

## EXPLORING THE RELATIONSHIP BETWEEN SENSE OF COHERENCE AND HISTORICAL TRAUMA AMONG AMERICAN INDIAN YOUTH

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*Abstract: Historical trauma has been associated with many health and social issues. However, there is little understanding of how American Indian (AI) youth cope with historical trauma. Sense of Coherence (SOC) provides a promising framework for studying the relationship between resiliency and historical trauma, as it is a theorized mechanism that helps individuals cope with ongoing stress. A multi-method study examining the potential relationship between SOC and historical trauma revealed that higher levels of SOC predicted fewer historical trauma-related symptoms and provided rich detail about how an AI youth sample conceptualized stress and coping. Implications and future directions are discussed.*

### INTRODUCTION

Historical trauma has long been a major social and health issue among American Indian (AI) tribes (Bassett, Buchwald, & Manson, 2014; Gone & Alcántra, 2007; Middlebrook, LeMaster, Beals, Novins, & Manson, 2001). Historical trauma is defined as the cumulative emotional and psychological wounding derived from massive group trauma experiences occurring over the course of the lifespan and across generations (Brave Heart & DeBruyn, 1998; Armenta, Whitbeck, & Habecker, 2016). Additionally, historical trauma has been associated with specific response features, which include but are not limited to depression, self-destructive behavior, suicidal ideation and attempts, anxiety, low self-esteem, and self-medicating to try and hide painful emotions (Brave Heart, 2003; Kirmayer, Gone, & Moses, 2014; Mohatt, Thomson, Thai, & Thebes, 2014). AIs have to cope with the transgenerational trauma brought on by European colonization, which has stripped many AI tribes of their culture (Gone, 2013a; Zahran, et al. 2004). Historical trauma among AIs is due to unresolved grief that is thought to span generations and is caused by the loss of lives, culture, and land from European colonization (Brave Heart & DeBruyn, 1998; Crawford, 2014; Evans-Campbell, 2008; Mohatt et al., 2014). Brave Heart & DeBruyn (1998) asserted that historical trauma is exacerbated by racism, oppression of native peoples, and internal conflict among tribal members. This ongoing suffering has been linked to chronic substance abuse, physical and sexual abuse,

violence, and suicide ideation, attempts, and completions (Brave Heart et al., 2016; Gone, 2013a; Gone & Alcántara, 2007; Middlebrook et al., 2001). AI populations continue to struggle with the effects of colonization and historical injustices, including vanishing AI cultures and languages (Brave Heart & DeBruyn, 1998; Kirmayer, et al., 2014).

Historical trauma also has been linked to impaired AI well-being through the long-term disruption of families and communities, parenting interference from punitive institutional and governmental practices, a compromised emotional response, repeated physical and sexual abuse, loss of cultural and historical knowledge, and the systematic devaluing of Native identity (McLeigh, 2010; Kirmayer et al., 2014). Furthermore, historical trauma appears to have negatively impacted AI youth who have a high risk for health problems such as substance abuse, violence, mental illness, and suicide (Brockie, Dana-Saco, Wallen, Wilcox, & Campbell, 2015; Cheadle & Whitbeck, 2011; Whitbeck & Armenta, 2015; Whitbeck, Walls, & Welch, 2012). Many AI youth also are more likely to live in communities with higher rates of physical and mental health disparities and lower rates of educational attainment compared to the rest of the U.S. population (Fleischhacker, Roberts, Camplain, Evenson, & Gittelsohn, 2016; Faircloth & Tuppeconic, 2010; Garrett et al., 2014; Gone & Trimble, 2012; Fryberg, Covarrubias, & Burrack, 2013; Sauder et al., 2017; Henson, Sabo, Trujillo, & Teufel-Shone, 2017). Given these social and health risks, it is important to understand how AI youth cope with historical trauma.

### **Background and Context**

Our interest in examining historical trauma among AI youth was spurred from focus groups we conducted in 2012 with employees of a Tribal Clinic in the Western United States<sup>1</sup> as part of a program evaluation of the Tribe's suicide prevention efforts (Evans & Davis, 2013). One of the purposes of these focus groups was to gain a better understanding of obstacles that might prevent Tribal youth from engaging in help-seeking behaviors. Our discussion quickly turned to the topic of historical trauma. As we gently probed for information on the effects of historical trauma on tribal youth, our adult participants indicated that they felt that cultural erosion has had an adverse effect on their youths' self-esteem and behavior.

The consensus from these focus groups was that historical trauma was a major, yet little addressed, Tribal issue impacting local AI youth. Given these findings, we became interested in

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<sup>1</sup> These focus group data, and all data from the primary mixed-method study, were collected at the same remote reservation located in the Western United States.

how historical trauma was impacting AI youth. This interest became the catalyst for the present study, where we sought to gain a better understanding of how AI youth conceptualize stress associated with historical trauma and how they cope. In this vein, we believe that Sense of Coherence (SOC<sup>2</sup>; Antonovsky, 1979) provides a promising framework for studying the relationship between resiliency and the stressors associated with historical trauma. In the next section we introduce the concept of Sense of Coherence, then we present the results of a multi-method study examining the relationship between SOC and AI youth's symptoms associated with historical trauma.

### Sense of Coherence

Antonovsky (1979) presented Salutogenesis as a theoretical framework for examining how some people manage to thrive despite being exposed to ongoing stress. Salutogenesis is a strength-based framework of health promotion that emphasizes the resources people can develop and use to increase their individual and collective well-being (Mittelmark & Bauer, 2017). Unlike traditional models of health, which view healthiness as the lack of disease, Antonovsky asserted that health and disease were polar ends of a continuum and that individuals move along this continuum throughout their lives (Antonovsky, 1996; Mittelmark & Bauer, 2017). Antonovsky (1979) proposed the construct of SOC as the central component of the Salutogenic model to explain how adaptation to stress impacts health.

Antonovsky (1979, 1987) asserted that SOC is integral in helping move towards health; he theorized it as a mechanism that people rely upon to deal with ongoing stress by managing, comprehending, and creating meaning about life stressors. According to Antonovsky (1990), *manageability* refers to having the resources to cope with life's demands. An example of how manageability applies to AI youth is that they must face demands derived from cultural oppression, discrimination, and historical trauma (Yasui, Dishion, Stormshak, & Ball, 2015). Those with a high sense of manageability are less likely to feel as though they are victims of life events or that life has treated them unfairly (Antonovsky, 1987). *Comprehensibility* refers to a person's ability to view stressors as understandable, ordered, structured, and predictable, and *meaningfulness* refers to a person's ability to see life as a challenge worthy of engagement and investment. Individuals

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<sup>2</sup> Although we acknowledge that this acronym is widely used to mean 'Systems of Care' in Indian Country, we retain this for use as 'Sense of Coherence' in this paper due to its long-standing use in the coping and resilience literatures.

with a high sense of comprehensibility see the world as consistent and structured, rather than raucous and chaotic, and when they do encounter surprises, they will view them as being orderable and explicable (Antonovsky, 1987). Additionally, Antonovsky described meaningfulness as the motivational element of SOC, in that individuals with a high sense of meaningfulness believe that when they encounter negative events (e.g., the death of a loved-one), they are willing to take up the challenge, be determined to seek meaning in the event, and do their best to overcome the event with dignity. Moreover, SOC is theorized as an orientation or attribute, in which a person with a higher SOC has generalized resistance resources (GRRs) to cope with stressors. GRRs are resources that an individual has at their disposal, which provides them with a set of life experiences that bolsters their ability to cope with stress, and contributes to the development of the individual's SOC (Antonovsky, 1987; Idan, Eriksson, & Al-Yagon, 2017). Those with more GRRs are thought to have a higher SOC and are thus more likely to be able to handle life's stressors than those with a low SOC (Antonovsky, 1987). Like Salutogenesis, Antonovsky conceptualized SOC as existing on a continuum, unlike the traditional pathogenic model, with higher SOC levels linked to healthiness and well-being.

Sense of Coherence has been supported by a rich literature of research. It has been associated with reduced mortality (Geulayov, Drory, Novikov, & Dankner, 2015) and higher levels of life satisfaction in adolescents (Moksnes, Lohre, & Espnes, 2012). Additional research by Mattisson, Horstmann, and Bogren (2014) found a negative correlation between SOC and depressive anxiety as well as psychotic disorders. SOC also has been shown to mediate the relationship between trauma and anxiety, social function, and loss of confidence, among Palestinian health providers (Veronese & Pepe, 2014). Similarly, research by Braun-Lewensohn, Sagy, and Roth (2011) found that SOC mediated the relationship between trauma from missile attacks and stress reactions of Israeli teenagers.

Bowman (1996, 1997) conducted the only known studies to date examining SOC among AIs and found that SOC was negatively associated with depression, anxiety, and physical symptoms; she also found evidence consistent with the idea that SOC can be developed and expressed through a variety of cultural paths. Additionally, Bowman found that AI and Anglo participants reported similar levels of SOC. To our knowledge, however, no studies have examined the potential role of SOC in mitigating symptoms associated with historical trauma among AI youth. Given that prior research has demonstrated that SOC is negatively associated with stress in AIs and adolescents, the current study sought to answer the following question: What is the

relationship between SOC and historical trauma among AI youth? To explore this question, a sequential, mixed-method, exploratory study was conducted by first administering an in-school survey to assess the relationship between SOC and historical trauma, followed by an art-based structured interview with AI youth from the same school to examine the phenomenological experiences of youth's stressors and coping strategies.

## METHODS

### In-school Survey Component

#### Consent Procedures and Participants

Permission to pursue this study was initially sought from the Reservation's Tribal Council. Approval for the study was obtained, but since the tribe did not have its own review board for human subject research, the Council requested that the researchers seek approval from the review board of their academic institution. The Tribal Council's resolution of approval, along with a letter of support from the principal of the tribal school, were included in the Institutional Review Board application. Human subjects' certification was obtained for all data collection procedures of this study. Initially, letters describing the study and consent/assent procedures were sent to the parents of all of the youth of this small tribal school ( $N = 64$ ). This letter stated that only youth with signed and returned parent consent forms could participate in the study and that youth without parent consent (or who were not interested in participating) would be allowed to work on alternate schoolwork as assigned by their teacher during study data collection. Youth assent also was obtained prior to the survey and arts-based interview administration. These procedures resulted in 30 AI youth participating in the study from this tribal junior/high school on a remote reservation in the Western United States. All consent and assent forms indicated that only de-identified data, images, or quotes would be used for research or publication purposes. The gender ratio was even, and the ages of the participants ranged from 14 to 18 years, with a mean of 15.67.

#### Study Procedure

The survey was administered at the school during regularly scheduled English classes. The researchers explained the purpose of the study and asked students to sign the assent forms if they agreed to participate in the study. The participants then were asked to complete the survey, which took approximately 20-30 minutes to complete. Participants also were provided snacks and drinks

as incentives while they completed their survey. This same procedure was followed for the arts-based, structured interview study component.

### **Measures**

**Sense of Coherence.** Sense of Coherence was measured using the SOC scale (Antonovsky, 1987). The SOC scale consists of 29 items, which are a series of semantic differential items on a seven-point scale, with anchoring phrases at each end. High scores indicated a strong SOC. The SOC scale is comprised of three subscales: comprehensibility, manageability, and meaningfulness, defined in the previous section. An account of the development of the SOC scale and its psychometric properties, revealing it to be reliable and valid, appears in Antonovsky's writings (1987, 1993). Antonovsky (1993) reported Cronbach's alphas ranging from .82 to .95 with an average of .91; the Cronbach's alpha for this study was .92. Example items are "Do you have the feeling that you are in an unfamiliar situation and don't know what to do?" (comprehensibility; 1 = very often to 7 = very seldom or never), "Until now your life has had:" (meaningfulness; 1 = no clear goals or purpose at all to 7 = very clear goals and purpose), and "When you think of difficulties you are likely to face in important aspects of your life, do you have the feeling that:" (manageability; 1 = you will always succeed in overcoming difficulties to 7 = you won't succeed in overcoming difficulties). Although there is a shorter version of the SOC scale (SOC-13; Antonovsky, 1987), both versions have rarely been employed with AI youth. Therefore, we decided to use the original 29-item scale for this exploratory study to capture as many elements of the SOC construct as possible. In addition, the 29-item scale has historically displayed higher reliability than the SOC-13 (Antonovksy, 1993; Jakobsson, 2011).

**Achenbach Youth Self-Report.** The Achenbach Youth Self-Report for ages 11-18 (YSR; Achenbach & Rescorla, 2001) is a 112-item scale that broadly measures behavioral and emotional problems through items yielding a total problem score along with two broad-band scales (internalizing and externalizing), eight subscales, and six DSM scales. For this study, the total problems scale was used for analyses, which contains all 112 items. However, over two-thirds of participants skipped one item, which is open-ended. Given the systematic non-response of that one item, we decided to remove the item from the analysis. Achenbach & Rescorla (2001) reported good internal consistency for the total problems scale, with a test-retest reliability score of .87. Similarly, Braun-Lewensohn et al. (2009) used the total problems scale to examine well-being among Israeli youth exposed to missile attacks and reported an alpha of .91. Reliability of the YSR for this study was .94.

**Historical Loss Associated Symptoms Scale.** The Historical Loss Associated Symptoms Scale (Whitbeck, Adams, Hoyt, & Chen, 2004) is a 12-item scale that assesses the frequency of symptoms and emotional responses to loss (i.e., anger, shame, loss of sleep, etc.) associated with historical trauma. This scale contains two subscales, the anxiety/depression subscale, and the anger/avoidance subscale. Whitbeck et al. (2004) reported that the Historical Loss Associated Symptoms scale showed high internal consistency with a Cronbach’s alpha of .89. Reliability for this study was .91 for the Historical Loss Associated Symptoms Scale, .83 for the Anxiety/depression subscale, and .85 for the Anger/avoidance subscale. The scale was measured on a 6-point scale ranging from 1 (Never) to 6 (Daily); we also included a “Does Not Apply” response. The measure was preceded by the following prompt: “Please think back to the losses you have experienced as a Native American. Please place an X under the response that best indicates how frequently you have experienced the following.”

**Results and Discussion**

Regression analyses examined the relationship between SOC and symptoms associated with historical trauma, as well as SOC and participant responses on the total problems scale of the YSR. Results revealed that SOC predicted lower levels of symptoms associated with historical trauma and participants’ response on the total problems scale (See Table 1). The results are consistent with Antonovsky’s Salutogenesis theory, which posits that higher levels of SOC are associated with greater adaptation to stress, enhancing individuals’ health. These results established a significant relationship between SOC and historical trauma within our AI youth sample. The next step was to understand how AI youth perceive stress and coping, and how these perceptions relate to the conceptual frameworks of historical trauma and SOC.

**Table 1**  
**Regression Results for SOC Predicting Historical Loss and Total Problem Score Outcomes**

Model	R <sup>2</sup>	b	SE
Historical Loss Symptoms	<b>.58</b>	<b>-1.10***</b>	.19
Total Problems (YSR)	<b>.57</b>	<b>-2.3***</b>	.04

Note. Bolded text with \*\*\* indicates a significant result ( $p < .001$ ).



### **Art-based Interview Component**

Next, we wanted to understand through stress and coping prompts if the historical trauma themes identified by Kirmayer, Simpson, and Cargo (2003) would emerge from this qualitative component with the youth. Although Kirmayer et al. (2003) were specifically applying their themes to a residential school experience, these themes are commonly cited throughout the historical trauma literature (e.g., Brave Heart & DeBruyn, 1998; Cross, 1986; Evans-Campbell, 2008; Gone, 2013a, 2013b; Hartman & Gone, 2016; Kirmayer et al., 2014; Whitbeck et al., 2004; Yasui et al., 2015). Kirmayer et al. (2003) identified six major consequences of historical trauma: 1) disruption of families and communities; 2) confusion of parenting with punitive institutional practices; 3) impaired emotional response; 4) repeated physical and sexual abuse; 5) loss of knowledge, language, and tradition; and 6) systematic devaluing of Native identity.

Therefore, we sought to understand specific stressors affecting AI youth and how they coped with these stressors in daily life. For this component, a qualitative art-based structured interview was administered to explore more deeply stress and SOC concepts among AI youth. The research question we sought to answer with this component of the study was: How do AI youth comprehend, manage, and find meaning from stressors so that they can better cope with ongoing life stress? To investigate this question, we used the art-based interview format as described by Huss, Sarid, and Cwikel (2010). Huss et al. (2010) developed this qualitative interview procedure to assess the phenomenological experiences of social workers working in a war zone situation. Huss et al.'s method allows participants to express their phenomenological experiences of stress and how they cope with that stress. Drawings and interview content then could be assessed for themes consistent with SOC and historical trauma conceptual frameworks.

### **Participants and Data Sources**

Participants ( $n = 27$ ) were AI youth attending the same junior/high school as the participants in the survey component. The sample consisted of 62% females, and the ages of the participants ranged from 14 to 18 years, with a mean of 16.8. The consent and assent procedures that were used for the survey component also were used for the arts-based component. The sources of data for this art-based component were comprised of the 54 images participants drew from the two prompts (outlined below) and the written explanations each participant included on the back



of each drawing. Additionally, the authors interviewed each participant so that they could elaborate on the meaning of their drawings.

**Procedure.** Each participant was asked to draw two images that are part of an arts-based interview format (Huss et al., 2010) and were offered snacks and drinks as incentives during this process. Participants drew the images using pencils, color markers, and white paper. The aim of both drawings was to symbolize how the youth defined and coped with stress, focusing on conceptualizations of comprehensibility, meaningfulness, and manageability. Specifically, participants were asked to draw using two prompts. The first prompt asked participants to draw a picture depicting a day-to-day stressful situation in their life. The participants were given 20 minutes to complete this drawing. Once the participants finished their drawings, they were asked to turn the paper over and write a few sentences explaining the image regarding the stressor and their stress reaction. This was followed by interviews with each participant to understand, provide clarity, and expand on the meaning of what they drew and wrote. The second prompt asked participants to draw a different scene depicting a very positive (good) day in their life. Follow-up prompts included: “What could make this day better” and “How does this help you cope with stress?” Participants were once again given 20 minutes to complete the drawings and were asked to describe what they drew on the back of the paper. Interviews with each participant again sought clarity and understanding of the meaning and content of the images.

### Results and Discussion

Analysis of drawings followed the arts-based interview format from Huss et al. (2010) to identify themes related to the types of daily stress and coping strategies in the images. This process was iterative, with an initial thematic content analysis of the drawings, followed by an analysis using art diagnostic theories (Furth, 1998; Silver, 2001), with a focus on life stressors and coping, since these were our study variables of interest. Thus, our overall approach for this component was epistemological in that we sought to understand how our participants know and experience their world, particularly regarding stress/coping, which we believe are constructed and mediated through their culture (Twining, Heller, Nussbaum, & Tsai, 2017). The drawings in this section are representative of the themes elicited from participants. We limited the number of drawings to protect the identity of participants who included elements that might identify them or the tribe and to address space limitations.

In terms of the **Stress** themes that emerged from the initial drawing prompt (day-to-day stressful situation), *Family Conflict*, *Loss*, *School Stress*, and *Isolation* were found to be the most

salient and consistent thematic content. For **Coping** themes (from the very positive/good day prompt), *AI Culture*, *Sports*, *Art and Music*, and *Family* emerged as the most prominent themes. Many participants included labels and descriptions as part of their drawings—often saying they did so because they were unsure of their artistic skill (“I’m no artist” and “I can’t draw”) and wanted to provide clarity of what they were depicting.

### **Cross Validity**

Cross validity was assessed by having each author separately undertake the analyses and then reach consensus on the thematic content and by using the drawings and verbal explanations to endorse and validate each other. Themes from each of the two drawing prompts emerged through this iterative process. As thematic data was gathered, the researchers reviewed them for overlapping themes and finalized these themes according to the broad categories of stress and coping that related to each drawing prompt. Example drawings and their descriptions are provided for the themes of Stress and Coping that emerged from our analyses of the student images.

**Stress.** Themes that emerged from the stress prompt revealed familiar adolescent stressors of *Family Conflict* and *School*, but also *Isolation*—perhaps not surprising given the remote location of their home Reservation—and *Loss*, often related to broken homes through domestic violence, death, alcoholism, and relocation among family members. Below is a quote from a 16-year-old female reflecting school-related stress.

Having to wake up really early in the morning is very stressful because you can’t miss school, and if I do, my parents have to take me and that is over an hour drive one way. This is stressful on my family and myself. I always have to make up stuff at home that I missed at school...homework is stressful as well. Drama is also an issue at school—that is stressful.

The theme captured here is consistent with Kirmayer et al.’s (2003) theme of disruption of family and communities. The majority of the stress expressed appears to be associated with this participant’s family living so far away from the Tribal school.

Many of the stress prompt images contained multiple themes; in Figure 1, a 15-year-old male has drawn an image of his step-father being taken away to prison by police for abusing his sister, reflecting both *Family Conflict* and *Loss*. He stated about the drawing, “I’m mixed up; happy he is gone, but I miss him.” The comments here also are reflective of disruption of families and communities. In addition, the participant’s mixed feelings about the event may also be suggestive

of impaired emotional response associated with attachment disruption due to losing a parent (Westen, Nakash, Thomas, & Bradley, 2006). Lastly, the comments here also indicated abuse was present in the home, consistent with previous theorization and research on historical trauma (Andersson & Ledogar, 2008; Brave Heart & DeBruyn, 1998; Elias et al., 2012; Evans-Campbell, 2008; Gone, 2013a).

**Figure 1.**



*Isolation* also emerged as a recurrent theme in the drawings, often linked to family and community disruption. For example, one participant, a 15-year-old female commented on her drawing in which she drew her family members geographically separated by the vast distances of the western U.S.—where many rural AIs reside in reservations. She said of her drawing: “I live with a friend. This picture represents my family. Some live very far away in other reservations. I’m separate from my mom, my dad, my grandma, 2 sisters, 3 brothers, and niece.”

*Loss*, also associated with disruption of family, was a prominent stress theme reflected in numerous images, often due to the death of a family member. A 14-year-old female drew an image reflecting the loss of her cousin (see Figure 4): “My first cousin passed away at age 20 last week. I’ve always called him my brother, and we were very close. This is a picture of his funeral.”

Figure 2.



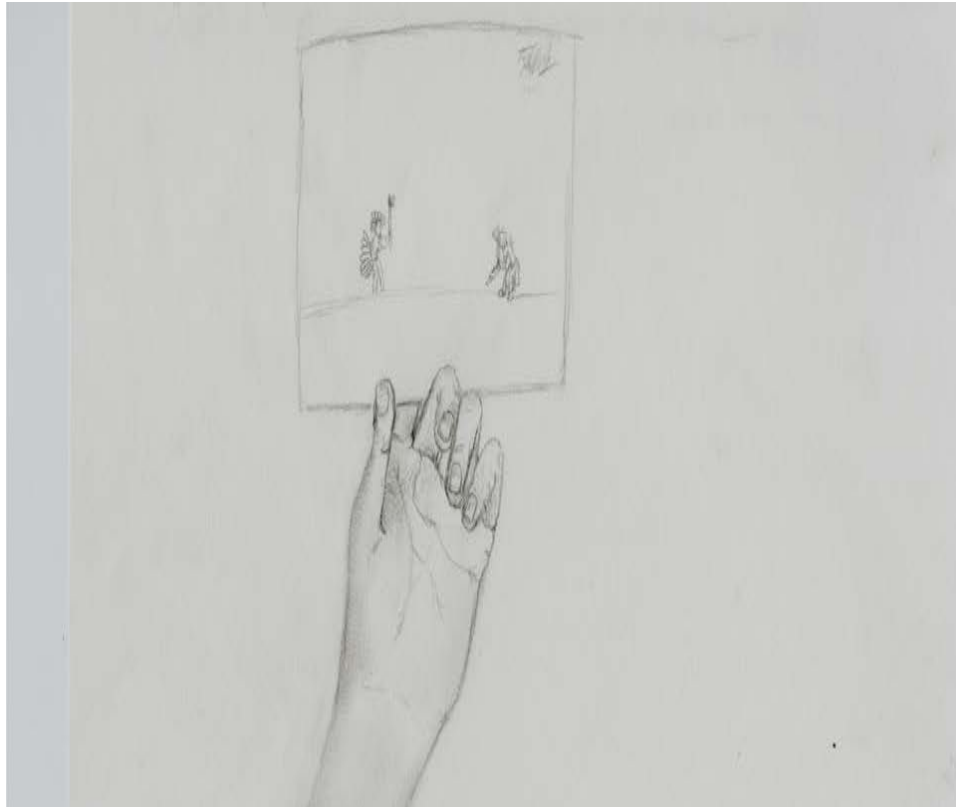
**Coping.** Themes from ‘A good day’ prompt included *AI Culture*, *Art and Music* (not directly related to AI Culture), *Sports*, and *Family*. *AI Culture* content (as most often represented by beading, dancing, music, and dress) was particularly salient, with images of AI dress and ceremonies prominent in many participants’ drawings, which is consistent with Antonovsky’s (1979) assertion that culture acts as a generalized resistance resource (GRR), helping people move toward health. A 15-year-old female stated that “dancing, listening to music, and shopping help stress go away.” Her drawing is of herself dancing at a recent Pow Wow sponsored by the Tribe (see Figure 3). This participant’s response is also consistent with the use of GRRs to make stress manageable Antonovsky, 1987).

Figure 3.



The following drawing is by a 17-year-old male participant (see Figure 4). He states of his image, “Drawing and being creative, along with my Native American culture has helped me out with stress.” This also is a drawing representing a recent Pow Wow that the Tribe conducted. This drawing is congruent with Antonovsky’s (1987) view that culture is a resource for dealing with stress and improving well-being.

**Figure 4.**



*Sports* were a prominent coping theme in many of the images among both sexes. A 17-year-old female commented on her drawing of her swimming in the tribal lake, “I love to swim. It helps me a lot. Here I am swimming in our sacred lake. Softball is my favorite sport.” This participant’s comments exemplify one who is utilizing resources (i.e., swimming and softball) to make stress manageable (Antonovsky, 1987).

Figure 5 is from a 17-year-old female. In response to the prompt of ‘A good day,’ she stated, “Everything...I drew is a representation of all the things that I do to cope with stress...I’m a very out-going person, so it is easy for me to cope with stress. All I need is my family and friends, and I can overcome anything.” This statement is an example of Antonovsky’s (1987) view that people high in meaningfulness do not see themselves as victims and that they feel that life’s



challenges are worthy of engagement and that those high in comprehensibility view the world as orderly and predictable. As previously stated, many drawings combined several themes, and in this image, she has drawn cultural, artistic, and sports activities that she enjoys doing with her family and loved ones.

Figure 5.



## GENERAL DISCUSSION

Our findings establish a link between SOC and reduced symptoms associated with historical trauma. Regression results revealed that those AI youth with higher levels of SOC reported fewer symptoms associated with historical trauma. These results are consistent with Salutogenesis theory, which posits that higher SOC helps individuals cope with life stressors (Antonovsky, 1979; 1987). SOC also predicted less endorsed problems on the Youth Self Report scale.

The arts-based interview results further elucidated this relationship and helped to underscore specifically how SOC is a means through which family, community, and culture can protect against the multi-generational stressors associated with historical trauma. Loss and

isolation were prominent themes associated with stressors among this sample of AI youth. Participants expressed loss and isolation in a variety of ways, such as loss of a loved one, geographical separation of family, and incarceration of a family member. These themes have been pronounced features of historical trauma, as cataloged by Brave Heart and DeBruyn (1998) and others (Crawford, 2014; Garrett et al., 2014; Whitbeck et al., 2004). Additionally, AI culture, practices, and family involvement emerged as major coping themes to address daily stress among participants, which is consistent with the SOC conceptual framework. Antonovsky (1987) argued that it was not possible to have deep-seated issues in a person's interpersonal relationships, inner feelings, major life activity (i.e., career), and existential issues (e.g., death, conflict, feelings of isolation) and maintain the ability to perceive the world as manageable, comprehensible, and meaningful. Our qualitative results suggest that culture is a resource that helps buffer the effects of historical trauma, potentially enhancing SOC among the AI youth in this study. This is consistent with the theoretical relationship between culture and SOC postulated by Antonovsky (1979; Benz, Bull, Mittelmark, & Vaandrager, 2014). Thus, taken together, present results provide preliminary evidence that SOC can protect against historical trauma and its symptoms, as well as increase coping with general adolescent problems among this AI sample.

## **Implications**

Present findings lead to practical implications for addressing historical trauma among AI youth. First, results provide a potential framework for helping AI youth dealing with symptoms associated with historical trauma. Much of the historical trauma literature has documented the devastating effects on AI populations, and although mechanisms for addressing historical trauma have been developed (Brave Heart, 1998, 1999, 2000; Brave Heart, Chase, Elkins, & Altschul, 2011; Brave Heart, Elkins, Tafoya, Bird, & Salvador, 2012), to our knowledge, this study is the first to suggest and test SOC as a mechanism for addressing historical trauma. Second, our thematic exploration of stress and coping through a drawing activity suggests that cultural and familiar ties and coping are strongly connected among this sample of AI youth. Those youth with enhanced cultural and family ties may have a stronger SOC and could have more resources for dealing with stress.

This assertion makes sense in light of Brave Heart's argument that historical trauma is the result of AIs being stripped of their culture (Brave Heart & DeBruyn, 1998). Although there are many definitions of culture, most will likely agree that culture is a system of shared values, beliefs,



knowledge, attitudes, preferences, and skills (Mesoudi, 2011). In other words, culture provides a system of shared meaning that helps people feel part of the larger group. Humans are motivated to engage in meaningful relationships with others and derive emotional benefits when they have these meaningful relationships and experience negative emotional consequences when these relationships cannot be formed or maintained (Baumeister & Leary, 1995). Historical trauma may leave AI youth feeling lost and disconnected from their cultural roots, which could lead to the wide array of problems—including substance abuse, domestic violence, and even suicide—documented in the literature (Gone & Alcántra, 2007; Middlebrook et al., 2001).

Antonovsky argued that minorities (e.g., AIs) often can feel subjugated to hostile powers outside of their control and are thus under ongoing stress due to a lack of power to do anything about it (Benz et al., 2014). This is consistent with Brave Heart and DeBruyn's (1998) argument that historical trauma is the result of racism and oppression of Native peoples. As AIs lost control of their culture and way of life, these losses led to a number of social problems (Brave Heart & DeBruyn, 1998). Thus, the loss of culture and resultant intergenerational stress is a central component in historical trauma; these linkages and our present findings need further study and replication with larger samples.

Antonovsky asserted that culture could be an asset, which individuals can use as a lens to understand and cope with stress (Benz et al., 2014). He asserted that culture acts as a GRR, which provides its members with ready answers that provide clarity and stability (Antonovsky, 1979). Antonovsky (1987) further wrote that culture provides the resources and life experiences to perceive life as comprehensible, meaningful, and manageable. He asserted that culture contributes to comprehensibility by sending people consistent messages, furnishes people with the necessary tools to adapt to cultural social norms making life manageable, and provides meaning by giving people a place in the world. In other words, culture provides a sense of belonging, which has been associated with positive emotional outcomes (Baumeister & Leary, 1995). Thus, it may be that SOC reduces symptoms of historical trauma by helping Native youth connect or re-connect with culture, fostering a sense of belonging. This line of reasoning offers direction for youth development and interventionist programming with AI youth that aims to increase resilience and health promotion. For example, the tribe from which our sample came from has developed a digital storytelling program, in which participants create short videos telling a story. Many of these stories capture the individual's personal struggles, often tied to historical trauma, and how their connection to their cultural heritage helps them deal with their stressors. While there is currently

no data examining the effect of these videos on tribal members' general well-being, our findings indicate that this type of programming has the potential to increase the well-being of the producers and viewers of these videos. Correspondingly, many of the coping images from our study contain aspects of cultural involvement and rituals—such participation likely solidifies cultural ties that may increase overall manageability, comprehensibility, and meaningfulness.

Another pathway in which SOC may enhance AI youth's sense of belonging is by countering the effects of thwarted belongingness. Thwarted belongingness has been associated with feelings of alienation from friends, family, society, and other valued social circles within one's culture (Ribiero & Joiner, 2009). A lack of connection to local tribal culture among many AIs (in conjunction with isolation from broader American society) may be partly responsible for feelings of alienation. Our results suggest that AI youth with a higher SOC may utilize culture to connect with their tribal roots to facilitate their need to belong, which in turn may provide positive emotional benefits that allow these youth to thrive despite ongoing developmental, family, and cultural stress. A promising topic of future investigation is the relationship among SOC, thwarted belongingness, and historical trauma.

Finally, mental health professionals can directly use the results of this study as a guide for developing culturally sensitive treatments for AI clients suffering from symptoms associated with historical trauma. The theoretical underpinnings of SOC can provide direction for individualized treatments that are culturally appropriate and help individuals become more equipped to comprehend, manage, and find meaning in their daily struggles.

### **Limitations and Future Directions**

Our mixed methods results have provided a preliminary understanding of the relationship between SOC and historical trauma. As mentioned previously, quantitative results revealed that higher levels of SOC predicted decreased symptoms associated with historical trauma. Additionally, these results showed that participants with a higher SOC reported fewer behavioral and health issues.

Qualitative results provide rich detail about how the AI youth in our sample conceptualize stress and coping and extend our understanding of the relationship between SOC and historical trauma. Much of the thematic content of our participants' images directly corresponded to Kirmayer's framework (McLeigh, 2010) of impacts from historical trauma. For example, Figure 1 illustrates disruption of families and repeated abuse, but the participant's statement "I'm mixed

up; happy he is gone, but I miss him” also reveals impaired emotional response and struggle. In a similar vein, our ‘good day’ prompt elicited responses that were consistent with Antonovsky’s assertion that SOC and GRRs operate together to help people move toward health. The youth in this study named several examples of GRRs they use on a daily basis such as cultural practices, listening to music, participating in sports, and being artistically creative, to name a few.

This current study has limitations beyond the routine cautions regarding correlational data from cross-sectional studies. First, our small sample came from a single tribe, which limits the generalizability of our findings. Despite this, our preliminary results are encouraging and justify future research. Although our data do not allow us to make causal inferences, future studies employing longitudinal designs can help address this limitation and also provide a better understanding of the SOC-historical trauma relationship over time. Our analyses also did not examine the role of potential covariates or moderators, which might impact the relationship between SOC and historical trauma. These could include age, social support, involvement with the tribe, and the level of connection with the participants’ Native culture. These are topics of future investigation.

Finally, while the present study was well rooted in Antonovsky’s Sense of Coherence framework, more work needs to be done on expanding this theoretical model. Specifically, further investigation of the model is needed to specify the precise cognitive, emotional, and behavioral mechanisms underlying SOC. One potential means for expanding this model is to examine the role of culture as a GRR. Exploring GRRs would not only extend current findings but also would allow further modeling of the SOC-historical trauma relationship and the generation of new hypotheses. Examining the role of GRRs also extends the SOC literature by testing the theoretical function of GRRs, which to our knowledge has not yet been done.

## CONCLUSION

This multi-method study has provided preliminary evidence for the ameliorating effect of Sense of Coherence on historical trauma. The youth in our study illustrated a rich qualitative perspective on stressors that are consistent with conceptualizations of historical trauma and on coping that align with the SOC theoretical framework, together providing a clearer understanding of how SOC can help address ongoing stress associated with historical trauma. Furthermore, our findings provide direction for working with AI youth who are suffering from symptoms associated

with historical trauma. Results also reveal a connection among SOC, coping, and culture—providing indirect support for the benefits of GRRs among Native youth. Our combined results suggest that culture and family may play a key role in helping AI youth develop and maintain a strong Sense of Coherence, increasing their resiliency to stress and helping them move toward health.

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