition* (American Psychiatric Association [APA], 2013) defines post-traumatic stress disorder (PTSD) as a trauma or stressor-related disorder in which symptoms began or worsened after the experience of one or more traumatic events (APA, 2013). While many individuals who develop PTSD show a substantial decline in symptoms during the first year, a third of individuals who develop PTSD experience ongoing symptoms and are at increased risk of developing additional disorders such as problematic substance use, anxiety and/or depression, panic disorder, or risk of suicide (National Collaborating Centre for Mental Health [NCCMH], 2005). Early researchers of PTSD thought that reactions to traumatic events occurred on a continuum in which the severity of any particular individual's reaction was a reflection of the severity of the traumatic event (Sherin & Nemeroff, 2011). However, over the years it has become clear that many people who are exposed to severe traumatic events do not develop PTSD. It is now thought that individual responses to trauma depend both on the nature of the trauma and on characteristics of the individual (APA, 2013; Sherin & Nemeroff, 2011; Yehuda & LeDoux, 2007). A modified overview of the criteria for PTSD diagnosis is displayed in Figure 1.

This paper will provide an overview of current knowledge on PTSD in Aboriginal peoples in Canada. Given limitations in this knowledge base, especially about the prevalence of PTSD in Aboriginal peoples, this paper will discuss the risk factors that place Aboriginal peoples at risk to develop PTSD, the challenges in determining prevalence rates of PTSD in Aboriginal communities, the impacts of PTSD on the health and well-being of Aboriginal peoples, and the importance of culturally appropriate treatment strategies that have demonstrated success in Aboriginal communities. It will also discuss limitations of a PTSD diagnosis and the need to consider both the risk and protective factors found in many Aboriginal communities. The paper will conclude with a list of resources that may be helpful for Aboriginal peoples seeking help and/or information for PTSD.

The information that informs this paper was derived from a search of literature on PTSD in Aboriginal peoples in Canada. PsycINFO, Pub Med and PsycARTICLES databases were searched using combinations of the following key words: PTSD and Aboriginal; PTSD and Risk; PTSD and Gender; PTSD and Prevalence; PTSD and Treatment; Complex PTSD; PTSD and child; PTSD and Alcohol; PTSD and Social Support; Aboriginal and Resilience; PTSD and Depression; and PTSD and Substance Abuse. In addition, the journal *Pimatisiwin: A Journal of Aboriginal and Indigenous Community Health* was hand-searched for papers on healing, therapy, mental health, post-traumatic stress disorder and trauma. Preference was given to the most current research and to studies focused on Aboriginal populations. All searches were limited to articles published in English.

A note on terminology

When we use the term 'Aboriginal peoples' in this document we are referring to all the original peoples in Canada. Three separate groups are recognized by the Canadian Constitution: First Nations, Inuit and Métis (Aboriginal Affairs and Northern Development Canada [AANDC], 2013). Within these three Aboriginal groups, there is enormous diversity with more than 60 different languages within 12 language families (Statistics Canada, 2012a). Aboriginal languages reflect distinct identities, histories and cultures and are linked to traditional knowledge as well as connections to the land, community and family (Norris, 2007). There are also substantial cultural, social and environmental differences between communities as well as diversity in lifestyle, values, and perspectives within any Aboriginal community (Kirmayer, Tait, & Simpson, 2009). Further, First Nations, Inuit, and Métis each have their own individual historical relationship with early European settlers and the Canadian government (Kirmayer et al., 2009).

Although the use of the blanket term 'Aboriginal peoples' is misleading as it indicates reference to a homogeneous group, Aboriginal peoples across Canada share a legacy of colonization which has resulted in social, economic and political circumstances that bring significant challenges to their health and well-being (Kirmayer et al., 2009). Although some Aboriginal communities are doing well despite multiple past and present challenges associated with colonialism (Kirmayer, et al., 2009), many of the risk factors for PTSD that are specific to Aboriginal peoples in Canada are a consequence of historical trauma associated with forced attendance to residential schools and the ongoing intergenerational trauma that has impacted families and communities.

Figure 1: Overview of PTSD Criteria

Diagnostic features of PTSD

Exposure to one or more traumatic events

- Event must be especially threatening such as exposure to actual or threatened death, actual or threatened sexual violence, serious physical injury
- Witness – of the traumatic event; or learning that the trauma happened to another person such as a close friend or family member.
- Or, through repeated exposure to trauma through occupations such as emergency responders exposed to accidents scenes or through learning of details of child abuse.

Symptoms of PTSD

Intrusion Symptoms – One or more intrusion symptoms that began or worsened after the traumatic event

- Persistent avoidance of stimuli (people, places, conversations, situations and/or activities associated with the traumatic event.

Negative alterations in cognitions and mood – Two or more that began or worsened after the traumatic event

- Inability to remember important aspects or the traumatic event that are not due to drugs, alcohol or head injury
- Persistent exaggerated negative beliefs about oneself and the world (i.e. nobody can be trusted, my nervous system has been completely ruined)
- Persistent distorted thoughts about the traumatic event that lead to blame of self or others
- Ongoing emotions – fear, horror, shame, guilt or anger
- Marked diminished interest in activities, feelings of detachment from others and inability to experience positive emotions

Alterations in arousal – Two or more of the following symptoms that began or worsened after the traumatic event and occur for one month or more

- Irritable behaviour or angry outbursts without adequate provocation (i.e. verbal or physical aggression)
- Self destructive or reckless behaviour
- Hypervigilance, exaggerated startle response, difficulty concentrating, sleep disturbance

Dissociative symptoms – PTSD may or may not occur with dissociative symptoms. Diagnosis of PTSD with dissociative symptoms is given if in response to the trauma, persistent and reoccurring dissociative symptoms occur

- Feeling a sense of ***depersonalization*** – a feeling of detached observation of oneself (i.e. feeling as if one is observing mental processes or body feelings from outside oneself
- Feeling a sense of ***derealization*** evidenced by a feeling of unreality as if one were in a dream or the world feels distant and unreal or distorted.

Source: *Diagnostic and Statistical Manual of Mental Disorders – 5th edition [DSM-V]*

PTSD IN ABORIGINAL POPULATIONS

Prevalence of PTSD in Aboriginal Peoples

Currently, there is inadequate research to provide a clear picture of the prevalence of PTSD in Aboriginal populations. The research that has been conducted indicates there are wide variations of PTSD prevalence among Aboriginal communities, with some communities showing very high rates of PTSD and other communities demonstrating low rates of PTSD. For example, a diagnostic interview administered to 109 American Indian adolescents found the PTSD prevalence rate was only 3% despite high levels of trauma reported in this sample (Jones, Dauphinais, Sack, & Somervell, 1997). In contrast, another investigation of 247 participants from an American Indian community found lifetime prevalence of PTSD was 21.9%, with 81.4% of participants reporting they had experienced at least one traumatic event in their lifetime (Robin, Chester, Rasmussen, Jaranson, & Goldman, 1997).

Unfortunately, there are very few studies investigating the prevalence of PTSD in Aboriginal communities in Canada. Some estimates of the prevalence of mental health disorders for Aboriginal peoples in Canada are based on service utilization numbers. However, since many Aboriginal people do not seek services, it is unlikely these estimates provide actual rates of PTSD (Kirmayer, Brass, & Tait, 2000). The few studies that have been conducted indicate rates of PTSD may be much higher in some Aboriginal communities compared to the general Canadian population. For example, a large scale Canadian community survey found 1.0% of the general population had been diagnosed with PTSD (Sareen et al., 2007), while an investigation into the mental health status of 127 former Canadian Aboriginal residential school students in British Columbia found that 64.2% met the diagnostic criteria for PTSD (Corrado & Cohen, 2003). However, one study of a group of residential school survivors does not represent the mental health status of Aboriginal peoples across Canada or of all survivors of residential schools. Further research is necessary to provide a clear picture of PTSD in Aboriginal communities in Canada.

COLONIZATION PLACE ENVIRONMENT ADVERSITY TRAUMA

Risk factors for post-traumatic stress disorder

In general, people vary greatly in their vulnerability to develop PTSD after a traumatic event. The *Diagnostic and Statistical Manual of Mental Disorders – 5th edition* DSM-V outlines three temporal classes of risk factors for the development of PTSD. Temporal risk relates to factors that have an influence on the individual before (pre-traumatic), during (peri-traumatic), and after (post-traumatic) the traumatic event occurs. There are some risk factors for PTSD that increase vulnerability both before and after the traumatic event; however, the function of each risk factor may be different in relation to the timing of the traumatic event. The following sections examine risk factors with a focus on why they are a concern in many Aboriginal communities in Canada.

Pre-traumatic risk factors

Pre-traumatic risk factors relate to the characteristics of both the individual and the environment in which the individual is exposed. They are categorized into demographic, individual and environmental factors.

Demographic risk factors for PTSD include female gender, lower levels of income and education, divorce or widowhood, and being from an ethnic minority (Halligan & Yehuda, 2000). While open to speculation, researchers have suggested that demographic risk factors for PTSD actually function as risk for trauma exposure (Halligan & Yehuda, 2000). This observation is important as the occurrence of trauma is influenced by broader social factors that many Aboriginal communities are struggling with such as poverty and low educational achievement. As a result, many Aboriginal people in Canada have increased vulnerabilities for PTSD on a range of demographic factors.

Aboriginal peoples have lower levels of income and education compared with non-Aboriginal people. They are disproportionately ranked among Canadians struggling with poverty (Wilson & Macdonald, 2010). In 2006, the median income for Aboriginal people in Canada was 30% below the median income for non-Aboriginal people (Wilson & Macdonald, 2010). Even though there have been considerable increases in educational attainment levels for Aboriginal peoples in Canada over the last 10 years, more than twice as many Aboriginal people do not complete secondary school (32%) compared to non-Aboriginal people (15%), and only 8% of Aboriginal people obtain a university degree or higher compared to 22% of non-Aboriginal people (Wilson & Macdonald, 2010).

Being female greatly increases the risk for PTSD, with prevalence rates for women being almost twice as high as for men (Halligan & Yehuda, 2000). This increased prevalence in females may be the result of increased vulnerability to injury due to violent assault since the perpetrators are usually male and have greater physical power compared to females (Breslau, Chilcoat, Kessler, Peterson, & Lucia, 1999b). Aboriginal women in Canada may be particularly vulnerable to developing PTSD as they are also more likely to have increased risk on other factors associated with PTSD such as poverty and marital status. Studies have shown that twice as many Aboriginal women live in poverty compared to non-Aboriginal women (AANDC, 2012). In addition, Aboriginal women in Canada are less likely to be married and more likely to live in common law relationships (AANDC, 2012). Data on divorce rates are unreliable estimates of family stability and a better measure may be rates of single parent families (Barsh, 1994). The 2011 National Household Survey showed approximately one third of Aboriginal families are single parent families, with most of these headed by women (Statistics Canada, 2013).

In addition to heightened risk on demographic factors, Aboriginal women in Canada are also at much higher risk

PERSONALITY INCOME EDUCATION TEMPERAMENT GENDER

of experiencing spousal and non-spousal assaultive violence compared to non-Aboriginal women (Brennan, 2011). For example, in 2009, 13% of Aboriginal women 15 years or older across Canada's 10 provinces reported they had been violently victimized (Brennan, 2011). The study also found close to six in 10 Aboriginal women reported being injured in the previous five years compared to four in 10 non-Aboriginal women. Spousal assault against Aboriginal women occurs more than three times the rate of non-Aboriginal women (Native Women's Association of Canada [NWAC], n.d.). Assaults against Aboriginal women are more likely to be life threatening compared to non-Aboriginal women (NWAC, n.d.). In addition, there is also some evidence to indicate that child physical and sexual abuse among Aboriginal women is also very high. For example, a study on the health status of Aboriginal women in Ontario reported that 55% of Aboriginal women experienced physical abuse and 45.4% experienced sexual abuse when they were children (Grace, 2003). However, one study does not represent all Aboriginal communities and it is very difficult to determine accurate rates of child sexual abuse, as perpetrators and victims often do not report the abuse (Hylton, 2002). The combination of higher rates of childhood abuse and violence in adulthood substantially increases risk of PTSD in Aboriginal women.

Increased risk factors on demographic variables such as poverty, low educational attainment, and marital status may increase risk for both genders in Aboriginal populations. However, the risk for Aboriginal women may be higher as poverty and living without a partner may increase their risk of experiencing a traumatic event. While open to speculation, the effects of being without a partner may be twofold: in addition to increasing risk for the experience of a traumatic event, lower levels of social support may be available for a woman who is without a partner.

Individual risk factors include temperament, personality or mental health vulnerabilities such as a history of anxiety or depression, emotional or behavioural problems before the age of 6 years (APA, 2013). Some studies indicate people who have higher levels of dissociation are at an increased risk of developing PTSD if they are exposed to a severe trauma (Shalev, Peri, Canetti, & Schreiber, 1996). Dissociation may be thought of as a lack of integration of feelings, thoughts and experiences into awareness and memory (Bernstein & Putnam, 1986). While all people experience dissociation to some degree, it is thought to be more prevalent in people who have mental illness (Bernstein & Putnam, 1986). Dissociation is also considered to be a defense mechanism employed by children who experience physical and sexual abuse (Hetzel & McCanne, 2005). In these cases, the child uses dissociation as a mechanism for achieving control over an event by controlling his/her perception of the event (Hetzel & McCanne, 2005). While researchers are unclear as to whether dissociation should be considered a personality trait or a response to trauma, studies have shown that the presence of dissociation in response to the traumatic event itself is a strong predictor of the development of PTSD (Halligan & Yehuda, 2000). To the authors' knowledge there is no research investigating the presence of dissociation in response to trauma in Aboriginal peoples, representing a significant gap in knowledge.

Aboriginal peoples in Canada have higher rates of individual risk factors as mental disorders are thought to be higher in Aboriginal communities compared to the general population (Kirmayer et al., 2007; Kirmayer et al., 2000). Studies have found high rates of depression (Tjepkema, 2002) and alcohol abuse/dependence (Clarke, Colantonio, Rhodes, & Escobar, 2008) in Aboriginal communities.

Higher rates of mental disorders in Aboriginal communities have been attributed to continued effects of past colonization policies through which Aboriginal peoples have endured traumatic forced assimilation practices and cultural oppression (Kirmayer, Simpson, & Cargo, 2003). Historical and intergenerational trauma has resulted in high levels of ongoing distress in many Aboriginal communities and has been identified as a direct cause of a high prevalence of psychiatric disorders (Kirmayer et al., 2009; Mitchell & Maracle, 2005).

Environmental risk factors include repeated exposure to trauma, family instability, and childhood adversities such as separation from parents, poverty, and family dysfunction (APA, 2013; Halligan & Yehuda, 2000; King, King, Gudanowski, & Foy, 1996). Exposure to trauma is both a risk factor and a direct cause of PTSD. The greater the number of traumatic events experienced by an individual, the greater his/her future vulnerability is to developing PTSD in response to a specific trauma (Breslau, Chilcoat, Kessler, & Davis, 1999a). The timing and type of prior trauma are also important. The experience of trauma at an early age, such as childhood sexual abuse and childhood assaultive violence, are associated with higher risk of developing PTSD in response to a traumatic event during adulthood (Breslau et al., 1999a).

Aboriginal peoples in Canada have greater exposure to environmental risk factors for PTSD with higher rates of family instability and greater rates of childhood trauma and adversity. Researchers investigating factors related to the health and well-being of Aboriginal peoples have found that incidences of childhood sexual and physical abuses are much higher in Aboriginal communities compared to all other ethnic groups (Söchting, Corrado, Cohen, Ley, & Brasfield, 2007). Further, more domestic violence is reported by First Nations, Inuit and Métis people compared to non-Aboriginal people (Andersson, Shea, Amaratunga, McGuire, & Sioui, 2010). Aboriginal children are more likely to be separated from their parents compared to non-Aboriginal children. Rates of single parent families and families with children placed into foster care or raised with other relatives indicate a high rate of family instability among Aboriginal peoples in Canada. Aboriginal children are over-represented in the child welfare system and are more likely to be placed in foster care. Aboriginal people account for only 4.3% of the Canadian population, yet half of children in foster care in 2011 were Aboriginal children (Statistics Canada, 2013).

While past colonization policies have influenced risk factors on individual levels with increased rates of psychiatric disorders, the effects of historical and intergenerational trauma also increase environmental risk factors as many communities are dealing with high rates of mental and social distress (Kirmayer et al., 2009). Patterns of abuse in Aboriginal families and communities have often occurred over generations and can be traced back to the abuses experienced by Aboriginal children who were forced to attend residential schools (Bopp, Bopp, & Lane, 2003). Familial violence is thought to be a problem that is reflective of unhealthy communities that have lost traditional Aboriginal values that function to protect every member of the community (Bopp et al., 2003). The connection between family and community allows for the understanding that familial violence is not an isolated problem within any one family as larger community and societal factors influence all Aboriginal families.

Peri-traumatic risk factors

Peri-traumatic risk factors relate to the characteristics of the trauma as well as to environmental and individual responses to trauma. The greater the severity or dose of the trauma, the more vulnerable the person is to developing PTSD (Bisson, 2007). If the trauma is particularly threatening, perceived by the person as a threat to his/her life or a threat of serious personal injury or of sexual assault, there is a greater risk of that person developing PTSD. The sudden death of a loved one has also been shown to be an important direct cause of PTSD (Breslau et al., 1998). Interpersonal violence is more damaging for children than for adults, particularly violence from a caregiver, which places the child at a greater risk for PTSD (APA, 2013). While child abuse functions as an environmental, pre-traumatic risk factor as it places the child at increased risk for PTSD as a result of experiencing a traumatic event, the event of interpersonal violence may also be a direct cause of PTSD in the child.

The higher incidence of trauma in Aboriginal peoples in Canada places them at increased risk of experiencing a traumatic event that may lead to the development of PTSD. A large-scale study across the Calgary health region reports that the incidence of a major traumatic event was four times higher for Aboriginal people compared to the general population; they were more likely to experience both unintentional (e.g. motor vehicle accidents, impact by an object or animal, or falls or jumps) or intentional (e.g. assault, homicide or suicide) trauma (Karmali et al., 2005). Incidence of trauma for Aboriginal peoples in this study was higher across every age category and for both genders, though incidence of major trauma was highest in Aboriginal men (Karmali et al., 2005). Of particular concern is the incidence of motor vehicle accidents as serious accidents have been shown to cause PTSD (Butler, Moffic, & Turkal, 1999). Motor vehicle accidents represent the greatest cause of injury in Canada, with Aboriginal people experiencing a greater rate of accidents compared to the general population (Karmali et

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Patterns of abuse in Aboriginal families and communities have often occurred over generations and can be traced back to the abuses experienced by Aboriginal children who were forced to attend residential schools
(Bopp, Bopp, & Lane, 2003).

al., 2005). Possible causes of increased levels of motor vehicle accidents for Aboriginal people in Canada include poorer road conditions on reserves and vehicle maintenance issues, as well as social factors such as driving behaviours, number of car occupants, and lifestyles requiring frequent highway traveling and alcohol use (Karmali et al., 2005).

Sudden death of a loved one is a salient risk factor for PTSD. In a large-scale population based study in the US, researchers found that 60% of individuals with PTSD had developed the disorder as a result of the unexpected death of a loved one (Breslau et al., 1998). In this sample, unexpected death of a loved one was the strongest predictor of PTSD. In Canada, Aboriginal peoples are more likely to suffer the sudden death of a loved one with deaths from intentional and unintentional injuries such as motor vehicle accidents, accidental poisoning, and suicide. While the prevalence of deaths due to injury vary across communities, higher rates have been found in First Nations, Inuit and Métis peoples in Canada compared to the general population (Katenies Research and Management Services, 2006; Banerji, 2012; Oliver, Peters, & Kohen, 2012). In many Aboriginal communities, unexpected deaths are highest among children, adolescents and young adults. While injury is the leading cause of death in the general population of Canadian children and adolescents (Statistics Canada, 2012b), Aboriginal communities are disproportionately affected as the rates of death due to injury in young people are three to four times higher than the national average (Banerji, 2012).

Post-traumatic risk factors

Post-traumatic risk factors occur after the trauma and include both individual and environmental factors (APA, 2013). Many post-traumatic risk factors are also pre-traumatic risk factors as they reflect life stress and individual vulnerabilities due to prior mental health problems. Individual factors that increase risk include a lack of appropriate coping strategies and high levels of life stress (Bisson, 2007). Environmental factors that increase risk for PTSD involve a lack of social support, additional life stresses or repeated upsetting reminders of the trauma such as financial or other trauma-related losses (Brewin, Andrews, & Valentine, 2000; APA, 2013). High levels of life stress in some Aboriginal communities due to poverty, family violence and instability as a result of ongoing intergenerational trauma as a consequence of historical trauma function to increase risk for PTSD after a traumatic event is experienced.

Lower levels of social support place many Aboriginal people at higher risk to develop PTSD after a traumatic event is experienced. Social support is an important protective factor in mental and physical health. Social support is thought to reduce the effects of environmental challenges through increasing resilience to stress (Ozbay, Johnson, Dimoulas, Charney, & Southwick, 2007). A broad definition of social support includes the actual receipt of help when needed, quality of relationships, and the belief that help will be received when needed (Kaniasty, 2005). Social support may be accessible through ties to family, kin, friends, co-workers, acquaintances or the larger community (Lin, Simeone, Ensel, & Kuo, 1979). Through these social ties,

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Lower levels of social support place many Aboriginal people at higher risk to develop PTSD after a traumatic event is experienced. Social support is an important protective factor in mental and physical health.

individuals have access to support in times of distress. Low levels of social support have consistently been linked with higher stress levels, depression, PTSD and a range of physical illnesses (Southwick, Vythilingam, & Charney, 2005). In studies investigating risk for PTSD in adults, low levels of social support after a trauma were among the strongest predictors of PTSD. Additionally, social support from family members may be particularly important for youth. A study investigating social support and exposure to violence in a large sample of young adolescents found adolescents who reported exposure to violence as well as higher levels of support from parents and siblings also reported fewer PTSD and depression symptoms (Ozer & Weinstein, 2004).

While the exact mechanisms underlying the protective effects of social support on mental and physical health are unknown, evidence suggests social support may increase nervous system regulation to stress (Ozbay et al., 2007). Further, social support has also been shown to enhance health by reducing the likelihood of engaging in risky coping strategies such as excess alcohol consumption (Ozbay et al., 2007). Social support is also beneficial by increasing feelings of self-efficacy and a sense of belonging, and by counteracting feelings of loneliness (Bisschop, Kriegsmann, Beekman, & Deeg, 2004).

In addition to family instability, residential instability may also contribute to challenges in accessing social support for many Aboriginal peoples in Canada. Over the past five decades, the percentage of Aboriginal peoples living in Canadian cities has risen considerably. In 2006, more than half of the Aboriginal population was living in cities (AANDC, 2010). Residential instability may weaken the social cohesion that exists in Aboriginal communities (Kirmayer et al., 2009). Frequent migration between reserves and cities, as well as frequent changes of residence within cities places Aboriginal people at risk of losing important support systems as a result of leaving their known neighbourhoods and communities. Many Aboriginal mothers often relocate to cities with their children to escape partner violence. However, these women are vulnerable to social marginalization, exploitation and victimization (Browne, McDonald, & Elliott, 2009; Culane, 2003; Lévesque, 2003). Further, high residential mobility may reduce access to important Aboriginal cultural practices and organizations such as Friendship Centres and, as a consequence, reduce access to collective activities important for maintaining cultural identity (Kirmayer et al., 2009).

Summary

Taken together, historical and intergenerational trauma has created social and family conditions in many Aboriginal communities that increase risk to develop PTSD after the experience of a traumatic event. The ongoing distress in many Aboriginal communities directly and indirectly influences vulnerability on pre-traumatic, peri-traumatic and post-traumatic risk factors. Community members of all ages who are exposed to trauma as well as additional risk brought about by social and family conditions have increased risk to develop PTSD.

PTSD in children

Post-traumatic stress disorder occurs in children and adolescents as well as in adults (APA, 2013). However, children may not express the full range of PTSD symptoms and they may express them differently from adults (Scheeringa, Myers, Putnam, & Zeanah, 2012). For example, children may lose interest in play activities rather than have difficulties with work or other everyday

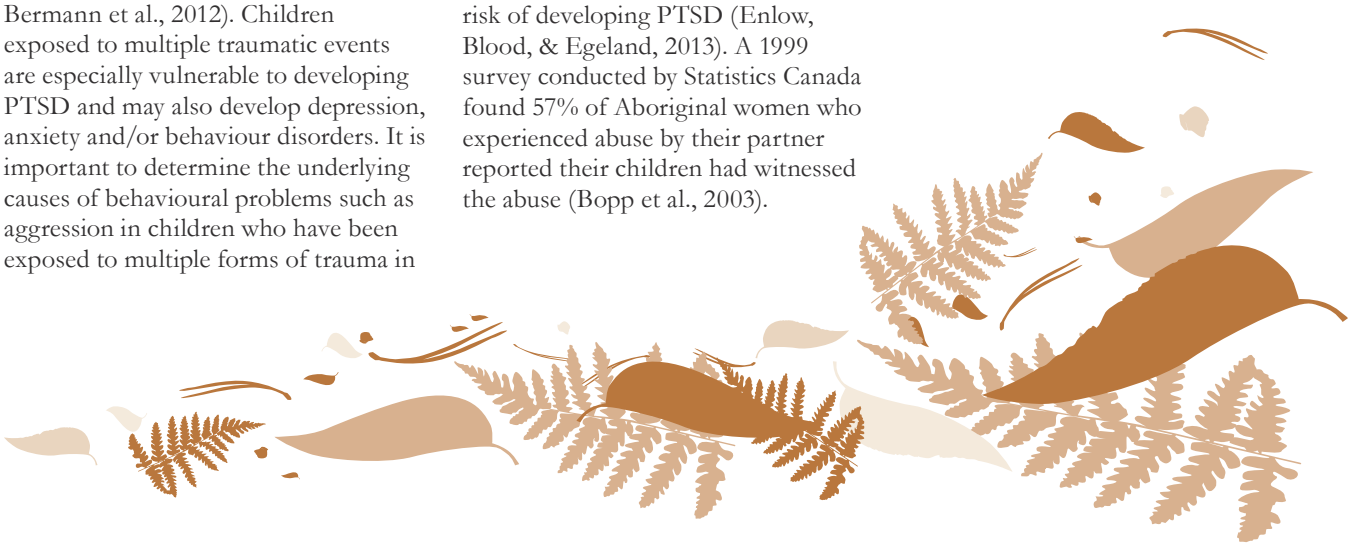
adult functions (Scheeringa et al., 2012). Intrusion symptoms[1] may be expressed as themes of play that represent the traumatic event. In addition, recurrent nightmares, which may or may not be related to the traumatic event, may also occur in children (APA, 2013). As with adults, children may become socially withdrawn or display a marked avoidance of reminders of the traumatic event and/or display negative emotional states such as shame, fear and confusion, guilt and sadness (APA, 2013).

Not all children exposed to a traumatic event will develop PTSD symptoms. However, some children are more vulnerable to developing PTSD after exposure to trauma. Exposure to intimate partner violence in the home, including threatened or actual physical or sexual assault and/or emotional abuse occurring between adults, places the child at an increased risk of developing PTSD (Graham-Bermann, Castor, Miller, & Howell, 2012). Children who are exposed to violence in the home are more likely to experience additional traumatic events such as physical and/or sexual assault, serious accidents or life threatening illnesses (Graham-Bermann et al., 2012). Children exposed to multiple traumatic events are especially vulnerable to developing PTSD and may also develop depression, anxiety and/or behaviour disorders. It is important to determine the underlying causes of behavioural problems such as aggression in children who have been exposed to multiple forms of trauma in order to provide them with appropriate treatment, as difficult child behaviour may be an outcome of trauma (Graham-Bermann et al., 2012). The combination of an aversive environment and further traumatic events places the child at a higher risk of developing the disorder.

Aboriginal children and risk for PTSD

Many Aboriginal children are at an increased risk of developing PTSD after experiencing a traumatic event. The risk factors impacting Aboriginal children today may be viewed as part of the legacy of residential schools, since many of the stresses these children are exposed to within their families and communities are linked to and shaped by the experiences of their parents and grandparents who attended residential schools (Bopp et al., 2003). Many researchers argue that the relationship patterns in Aboriginal communities and families can be traced back to abuses experienced in residential schools (Bopp et al., 2003). As a result, the home is not a safe haven for many Aboriginal children and youth; instead, many grow up in violent households with families facing stressful conditions (Health Canada, 2003). All children who witness violence in the family are at an increased risk of developing PTSD (Enlow, Blood, & Egeland, 2013). A 1999 survey conducted by Statistics Canada found 57% of Aboriginal women who experienced abuse by their partner reported their children had witnessed the abuse (Bopp et al., 2003).

Children who develop PTSD are at increased risk of developing a variety of other mental health problems such as depression, separation anxiety, behavioural disorders, and difficulty learning in school (Cobham et al., 2012). Therefore intervention and treatment options for Aboriginal children are crucial as early intervention has been shown to substantially reduce the risk of a child developing PTSD after a traumatic event (Berkowitz, Stover, & Marans, 2011). Intervention services that include both the parent and the child in the therapeutic process have shown superior results compared to interventions that focus exclusively on the child (Cobham et al., 2012). There are many benefits to including parents in the intervention since it enables the parent to assist the child in practicing learned coping skills in therapy and apply these skills to other areas of life (Cobham et al., 2012). As a result, parents themselves learn new coping skills they may then apply in other settings to improve their own well-being.



[1] Intrusion symptoms are involuntarily re-experiencing the traumatic event. Intrusion symptoms are recurrent and may take the form of intrusive memories, reoccurring dreams, or intense and/or prolonged feelings of distress as a result of exposure to any reminder of the traumatic event. Intense feelings of physical distress or biological responses (body feels nervous or scared) are also a form of intrusion symptoms.

CONSEQUENCES OF PTSD

Symptoms of PTSD cause considerable distress and often lead to impairment in everyday functioning; they may interfere with educational, occupational and social activities (NCCMH, 2005). Studies have shown PTSD is strongly associated with the development of secondary problems such as substance dependency/abuse and/or other mental health problems. High levels of distress and difficulty coping may leave PTSD sufferers feeling isolated and disconnected from people they are normally close to (NCCMH, 2005). As a result, personal and professional relationships may be negatively impacted and lead to further distress both for the individual with PTSD and for their families and communities. The following sections review mental health and substance use consequences of PTSD as well as the potential impacts on family and relationships.

Mental health and substance use consequences

Studies have found PTSD often co-occurs with other mental health disorders such as anxiety, depression, and substance (alcohol and/or drug) dependency or abuse (e.g. Kilpatrick et al., 2003; NCCMH, 2005). While the presence of a prior mental disorder increases risk to develop PTSD in response to a traumatic event, PTSD symptoms also increase risk to develop a co-occurring mental disorder. However, findings from several studies suggest PTSD is a stronger risk for developing a subsequent mental disorder compared to the reverse. An investigation into the temporal relationship between PTSD and co-occurring substance dependence/abuse and depression indicated that in the majority of cases, PTSD was present before depression (68.5%) and substance dependence/abuse (70.6%) (Perkonigg, Kessler, Storz, & Wittchen, 2000). This relationship has been found across several studies that have demonstrated PTSD is a strong and consistent predictor of depression and substance use (Ouimette, Read, Wade, & Trone, 2010; Stander, Thomsen, & Highfill-McRoy, 2014).

The development of substance abuse is often associated with trauma and is thought to be an attempt to self-medicate in order to relieve physical and emotional pain of the trauma (Najavits, Weiss, & Shaw, 1997). Substance use in response to stress is well documented as many people have reported using alcohol after a traumatic event to relieve anxiety, irritability and depression (Volpicelli, Balaraman, Hahn, Wallace, & Bux, 1999). Many Aboriginal communities have high rates of substance abuse that have been attributed to intergenerational impacts of trauma experienced by previous generations in residential schools (Chansonneuve, 2007). Substance use as a coping strategy has been well documented in students of residential schools and is seen to continue to this day in many Aboriginal communities (Chansonneuve, 2007).

Aboriginal women may be particularly vulnerable to concurrent substance abuse and PTSD as rates of PTSD in women who abuse substances are approximately two to four times higher than they are for men (Najavits et al., 1997). In many women, increased vulnerability to PTSD and substance use is thought to be linked to a history of trauma in childhood. A study investigating risk factors associated with co-current PTSD and alcohol abuse in women found those diagnosed with both PTSD and alcohol abuse reported more severe childhood sexual abuse and a greater number of sexual abuse events (Ouimette, Wolfe, & Chrestman, 1996). As stated previously, Aboriginal women are more likely to experience sexual abuse during childhood. High incidence of childhood abuse together with a greater risk for exposure to violence in adulthood may place many Aboriginal women at a particularly high risk to develop co-occurring PTSD and substance abuse.

Personal and family relationships

It is not uncommon for those who are affected by PTSD to experience problems in their family and social relationships. In such cases, family breakups may occur, leading to further distress (NCCMH, 2005). Emotions that are brought about by PTSD may have a negative impact on the sufferer's relationships with family, friends and co-workers (NCCMH, 2005). Many people with PTSD withdraw from close relationships and may feel they can no longer relate to the world around them. This further isolation often leads to a decrease in self-confidence, self-esteem, and depression (NCCMH, 2005).

PTSD has also been shown to negatively impact parenting. Several studies investigating the effects of PTSD on parenting have found that parental PTSD is associated with childhood behaviour problems and distress (Lambert, Holzer, & Hasbun, 2014). Parents with PTSD symptomatology have reported lower levels of parental functioning as indicated by the degree of involvement in parenting, ability to meet the emotional needs of children, and ability to refrain from directing physical and verbal abuse at them (Solomon, Debby-Aharon, Zerach, & Horesh, 2011). Difficulties with family life are thought to result from difficulty controlling emotions such as anger and rage, which may be directed at family members (Solomon et al., 2011). An investigation into the effects of PTSD on parenting in a sample of holocaust survivors found their children reported significantly higher levels of emotional abuse and emotional neglect on the Childhood Trauma Questionnaire (CTQ) compared to a matched comparison group (Yehuda, Halligan, & Grossman, 2001b). The CTQ defines emotional abuse as verbal assaults on a child's sense of self-worth or any demeaning or humiliating behaviour directed towards the child (Bernstein et al., 2003). Emotional neglect is defined as the parent's failure to meet the child's emotional and psychological needs such as providing feelings of love, belonging, nurturance and support (Bernstein et al., 2003).

Studies have found a strong relationship exists between parental PTSD and PTSD in children (Yehuda, Halligan, & Bierer, 2001). While it is likely that inherited genetic and biological vulnerabilities contribute to an increased risk of developing PTSD, the emotional environment that is found in families also contributes to higher rates of PTSD in offspring of parents who also have PTSD (Yehuda et al., 2001a).

TREATMENT OF PTSD

Limitations of post-traumatic stress disorder diagnosis and treatment among Aboriginal populations

Several explanations have been offered for findings of low rates of PTSD in Aboriginal populations despite high levels of risk and exposure to trauma. Cultural bias of instruments designed to diagnose mental illness may account for the low rates of PTSD among Aboriginal peoples as mental health problems may be described and understood differently in Aboriginal compared to mainstream populations (i.e. Beals et al., 2005). In addition, culture may influence symptom experience as well as what is considered to be pathological and what is considered to be normal (Brave Heart, 1999). A further explanation is the diagnosis of PTSD may fail to adequately address Aboriginal trauma (Brave Heart, 1999; Söchting et al., 2007). For example, the diagnostic criteria for PTSD was initially developed based on the experiences of combat veterans or others with a single traumatic event such as rape or a disaster (Herman, 1993). It has been suggested that PTSD fails to capture the wide range of symptoms that result from prolonged and repeated exposure to trauma (Herman, 1993).

The failure of the PTSD diagnosis to represent the outcomes of repeated experiences of trauma combined with high levels of adversity that is characteristic of some Aboriginal communities has led researchers to propose the concept of Complex Post-traumatic Stress Disorder (Herman, 1993; Söchting et al., 2007). Exposure to prolonged abuse or trauma has been associated with pathology in multiple domains (Herman, 1993). Survivors may develop mood and behavioural disorders, experience difficulties in interpersonal relationships, and suffer from physical health problems (Herman, 1993). The symptoms of complex PTSD may be more appropriate for some Aboriginal people seeking mental health services as many display challenges in several areas, including poor self-image, impairment in interpersonal relationships, serious substance abuse, and an inability to regulate intense negative emotions (Söchting et al., 2007). The experience of ongoing trauma presents challenges for both clinicians and clients as treatment protocols for PTSD are based on the assumption that the development of PTSD is a result of a single traumatic event (e.g. Ponniah & Hollon, 2009). The recognition of a Complex PTSD diagnosis that has resulted from layers of trauma experienced over a

significant period of time has important implications for the development of treatment protocol (Brasfield, 2001; Söchting et al., 2007). Specifically, treatments designed to address a single traumatic event do not take into account repeated experiences of trauma or the long term consequences that may result from ongoing trauma (Söchting et al., 2007). As a result, some Aboriginal sufferers of ongoing trauma experiencing a variety of challenging symptoms may not get the appropriate care and may be viewed as too complicated or resistant to treatment (Söchting et al., 2007). Further research needs to be conducted as complex PTSD is not yet officially recognized as a disorder and is still in the early stages of study.

Risk and resilience

The study of all manner of risk factors in childhood has demonstrated that despite similar risk experiences, child outcomes are extremely diverse with some developing a mental disorder while others remaining seemingly undamaged (Rutter & Sroufe, 2000). This observation has led researchers to the conclusion that protective factors need to be studied alongside risk in order to better understand the mix of influences that allow for resilience in response to adversity (Rutter & Sroufe, 2000). Research that examines risk and fails to account for protective factors and resilience is limited in its ability to present a complete picture of the development, or lack thereof, of mental illness in Aboriginal communities. For example, Waldram (2004) argues that many Aboriginal communities may contain healthy, positive protective factors that assist its members in dealing with trauma. As a result, it needs to be considered that despite high levels of risk in many Aboriginal communities, the low rates of PTSD may reflect the reality that the majority of Aboriginal people do not have PTSD (Waldram, 2004). However, the authors do not want to convey the message that despite high levels of adversity, Aboriginal peoples remain unharmed. It is important however, to examine resilience factors in Aboriginal communities in order to present a more complete picture of risk and resilience.

Resilience is often defined as a positive adaptation in the face of adversity (Fleming & Ledogar, 2008). While early researchers believed resilience came largely from child characteristics, over time it has been recognized that resilience factors originate from external factors as well such as family, community and cultural qualities (Luthar, Cicchetti, & Becker 2000). In a review of research investigating Aboriginal cultural factors that have been found to foster resilience, Fleming and Foster (2008) found that spirituality, traditional activities, as well as traditional language and healing practices were associated with resilience. Native American Elders reported that connections to family, relatives and communities fostered resilience, as did the close bonds they experienced with others as a result of shared history, experiences and culture (Grandbois & Sanders, 2009). While research investigating Aboriginal resilience is in its early stages, it is clear from the few studies that have been conducted that Aboriginal culture has powerful protective factors that foster resilience in the face of adversity. Further research is necessary to fully understand the complex interactions between risk and protective factors in Aboriginal communities. The resulting knowledge from this research will aid in designing intervention and prevention programs that are able to utilize protective factors that are already embedded in Aboriginal culture.

Treatment options for PTSD

Post-traumatic stress disorder is treatable and recovery of health and well-being is possible; therefore, it is important that individuals seek help when experiencing distress. Healing approaches available for Aboriginal peoples in Canada include Western based approaches, Indigenous approaches, and strategies that incorporate a blend of Western and Indigenous approaches. Purely Western approaches to counselling for Aboriginal peoples have met with limited success as they emphasize the individual over the collective, often ignore Aboriginal history and context of the problem, and are not holistic (McCormick, 2009; Mitchell & Maracle, 2005). Aboriginal health researchers have identified several features of mental health programs that are more culturally appropriate for Aboriginal peoples. Approaches should incorporate aspects of Aboriginal worldviews that are relevant for healing such as balance, connectedness, nature and ceremony (McCormick, 2009). Successful healing models for Aboriginal peoples include a focus on emotional, cultural, mental and spiritual elements in the healing process (McCormick, 2009; Mitchell & Maracle, 2005). Therapeutic models that are based on Aboriginal values and incorporate collective healing are beneficial as they bring people together who share a traumatic history (Mitchell & Maracle, 2005). In addition, healing programs that incorporate education of the history of Canada's early colonization practices and the resulting collective trauma and distress experienced by many Aboriginal communities today have demonstrated that instilling an understanding of collective trauma facilitates the healing process (Kishk Anaquot Health Research, 2002).

Healing programs have successfully incorporated both Western and Indigenous approaches. One example is the Six Nations Mental Health Services, a mental health clinic that delivers psychiatric services to the Iroquoian community in Ontario that has been shown to meet the mental health needs

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of Aboriginal peoples. The program honours the link between loss of culture and historical trauma, and balances Western and Aboriginal approaches through the use of holistic models of healing and a mix of Aboriginal staff and non-Aboriginal therapists (Wieman, 2009). With this strategy, the Six Nations Mental Health Services has been able to offer mental health services that are appropriate for Aboriginal people who are dealing with various disorders such as depression, substance abuse, and anxiety (Wieman, 2009).

There is also the potential for Western approaches to be successfully adapted to suit Aboriginal peoples in the delivery of interventions. One example is the Cognitive Behavioural Intervention for Trauma in schools which is aimed at reducing risk for suicide and psychological distress among American Indian adolescents. This intervention was adapted by program developers in collaboration with members of the American Indian community to ensure it was culturally sensitive and appropriate for American Indian youth (Goodkind, LaNoue, & Milford, 2010). The program demonstrated initial success, with a significant reduction in PTSD, depression and anxiety symptoms experienced by participating youth. These improvements were still seen at three-month follow up, however symptoms had returned to baseline level six months after the intervention (Goodkind et al., 2010). While the results are encouraging as they indicate the potential of successfully adapting Western approaches to meet Aboriginal needs, further research is necessary to determine why the positive effects did not last. The authors speculate that with its focus on facilitating coping with acute trauma, it was not designed to assist in coping with ongoing trauma (Goodkind et al., 2010). The results of this research potentially highlight the need to focus on healing entire communities in order to achieve an increase in well-being and health for all community members.

Finally, concerns have been raised over difficulties in finding culturally appropriate help for Aboriginal people who need counselling or treatment for mental health issues (McCormick, 1996). Aboriginal people are often challenged by a lack of access to appropriate professional support after a trauma occurs or do not seek treatment because services are either not available locally, there is lack of trust, or the services offered are not socially or culturally relevant (Kirmayer et al., 2000). In Canada, there is a lack of Aboriginal health professionals (Wieman, 2009). A lack of Aboriginal therapists combined with difficulties finding culturally relevant treatment programs result in significant barriers to treatment access for Aboriginal peoples.

Researchers and professionals who focus on Aboriginal healing stress that it is important not to become frustrated with challenges to seeking help and to continue to take the time to find the right counsellor if experiencing distress. Sometimes Aboriginal people prefer to seek help outside of their community if culturally appropriate services are unavailable and although it may be challenging, finding treatment is worth the effort. Currently there are more mainstream therapists who have received culturally appropriate training who may be helpful for Aboriginal people seeking help (Canadian Collaborative Mental Health Initiative, 2006). Overall, it is essential for Aboriginal people to pursue appropriate treatment options for PTSD as the disorder is treatable and restoration to well-being is possible.

CONCLUDING REMARKS

Even though Canada is recognized as a country in which citizens enjoy a high standard of living, many health and lifestyle benefits are not extended to all Aboriginal peoples (Mitchell & Maracle, 2005). There is general consensus among researchers investigating the health of Aboriginal peoples that historical and intergenerational trauma have resulted in collective psychological and emotional injury that has directly and indirectly led to considerable distress among Aboriginal peoples. Today, Aboriginal peoples in Canada are more likely than non-Aboriginal people to experience traumatic events in their lifetimes. In addition, they are at increased risk of developing PTSD as a result of historical, collective and individual trauma, compounded by stressful current living conditions resulting from high levels of poverty and abuse.

It is crucial that more culturally appropriate services are made available to Aboriginal peoples in all communities across Canada. Further research is needed to investigate cultural factors that foster resilience in order to understand the complex interactions between risk and resilience in Aboriginal communities. Interventions that honour Aboriginal holistic values and traditions and promote resilience factors that are already present in Aboriginal culture are most likely to be met with success (Mitchell & Maracle, 2005). Further, there is a need to develop and implement interventions and treatment programs that aim to heal families and communities as these types of interventions are most likely to foster improved health and well-being collectively, and thus reduce some of the environmental factors that work to reinforce and perpetuate trauma within communities. The protection of future generations is dependent on healthy families and communities.

Interventions that honor Aboriginal holistic values and traditions and promote resilience factors that are already present in Aboriginal culture are most likely to be met with success (Mitchell & Maracle, 2005).

RESOURCES

EYAA-Keen Healing Centre Inc.

EYAA-Keen Healing Centre Inc. provides a culturally-appropriate, multidisciplinary treatment program for indigenous adults. Individuals have access to an indigenous behavioural health specialist, elder or traditional healers for dealing with trauma or major loss. Individual support, group work and therapeutic training are provided with a view to facilitating both personal and community healing.
http://www.eyaa-keen.org/resources/post-traumatic-stress-disorder/

Za-geh-do-win Aboriginal Mental Health Services/ Support Directory

This document provides a directory for First Nations mental health services within Ontario
http://www.za-geh-do-win.com/PDF/The%20Key.pdf

PTSD Association

This website is an informational resource for people who are suffering from PTSD as well as for their family, friends and coworkers. The website provides access to PTSD research articles, a checklist for symptoms of PTSD and a list of web links to further resources for PTSD. Information on coping strategies that have shown to be helpful for PTSD are also provided.
http://www.ptsdassociation.com/coping-strategies/2015/7/15/trauma-and-the-spiritual-path

HealthLink BC: Counselling for PTSD

While this resource is based on a western model of healing, Healthlink BC provides information on PTSD and includes an overview of three different counselling options. Cognitive Therapy, Exposure Therapy and Eye Movement Desensitization and Reprocessing (EMDR) are reviewed as treatment options for PTSD.
http://www.healthlinkbc.ca/healthtopics/content.asp?hwid=ad1000spec

HealthLink BC: Other Types of Counselling for PTSD

In a separate section, Healthlink BC provides an overview of other types of treatment options. Group Therapy, Brief Psychodynamic Psychotherapy, and Family Therapy are reviewed.
http://www.healthlinkbc.ca/healthtopics/content.asp?hwid=ad1018spec

Anxiety BC

Anxiety BC is based on a western model of healing. However, the website provides information on anxiety disorders and includes a section on Self Help Strategies that aim to teach skills that an individual can use to help manage their anxiety.
http://www.anxietybc.com/sites/default/files/adult_hmptsd.pdf

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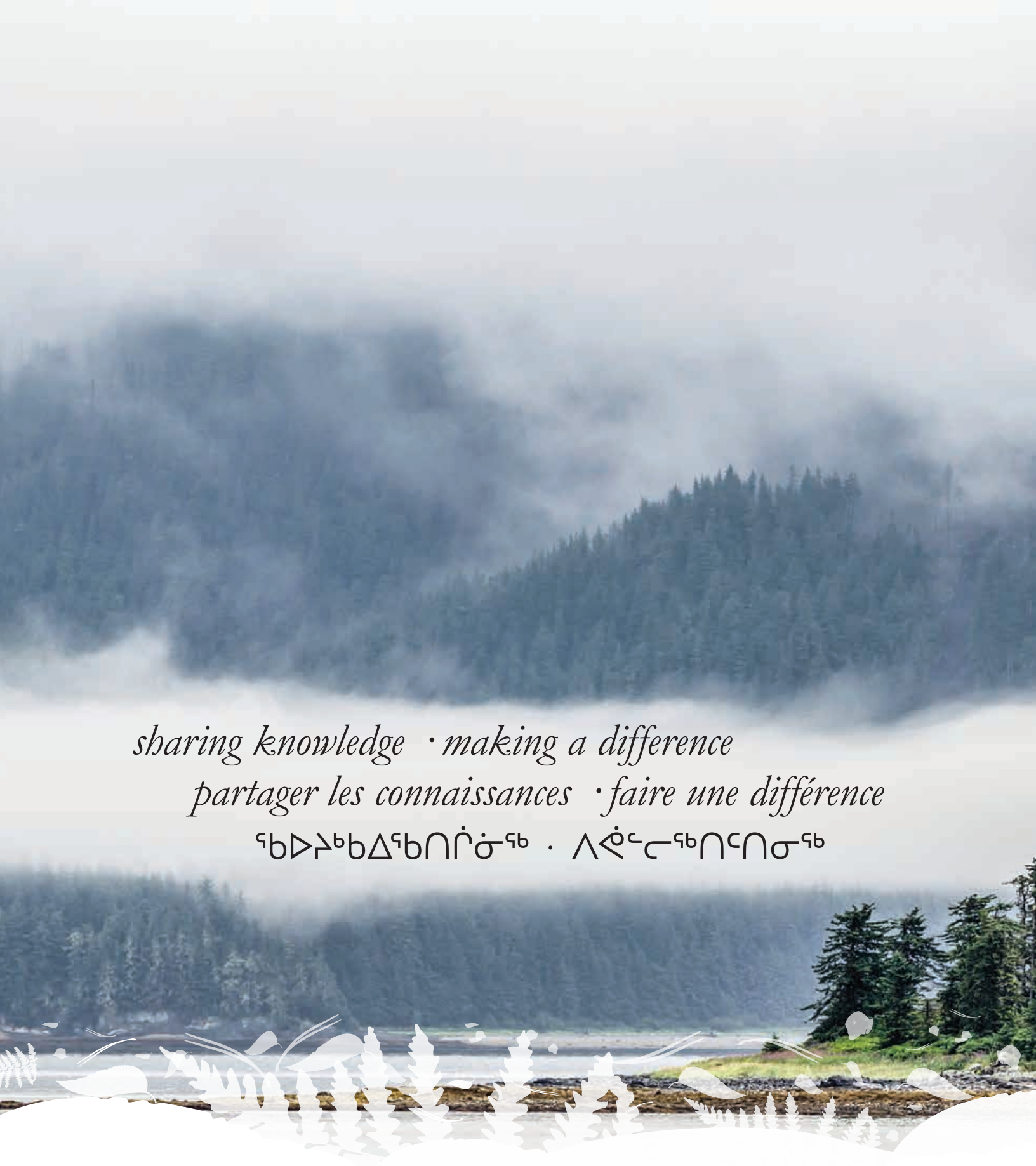

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NATIONAL COLLABORATING CENTRE FOR ABORIGINAL HEALTH

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