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“Living off the Land”: How Subsistence Promotes Well-Being and Resilience among Indigenous Peoples of the Southeastern United States

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Abstract

Indigenous peoples of the United States tend to experience the most severe social, behavioral, and physical health disparities of any ethnic minority. This critical ethnography uses the framework of historical oppression, resilience, and transcendence to examine indigenous peoples’ perspectives on and experiences with subsistence living, investigating how subsistence living may contribute to well-being and resilience by promoting physical exercise, a healthy diet, and psychological health. Thematic analysis of data from 436 participants across two southeastern tribes reveals three overarching themes: fostering fond memories and family bonding through “living off the land,” enabling experiential intergenerational teaching and learning, and promoting resourcefulness and offsetting economic marginalization. Results indicate that subsistence is an important avenue to promote sustainable and organic approaches to health and well-being within indigenous communities by facilitating positive nutrition and diet, exercise, and subjective well-being.

Historical oppression is thought to drive the health disparities experienced by indigenous peoples of the United States. According to the treaty agreements between the US government and federal sovereign tribes, the government is required to provide for the health and well-being of indigenous peoples (US Commission on Civil Rights 2004). However, since social, physical, and mental health disparities have been tracked, indigenous peoples of the contiguous United States (American Indians and Alaska Natives),[1] to whom the scope of this inquiry is limited, have tended to experience the most pervasive and most severe health disparities of any ethnic minority (US Commission on Civil Rights 2004; American Psychological Association 2010; CDC 2013, 2016; Breiding et al. 2014; Espey et al. 2014).

American Indians and Alaska Natives represent diverse groups of 573 federally recognized tribes (Bureau of Indian Affairs 2017), over 60 state recognized tribes (National Conference of State Legislatures 2015), and around 400 tribes that exist outside either jurisdiction (US Government Accountability Office 2012). Depending on their recognition, tribes have variable needs and resources, with federally recognized tribes receiving health care through Indian Health Service (IHS) as part of treaty agreements, yet state-recognized tribes do not receive this benefit. Thus, distinct trust relationships based on treaty agreements with politically sovereign tribes warrant the examination of indigenous health disparities separately from those of other ethnic minorities (US Commission on Civil Rights 2004).

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[1] Native Hawaiians are another indigenous group of the United States, but they operate under distinct rights in relation to the US government, warranting that the examination of such groups be separate. Indigenous peoples share experiences of colonization and are thought to be the original inhabitants of a given region.

According to the 2015 National Health Interview Survey, indigenous peoples tend to experience poorer physical health than all other racial groups (CDC 2015). In fact, the number of both physically and mentally unhealthy days experienced by indigenous people within a month approached twice that of non-Hispanic whites (1.8 and 1.7 times, respectively; CDC 2013). Indigenous peoples experience a 4.4-year lower life expectancy than members of the general US population, with the leading causes of death being cardiovascular disease, cancer, unintentional injuries (often related to violence and substance abuse), and diabetes (Indian Health Service 2018). In comparison with members of all races, indigenous peoples experience many of these health problems, including unintentional injuries (2.5 times higher), diabetes (3.0 times higher), chronic liver disease and cirrhosis (4.8 times higher), drug-induced death (1.9 times higher), suicide (1.7 times higher), and assault (2.1 times higher; Bureau of Indian Affairs 2017), at disproportionately high rates. Behavioral and mental health disparities tend to include higher rates of substance abuse, posttraumatic stress disorder, depression, and suicide (Sarche and Spicer 2008; Burnette and Cannon 2014; Masten and Monn 2015; Burnette and Figley 2017).

Two-thirds of all deaths in the United States are related to cardiovascular disease, cancer, and diabetes, and poor diet and lack of exercise are risk factors for all three diseases (Eyre et al. 2004). Thus, a healthy diet and exercise are clear means of promoting well-being, along with mental wellness, life satisfaction, and positive life experiences. The IHS Promotion and Disease Prevention initiative has identified five focal areas for health promotion and well-being—diabetes, nutrition, obesity, physical activity and exercise, and tobacco cessation (along with substance abuse)—highlighting the prominence of physical activity, diet, and exercise. According to the Centers for Disease Control and Prevention (CDC 2016), well-being, at minimum, includes positive emotions, the absence of negative emotions (e.g., depression and anxiety), and satisfaction with life, along with feeling healthy and good. It encompasses physical, economic, social, developmental, emotional, psychological, life satisfaction, and employment domains.

This inquiry investigates how subsistence relates to well-being and resilience. Subsistence is generally thought to relate to the activities through which food is acquired, processed, prepared, and consumed (i.e., what people eat, how they produce or acquire it, and whether those activities emphasize hunting, gathering, and fishing or horticulture and agriculture; Hudson 1976; Scarry 1993; Gremillion 1997; Smith 2011; White 2013; Peres 2014, 2017). As such, the purpose of this qualitative inquiry is to examine indigenous peoples' perspectives on and experiences with subsistence living, investigating how subsistence living may contribute to well-being, resilience, and cultural connection by promoting physical exercise, a healthy diet, and psychological wellness. Investigations of subsistence living and well-being are essential if we are to eradicate the physical and mental health disparities experienced by indigenous peoples of the United States.

In the following sections, we briefly introduce the framework of historical oppression, resilience, and transcendence (FHORT; Burnette and Figley 2017) and describe its connection to subsistence as an organic way to promote well-being. We then describe the critical ethnographic methodology employed in this study before presenting the results, which indicate that subsistence living promotes many aspects of well-being and resilience along physical, social, and emotional dimensions, namely, by fostering fond memories and family bonding through "living off the land," enabling experiential intergenerational teaching and learning, and promoting resourcefulness and offsetting economic marginalization. We end with a discussion of implications for policy and practice, recommending that funders, policy makers, and practice entities work to promote infrastructure that supports subsistence.

A FRAMEWORK OF HISTORICAL OPPRESSION, RESILIENCE, AND TRANSCENDENCE TO UNDERSTAND WELL-BEING

Given that disparities extend across physical and mental domains, any approach to significantly addressing disparities must be holistic and incorporate the context of historical oppression. The FHORT proposes that historical oppression has set the stage for and contributed to the health inequities experienced by indigenous peoples, yet resilience and transcendence have been continually demonstrated among such populations despite their experiences of chronic adversity (Goodkind et al. 2012; Burnette and Figley 2017). The FHORT (Burnette and Figley 2017) works from a nonlinear, relational worldview—encompassing the context and mental, physical, spiritual, and emotional realms—proposed and recommended by indigenous scholars (Fleming and Ledogar 2008; Burnette and Figley 2017). This article focuses on historical oppression as a major risk factor for well-being, as it has led to a disruption in cultural continuity, cultural knowledge about healthy living, and community. Historical oppression is in constant tension with the protective factors related to subsistence, which promotes cultural continuity, knowledge, and community while naturally improving health through greater physical activity, healthy diets, and subjective well-being.

HISTORICAL OPPRESSION AND SUBSISTENCE

A core component of the FHORT, historical oppression, describes the chronic, pervasive, and intergenerational experiences of oppression that, over time, may be normalized, imposed on, and internalized into the daily lives of many indigenous American peoples (including individuals, families, and communities; Burnette 2015a, 2015b). Historical oppression, in the forms of historical traumas (e.g., forced relocation, boarding school, land dispossession, religious suppression), chronic poverty, discrimination, and marginalization, is thought to be intricately connected to the health inequities experienced by indigenous peoples (Kirmayer, Gone, and Moses 2014; Wexler 2014; Burnette and Figley 2017). Historical oppression in its many forms has created significant adversity for indigenous peoples, who, through the very act of survival and continuance, have demonstrated resilience and in many cases transcendence. According to the FHORT (Kirmayer et al. 2014; Burnette and Figley 2017), people, cultures, and communities may develop new insights and degrees of actualization in response to historical oppression, which challenges the idea that people may be damaged goods as a result of exposure to adversity (Fleming and Ledogar 2008). This is not meant to trivialize the severe degree of exploitation and imposition on the quality of life historical oppression has imposed on indigenous peoples but to highlight their incredible resilience in the face of adversity. We emphasize the need for equity in access to the highest degree of wellness for indigenous and all peoples.

HISTORICAL OPPRESSION CONTRIBUTES TO A DISRUPTION IN CULTURAL CONTINUITY, KNOWLEDGE, AND COMMUNITY

Prior research posits that the high rates of diet-related diseases among indigenous people may be related to historical oppression in the form of losses in knowledge about traditional foods (Ruelle and Kassam 2013). In fact, before the 1950s, diabetes was said to be unheard of among indigenous peoples, and they were thought to be immune (Satterfield et al. 2007). In a study that draws connections to the overall health of Alaska Natives (Bersamin et al. 2014), researchers find that not only do indigenous communities have some of the lowest rates of physical activity of all ethnic groups in the United States, but this is due in large part to a loss of culture.

Indeed, scholars understandably link such disparities to the context of historical oppression, which is broader but inclusive of historical trauma (i.e., also includes contemporary trauma and oppression). Goodkind and colleagues (2012) find that one of the greatest negative effects of historical oppression is the breakdown of communications across generations and relationships. King, Smith, and Gracey (2009) go on to state, “Whether in cities or rural or reserve communities, the burden of distress and despair wrought by generations of colonial oppression often renders relationships and social cohesion within and between indigenous communities fragile” (81). Repressed anger due to chronic oppression can lead to violence, depression, and substance abuse as coping methods, which mirror extant social and behavioral health disparities (Gone and Trimble 2012; Burnette 2015a, 2015b, 2016).

Historical oppression may disrupt cultural continuity and indigenous peoples’ awareness of the interconnection between the physical, mental, and spiritual realms and relationships (Mohatt et al. 2011). Indeed, substance abuse is thought to result, in part, from cultural erosion, and such abuse undoubtedly has given rise to increased mortality and morbidity, as well as cardiovascular disease and diabetes (Brady 1995; Indian Health Service 2018). Researchers note that ethnic identification and connectedness, in contrast, seem to buffer or protect against substance abuse (Brady 1995). Indigenous identity is inherently social; being isolated from one’s identity is widely understood to contribute to poor health (King et al. 2009). However, historical oppression has resulted in widespread disruption in families and communities, undermining parent socialization, expressions of emotional warmth, indigenous identity, and the transmission of values, languages, and traditions (King et al. 2009). Thus, rebuilding family, cultural, and community connections is needed to begin to repair the negative effects of such oppression (Mohatt et al. 2011).

RESILIENCE

Rapid social and cultural change through historical oppression is reported as a risk factor for indigenous peoples, while the promotion of cultural continuity is crucial for their resilience (Allen et al. 2014).Wexler (2014) identifies the connection between culture and resilience through the mechanisms of cultural identity, enculturation, and participation in traditional activities, such as subsistence. According to Kirmayer and colleagues (2011), a fundamental source of indigenous resilience is found in efforts to “revitalize language, culture, and spirituality as resources for self-fashioning, collective solidarity, and individual and collective healing” (89). Restoring health, from an indigenous perspective, includes promoting unity across families and communities, largely through cultural and traditional practices (Hodge, Limb, and Cross 2009). Resilience is generally characterized as making positive adaptations despite experiencing significant adversity, encompassing the development of well-being despite being at high risk for negative outcomes, sustained competence despite experiencing stress, and recovering well after experiencing trauma (Fleming and Ledogar 2008). Some researchers have begun to draw connections between enculturation (learning about, engaging with, and identifying with one’s culture), spirituality, traditional activities, and resilience (Whitbeck et al. 2004; LaFromboise et al. 2006; Fast and Collin-Vézina 2010; Burnette 2017). As Wexler (2014) states, “Culture is offered as an antidote to protect against poor health outcomes and to bolster indigenous well-being, but the nuances of this process remain unexplored” (74).

WELL-BEING

Western and indigenous notions of health and mental health differ. Indigenous peoples tend to view historical oppression and the devastating, chronic, and intergenerational disruptions in cultural practices brought on by colonization as driving forces for negative physical, social, and behavioral outcomes, in contrast to the more isolated and compartmentalized views of health in conventional Western approaches (Brady 1995; Duran et al. 1998; King et al. 2009; Gone and Trimble 2012; Burnette 2015a, 2015b, 2016, 2017). As such, the FHORT focuses on well-being (also termed “wellness”), which integrates mind (i.e., mental and emotional health) and body (i.e., physical health) in a holistic approach to disease prevention and health promotion (CDC 2016), as a primary outcome of interest (Burnette and Figley 2017). The FHORT is commensurate with indigenous notions of health and wellness, which also tend to place importance on persons living harmoniously with their environment, and values the balance of physical, social, emotional, and spiritual life elements (Brady 1995; Hodge et al. 2009; King et al. 2009; Kirmayer, Sehdev, and Isaac 2009). The indigenous view of balance extends beyond the individual to include living in harmony with the community, others, and the spirit world (Hodge et al. 2009; King et al. 2009). Sickness, in the indigenous worldview, is the absence of wellness or an imbalance; connections to family and relations are essential to wellness (King et al. 2009). Well-being, or wellness, includes people’s perspectives on how their whole life is progressing, including their level of life satisfaction, which can range from depression to joy (CDC 2016).

SUBSISTENCE AND WELL-BEING

Subsistence has been described as a tribal tradition that promotes the cultural preservation of indigenous groups through food-sourcing practices (Kancewick and Smith 1990). According to Salmon (2000, 1331), “Nearly all indigenous cultures share a set of structures (expressions, metaphors, concepts) that describe their links to the natural world.” Subsistence practices are the application of traditional ecological knowledge, beliefs, applications, and expertise that indigenous people have passed from generation to generation (Reo and Whyte 2012).

Subsistence activities may inherently promote well-being by simultaneously and organically promoting physical activity, healthy nutrition, and subjective well-being, along with family and community cohesion. First, subsistence can promote physical activities and exercise. Research indicates that many traditional activities, such as hunting, consuming traditional foods and medicines, and engaging in spiritual practices, are all connected to higher levels of physical activity (Bersamin et al. 2014). In fact, the findings from this study indicate that those engaging in traditional lifestyle activities were more physically active and endorsed lower levels of psychosocial stress—both key aspects of well-being (Bersamin et al. 2014). A review of resiliency factors that enhance the mental health of indigenous youth emphasizes cultural and land-based activities, history, and language, as well as social and family supports (MacDonald et al. 2013). Specifically, having positive role models, a sense of community and collective responsibility, mentorship from elders, family support, ethnic pride, involvement in subsistence activities, physical activity, self-reliance, and enculturation were recurring and prominent themes that promote youth mental health across extant research (MacDonald et al. 2013).

Second, subsistence activities can promote a healthy, nutritious diet. The traditional foods of many tribes tend to be much healthier and less costly than those available within the socioeconomic and geographic constraints of the areas where many indigenous peoples reside. Some of the traditional foods of this region included deer, turkey, bear, fish, shellfish, corn, squash, beans, peas, pumpkins, blackberries, sweet potatoes, and strawberries (Swanton 1931; Hudson 1976; Burnette 2013). Subsistence living tends to include foods that are carefully sourced and free of the chemical trappings found in grocery stores (Reo and Whyte 2012). Furthermore, traditional foods are seen as healthier alternatives and as more suitable to the indigenous physiological makeup than foods found in the Western diet (Ruelle and Kassam 2013), which now includes a great amount of processed foods that are high in fat, sugar, and carbohydrates (Bodirsky and Johnson 2008).

Third, subsistence can promote subjective and communal (e.g., family) well-being. Historically, food procurement for tribes of the southeastern United States generally included the whole family, including women and children, who made important contributions to the sustenance of tribal members as they worked in the fields to gather fruits, nuts, and wild plants for consumption (Swanton 1931; Zehmer Searcy 1985; Pesantubbee 2005). Subsistence farming, hunting, fishing, and gathering organized social life, heightened familial and community solidarity, and demonstrated cultural synthesis as the entire tribe contributed to these activities (Swanton 1931; Zehmer Searcy 1985;

Pesantubbee 2005; Burnette 2013). Subsistence living connects contemporary indigenous communities to cultural traditions that are hundreds, if not thousands, of years old.

As can be seen from an examination of subsistence practices historically, a number of health-promoting factors are infused into subsistence practices, namely, family and community connection, exercise (in carrying out physical activities such as farming, gathering, hunting, grinding corn and nuts, and fishing), and maintaining a healthy diet. Thus, research suggests that subsistence practices address three core aspects of health promotion and disease prevention: exercise, healthy diet, and subjective and family well-being (CDC 2016). The purpose of this qualitative inquiry is to examine how subsistence living relates to well-being and resilience across the physical, mental, and social domains for indigenous people in the United States.

METHOD

RESEARCH DESIGN

We used an in-depth, critical ethnographic approach to understand subsistence as a cultural protective factor for indigenous well-being. We coupled this critical ethnography with the toolkit for ethical and culturally sensitive research with indigenous communities to promote cultural relevance (Burnette et al. 2014). We drew results for this study from a broader critical ethnography to identify culturally relevant risk and protective factors related to indigenous well-being and cultural practices, including subsistence. A critical ethnographic inquiry incorporates critical theory in its investigation by attending to the power relationships among dominant and marginalized groups (Carspecken 1996). Critical ethnographic methods incorporate and triangulate multiple forms of qualitative data including self-report and direct observation (Carspecken 1996). This ethnography included 436 participants across two southeastern tribes. Methods of data collection included focus groups, family interviews, and individually focused interviews. Additionally, field notes and existing data were part of the broader ethnographic project; however, because of the breadth of data, this article focuses on interview data. Participants included professionals who worked with indigenous peoples, elders (age 55 or older), adults (ages 24–54), and youth (ages 11–23).

SETTING

To enable an understanding of commonalities and differences across indigenous populations, we included two tribes in this research process: one that is federally recognized (termed “Inland Tribe”) and another that is state recognized but not federally recognized (termed “Coastal Tribe”). The names of these tribes are kept confidential to protect each community’s identity. We leave any details that could reveal the identities of either tribe out of this publication, as part of our agreements with the tribes and in accordance with the toolkit of ethical and culturally sensitive research with tribal communities (Burnette et al. 2014). Tribes have experienced colonialism in distinct ways at different historical periods; therefore, tribes and regions vary considerably and should be considered a heterogeneous group. As indicated, tribal recognition can have a substantial influence on resources, social and health outcomes, and community infrastructure.

The Inland Tribe is a federally recognized tribe located further inland from the Gulf of Mexico. It has experienced significant economic development and has its own schools, health care and medical services, police force, fire department, land management agency, and health and human services facilities. The Coastal Tribe is a state-recognized tribe located in proximity to water and the Gulf Coast. The Coastal Tribe has fewer economic resources, and the absence of federal recognition has undermined its ability to provide tribal infrastructure for its members. The Coastal Tribe offers employment, educational, and other individual programs for youth and tribal members.

Both tribes have experienced severe historical oppression related to the history of race relations and civil rights issues in the Deep South, where they have experienced educational discrimination and economic marginalization. During the early to mid-1900s (i.e., the time of segregation), tribal members from both locales were restricted from attending either white or African American schools. Many tribal members were not afforded the opportunity for any formal education, and the others attended either missionary or tribal schools. Tribal members over 55 often completed less than a middle-school level of formal education. Serving as sharecroppers or living off the riverine, estuarine, and coastal environments of the Gulf South severely restrained their capacity for upward economic mobility. Thus, both tribes depended on informal social networks and subsistence for their living and livelihood until other economic forms of income became available after the 1970s.

DATA COLLECTION

As is indicated by the ethnographic methodology (Carspecken 1996), this research includes multiple forms of data (i.e., existing data, qualitative data, and quantitative follow-up survey data). Data collection for this critical ethnography included participant observation, individually focused interviews, family interviews, and focus groups across the two tribes. Recruitment efforts included posting information on Facebook, the tribal websites, and newsletters where available and posting fliers in tribal agencies. Word of mouth was also a primary method of recruitment. Participants received $20 gift cards to a local department store for their participation in individual interviews and focus groups. Families received a $60 gift card for each family interview.

Focus groups and interviews followed a semistructured guide to ascertain answers to research questions, which were derived from our research aims. Because a culturally sensitive interview approach is recommended for use in critical methodologies (Carspecken 1996; Burnette 2013), life history interviews were conducted in individually focused interviews. Professionals had the opportunity to choose whether they wanted to participate in the life history portion of the interviews. Examples of probes from the semistructured interview guide include “Describe what you remember about growing up in your family,” “What was a happy memory?” and “Describe a typical day growing up.” A copy of the life history interview was offered to participants to keep for themselves or their families. Because youth participated in interviews, wording was aimed for comprehension at the fifth-grade level.

SAMPLE

In total, 436 participants were part of the qualitative portion of the study in the form of individually focused interviews, family interviews, and focus groups, with 228 total participants from the Inland Tribe and 208 participants from the Coastal Tribe. Some participants completed more than one type of interview, which adds to study rigor (Carspecken 1996). A total of 254 participants completed individually focused interviews (n = 145 Inland Tribe; n = 109 Coastal Tribe), 217 participated in 27 focus groups (n = 113 Inland Tribe participants across 14 focus groups; n = 104 Coastal Tribe participants across 13 focus groups), and 163 participants completed family interviews (n = 80 Inland Tribe participants across 34 family interviews; n = 83 Coastal Tribe participants across 30 family interviews).

Because we aimed to identify culturally specific risk and protective factors that were culturally relevant to all tribal members, we made a purposeful effort to include professionals (n = 70), elders (ages 55 and above; n = 105), adults (ages 24–54; n = 147), and youth (ages 11–23; n = 114).[2] On average, individual interviews lasted approximately 64 minutes (63.49), family interviews lasted approximately 70 minutes (69.69), and focus groups lasted approximately 57 minutes (57.18). Finally, the total length of a person's average interview time (many participated in more than one) was about 89 minutes (88.99).

DATA ANALYSIS

Because of the breadth of data collected for this ethnography, we used collaborative team-based qualitative data analysis methods (Guest and MacQueen 2008). Following recommendations for team-based analysis (Guest and MacQueen 2008), we had the interviews professionally transcribed and transferred to two separate NVivo files—one for Inland Tribe and one for Coastal Tribe—after all qualitative data (i.e., field notes/ observations, interviews, observation sessions) were collected.[3] Data analysis teams were composed of PhD students, two of whom were indigenous (one from each tribe) and two of whom were nonindigenous. The tribal PhD students came from the two tribal backgrounds under investigation—one had resided on Inland Tribe's reservation, and the other is a member of Coastal Tribe. Including tribal members in data collection and analysis increases cultural sensitivity and accurate interpretations of the data.

Thematic qualitative data analysis (termed reconstructive analysis in this specific method) was used for all qualitative data derived from this critical ethnography. This process included an initial meaning construction, which meant reading and listening to audio files and transcripts two to four times to understand the meaning holistically. Next, we completed preliminary analysis using low-level coding, from which a hierarchical scheme of codes and subcodes was created. The first author developed coding schemes in consultation with team members, and all team members reviewed coding schemes for cultural appropriateness. Any suggestions were integrated into the final coding scheme. All questions, codes added, and communication on a coding log were shared among the team, which served as an audit trail. The analysis team met biweekly throughout data analysis to discuss interpretations and questions and to engage in dialogic discussion of results. For the whole data set, 3,606 codes and subcodes were identified for Inland Tribe, and 3,069 codes were identified for Coastal Tribe. Finally, Cohen's kappa coefficients were calculated with each team member in NVivo to ensure interrater reliability (McHugh 2012). We examined this coefficient at the start of data analysis and throughout the process to ensure consistent data analysis. The coefficient was never lower than what is considered strong (i.e., .80 or higher), with statistics that generally showed extremely high kappa coefficients (.90 or above).

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[2] We use the term *elders* to be culturally congruent with the terminology used by tribal members.

[3] NVivo is a qualitative data analysis software program.

Next, sections were purposefully selected for in-depth analysis, which involved identifying explicit and implicit meaning and interpretations of the data. Original categories of themes were provided to a research team composed of the first author and four social work students pursuing master's degrees, who, for an added layer of rigor and triangulation, analyzed subthemes independently in the aforementioned way, creating themes and subthemes. The first author reviewed the themes, and the team met as a group on two occasions to discuss them. The team then reviewed their own and each other's themes, comparing perspectives and interpretations with initial interpretations, in a dialogic iterative process. Thus, the final themes are a result of multiple teams analyzing the data through distinct eyes and coming to a consensus on the resultant themes, bolstering the rigor and credibility of results.

This article focuses on data related to traditional activities. For the purpose of this article, we looked across sources for unifying themes across tribes and participants, noting the tribe and type of participant in the results for reference. The theme of traditional activities was coded across 245 sources (occurring across 186 individually focused interviews, 30 family interviews, and 17 focus groups). Broken down by tribe, this overarching theme focuses on the traditional activities discussed by 101 participants from Inland Tribe (79 individually focused interviews, 17 family interviews, and 5 focus groups) and by 144 participants from Coastal Tribe (107 individually focused interviews, 27 family interviews, and 10 focus groups). The themes identified in this article are related to subsistence that occurred most frequently across tribes.

RIGOR

Information provided to participants included a descriptive summary of the results (i.e., overarching themes and explanation/description of each theme), interview transcripts for individual interviews, information about the follow-up survey, and an invitation to have a discussion about, amend, add to, or make changes to the interview transcript or results. Group interview transcripts (i.e., focus group and family interviews) were not provided to participants to protect fellow group members' confidentiality. Although some participants elaborated on our findings, no participants disagreed with any of our interpretations. We reported our results to the tribes on more than 10 occasions, through training sessions; reports to agencies, tribal councils, and community groups; and facilitated community dialogue groups. The four research team members who participated in follow-up engaged in peer debriefing weekly. The first author completed consistency checks throughout the interviews and encouraged participants' further explanations of their thoughts and perceptions. Finally, a good portion of participants were interviewed several times. In total, 72 members of Inland Tribe were interviewed two to three times (31.6 percent), and 50 members of Coastal Tribe were interviewed two to three times (24 percent).

RESULTS

This article focuses on overarching themes that cut across tribes, which are fostering fond memories and family bonding through "living off the land," enabling experiential intergenerational teaching and learning, and promoting resourcefulness and offsetting economic marginalization. The focus now turns to these themes, with quotes from each tribe presented separately.

FOSTERING FOND MEMORIES AND FAMILY BONDING THROUGH "LIVING OFF THE LAND"

Coastal Tribe—Participants mentioned the importance of their ability to "live off the land," which seemed to instill a lot of pride and confidence in them. A participant in a focus group felt that what made members of the tribe distinguishable from nontribal members was, "I could live off the land. I could. I eat rabbit, I eat deer, ducks. … Only thing I don't eat is alligator and nutria." Another participant in the same focus group remarked, "We have a garden … we harvested. Our parents, our grandparents, lived off the land." Another participant expressed the value of living off the land and how it offset the economic strain of purchasing food:

> We'd eat off the land. … We'd have fresh oysters and some fish. Mom would cook it that evening and we'd eat off the land on the weekends. Dad was trying to show us you can't always depend on going to WalMart or Sam's or Ralphs. You have to learn to live off the land. Dad would get off from work and he'd stop in the fields, the sugar cane fields. The man that he knew was one of the men that worked the fields. … We could eat the sugar. We didn't have the money to buy candy. … Our desserts were from scratch.

As depicted in this quote, the phrase "living off the land," was used frequently, and it conveys a sense of pride in the resourcefulness and traditions of tribal members.

Many participants expressed a sense of subjective well-being, satisfaction, and fondness for their memories of being outside engaging in subsistence activities with family members. A participant recalled, "I liked that [subsistence activities], because we could go … and fish. … When I was younger and they had a camp … you had to get to it by boat. … They had the horses, the cows. … My great-great-grandparents were buried across from my grandparents' camp. It was really nice down there." Similarly, another participant mentioned several happy memories with her significant other engaging in water subsistence activities: "We've got a shrimp boat. Just this past year that I haven't went with my husband, my husband and I used to go together, shrimping. … I love that, shrimping and fishing, whatever. I really enjoy it." She went on to describe how, just as it had happened historically in rearing children, her children joined her and connected with their elders: "We used to love to go over there, even my kids. My kids, once they got a little older, we'd go over … and they'd go fishing. … They just loved the old people—so good to them, they loved them to death. They really used to enjoy that. I just liked going over there, too."

Inland Tribe—A participant recalled the experiences of her mother, stating, "Her dad was a laborer, a sharecropper. Her memories of that time were fun. She was out in the field. She loved the smell. You know, she just loved being out there. She learned a lot of things. She had really fun memories. Her mom was a homemaker, but she loved to play in the fields. You know, ride on the sacks, she said cotton sacks. Eat watermelon, the smell of the fields, those are some of the positive memories she really had of sharecropping." Another participant recalled the tradition of cooking outside, "They [older family members] cooked it [food] out there [outside] and then they'd eat. … I used to have a lot of fun like that. … That's old memories. … So, if something was to ever happen, you know, at least I know how to cook outside, you know? (laughs)." Similar to other participants, she described how the ability live off the land and cook outside gave her feelings of self-sufficiency and confidence. Another participant expressed the desire to return to subsistence:

> Oh my gosh. I just think this tribe could use a lesson in economics, like where not to send your money, like the casino. Why not go into something like farming, because hello, we are in the country. There's chickens, cows, we can grow our own crops and get with the local markets and sell it that way, bring in revenue like that. Just different things. Pretty much take it down, back off from the whole modern-day casinos and kind of go back to what you originally came from, which Native Americans, that's where we originally came from, living off the land. To go back to living off the land.

ENABLING EXPERIENTIAL INTERGENERATIONAL TEACHING AND LEARNING

Coastal Tribe—Intergenerational teaching and passing on of subsistence traditions was perhaps one of the most prevalent themes to come from participants. Often, lessons in fishing, farming, or hunting were passed down by parents or grandparents, although at times they were shared by extended relatives or community members. These experiences were frequently tied up in sentiments of admiration, bonding, and positive values. Several participants described a sense of positive values being passed between generations, in addition to skills. For example, a participant spoke about how his father instilled in him a sense of self-reliance and mastery:

> I'd definitely say for me, what my father figure is … He taught me how to be a man. I know that sounds cliché and everything but I really find that that's true because I feel like a lot of the values and a lot of who I am is because of him. Just the work ethic that he's instilled in me … Because like I said, he maybe didn't finish high school, but he's been a boat captain for a while now. And he was a boat captain at a young age because he worked. He always works his hardest on everything. So just to see that and just to see that he never depended on or never expected anyone to help him throughout the way. He always did it on his own, him and my mom.

Inland Tribe—A participant expressed how the benefits of learning subsistence traditions could be a lifelong tool: “It was hard work. I mean … I mean, especially when you’re a 5-year-old or you know growing up, it’s like, I learned a whole lot of stuff and it taught me to survive. I mean, it … it’s like if they tell me to go pick cotton, I can do it.” This value was also discussed by another participant who, when asked about chores, answered: “Like survival skills, they taught us how to fish and how to hunt, and that’s one of the things they used to tell us, ‘You need to learn how to fish and how to hunt and how to clean and how to cook so that if hard times come you can eat yourself [find food to eat on your own].’” Another participant also spoke to the value of learning subsistence in order to be self-reliant, stating: “Because they, they knew how to grow their own food. So, he was always teaching us that you have to be able to survive on your own. … Even if you …You can depend on other things, but you have to go back to the ground rules, to be able to know that you can survive. … So, but he’s taught us a lot of stuff and I feel like, being a part of his life is a very meaningful thing for me because he taught us a lot.”

One participant expressed how fishing was a way of connecting and bonding with a family member when other family dynamics were not as positive: “She’s [extended family member] the one that taught me how to go out there, and she loves fishing, and they [parents] didn’t have time for me, so I used to go fishing with her. … We used to pick the huckleberries.” Another participant spoke of the lifestyle of eating fresh foods from the garden or farm and how this was an important part of one’s tribal identity, saying, “[We] used to go into the garden and just pick up some tomatoes, or grow some corn, or whatever, all those things that he taught me, and the language, too. Then I was always taught to, I mean, I was told to go out and go look for eggs in the hen house, and go feed the pigs, and all that. These were the things that how them [sic] as a tribal members grew up.” Several participants recalled the past as “good times” and “pleasant” and “fun.” Many remember these good times with a sense of misadventure and humor, including one participant, who recalled, “And the mule would do anything for me but wouldn’t do anything for grandpa (laughs).”

PROMOTING RESOURCEFULNESS AND OFFSETTING ECONOMIC MARGINALIZATION

Coastal Tribe—Many of the interview participants reported stories of resourcefulness related to subsistence. This was particularly important for tribal members in the Jim Crow Deep South, who experienced rampant educational discrimination. Indigenous people of this time (before 1964) could not go to either the segregated white or African American schools, so unless a tribal or missionary school was available, they were excluded from formal education. When tribal or missionary schools were available, they generally only included a few grade levels and were taught by undereducated paraprofessionals. Often times, participants described the unique skills and diligence that tribal members possessed, connected to the hard work often associated with subsistence practices. A participant spoke of his father’s complex skills, saying, “He was I guess good at what he did as far as that goes and, none, he never had a diploma as far as I know … he had to learn to read maps. … They would travel by the moon and the stars and … [a] compass.” Another participant spoke of his father’s sense of intellect and hard work, stating, “Dad was very intelligent. He was very motivated, very intelligent, very, I don’t know, hardworking. I never knew my dad to be unemployed for a long time, but he did take a job. He did get a boat, and he wanted to be the traditional fisherman and start shrimping for a living."

Another participant added, "Well, we worked hard. He had a lot of property and he had fields of oat grain, corn." Often the conversation shifted to express how subsistence was a way of making ends meet. One participant stated, "Life was hard. They had to make do with a lot of things, they did like, after my mom and my daddy got married, you know, he shrimped … and before that, when like they were growing up, like my grandpa on my momma's side well like he trapped and they lived off the land." Another participant stated: "It wasn't elegant, but it was livable. They had [a] butane stove. Daddy had a cistern where they had water. You could go get your own water. They had that and dad built four pirogues and we get in the pirogues … and we'd go fishing.[4] We'd go fishing for supper or crabbing. Whatever we'd catch, dad would clean that night him and mom and we'd eat for supper."

Conversations about resourcefulness also included sentiments of pride. A participant discussed cultural traditions surrounding food sourcing that later became apparent were impressive to outsiders, despite having been normalized during childhood:

> Most of our people [are] building boats. You know, that's something our people still do that we did as a kid. … As a kid we hunted … we would go shrimping and crabbing and, you know, hunting—you know, uh, for craw-fish and then, you know, that would be our dinner, but we didn't realize, "like wow, this is like, you know, across the world, like this is a delicacy." But here we are, going in the woods and getting this and doing it, go back home and cooking it ourselves … that was my childhood. … That's how I grew up and, um, you know, we never would go out to eat [at restaurants], but somehow, we were always filled because we were doing these kind of things. We were feeding ourselves.

Inland Tribe—Inland Tribe members brought up farming and hunting as intense labors that their families grew up practicing. The participants from Inland Tribe often expressed the resourcefulness of subsistence living through the lens of hard work. A participant stated, "Yes. In the summertime, we never had summer breaks because we were out there working —Helping harvest, usually cucumbers, and then he would go sell them and we'd help him."

A focus group participant expressed the ways in which farming practices allowed the family to live well off of little, stating, "My father, he led the family, and then we had to grow our food and eat it, and then all they did was go to the grocery store and get meat. We'd freeze any fruit and vegetable, and then we'd eat that during the year." A participant from a family interview recalled, "Our grandmother, she lived through the depression and everything so she knew how to raise garden food and daddy goes hunting inside the woods and gets some game and everything. That's how they used to live." Yet another participant raised a similar point, stating: "And we never, it was that at home we never go hungry there cause my mom uses the resource of the land cause she raised chickens and she would kill chickens to cook chickens. If we have fresh eggs from the chickens, you know, we have something to eat every day … and the same with my father. He planted a garden every spring, so we had variety of fruits, vegetables, and it was plentiful. And he raised hogs and killed them too, so. … ”

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[4] A pirogue is a long, narrow canoe made from a tree trunk.

As the quotes indicate, participants were proud of their families “having enough” despite the difficulties they faced. A participant said, “As a matter of fact, he was the only working, self-employed person in the house. Head of the household, but we always had food. We always had clothes. We weren’t the richest people, but we made it. I have 5 more sisters.” Another participant noted additional opportunities ascribed to subsistence practices; when asked what he does to “cool off” when he feels angry, he stated, “I’ll go fishing.” Asked about the benefits of hard work, a participant from a focus group stated, “‘Cause it’s worked out good for us. You know, it’s a strength.”

DISCUSSION

As the results indicate, subsistence living promoted many aspects of well-being and resilience along physical, social, and emotional dimensions, namely, by fostering fond memories and family bonding through “living off the land,” enabling experiential intergenerational teaching and learning, and promoting resourcefulness and offsetting economic marginalization. Within each of these themes, subsistence activities promoted numerous critical aspects of well-being. First, “living off the land” seemed to be an essential aspect of ethnic identity and a source of ethnic pride, which research finds protective for the well-being and wellness of indigenous peoples (Burnette and Figley 2016). Knowledge and health behaviors related to traditional foods have clear health benefits and can instill cultural identity and pride (Bodirsky and Johnson 2008).

Participants described how elders instilled in them the value of being self-sufficient. Indigenous peoples were able to nourish their families and meet their basic needs through subsistence living, which was particularly crucial given the constrained economic and educational opportunities imposed by their contextual circumstances. Subsistence may have enabled survival in cases in which indigenous peoples were pushed out of or excluded from opportunities for upward mobility in social, economic, and educational domains. Research finds that transmitting knowledge and practices related to traditional foods is essential to building a sense of autonomy (Ruelle and Kassam 2013). This ability is a key aspect of *survivance*, a phenomenon encompassing the resourcefulness, commitment to homeland, strength of spirit, humor, and resilience demonstrated by indigenous peoples throughout history (Vizenor 2008; Kirmayer et al. 2014).

Indigenous people fostered a healthy diet through subsistence, as the foods that participants described tended to include fresh fish, fresh vegetables, and fruits from gardens or locally raised meat sources. Satterfield and colleagues (2007) highlight the likelihood that knowledge of these traditional foods and health practices will fend off health problems, stating, “Communities have powerful stories to fight off illness and death because elders, who knew a time when diabetes was rare, are sharing knowledge that can represent a blueprint for survival. Many elders are reservoirs of knowledge and hope who share the vision ‘so that the people may live’” (2). Moreover, the energy and physical activity required to catch or harvest food is significant, promoting a healthy diet and regular exercise.

Subsistence practices also promoted subjective wellness, with words such as “love,” “joy,” and “fun” being descriptors of participants’ memories as they engaged in subsistence activities with family members and in nature. Such feelings are clear indicators of life satisfaction, which is an essential element of well-being (CDC 2016). Research has begun to discuss the power of “awe”—an existential experience often tied to nature—on mental health. Mayer and Frantz studied this idea and, in doing so, developed a Connectedness to Nature Scale (CNS). Higher CNS scores have been found to correlate with life satisfaction, overall happiness, and greater perspective; furthermore, higher CNS scores correlate to less frequent inclinations toward negative self-rumination (Mayer and Frantz 2004). These connections are attributed to the notion that engagement with nature provokes a sense of awe capable of drawing individuals out of themselves and into a perspective that is “greater than self” (Shiota, Keltner, and Mossman 2007, 946). Stephen Kaplan (1995) coined the term Attention Restoration Theory, which asserts that humans have instinctual concentration faculties that are used in nature. When employed, our directed attention, which is a cognitive focusing mechanism used on stimuli that may not have otherwise attracted our attention, is given an opportunity to rest, while our effortless attention takes over (Sullivan and Brems 1997). The two theories suggest that time spent in nature can reduce the stressors that the effects of urban life impose on the psyche.

Indigenous notions of resilience tend to involve holistic, complex, and interacting relationships (Kirmayer et al. 2009; Burnette and Figley 2017). Indeed, indigenous resilience is thought to include spiritual beliefs; extended family networks; generosity; sharing; passing down cultural knowledge, traditions, and values; respect for the natural world; harmony; respect; composure; patience; and nonverbal communication (HeavyRunner and Morris 1997). An aspect of resilience, being with family, was a core element of the positive experiences described by participants, and when some family members could not be supportive, the extended family network could provide support in an indirect and protective way. Research identifies connectedness, or feeling close to one’s individual, family, community, and environment, as a culturally relevant protective factor against substance abuse and suicide (Hill 2006; Mohatt et al. 2011). Indeed, within an indigenous world-view, people are often considered extensions of and integrated with their families, communities, tribes, and the universe (Hill 2006). Research finds that such a sense of belonging is protective for health (Hill 2006). Some research indicates that subsistence practices can reinforce the altruistic nature of nourishing one’s family and community in addition to oneself (Kuokkanen 2011). Other research emphasizes the important role subsistence practices play in facilitating bonding between family members and the ways in which those relationships provide valuable protection against social isolation (DeCou, Skewes, and López 2013). Often, these experiences are vital in the creation of fond memories and warmth among relations (Ruelle and Kassam 2013).

Related to family involvement and quality time, participants talked about intergenerational bonding and learning important values from elders. Elders may also serve as role models, who are critical for resilience (MacDonald et al. 2013). Subsistence traditions are woven into the fabric of indigenous identities, and the literature shows that the way such cultures use traditional practices to pass down knowledge, preparation, and rituals related to foods between generations, or “foodways transmission,” can be protective (Ruelle and Kassam 2013). Thus, values are often embedded in the continued application of subsistence. Reo and Whyte (2012) studied the benefits of subsistence within the context of deer hunting practices among the Lac du Flambeau Indians in North Central Wisconsin. Within these traditions, they find a thematic sense of morality tied to the hunters’ guiding principles (Reo and Whyte 2012). The decisions regarding where to hunt, when to pull the trigger, and how to use the meat all spoke to broader understandings of the implications of any one action, indicating implicit moral codes and judgments about appropriate social behavior (Reo and Whyte 2012; Ruelle and Kassam 2013). These moral codes include a sense of shared responsibility and indebtedness that runs through the community and into the surrounding environment (DeCou et al. 2013).

Given that historical oppression has disrupted the intergenerational transmission of cultural knowledge, it is important to develop and support practices and community mechanisms that bridge intergenerational knowledge, which tends to include the teaching of traditions and cultural knowledge (Goodkind et al. 2012). Participants remarked that they were learning positive gender roles from elders, along with important values, such as a strong work ethic and pride, despite experiencing educational discrimination. Indeed, in broader research, elders have been tasked with cooperating with youth to transmit cultural knowledge, beliefs, and principles so that youth can translate their tribal culture into the contemporary social environment (Kirmayer et al. 2009).

LIMITATIONS AND FUTURE RESEARCH

Although we believe that the use of two tribal case studies gives us a more nuanced ability to compare and contrast differences in risk and protective factors between tribes, we are limited in our ability to draw generalizations to other tribal populations. Future research requires applying this inquiry to other specific tribal contexts. It is imperative that researchers follow culturally sensitive tribal protocols, ensuring that research is ethical and useful for tribes (Burnette et al. 2014). Moreover, research is subject to the ever-shifting political climates and localized contexts of different tribal communities; sustaining the ability to engage in, conduct, and complete research projects is a delicate process. The process outlined in this article shows the importance of a sustained research method built on trust and the respect of tribal insiders, but the details such as sample size, outreach, and follow-up methods will differ by tribe. Replicating this research would be difficult without having prior long-term relationships with each tribe.

Although our interpretations of the data presented here demonstrate resilience within tribal communities related to subsistence living, there are also data about health disparities between indigenous communities and the larger American population. Negative news about health issues in tribal communities receives more media attention, perpetuates negative stereotypes, and contributes to subtle forms of discrimination (Fast and Collin-Vézina 2010). More bridges in research are needed to facilitate a balanced perspective, taking into account the devastating effects of historical oppression while acknowledging the variability across tribes and the resilience and transcendence demonstrated by indigenous peoples (Fast and Collin-Vézina 2010; Burnette and Figley 2017).

IMPLICATIONS

The tribal tradition of subsistence activities contributes to the well-being and resilience of tribal members, which can promote health and combat health disparities. For example, identification with one's culture and traditional practices is thought to lead to the internalization of prosocial value systems, which lowers the prevalence of substance abuse (Mohatt et al. 2011) and offsets the internalization of dehumanizing stereotypes and myths imposed by colonization (Burnette and Figley 2017). Pragmatically, contact with nature is thought to have numerous health benefits, including promoting wellness, and a summary of extant research (Maller et al. 2006) indicates that there are known physiological benefits to being in contact with nature and animals (e.g., shortened recovery from stress and adversity); natural environments are restorative and recuperative for those with mental fatigue; proximity to nature is related to positive outlooks and higher life satisfaction; exposure to natural environments enhances one's ability to cope with and recover from stress, illness, and injury; observing nature can promote concentration and productivity; and having nature in proximity is important, regardless of whether one is "using" it. In fact, a study of 112 randomly assigned young adults examined their blood pressure, emotions, and level of attention after they completed an attention-demanding test (Hartig et al. 2003) either in the natural environment (treatment group) or not (control group). The treatment group enjoyed a more rapid decline in diastolic blood pressure, improved attention, and positive affect, whereas the control group did not (Hartig et al. 2003). These findings indicate that engaging in the natural world through subsistence practices may be a promising intervention approach to promote indigenous health.

In a qualitative study with indigenous university students in Alaska, which focuses on the protective nature of traditional practices and suicide rates, DeCou and colleagues (2013) find access to fish and fresh meat to be a culturally embedded health practice, in both the quality of the product and the manner by which it is attained. Thematically, these authors see connectedness to nature as encouraging important areas of growth: "Participants' perceptions of traditional ways and subsistence activities represent a synthesis of relationships, health and culture. Participants viewed traditional ways as meaningful and beneficial aspects of rural living with potential applications to intervention and prevention strategies for individuals, families and communities" (4).

According to Kirmayer and colleagues (2009), an essential dimension of indigenous community resilience includes people's cultural knowledge, values, and practices. Cultural continuity, recently termed as cultural resilience, is protective against suicide among indigenous peoples (Chandler and Lalonde 1998; Hallett, Chandler, and Lalonde 2007). Particularly considering the disruption brought about by colonization, which undermines positive indigenous role models such as older family members (as participants described), traditional knowledge and teachings can provide the foundation for positive self-images and health identity (King et al. 2009). According to King and colleagues (2009), identity is a precursor to positive mental health, and, despite experiencing historical oppression, indigenous peoples continue to transmit knowledge, traditions, values, and language that support an indigenous cultural identity to the next generation.

According to the indigenous-based FHORT, which is used to understand disparities, liberation from oppression is achievable by shedding internalized colonial attitudes in exchange for responsibility, autonomy, and the strengths possessed from forgoing colonization. These three tenets are arguably achievable through subsistence, which allows for resourcefulness, self-determination, and an opportunity to enact the preexisting traits, behaviors, and values that have historically powered indigenous survival. Under the pulse of modernity, some subsistence practices have evolved to incorporate contemporary methods, such as modern fishing boats, and some also have adapted to constraints upheld by legislation (Reo and Whyte 2012). Subsistence continues to survive, and its protective aspects remain tenable. Thus, experiential learning and the incorporation of subsistence practices are warranted.

Given that subsistence is a tribal tradition that naturally promotes well-being and health while offsetting the constraints of economic marginalization and historical oppression, education campaigns should target funding agencies, policy decision makers, and practitioners as audiences. More grant funding geared at promoting the infrastructure and resources available for existing social networks is needed to bolster the legitimacy of sustainable communities for health and well-being. Federally recognized tribes have some infrastructure that can be enhanced through federal and state initiatives, funding, and resources geared at promoting tribally based programs and policies. For example, in 2008, the CDC, informed by 400 tribal leaders across 171 tribal nations (Satterfield 2016), provided funding for the use of traditional foods and sustainable ecological approaches to promote health and well-being (Traditional Foods Project). Results from this project emphasized (Satterfield 2016) the significance of land and subsistence, food sovereignty movements, respect for traditional tribal knowledge, the importance of tribal values, elders as teachers fostering intergenerational relationships, community education about traditional foods, community-based efforts, and sustainable initiatives. Thus, although most funding entities focus on formal services for indigenous communities, more attention to opportunities that promote health within the existing social networks and community-based health initiatives is warranted. Preserving, protecting, and promoting health through holistic and culturally grounded mechanisms should be prioritized in policies affecting indigenous peoples. Tribal and community leaders, as well as allies, can voice these policy initiatives at the federal and state levels. Interventions seeking to bolster these natural protective factors and the resilience of indigenous communities are recommended. Subsistence is an important avenue for promoting sustainable and organic approaches to health and wellness within indigenous communities by facilitating positive nutrition and diet, exercise, and subjective well-being.

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