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The intergenerational effects of Indian Residential Schools: Implications for the concept of historical trauma

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Abstract

The current paper reviews research that has explored the intergenerational effects of the Indian Residential School (IRS) system in Canada, in which Aboriginal children were forced to live at schools where various forms of neglect and abuse were common. Intergenerational IRS trauma continues to undermine the well-being of today's Aboriginal population, and having a familial history of IRS attendance has also been linked with more frequent contemporary stressor experiences and relatively greater effects of stressors on well-being. It is also suggested that familial IRS attendance across several generations within a family appears to have cumulative effects. Together, these findings provide empirical support for the concept of historical trauma, which takes the perspective that the consequences of numerous and sustained attacks against a group may accumulate over generations and interact with proximal stressors to undermine collective well-being. As much as historical trauma might be linked to pathology, it is not possible to go back in time to assess how previous traumas endured by Aboriginal peoples might be related to subsequent responses to IRS trauma. Nonetheless, the currently available research demonstrating the intergenerational effects of IRSs provides support for the enduring negative consequences of these experiences and the role of historical trauma in contributing to present day disparities in well-being.

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There are various processes by which the experience of trauma in one generation can influence subsequent generations, a perspective that seems to have resonated in the literature related to Aboriginal health, as well as among Aboriginal peoples living with the historical, collective traumas experienced by their ancestors (Evans-Campbell, 2008; Gone, 2009; Whitbeck, Adams, Hoyt, & Chen, 2004). Although much of the research assessing intergenerational trauma effects has been conducted in the context of the Holocaust (Shoah), it is clear that comparable effects have also occurred in other groups exposed to discrete or chronic collective trauma experiences. To a considerable extent this research has focused on diagnosable disorders and/or individual physiological, psychological, and emotional effects among the offspring of trauma survivors (Evans-Campbell, 2008).

Although it is important to identify individual reactions to specific historically traumatic events or periods, there has been less attention focused on the interrelated effects of trauma experiences on family dynamics and on whole communities (Evans-Campbell, 2008; Waldram, 2004). Furthermore, and particularly germane to Aboriginal groups who had endured continuous assaults since the arrival of colonizing groups, research examining individual-level intergenerational effects typically has not considered the larger context in which these traumatic events rest (Kirmayer, Brass, & Tait, 2000). Just as the impact of a stressor on individual functioning is influenced by a person's past experiences and current environment, the influence of a *collective* trauma on well-being needs to be considered in the context of the group's historical and contemporary stressor experiences. Although variations exist concerning the precise conceptualization of the term, the concept of *historical trauma* (Brave Heart, 1999; Brave Heart & DeBruyn, 1998) addresses this issue, as it highlights the idea that the accumulation of collective stressors and trauma that began in the past may contribute to increased risk for negative health and social outcomes among contemporary Aboriginal peoples (Walters et al., 2011).

Despite the scholarly interest in historical trauma as an explanation for current group-based health disparities (e.g., Brave Heart & DeBruyn, 1998), there is relatively little empirical research documenting this phenomenon (Sotero, 2006). In part, this likely stems from the differing conceptualizations of historical trauma, as the term has been used both as a description of trauma responses, as well as a causal explanation for them (Evans-Campbell, 2008; Walters et al., 2011). In attempt to address this problem, Evans-Campbell (2008) identified three distinguishing characteristics of historical trauma *events*, which can be discrete or more chronic occurrences:

1. the event was widespread among a specific group or population, with many group members being affected;

2. the event was perpetrated by outgroup members with purposeful and often destructive intent;
3. the event generated high levels of collective distress in the victimized group.

In addition, there also seem to be generally agreed upon characteristics of historical trauma *responses*, which comprise the following:

1. historical trauma events continue to undermine well-being of contemporary group members;
2. responses to historically traumatic events interact with contemporary stressors to influence well-being;
3. the risk associated with historically traumatic events can accumulate across generations.

In order to validate these theoretical constructs related to historical trauma, empirical research is needed to provide evidence that the characteristic historical trauma responses are, in fact, elicited by such events. However, this may prove to be untenable, as it is exceedingly difficult to conceptualize and objectively measure how traumatic events that took place in the distant past affect individuals currently. This said, there are several relatively recent chronic collective traumas that spanned generations and affected large portions of the Aboriginal population in Canada which meet the criteria of historical trauma events that may provide empirical support for the central tenets of this concept.

Indian Residential Schools as an example of historical trauma

Although numerous historically traumatic events occurred earlier, the 19th century in Canada was marked by government policies to assimilate Aboriginal peoples based on the assumption that Whites were inherently superior to the “Indians” they considered to be savage and uncivilized. The Indian Residential School (IRS) system was one of the key mechanisms by which the government attempted to achieve their goals of eliminating their “Indian problem” (Royal Commission on Aboriginal Peoples [RCAP], 1996), which ran from the 1880s until the last school closed in the mid-1990s. By 1930, roughly 75% of all First Nations children between the ages of 7 and 15 attended IRS, as did significant numbers of Métis and Inuit children (Fournier & Crey, 1997). It has been estimated that over 150,000 Aboriginal children in Canada attended IRSs (Barkan, 2003).

Children as young as 3 were forced, by law, to leave their families and communities to live at schools designed to “kill the Indian in the child” (RCAP, 1996). These schools taught Aboriginal children to be ashamed of their languages, cultural beliefs and traditions, and were largely ineffective at providing proper or even adequate education (Deiter, 1999; Friesen & Friesen, 2002). In addition to the significant number of mortalities and children who went “missing” from these schools,

many were also victims of chronic mental, physical, and sexual abuses and neglect (RCAP, 1996). Not surprisingly, IRS Survivors have been more likely to suffer a variety of mental and physical health problems compared to Aboriginal adults who did not attend (First Nations Centre, 2005).

In addition to negative effects observed among those who attended IRS, accumulating evidence suggests that the children of those who attended (IRS offspring) are also at greater risk for poor well-being. In the current paper, we provide an overview of existing empirical research relating to intergenerational effects of the IRS system, which is one example of a historically traumatic event experienced by Aboriginal peoples in Canada. In this regard, although not all communities were affected, a large proportion of Aboriginal children from across Canada were forced to attend IRSs, which intentionally sought to assimilate Aboriginal peoples and destroy their culture, and has resulted in individual and community distress. Providing evidence that IRSs elicited the three characteristic historical trauma responses previously outlined, the data currently available suggests that IRSs continue to undermine the health and well-being of today's Aboriginal population, and several potential mediators of these effects have been identified. Providing evidence for the second and third criteria of historical trauma responses, studies have also suggested that having a familial history of IRS attendance interacts with current stressors to influence well-being, and that the risk associated with IRS trauma may accumulate across generations. In addition to several smaller scale community-based studies, much of this research stems from analyses using national-level data from the First Nations Regional Longitudinal Health Survey (RHS; First Nations on-reserve) and the Aboriginal Peoples Survey (APS; Aboriginal peoples living off-reserve).

To be sure, the studies that have been conducted are not without limitations. Among other things, the data are often based on self-reports rather than objective measures. For the community-based studies that are reviewed, participants were often self-selected and the samples sizes were relatively small. Furthermore, the relationship between historical trauma and current experiences may vary from one region of Canada to another, and may even differ between different communities, to say nothing of differences between individuals on- and off-reserve. Thus, it is difficult to generate conclusions that apply broadly. Finally, the studies conducted are invariably of a correlational nature, precluding the possibility of making causal attributions regarding the impact of previous trauma. Nevertheless, although such biases may raise questions about the directional nature of the relations, they do not alter the fact that the relations were present and that IRS-affected individuals appear to be at greater risk for poor health and social outcomes.

Historical trauma responses related to familial IRS attendance

Most of the research assessing outcomes associated with familial IRS attendance has focused on the psychological effects observed among the children and

grandchildren of IRS Survivors. In this regard, data from the 2002–2003 RHS revealed that 37.2% of adults who had at least one parent who attended IRS thought about committing suicide in their lifetime, compared to 25.7% of those whose parents did not attend (Assembly of First Nations [AFN]/First Nations Information Governance Committee [FNIGC], 2007, p. 37). As well, 20.4% of adults who had at least one grandparent who attended IRS had attempted suicide, compared to 13.1% who did not have grandparents who attended (AFN/FNIGC, 2007, p. 37). Likewise, analyses of the Manitoba 2002–2003 adult RHS data revealed that having a parent or grandparent who attended IRS was associated with a history of suicidal thoughts and attempts (Elias et al., 2012). Consistent with these greater suicidal tendencies reported by IRS offspring living on-reserve, in a sample ($N=143$) of First Nations adults living predominately in rural and urban areas across Canada, higher levels of depressive symptoms were also evident among IRS offspring relative to those whose families were not intimately affected by IRSs (Bombay, Matheson, & Anisman, 2011).

Analyses from the youth portion of the 2002–2003 RHS data revealed that the greater risk for distress associated with parental IRS attendance may begin to manifest itself during adolescence. In this regard, 26.3% of First Nations youth with a parent who attended IRS had thought about suicide, whereas 18.0% of non-IRS youth reported such suicidal ideation (First Nations Centre, 2005, p. 217). Parental IRS attendance was also associated with attempted suicide in a sample ($N=605$) of drug-using young Aboriginal peoples aged 14–30 in Vancouver and Prince George, British Columbia (Moniruzzaman et al., 2009). Consistent with these findings, the 2008–2010 RHS revealed that 31.4% of First Nations youth living on-reserve who had a parent who attended IRS reported symptoms of depression, compared to 20.4% of youth with neither parent who attended (Bombay, Matheson, & Anisman, 2012, p. 347).

Possibly related to their increased risk of psychological distress, youth RHS respondents with a parent who attended IRS were also more likely to have problems with respect to educational outcomes. Specifically, the 2002–2003 RHS revealed that First Nations youth who had a parent who attended IRS were more likely to report having learning difficulties at school (48.7% of youth whose parents attended vs. 40.4% whose parents did not attend) and having had to repeat a grade (47.3% of youth whose parents attended vs. 35.2% whose parents did not attend; First Nations Centre, 2005, p.161). Likewise, analyses of the 2006 APS revealed that Aboriginal children and youth (aged 6–14) living off-reserve tended to have lower levels of school success if their parent attended IRS (Bougie & Sénécal, 2010). In addition to these effects on mental health and educational outcomes, young Aboriginal drug users ($N=512$, aged 14–30) who had a parent who attended IRS, were more likely to contract Hepatitis C virus infection compared to those without a familial IRS history (Craib et al., 2009).

Mediators between familial IRS attendance and well-being

In addition to the negative effects on well-being that have been documented among descendants of IRS Survivors, research has begun to identify some of the potential mechanisms by which IRSs exert intergenerational effects (although only some of these have undergone explicit tests of mediation). For example, stress proliferation, which refers to a process in which an initial challenge or adverse experience gives rise to additional stressors (Pearlin, Aneshensel, & LeBlanc, 1997), appears to be a significant pathway leading to increased vulnerability to poor well-being. This can occur when difficulties in one domain of life seep into other aspects or when childhood adversities favor the occurrence of other behaviors or circumstances (e.g., elevated risk taking, poor socioeconomic status) that foster later stressor encounters (Thoits, 2010). More recently, this concept has been expanded to include intergenerational stress proliferation, where parental stress influences children's exposure to stressors indirectly through social disadvantages and directly by altering parenting behaviors (Thoits, 2010; Wheaton & Clarke, 2003). For example, the 2006 APS survey revealed that off-reserve Aboriginal children whose parents attended IRS were more likely to grow up in larger households, in households with lower incomes, and in households that experienced food insecurity (Bougie & Sénécal, 2010). In turn, the lower income among IRS parents, which may have stemmed from deficiencies in functioning and lower educational achievement due to their IRS experiences, partially accounted for the reduced school success of their children (Bougie & Sénécal, 2010).

It has frequently been suggested that the lack of traditional parental role models among IRS Survivors impeded the transmission of positive child-rearing practices and actually instilled negative parenting practices (Evans-Campbell, 2008). Although tests of mediation were not conducted in this study, parental IRS attendance and involvement with the child welfare system was associated with being a victim of sexual abuse among a sample of young Aboriginal drug users (aged 14–30 years; $N = 543$; For the Cedar Project Partnership et al., 2008). In a separate qualitative study among 43 service providers who have worked with individuals and communities affected by IRSs, the widespread sexual abuse suffered by generations of children while attending these schools were implicated as key factors that contributed to high rates of sexual abuse in some communities. This was attributed, in part, to the alteration of social norms generated by the IRSs, including the tendency for individuals not to report these abusive incidents (Bombay, Matheson, & Anisman, in press).

Although experiences of sexual abuse have been uniquely associated with significant life-long negative effects on well-being (Chartier, Walker, & Naimark, 2010), large-scale studies in the general population have suggested that sexual abuse rarely occurs in the absence of other forms of abuse (i.e., physical, emotional), neglect (physical, emotional), and household dysfunction (e.g., parental substance use, domestic violence; Dong et al., 2004; Turner, Finkelhor, & Ormrod, 2010). The importance of considering the co-occurrence of various

types of adverse childhood experiences is highlighted by increasing evidence that exposure to these experiences are cumulatively linked with a range of negative outcomes that continue into adulthood (Chartier et al., 2010; Turner et al., 2010). Indeed, among First Nations adults living primarily off-reserve ($N = 143$), relative to non-IRS adults, the IRS offspring reported greater cumulative childhood abuse, neglect, and indices of household dysfunction (e.g., being raised in a household affected by domestic violence, substance abuse, criminal behavior, and mental illness), which in turn partially accounted for their higher levels of depressive symptoms (Bombay et al., 2011).

These findings are in line with the perceptions reported by IRS offspring in the 2002–2003 RHS that parental IRS attendance negatively affected the parenting that they received as children (AFN/FNIGC, 2007, p. 36), which was likely influenced directly through modeling of negative care-taking practices observed in IRSs. As noted earlier, however, these effects on parenting also appeared to evolve indirectly through the decreased health and socioeconomic factors stemming from their IRS experiences that limited the resources and opportunities that could be provided to their children. In addition to the effects on individuals and families who were directly affected by IRSs, qualitative responses provided in the previously mentioned study conducted with service providers suggested that the consequences of the resulting cycles of parenting deficiencies might have exacted a toll on whole communities by altering social norms related to parenting and by sustaining factors that promoted these deficiencies (e.g., high rates of trauma exposure, low educational achievement; Bombay et al., *in press*).

In addition to the proliferation of stressors across generations, stress-proliferation processes throughout one's own lifetime also appear to be involved in contributing to greater distress among IRS offspring. In this regard, the greater exposure to adverse childhood experiences among IRS offspring seemed to put them on a trajectory for increased stressor exposure as adults. Specifically, the number of adversities encountered by IRS offspring in childhood was associated with greater exposure to traumatic experiences and higher levels of perceived discrimination in adulthood. In turn, each of these stressors demonstrated unique mediating roles in the relation between parental IRS attendance and depressive symptoms in First Nations adults (Bombay et al., 2011). Consistent with these findings, analyses of the 2002–2003 Manitoba RHS revealed that a history of abuse or victimization as a child or adult was associated with having a parent or grandparent who attended IRS (Elias et al., 2012).

In addition to their increased exposure to stressors, IRS offspring also seem to be more affected by stressors. In this regard, the occurrence of depressive symptoms was independently related to adverse childhood experiences, trauma experienced in adulthood, and levels of perceived discrimination, and in each case, symptomatology associated with these stressors were greater among IRS offspring compared to non-IRS adults in the study carried out with First Nations adults from across Canada (Bombay et al., 2011). It is known that stressful events may result in the sensitization of biological stress systems (e.g., hypothalamic–pituitary–adrenocortical axis [HPA])

functioning as well as neurochemical functioning in limbic and frontal cortical regions; Anisman, Merali, & Hayley, 2008) so that behavioral and biological responses to later stressors are exaggerated. In this regard, both prenatal stressors (i.e., stressors in pregnant women) and early life adverse events may have these sensitizing effects (Hochberg et al., 2011). It was reported that dysregulation of HPA axis functioning was observed in Holocaust offspring (Yehuda, Halligman, & Grossman, 2001), and it is conceivable that similar outcomes would be apparent in the children of IRS Survivors. In addition to the potential physiological explanations for the increased vulnerability to the negative effects of stressors, the greater reactivity to stressors among IRS offspring may also stem from a variety of psychosocial processes, such as altered appraisals of stressors and/or poor coping strategies.

Parental IRS attendance also seems to be linked with a number of negative health behaviors, which might contribute to decreased well-being among descendants of IRS Survivors. For example, having at least one parent who attended IRS was associated with smoking among adults and youth in the 2002–2003 RHS (First Nations Centre, 2005, pp. 111 and 205, respectively). Highlighting how these behaviors can contribute to continued intergenerational effects, in both the 2002–2003 and the 2008–2010 RHS, mothers who had a parent or grandparent who had attended IRS were more likely to smoke during pregnancy (First Nations Centre, 2005, p. 248; Smylie, O'Campo, McShane, Daoud, & Davey, 2012, p. 432). In turn, maternal smoking while pregnant was predictive of the birth weight of their offspring in the 2008–2010 RHS (Smylie et al., 2012, pp. 431–432). Likewise, in addition to their increased psychological distress and greater likelihood of contracting Hepatitis C, young Aboriginal drug users in British Columbia ($N = 605$) who had a parent who attended IRS were more likely to progress to injection drug use compared to users without a familial history of IRS attendance (Miller et al., 2011), which could have contributed to either of these negative outcomes.

Ethnic and cultural identity is considered to be an important determinant of health among minority group members (T. B. Smith & Silva, 2011). Considering that the explicit goal of IRSs was to assimilate Aboriginal children and instill a sense of shame regarding their culture, it might be expected that these experiences had effects on aspects of Aboriginal identity. Although group identification comprises several components (e.g., Sellers, Smith, Shelton, Rowley, & Chavous, 1998), identity centrality, which refers to the degree to which an individual feels that their group membership is a central part of who they are, is one of the most commonly explored aspects of identity (Cameron, 2004). In exploring levels of identity centrality in a sample of Aboriginal adults living primarily off-reserve ($N = 399$), IRS offspring were particularly likely to consider their Aboriginal heritage as a central or salient component of their self-concept relative to those without a familial history of IRS attendance (Bombay, Matheson, & Anisman, 2014). Although explanations for this difference were not explored in this study, it is possible that constant verbal and nonverbal reminders of IRSs that might be present in the lives of IRS offspring could enhance the salience of their Aboriginal identity. Alternatively, it might reflect a process observed among other minority groups,

in which outgroup rejection (in this case the knowledge that their group was the target of historical trauma, such as IRS, that focused on their assimilation), leads to greater identification with the ingroup (Branscombe, Schmitt, & Harvey, 1999).

Although other facets of cultural identity typically act as protective factors for well-being (e.g., collective pride), the positive effects of having a strong cultural identity may be mitigated by the fact that high levels of identity centrality appear to be linked with greater levels of perceived discrimination (Sellers & Shelton, 2003), which may put these individuals at greater risk for poor health and social outcomes. Research in other minority groups suggested that the high levels of perceived discrimination reported by group members high in identity centrality may be due to an increased inclination to appraise an intergroup encounter as reflecting discrimination because they are more sensitive to race-related cues (Operario & Fiske, 2001; Sellers & Shelton, 2003). Indeed, in the previously mentioned study (Bombay et al., 2014), it was found that IRS offspring were more likely to appraise hypothetical intergroup scenarios as reflecting discrimination on the part of the outgroup member involved in the interaction, which was mediated by their higher levels of identity centrality and greater past experiences of discrimination. Furthermore, IRS offspring were also more likely to appraise such discriminatory events as a threat to their well-being, which in turn contributed to their relatively greater depressive symptoms.

Considered to be another aspect of identity, it has been suggested that enculturation or immersion in one's traditional culture can act as a protective factor for Aboriginal peoples (Rieckmann, Wadsworth, & Deyhle, 2004; Whitbeck, Chen, Hoyt, & Adams, 2004; Whitbeck, Hoyt, Stubben, & Lafromboise, 2001). It might be expected that levels of enculturation would be lower among children of IRS offspring since their parents grew up in a setting where their languages and cultural practices were forbidden and disparaged. In contrast, however, adults and youth in the 2002–2003 RHS who had a parent who attended IRS were equally likely to speak their respective First Nations language (First Nations Centre, 2005, p. 34), which is considered to be an important characteristic behavior associated with enculturation (Park, 2007). This may be explained by the unanticipated finding that IRS Survivors were more likely to speak a First Nations language compared to non-IRS adults living on-reserve (First Nations Centre, 2005, p. 34). It was suggested in this report that this may reflect the fact that IRS Survivors were more likely to reside in isolated communities where language skills were found to be stronger, and/or because of the resiliency of IRS Survivors who secretly spoke their language as an act of rebellion or who sought to relearn their Aboriginal languages as part of their healing process (First Nations Centre, 2005, pp. 38–39). Although this did not seem to affect the ability to speak Aboriginal languages in the children of those who attended, individuals with at least one grandparent who attended were less likely to understand a First Nations language “relatively well” or “fluently” (p. 34). Despite the lower proportion of adult grandchildren who were able to understand First Nations languages, adults with at least one parent or grandparent who attended IRS were more likely to regard cultural events as

somewhat or very important (First Nations Centre, 2005, p. 35). Thus, on the whole, the IRS experience may not have had the intended effect of “taking the Indian out of the child,” and although it effectively undermined various attributes of well-being, may have actually increased certain aspects of their identity.

Research in other minority groups has revealed the intergenerational transmission of attitudes (e.g., prejudices and stereotypes) toward outgroup members (O'Bryan, Fishbein, & Ritchey, 2004). Indeed, in a sample of Aboriginal adults from across Canada ($N=164$), this was also observed among Aboriginal adults who reported that they had a family member or loved one who attended IRS, as these individuals reported greater perceived discrimination that, in turn, was associated with lowered intergroup trust and forgiveness (Bombay, Matheson, & Anisman, 2013). The low levels of intergroup trust and forgiveness, particularly in relation to the Canadian government, in turn, predicted pessimistic attitudes towards potential changes stemming from the IRS apology given to Aboriginal peoples in 2008. This is not to say that the apology was rejected; rather, individuals expressed the view that they thought this was a good first step, but that the apology needed to be coupled with concrete actions that would benefit the well-being of Aboriginal peoples (Bombay et al., 2013). Thus, in addition to interacting with and influencing responses to contemporary stressors and discriminatory encounters, having a family history of IRS attendance also is associated with reactions to contemporary events related to intergroup relations and reconciliation.

Familial IRS attendance interacts with contemporary stressors to influence well-being

Marion Hirsch (2008), in her photographic essays referring to the Holocaust, has described how parental traumatic experiences can result in the children having “post-memories” that are so well entrenched that they become recaptured memories, recalled as if they had happened to the individual. Historical trauma theory similarly suggests that, like the person that experienced the original trauma, subsequent generations might also be exceptionally reactive to stressors. Moreover, when these post-memories comprise more than just a single experience, but a collection of horrific events, it is possible that reactions to current injustices, or even to unrelated stressors, would be greatly increased.

There have been attempts to measure this phenomenon empirically in Aboriginal populations, and it appeared that thoughts of perceived losses (e.g., loss of language, loss of trust) stemming from historical trauma were common in a sample of young American Indian adults, with up to half thinking about these losses daily (Whitbeck, Adams, et al., 2004). In turn, having frequent thoughts of these losses was associated with greater symptoms of emotional distress (Whitbeck, Adams, et al., 2004), perceived discrimination, and alcohol abuse (Whitbeck, Chen, et al., 2004). Although historical loss may be related to negative outcomes through additional mechanisms, historical loss mediated the relationship between perceived discrimination and alcohol abuse (Whitbeck, Chen, et al., 2004). It was suggested

that discriminatory acts may trigger a sense of loss or serve as a reminder of historical traumas, and alcohol may serve to numb these negative feelings, or might represent anger manifested in self-destructive behaviors. In light of the previously discussed findings related to the increased perceptions and altered appraisals of discrimination among IRS offspring (Bombay et al., 2011, 2014), it may similarly be the case that thoughts of historical loss might be related to the greater likelihood of ambiguous events or interactions being attributed to discrimination. In addition to increased perceptions of discrimination, a familial history of IRS attendance seems to place these individuals at risk for greater exposure to non-ethnicity-related contemporary childhood and adulthood stressors (Bombay et al., 2011). Also described previously, in addition to the relationship between parental IRS attendance and increased stressor experiences, the relationships between depressive symptoms and both ethnicity-related (i.e., perceived discrimination) and non-ethnicity-related (i.e., adverse childhood experiences and adult traumas) stressors were much stronger among IRS than non-IRS offspring (Bombay et al., 2011). In effect, having a family history of IRS attendance may result in increased vulnerability to the negative effects of contemporary stressors.

The risk associated with IRS attendance accumulates across generations

A key feature of historical trauma theory is the emphasis on the cumulative impact that historical trauma events have on populations who have endured a history of numerous assaults against their group. Essentially, it is thought that the negative effects emanating from group trauma experiences are not only transferred across generations, but that these effects accumulate, such that events occurring at different points in history are part of a single traumatic trajectory (Evans-Campbell, 2008). However, to our knowledge, there has been no empirical evidence to support this claim, which is understandable considering the methodological difficulty in obtaining such data. Although evidence is lacking with respect to the cumulative nature of different types of historical traumas, the fact that the IRS system spanned several generations of Aboriginal peoples permitted analyses using data from the 2008–2010 RHS¹ exploring whether the intergenerational effects of IRSs appear to accumulate across generations.

Specifically, analyses were conducted to assess differences between First Nations adults who had one or more parents *and* grandparent who attended IRS (two previous generations attended), those who had a parent *or* grandparent who attended (one previous generation attended), and those who did not have any parents or grandparents who attended (non-IRS comparison group), in relation to levels of psychological distress. Because we were focusing specifically on the intergenerational effects of IRSs (as opposed to the direct effects of having attended), respondents who attended IRS were not included in these analyses. Psychological distress in the RHS was measured using the 10-item Kessler Psychological Distress Scale (Kessler & Mroczek, 1994), in which respondents were asked how often they experienced

symptoms of anxiety or depression in the previous month on a scale ranging from 0 (“none of the time”) to 4 (“all of the time”). Responses were summed with possible scores ranging from 0 to 40, with higher scores reflecting greater distress. According to past research (Andrews & Slade, 2001; Schmitz, Wang, Malla, & Lesage, 2009), scores ranging from 0–5 reflect low distress, scores 6–19 reflect moderate distress, and scores 20 or higher are reflective of high psychological distress (although various interpretations of scoring have been used).

Using the general linear model (GLM; analysis of covariance) within the Complex Samples module of SPSS,² levels of psychological distress were compared between the non-IRS controls (weighted count = 33,619.17; weighted percent = 38.5%), those who had one previous generation attend IRS (weighted count = 30,932.25; weighted percent = 38.5%), and those who had two previous generations attend (weighted count = 22,860.38; weighted percent = 26.2%), while controlling for gender, age, and household income. A significant difference appeared across these three groups, Wald $F(2, 121) = 14.16$, $p < .0001$, and post hoc analyses revealed significant differences between non-IRS adults versus those with one previous generation who attended, Wald $F(1, 122) = 4.25$, $p < .04$, and between those with one versus two previous generations who attended, Wald $F(1, 122) = 22.42$, $p < .0001$. In effect, the more generations that attended IRS, the poorer the psychological well-being of the next generation. Although there is still a need to demonstrate that the risk associated with historically traumatic experiences can accumulate across different types of events, these findings provide preliminary support for the cumulative nature of historical trauma across generations.

Conclusion

We reviewed the small, but growing literature assessing the intergenerational effects of the IRS system, which has provided consistent evidence of the enduring links between familial IRS attendance and a range of health and social outcomes among the descendants of those who attended. Not only has this research provided knowledge about some of the specific individual and familial effects of a relatively recent collective trauma that affected a large proportion of Canada's Aboriginal population, but it provides support for the proposed characteristics of historical trauma responses. First, a growing literature has revealed consistent relationships between familial IRS attendance and various forms of psychological distress, which appear to occur through a variety of mechanisms. Second, the risk accrued from familial IRS attendance appears to carry forward to influence the frequency of exposure to new stressors through stress-proliferation and altered appraisals, as well as by augmenting the impacts of contemporary stressors through increased psychological and/or physiological stress reactivity. Of particular note is the relationship between parental IRS attendance and perceived discrimination that, together with research linking historical loss and consciousness with perceptions of discrimination, provides support for the interplay between historical and contemporary trauma. Finally, although more research is needed to further explore this phenomenon,

individuals from families in which multiple generations attended IRSs reported greater distress relative to those in which only one generation attended, consistent with the view concerning the cumulative nature of historical trauma.

In considering additional factors relevant to historical trauma that should be investigated, there has been a growing literature indicating that biological factors might contribute to the intergenerational effects of traumatic experiences. In this regard, stressful encounters may result in epigenetic changes in which the expression of certain genes might be suppressed, and these suppressed genes, provided that they are present in germ cells (sperm or ova) could potentially be transmitted from one generation to the next (McGowan & Szyf, 2010). It was, in fact, suggested that biological expressions of historical trauma should be explored in light of the emerging literature on epigenetics and the implications of this intergenerational pathway (Walters et al., 2011). However, the ability to do this might be limited by the understandable hesitation of Aboriginal peoples and groups to take part in research (given past disappointments regarding the benefits accrued from research), particularly studies that require collecting DNA samples (L. T. Smith, 2001).

As noted by Evans-Campbell (2008), community-level responses to historically traumatic events are the least studied and understood. Indeed, the impact of IRSs has been conceptualized as a trauma having community-wide intergenerational effects, including the alterations of traditional social norms, social malaise, and weakened social structures that have themselves become second-order stressors (Adams, 1995; Duran, Duran, & Brave Heart, 1998). In support of this perspective, although not specific to IRSs, elders attributed their community's high rates of alcoholism and child maltreatment to historically traumatic events (Whitbeck, Adams, et al., 2004). As well, levels of historical loss were associated with responses to a newly developed measure of community capacity, and to measures of social capital and "community influence" among members of two southwest American Indian tribes (Oetzel et al., 2011). This may suggest that communities less affected by IRS or other historical traumas may have a greater capacity to achieve self-government, as well as local control over child welfare, health, education, and policing services. These have been considered to be measures of "cultural continuity," which in turn, have been linked with suicide rates in First Nations communities (Chandler & Proulx, 2008).

As emphasized earlier, in evaluating the effects of IRSs, it ought to be recognized that this was only one example of a long series of injustices that were committed towards Aboriginal people in Canada and elsewhere. Accordingly, although this research provides support for the influence of historical trauma in contributing to present day health disparities, the specific effects associated with IRS-related events may not be applicable to communities who have faced other types of historical traumas. Though based on preliminary research, it was suggested that historical traumas that disrupt ties to family, community, or place, may be associated with depressive symptoms, whereas events that caused direct physical harm to individuals, communities, land, or sacred sites might be more likely to elicit symptoms of anxiety or PTSD (Walters et al., 2011), although depression is a frequent comorbid

feature of PTSD. Exploration of historical traumas of a different nature (e.g., witnessing a community massacre; the prohibition of whaling in northwestern coast communities), and their interaction with other historical and contemporary traumas, will enhance the understanding of how historical trauma comes to undermine health.

Although it might be considered that highlighting the link between historical trauma and individual and collective well-being may deflect attention from the impacts of more proximal stressors, the linkages found between IRSs and contemporary determinants of health actually allow for a greater understanding of these variables and how they can be targeted in health promotion and interventions. For example, the research that was reviewed emphasizes the importance of cultural factors, such as identity, and thoughts about historical losses, in contributing to poor health and social outcomes, which may otherwise be overlooked if one simply considered the relationship between socioeconomic status and well-being. In this regard, IRS-related alterations of cultural factors typically considered to be sources of resilience, such as Aboriginal identity centrality, also contributed to and interacted with stress-related pathways leading to increased risk of poor well-being. Identification of risk and resilience factors discussed in this review, as well as additional variables such as social support and community-level factors, can facilitate the development of effective treatments that target not only individuals affected by IRSs, but families and communities as well.

In addition to facilitating the development of culturally effective treatments to deal with the consequences of historical trauma, like the therapeutic effects of having individual-level traumatic experiences validated and acknowledged (Mueller, Moergeli, & Maercker, 2008), this knowledge and awareness of historical trauma may also foster healing among Aboriginal peoples and communities. In our studies, room is always made for comments by participants to enable qualitative analyses. A poignant comment made by a First Nations woman informed us that prior to participating in our study she was not aware that her mother had attended IRS until she asked her mother directly when she was completing the study questionnaire. Since her participation, she has learned more about IRSs and gained a deeper understanding of her mother's behavior while growing up, which ultimately helped to heal certain aspects of their relationship. Knowledge of these continued consequences of historical trauma among non-Aboriginal Canadians may similarly help foster improved intergroup relations by increasing understanding of the complicated issues contributing to the health of Aboriginal peoples. Recognition of a group's collective history is often necessary to make sense of the current health and social conditions. This was effectively acknowledged by the Assembly of First Nations (1994, p. 141), whose view was that, "First Nations need to know their history. History provides a context for understanding individuals' present circumstances, and is an essential part of the healing process."

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Notes

1. See the *First Nations Regional Health Survey (RHS) 2008–10 National Report on Adults, Youth and Children Living in First Nations Communities* for further details regarding the background, process, and methods used in the RHS (FNIGC, 2012).
2. Complex Samples module in SPSS was used to take into account the clustered, stratified, multistage sample design of the RHS.

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Exhibit: *National Inquiry into Missing and Murdered Indigenous Women and Girls*

Location/Phase: Parts 2/3 Winnipeg

Witness: Dr. Amy Bombay

Submitted by: Stuart Wuttke

Add'l info: P02-03 P03 P0101

Date: OCT 01 2018

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