Substance Abuse Prevention in American Indian and Alaska Native Communities: Exploration of Guiding Theoretical Underpinnings and Theoretical Fit in Practice

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Substance Abuse Prevention in American Indian and Alaska Native Communities:
Exploration of Guiding Theoretical Underpinnings and Theoretical Fit in Practice

by

Margaret L. Walsh

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy Department of Community and Family Health College of Public Health University of South Florida

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Abstract

The purpose of this study was to identify ways Indigenous theoretical perspectives may guide current and future substance abuse prevention programs. As the majority of current theories guiding substance abuse prevention programs in American Indian and Alaska Native communities stem from Western ideologies and lack Indigenous perspectives, there is a paucity of research on theoretical underpinnings for Indigenous perspectives in AI/AN communities and their potential role in substance abuse prevention programming. It is well known that when programs are theoretically connected to the communities in which they are implemented, they are more likely to be accepted, accurately measured, and sustained for longer periods of time. Using a multi-method approach, in-depth qualitative interviews were conducted, followed by a content analysis of interviewee publications, and member check interviews to validate findings. Participants were asked about their perceptions on the role of theory in substance abuse prevention in American Indian and Alaska Native communities; with a focus on what Indigenous perspectives would look like in current and future programming. Results provided evidence of a complex, yet essential, topic area in which additional future studies are necessary. Identification of missing or lacking cultural elements and future recommendations are provided. Implications from the current study show the need for integration of Indigenous perspectives into substance abuse prevention programs for American Indian and Alaska Native communities.
Chapter One: Statement of the Problem

American Indian and Alaska Native (AI/AN) communities have repeatedly been serviced with substance abuse prevention (SAP) programs that have been unable to meet their unique cultural needs (Beauvais & LaBoueff, 1985; Hawkins, Cummins & Marlatt, 2004; May, 1999; Whitbeck, Walls & Welch, 2012). Not surprisingly, AI/AN communities continue to have some of the highest rates of alcohol abuse and drug addiction compared with the rest of the United States (U.S) (Indian Health Services, 2011; Hawkins et al., 2004). Some researchers have posited that a disconnect exists between the theories that are used to guide development of prevention programs in AI/AN communities and culturally-appropriate theoretical constructs of AI/AN worldviews, that when combined might lead to greater success (Champagne, 2007). The general research literature suggests that theory-driven programs are more effective than programs that are not theoretically-based (Donaldson & Gooler, 2003). Furthermore, when programs do employ theory, they are more likely to become incorporated into communities when the chosen theoretical framework matches the needs of the community (Green & Kreuter, 2005). When interventions and programs are theoretically driven, their components are more easily constructed, more accurately measured, evaluated, replicated, and sustained for longer periods of time (Glanz, Rimer, & Viswanath, 2008). It is hypothesized that if SAP programs were theoretically connected and driven by AI/AN communities, they would be more likely to be integrated into AI/AN communities, accurately measured, evaluated, sustained, and deemed

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1 For the purpose of dissertation, AI/AN communities will include all geographical regions where AI/AN reside, such as urban, rural, remote, and reservation lands. The author acknowledges and understands that there may be differences inherent within the geographic locations and within tribes that may impact the health of AI/AN. Although not all AI/AN will present with the health issues and associated challenges described in this proposal, it is not feasible to present tribal-specific information for all 566 federally recognized tribes and the number of state tribes recognized by the National Congress of American Indians (NCAI).
successful for those participating. Especially, due to the growing number of AI/AN in the U.S., addressing the apparent gap in culturally relevant SAP services is paramount.

As of 2010, the U.S. Census reported 5.2 million individuals who identified as AI/AN, alone or in combination with one or more other races (U.S. Census, 2012). AI/AN live throughout the U.S., in urban, rural and remote rural areas and reservation lands with high population centers in the desert Southwest, Pacific Northwest, and Midwestern Plains (Brown, Baldwin & Walsh, 2011). To date, there are 566 federally recognized tribes (Department of the Interior [DOI], 2012) and a number of state tribes recognized by the National Congress of American Indians (National Congress of American Indians [NCAI], 2014). Each of these tribes has distinct and unique traditions, customs, language, and teachings making it difficult to generalize characteristics found among certain AI/AN (Brown et al., 2011).

Rates of health disparities in AI/AN communities continue to be some of the highest in the U.S., with rates of AI/AN adult substance use consistently higher than national averages, and higher for reported binge drinking episodes within the last month (National Survey on Drug Use and Health [NSDUH], 2010). An average 43.9% of adult AI/AN reported using alcohol within the last month, higher than the national average of 30.6% (Substance Abuse and Mental Health Services Administration [SAMHSA], 2011). Additionally, of those AI/AN reporting alcohol use within the last month, 30% also reported engaging in binge drinking episodes (SAMHSA, 2011). AI/AN youth alcohol consumption rates are higher than rates of all substance use combined (alcohol, tobacco, and other drugs [ATOD]) compared to national averages (NSDUH, 2011).

Based on the current health statistics there continue to be clear health disparities for AI/AN associated with ATOD use (Centers for Disease Control and Prevention [CDC], 2010). The leading causes of death among AI/AN are heart disease (139.4 per 100,000), cancers (119.4
per 100,000) and unintentional injuries (56.7 per 100,000), compared with lower rates for all other races (CDC, 2010). Among AI/AN men ages 45–74, the incidence of cardiovascular disease ranges from 15 to 28 per 1,000 and for women, 9 to 15 per 1,000 (American Heart Association, 2013). AI/AN have higher rates of emphysema, chronic bronchitis, and asthma when compared with whites (Barnes et al., 2010). Furthermore, AI/AN men and women are twice as likely to be diagnosed with chronic liver disease (Office of Minority Health, 2013b). Rates of unintentional injuries and deaths are 60% higher in AI/AN compared with Whites, with mortality rates due to unintentional injury twice that of whites (29.1 per 100,000 compared with 15 per 100,00) (CDC, 2011, 2012). The health disparities associated with the use and abuse of substances negatively impacts many AI/AN communities.

Although there are SAP efforts underway, it is a complex task to determine what programs have made an impact on in AI/AN communities (Whitbeck et al., 2012). It is even more difficult to determine if those programs are theoretically-driven and if so, from what theoretical perspective they are based. To assess whether or not those programs are successful, and by what definition of success they are measured, adds more intricacy to an already multifaceted task. Whitbeck et al. (2012) stated that for all of the necessary and useful community-based participatory research (CBPR) that is being conducted in AI/AN communities, many non-Native researchers continue to operate from a “Western colonial paradigm that ignores, diminishes, and reinterprets Native ways of knowing” (p.432). Furthermore many AI/AN designed programs are theoretically driven but the theories do not reflect Western values. There is a need for theoretical publications that acknowledge grassroots programs are not atheoretical, but very much grounded in traditional world views and guided by strong assumptions pertaining to risk and protective factors. Future work, ideally by cultural insiders,
should chronicle this grassroots work, delineate the cultural theories on which they are based, and demarcate the kinds of evidence that support them (Whitbeck et al., 2012, p.432).

Research Plan

This exploratory study investigated researchers’ views of theory in substance abuse prevention (SAP) for AI/AN communities. Specific focus was on the role of theory and guiding perspectives of SAP programs for AI/AN communities. The research question aimed to explore how researchers view, incorporate and think about theory in relation to the design and implementation of SAP programs in AI/AN communities. Further, the research question lead to identification of theoretical constructs deemed necessary for successful, effective SAP programs in AI/AN communities.

Research Question:

From a researchers’ perspective, what is the role of theory in SAP in AI/AN communities?

a) Specifically, what does SAP look like in practice?

b) What are the components of guiding theories that are key for success in AI/AN communities?

c) How do differing theoretical perspectives influence SAP in AI/AN communities?

The research question aimed to explore the theoretical underpinnings of SAP programs and the perceptions of how those underpinnings were (or were not) incorporated with AI/AN culture. Additionally, the research question aimed to thoroughly assess the theoretical constructs that are present in theories guiding SAP programming in AI/AN communities.

The theoretical importance of the research question rests on the fact that “theoretical inquiry is central to the vitality and development of a field of practice…the theoretical foundations of a field describe and inform the practice and provide the primary means to guide
future developments” (Garrison, 2000, n.p.). By exploring facets of this research question, the study may influence future practice and research, reveal new knowledge and suggest alternatives in the use of theory and development and implementation of SAP programs in AI/AN communities. Furthermore, the research was theoretically and methodologically strengthened through the guidance of phenomenological and social constructivism lenses in assessing the perceived theoretical roots of programs.

Phenomenology asks questions to understand the meaning, structure, and essence of the lived experience, for individuals or groups of individuals (Moustakas, 1994). The lens of social constructivism views knowledge as created through social experiences that may change (Lincoln & Guba, 1985; Vygotsky, 1978a). Potential participants bring past experiences, knowledge and beliefs into each new experience, building on top of their prior constructions of their world (Vygotsky, 1978b); social constructivism allows for a multitude of perspectives to arise from any one person on any given topic. The methodological importance in using social constructivism to guide the research was that individuals had independent perspectives but there was inherently different cultural and worldview perspectives identified between Native and non-Native researchers.

As to the practical importance of the research question, it may inform current and future SAP programs to ensure adoption and implementation of SAP that will work in AI/AN communities. This will be done by establishing the perceived theoretical underpinnings of researchers and exploring what is needed to make SAP programs effective for AI/AN communities. When SAP programs are designed to adequately represent the lived experience of AI/ANs, and are evaluated by multiple evidence-based sources (e.g., community-defined evidence and traditional evaluation measures), it is anticipated that prevention and reduction of
substance use and abuse will occur. Additional improvement in the non-monetary costs associated with substance abuse, such as level of educational attainment, employment rates, and health outcomes will also be impacted (Brown et al., 2011).  

**Research Design and Rationale**

**Interpretive orientation and study design.** The study conducted 22 in-depth interviews using an interpretive orientation and two-tiered theoretical framework and a content analysis of 47 peer-reviewed articles. The interpretivist orientation views the phenomenon in question as having multiple realities dependent on various social constructions and subjective interpretations; there is no one right answer from an interpretivist orientation (Lincoln & Guba, 1985). To best understand the multiple meanings for the phenomenon at hand, one must rely on understanding individual and collective motivations, reasons, and subjective experiences, all of which are context bound (Lincoln & Guba). Interpretivist research goals aim to explore and interpret subjective scenarios to allow for a greater understanding of contextually-bound occurrences, rather than to attempt to predict or generalize behaviors (Lincol & Guba, 1985).

**Triangulation.** Triangulation is paramount to ascertain the validity and reliability of multiple realities, therefore multiple methods of data collection are encouraged for the triangulation of data (Golafshani, 2003). Triangulation is the process by which multiple methods are utilized regarding data collection and analysis (Golafshani, 2003). Denzin (1978) identified four modes of triangulation: sources, methods, investigators, and theories. For the completed study the following triangulation modes were assessed: 1) sources: researchers and member checks; 2) methods: in-depth interviews and content analysis; 3) investigators: two coders for inter-rater reliability during analysis; and 4) theories: use of a two-tiered theoretical approach to data analysis.
**In-depth interviewing.** In-depth interviewing was utilized as the main data collection method (Creswell, 2013; Lincoln & Guba, 1998; Kvale, 1996). The purpose of in-depth interviewing aligned well with the chosen qualitative paradigm of phenomenology and lens of social constructivism (Seidman, 2006). Interviewing allowed for exploration of participant experiences, interpretations, and understanding as stated in one’s own words (Seidman, 2006).

The use of in-depth interviews aimed to understand the processes, mechanisms, and potential paradoxes of how the phenomenon under study works. Each interviewed participant became a snapshot of the social world of interest (Strauss & Corbin, 1998). Research aims, theoretical orientation, and underlying principles of methodology guided how to conduct an interview. The seven stages for conducting interviews—thematizing, designing, interviewing, transcribing, analyzing, verifying, and reporting—was completed (Kvale, 1996).

**Content analysis.** Qualitative content analysis is defined as a method to assess textual data using subjective interpretation through a systematic classification process of coding and identifying themes and patterns (Hsieh, 2005). Specifically, focus is placed on the inferences made from the text “about the sender(s) of the message, the message itself, or the audience of the message” (Weber, 1990, p. 9). A content analysis of a selection of researcher publications was conducted. The content analysis followed Mayring’s nine stages:

1) determination of the material; 2) analysis of the situation in which the text originated; 3) the formal characterization of the material; 4) determination of the direction of the analysis; 5) theoretically informed differentiation of questions to be answered; 6) selection of the analytical techniques (summary, explication, structuring); 7) definition of the unit of analysis; 8) analysis of the material (summary, explication, structuring); and 9) interpretation (Kohlbacher, 2006, p.1).
Specifically, the selected publications were assessed regarding theoretical orientation, perspectives, and approaches related to SAP in AI/AN communities.

**Rationale for Design**

Qualitative research is an approach that can be used to explore and understand how individuals or groups provide meaning to situations, concepts, social experiences, and to the world around them (Creswell, 2013). The completed study aimed to explore and understand views on theory in SAP programs in AI/AN communities, thus necessitating the use of qualitative inquiry. Using an inductive approach to research, qualitative research allows for data emergence to occur through each step of the process. Two qualitative approaches guided the proposed study. Specifically, the use of existential phenomenology, which aims to discover the social construction of a groups’ reality or what is the true nature of the reality that holds a concept or phenomenon together, was used in the completed study (Moustakas, 1994). Furthermore, the ontology (the nature and perception of reality) allows the formation of epistemologies (how we know what we know). Exploring the ontology and epistemology of participant perceptions allowed for a deeper understanding of how participants individually conceptualized their world and experiences.

Additionally, the qualitative lens of social constructivism was employed. Social constructivism, or constructivism, views knowledge as created through social experiences that may change under certain circumstances (Golafshani, 2003; Vygotsky, 1978a, 1978b). Social constructivism is the view that all knowledge is contingent on human experiences, being constructed based on interactions between individuals and their world, and expressed through and within social contexts; the cornerstone being that it values the multiple realities that individuals hold, with no one ‘right’ answer or perspective for any situation (Golafshani, 2003).
To ascertain the validity and reliability of these multiple realities, multiple methods of data collection are encouraged, specifically triangulation of data (Golafshani, 2003). Most importantly, constructivism insists that significance is placed on information collected from interviews to be analyzed as views, rather than hard facts (Schram, 2006). The emphasis within a constructivist lens is on the feelings, assumptions, and meaning making of study participants (Schram, 2006). Through the use of a constructivism lens, the collectivist view of participants, how they view their world as impacted and crafted through their interpersonal interactions, can then be explored.

The rationale for use of a two-tiered theoretical approach was to allow for an opportunity for multiple perspectives to arise using different analytic methods. Traditionally, in a qualitative study it is the richness and sophistication of the analytic perspectives or “lenses” focused on the data that lends richness, credibility, and validity to the analyses (Luborsky, 1995, p. 13). Therefore, the use of two lenses added richness to the study. Furthermore, the interpretive design allowed for in-depth exploration into the views and perceptions of Native and non-Native researchers and community partners. Use of all four identified modes of triangulation (sources, methods, investigators, and theories) (Denzin, 1978) further strengthened the study design.

In conclusion, Chapter 1 has included information on the statement of the problem, proposed research questions, and the overall significance of the study. In Chapter 2, a review of related research and literature associated with the dissertation topic is included, specifically comprised of the following: epidemiology of substance abuse in AI/AN communities, theories on substance use in AI/AN communities, potentially contributing factors to substance abuse in AI/AN communities, current efforts for SAP in AI/AN communities, guiding theories in SAP, differences in guiding theoretical perspectives in AI/AN communities, and exploration of what
may constitute an Indigenous theoretical perspective. The third chapter reviews the research methodology, data collection and analysis. Results and final analysis are included in Chapter 4 and an in-depth discussion of findings, recommendations, and future directions can be found in Chapter 5.
Chapter Two: Literature Review

Epidemiology of Substance Use among AI/AN

Although rates of substance use vary widely among AI/AN across the United States, epidemiological research has shown consistent health disparities related to substance use and abuse present in AI/AN communities (Brown et al., 2011; Whitesell, Beals, Big Crow, Mitchell, & Novins, 2012). AI/AN rates of chronic liver disease, cirrhosis, lung cancer and other alcohol-associated diseases are reported to be 6 times higher when compared with non-Hispanic Whites (US Department of Health and Human Services [DHHS], 2010). Moreover, alcohol use is considered to be one of the biggest contributing factors for increased mortality among AI/AN (Whitesell et al., 2012). However, the DHHS (2009) stresses that there is substantial variation across Indian Health Service (IHS) areas with reported alcohol-related mortality rates of 18.3/100,000 (eastern United States) to 86.4/100,000 (North and South Dakota).

Rates of tobacco and other drugs also vary widely and often resemble general American adult usage (Mitchell, Beals, Novins, Spicer & the AI-SUPERPFP Team, 2003). The 2012 National Survey on Drug Use and Health reported prevalence of tobacco product use among individuals 12 and older at 48.4% for AI/AN compared to 10.8% (Asian) to 29.2% (whites) (DHHS, 2012). The same survey reports no statistically significant differences in the rates of current illicit drug use for any racial/ethnic groups in the U.S. 2002-2012, and yet AI/AN were not included in the current study due to inadequate sample sizes necessary for reliable presentation (U.S. Department of Health and Human Services, 2012). However, in 2009 the National Survey on Drug Use and Health (NSDUH) reported 18% of AI/AN over the age of 12
were currently using illicit drugs, with almost 65% reporting lifetime illicit drug use. These conflicting results are not surprising as there is such wide variation in sampling, surveillance and reporting methods often reported for AI/AN. Some AI/AN communities appear to have much lower rates of other drug use compared with the general population (Compton, Thomas, Stinson, & Grant, 2007), and other studies report an overall lack of reliable data on illicit drug use among adult AI/AN (Walters, Simoni, & Evans-Campbell, 2002).

For AI/AN youth, there are additional data sources tracking ATOD use, the Youth Risk Behavior Survey (YRBS) (CDC, 2014) and Monitoring the Future (University of Michigan [UM], 2013). But, even the YRBS does not report aggregate data for AI/AN as sample sizes are not large enough for statistical significance (CDC, 2014). Instead interested parties can search participating state websites to assess rates of ATOD use for AI/AN youth; and as with adult AI/AN, there is wide variation of reported ATOD type and frequency of use by AI/AN youth. Monitoring the Future also does not report specific data for AI/AN youth and instead refers to regional and age differences (such as, 12th graders or students living in the Northwest) (UM, 2013).

Even with issues surrounding inadequate sampling and representativeness, the health disparities associated with ATOD in AI/AN communities are hard to dispute. Healthy People 2010 reported AI/AN to have the best group rate for only 16% of identified Healthy People 2010 objectives (Garcia, Keppel, & Hallquist, 2014). Most of the met objectives were related to air quality and vaccination adherence based on data from the early 2000’s (Garcia et al., 2014). The focus areas with the largest health disparities were from Maternal, Infant, and Child Health and Substance Abuse focus areas, with data from the 2010 Healthy People database (Garcia et al., 2014). Specifically the largest disparities between AI/AN and other populations in the U.S.
focused on reported alcohol consumption during pregnancy (3.2/1,000 live births compared with 0.2/1,000 live births); tobacco use during pregnancy (18.2% compared with 2.2%); rates of sexually transmitted infections (118 new cases/100,000 compared with 20 new cases/100,000); and cirrhosis deaths (22.7/100,000 compared with 3.2/100,000). But it must be noted that not every AI/AN community experiences the same level of health disparities. Overall, AI/AN appear to be at an “increased risk compared with others in the United States (particularly for heavy, episodic alcohol use), but evidence also shows tremendous variability in use and disorders across tribes and across reservation and urban contexts” (Whitesell et al., 2012, p. 377).

Theories of ATOD use among AI/AN

Colonization brought with it the introduction of alcohol to AI/AN (Frank, Moore & Ames, 2000). Prior to the 1500s, no known contact with alcohol had been documented for AI/AN (Hill, 2013; Thatcher, 2004). When Europeans came to America they would carry alcohol with them as an item to trade with the Natives (French, 2000; Hill, 2013). Alcohol often became the focus of many tribes, thus diverting their attention from actively responding to the acts of colonization (Hill, 2013; Mancall, 1995).

Over the years, the role of alcohol transformed from a means of trade to that of a coping response for many AI/AN (Hill, 2013). According to Hill (2013) there are four main theories of why alcohol has been used/abused by AI/AN: 1) drinking as a response to sociocultural disorganization; 2) drinking in response to deprivation; 3) drinking as an expression of traditional values and activities; and 4) drinking as a mainstream normative behavior. As the first of these theories suggests, due to colonization, traditional Native sociocultural practices have been disrupted, resulting in current disorganization within tribal communities (Hill, 2013). The use of alcohol to cope with disorganization was originally studied in the 1930s by Margaret
Mead, who noticed rates of alcohol use were related to a lack of social standards, values, beliefs and that the old mechanisms of societal operations had broken down without new ones being instated (Hill, 2013). Further studies concluded that drinking, especially heavy drinking, allowed participants to “achieve momentary feelings of power, to express hostility without anxiety, to satisfy dependency needs, or to cope with high levels of anxiety and psychological stress” (Hill, 2013, pp.7).

The second theory of alcohol use among AI/AN was originally described by Durkheim and Merton, also in the 1930s (Hill, 2013). Their perspective described the causes of drinking not necessarily due to enculturation but rather more in response to a lack of valued goals and mechanisms for reaching them (Hill, 2013). It is entrenched in the idea that economic and other forms of deprivation cause the response of heavy drinking. Heavy drinking then becomes a normalized pattern from one generation to the next. Even if opportunities to eliminate deprivation present themselves, the drinking pattern response will continue (Hill, 2013). Both theories of disorganization and deprivation view alcohol use as an indicator of social strain and psychological maladjustment in Native communities (Hill, 2013).

For the third theory, the emphasis is placed on how alcohol aids in the maintenance of a social system. Hill (2013) described this perspective as one that views AI/AN culture as having new traditional elements that have incorporated alcohol as a key factor. Even though alcohol use has negative associations, it has become a normative behavior in mainstream culture. Similarly, the last theory of alcohol use among AI/AN focuses on the fact that drinking alcohol is a patterned behavior of Western society and AI/AN have merely learned this behavior and practice it because it is normalized (Esqueda, Hack & Tehee, 2010). The last two theories of alcohol use frame it to view alcohol use as serving a social function for society. As to whether alcohol use is
a coping response, or merely practicing a normative behavior, the devastating effects of alcohol on Native communities are hard to dispute (Thatcher, 2004). Alcohol use is a product of colonization and all associated sociocultural impacts can be traced back to its introduction (Mancall, 1995; Thatcher, 2004).

Use of other substances (OTD) have also been reported to operate under tenets similar to those of above; primarily as either being used as a maladaptive coping mechanism or a socially normalized behavior (McNulty Eitle & Eitle, 2014). A number of studies have reported ATOD use as being associated with emotion-focused and avoidance coping strategies (McNulty et al., 2014). However, as is the case for many disciplines, results may not be generalizable as these studies are based on non-Hispanic White males and have not been standardized with other populations or with women (McNulty et al., 2014).

**Potentially Contributing factors for substance abuse among AI/AN**

Within any community there are multiple factors that contribute to substance use and abuse. AI/AN communities have the additional compounding factors of intergenerational trauma, historical events, colonization, assimilation, removal of cultural identity and enculturation that may potentially contribute to substance use and abuse (Brave Heart, Chase, Elkins, & Altschul, 2011; Duran, Duran, Brave Heart, & Yellow Horse-Davis, 1998; Duran, 2006; Evans-Campbell, 2008; Morgan & Freeman, 2009; Poupart, 2003; Reagan, 2012; Struthers & Lowe, 2003; Walters et al., 2002; Whitbeck et.al, 2012). The myriad of factors experienced by AI/AN communities can make prevention of substance use and abuse all the more difficult.
**Intergenerational trauma.** In the 1980s, Maria Yellow Horse Brave Heart began theorizing a concept, known now as historical trauma, as a means to describe the cumulative emotional, physical and psychological wounds that are due to collective group trauma that occurs over a lifespan and across generations (Brave Heart, 1998). For over 500 years, AI/AN have had to endure an onslaught of physical, emotional, social, and spiritual genocide from European and American colonialist policies and practices (Brave Heart et al., 2011; Evans-Campbell, 2008; Poupart, 2003). As of today, many AI/AN have adapted enough to be healthy, and by Western standards are considered self-sufficient (Champagne, 1999); yet, many are not faring as well as they could be (Duran et al., 1998). Intergenerational, or multi-generational, traumas experienced by AI/AN include events such as forced “displacement, assimilation, language and culture suppression, and re-education through boarding schools” (Native American Center for Excellence [NACE], 2013, pp.1). These events are experienced by one generation, passed down through subsequent generations and experienced both individually and within families (Reagan, 2012). Associated with historical trauma is an overwhelming sense of powerlessness and hopelessness that are often associated with high rates of alcoholism, substance abuse, suicide, and other negative health issues (NACE, 2013). There is a complex association between substance use and traumatic stress that is usually described through a self-medicating focus and not by assessing the other sociopolitical and historical components that are thought to increase susceptibility to substance use, which is the lens that historical trauma uses (Duran, 2006; Morgan & Freeman, 2009; Struthers & Lowe, 2003; Walters et al., 2002).

Historical trauma has also been likened to a “soul wound” by Duran and Duran (1995), who believed that the core of all Indigenous suffering is rooted in their histories of colonial oppression. Specifically stating that “the trauma of the loss of land, culture, and people has never
been resolved, but has been anesthetized by alcohol and other drugs…in a sense Native American people suffer from posttraumatic stress disorder as a consequence of the devastating effects of genocide” (Duran & Duran, 1995, pp. 152). Historical trauma has been thought to be a main cause of current AI/AN health disparities (Myhra, 2012; Spicer, 1998).

However, it should be noted that historical trauma is not readily embraced by everyone (Gone, in press; Gone, 2009). Gone (in press) does state that the concept of historical trauma may be a contributing factor to health disparities, but to place all of the focus on past experiences mediates those of the present; thereby “distorting more than it illuminates and explains, and at a genuine cost to future AI promise and potential” (n.p.). Instead he approaches historical trauma as one component of many that must be recognized and addressed by AI/AN in order for them to flourish (Gone, 2013). For the purpose of this dissertation, historical trauma was viewed as one of the effects of the major historical events that have shaped public health efforts.

**Historical events.** The following events are by no means an exhaustive list of the laws, acts, and historical events that have impacted AI/AN communities in the U.S. Instead, each of the chosen laws has had a clear impact on current public health efforts in AI/AN communities. Almost all of the laws and acts were enacted primarily for acquisition of prime real estate, with secondary motives to assimilate AI/AN into the mainstream culture (Barlow, 2007).

The first of these acts occurred in 1830 with *The Indian Removal Act* to set in motion mass forced relocations of the Creek, Cherokee, Choctaw, Chickasaw, Seminole and many other AI nations living east of the Mississippi (Churchill & Morris, 1992; Shelton, 2001). The Act allowed for the U.S. government to legally clear space for European settlers (Churchill & Morris, 1992) and place sovereign Indian nations on the same lands within set boundaries (Shelton,
After 1830 the U.S. government gave up all pretenses of honoring treaties that had been made prior to 1830, as well as, treating tribes as sovereign nations (Nighthorse Campbell, 2007).

*The General Allotment Act* (1887) or the “Dawes Act”, allowed the U.S. to insert itself into the internal affairs of Native nations with the fundamental goal of breaking up their traditional systems of collective land tenure (Churchill & Morris, 1992; Wilkins, 2007). The term, “blood quantum” became a part of the AI vernacular as Native people had to begin to prove their amount of Native-ness to be deeded land parcels (Nighthorse Campbell, 2007). Due to this Act, from 1887-1934, over 100 million acres of all Indian-reserved land was appropriated by the U.S. government (Churchill & Morris, 1992). At the start of the 1887, Indians held approximately 138 million acres of land and by the time the Dawes Act was repealed in 1934, landholdings had been reduced to less than 52 million acres (Shelton, 2001). Allotment was clearly a devastating Act for AI/AN communities and has had lasting impacts that continue to this day (Gover, 2007; French, 2000; Ruppel, 2008; Shelton, 2001).

During the time of allotment, many policies were enacted to assimilate AI/AN into white culture. Re-naming Indians according to Anglo-Saxon traditions was one method that was used in the assimilation process (Shelton, 2002). Furthermore in 1924, *the Indian Citizenship Act* (ICA) was passed to account for all those who were missing or excluded from the General Allotment Act (Wilkins, 2007). The Act allowed the U.S. government to bestow citizenship to all “non-citizen Indians born within the territorial limits of the U.S.” (Churchill & Morris, 1992; French, 2000). The perceived impact of the ICA was to ultimately assimilate and disrupt tribal sovereignty (Bruyneel, 2004). With the creation of the ICA, many AI/AN began to see the U.S. government as the mechanism for providing federal guardianship and support to AI communities (Bruyneel, 2004).
Following closely was *The Indian Reorganization Act* (IRA), in 1934, which allowed the U.S. government to “supplant traditional forms of Indigenous governance in favor of a tribal council structure modeled after corporate boards” (Churchill & Morris, 1992, pp.15). It essentially stripped tribes of their traditional ways of selecting leaders (Nighthorse Campbell, 2007; Wilkins, 2007). The IRA resulted in deep divisions on many reservations, still to this day, between traditionalists and progressives (Shelton, 2001). Traditionalists believe that tribes should have continued to operate traditionally, whereas progressives are those in favor of the tribal council structure. Again, many opponents to the IRA viewed it as another form of assimilation.

In 1953, from a report aiming to free Indians from control and supervision of the Bureau of Indian Affairs (BIA), *The Termination Act* was developed (Churchill & Morris, 1992; Wilkins, 2007). The policy unilaterally dissolved specific Native nations, specifically suspending federal services to, and recognition of them (Churchill & Morris, 1992; French, 2000; Shelton, 2001). A total of 109 nations were terminated by this action with only a handful restored to federal recognition in the 1970s (Churchill & Morris, 1992). The Act caused devastating effects to the economy and health of the terminated tribes. Automatic spikes in alcoholism and suicides occurred and longstanding impacts on education, poverty, and mortality rates have been associated with the Act (Shelton, 2001). Relocation of the terminated tribes resulted in shattered family networks and cultural traditions (Wilkins, 2007). To this day tribes are still trying to be reinstated as federally recognized due to *The Termination Act* (Nighthorse Campbell, 2007).

As *The Termination Act* was realized to be a failure, *The Indian Civil Rights Act* was passed in 1968. It appeared to be a positive move as it negated “the worst potentialities of termination policy” (Churchill & Morris, 1992, pp. 16) and ended the possibility of unilateral extensions of state jurisdictions over tribes (Shelton, 2001). Yet, it ended up binding all those
Indigenous governments more tightly with federal preferences than the IRA had; “in effect made Native governments a functional part of the federal system itself” (Churchill & Morris, 1992, pp.16).

In 1975 *The Indian Self-Determination and Educational Assistance Act* was passed (Shelton, 2001). This Act originally required AI/AN to be included in staffing of the various programs designed for AI/AN by the federal policymakers, “who-the Act makes clear-continues to hold preeminent authority over Indian affairs” (Churchill & Morris, 1992, pp.16). Moreover, the Act directs the Secretary of the Department of Health and Human Services [DHHS] and the Secretary of the Department of the Interior [DOI] to enter into self-determination contracts with tribal organizations when requested by tribes (Shelton, 2001). These contracts include planning, conducting, and administering programs that are provided by the federal government for AI/AN. The idea behind the Act was to allow for AI/AN to have a greater voice in how and what programs are implemented in Native communities (French, 2000). However, the original version of the Act allowed for the BIA to retain control over budgetary decisions—which ultimately led many AI/AN to question whether or not termination by appropriation might occur (Robbins, 1992; Shelton, 2001). Although the Act has been modified through the years there is still uncertainty on the true intentions of the Act (Shelton, 2001).

As of 1978, *The Indian Child Welfare Act* was passed and with this law the federal government finally stopped the centuries old policy of forcibly and systematically removing Native children to non-Natives through compulsory boarding school systems and wholesale adoptions (Churchill & Morris, 1992; French, 2000; Gover, 2007; Niles, 1996). As of 1900, there were 25 off-reservation boarding schools that had enrolled over 7,500 students; with another 81 boarding schools on reservations with enrollments close to 10,000 all run by the BIA (Grande,
2004; Gover, 2007). It was during this time that the infamous Carlisle Indian School (1879-1918) was operating (Grande, 2004; Wilkins, 2007). The Carlisle School was the first of its kind as it moved away from the “day school model that provided too much proximity to their families and communities” (Grande, 2004, pp.13). Instead the school was designed to be a manual labor boarding school, far away from families and communities (French, 2000; Noriega, 1992; Wilkins, 2007). Education consisted of euro-centric ideologies and history, English-only curriculum, corporal punishment, compounded by high staff turnover, inadequate teacher training, lack of financial resources, and overt and subtle forms of racism throughout all of the boarding schools (Davis, 2001; Grande, 2004; Noriega, 1992). Children were only taught Christian teachings and all cultural teaching and spirituality was prohibited (Grande, 2004).

Yet, the tradition of removing Native children from their families continued for another 50 years. As of 1973 an estimated 60,000 Native youth were enrolled in Indian boarding schools throughout the country and although forced attendance has ceased. Still in 2007 an estimated 9,000 students were still being educated based on boarding school doctrines (Smith, 2007). The systematic removal of children to attend Indian boarding schools has “decimated the Native family systems, the central cohesive force in any tribal culture” (Gover, 2007, pp.189). Family dysfunction, addiction, violence, and maladaptive coping skills continue to run rampant in Native communities, and perhaps these are in part due to the organized assault on the Native family unit (Dick, Manson & Beals, 1993; Gover, 2007). Centuries of genocide and forced assimilation policies cannot be quickly undone and the residual effects of the Indian boarding schools can still be felt in many Native communities (Grande, 2004).

It was not until 2000 that specific standards to ensure tribal authority over their own affairs that are not to be hindered or limited by federal administrative practices was passed. This
recognized that Native nations should retain their “inherent ability and responsibility for looking after their own people and interests” (Shelton, 2001, pp. 27). Yet, the back and forth of over 200 years of American politics would leave anyone questioning the stability of practices concerning AI/AN interests (Gover, 2007; Robbins, 1992; Wilkins, 2007).

**Creation of Indian Health Services (IHS).** Prior to 1954, the BIA was in charge of Indian health care and was wholly inadequate at meeting the needs of AI (Churchill & Morris, 1992; Shelton, 2001). As of 1954, *the Transfer Act* shifted health services responsibilities to the Public Health Service which was a division of the Department of Health, Education, and Welfare (Dixon, 2001; Hawkins & Blume, 2000; Johnson & Rhoades, 2000a; Shelton, 2001). At the time of the transfer, health services were marginal at best (Johnson & Rhoades, 2000a). The first steps of the new Indian Health Service (IHS) focused on establishing basic services, recruitment of health professionals, remodeling and renovation of health care facilities, and creation of clinical laboratories (Johnson & Rhoades, 2000a). Then in 1976, passage of the Indian Health Care Improvement Act focused on addressing the lag of Indian health compared with the general public (Shelton, 2001). A goal was set to “provide the highest possible health status to Indians and to provide existing Indian health services with all resources necessary to effect that policy” (Shelton, 2001, pp. 26). Within the Act were provisions to increase quantity and quality of Indian health services and improve participation of AI/AN in the planning and implementing of those services; consolidation and authorization of funding for existing IHS programs; safe water and sanitation facilities; and authorization of Medicare and Medicaid reimbursement (Johnson & Rhoades, 2000a; Shelton, 2001).

IHS operates a health services delivery system that is overall designed to provide “preventative, curative, and rehabilitative, and environmental services” for AI/AN (Hawkins &
Blume, 2000, pp. 37). Yet, it was not until 1976 with the passage of the Indian Health Care Improvement Act did AI/AN living off-reservation have their health care needs formally recognized by the federal government (Hawkins & Blume, 2000). In 1979, IHS developed its first formal policy affirming the importance of Native healing practices (Johnson & Rhoades, 2000a).

There are many federally funded programs operated through IHS and many have led to improved health-care delivery for Native communities (French, 2000). However, there are countless obstacles still to overcome for IHS-funded programs as the majority are rooted in Eurocentric ideologies and are not culturally or traditionally rooted in Native practices (French, 2000). Although IHS does have sections in their manuals that claim to address culture-specific approaches, these often appear as afterthoughts and lack consistent measurement and evaluation (French, 2000). With an abundance of programs rooted in Euro-American ideology, formats, and practices many IHS-funded programs focus on individual constructs, competition, and confrontation in lieu of Native harmony-ethos concepts (French, 2000).

Moreover, IHS has identified alcohol and substance abuse as the most significant health problem in AI/AN communities (Dixon, 2001; Hawkins & Blume, 2000; DHHS, Indian Health Services, 2011; Johnson & Rhoades, 2000a). Almost all of the 566 federally recognized tribes offer some type of mental health and/or substance abuse services, and most are tribally managed (Dixon, 2001). In 1986, The Indian Alcohol and Substance Abuse Prevention and Treatment Act was passed and authorized IHS to create one regional youth substance abuse treatment facilities in each IHS area (Dixon, 2001). However, the needs of AI/AN far outweigh the IHS services available for mental health and substance abuse prevention and treatment (Dixon, 2001). IHS has separate branches for Mental Health and Social Services Programs Branch [MHSSPB] and for
the Alcoholism/Substance Abuse Program Branch [A/SAPB] (Manson, 2001). Each branch is in charge of services and programs to address these health issues. However, a lack of coordination of care and alcohol prevention and treatment services has been well established (Manson, 2001). There is a paucity of research on community-wide substance abuse prevention programs (Howard, Walker, Walker, & Rhoades, 2000). Continuing recommendations for reducing the negative toll of alcohol and substance abuse in Native communities are provided to IHS each year, and yet organizational change is slow (Howard et al., 2000).

There exists an assumption that by having adequate health care and providing health care systems, the disparities in health will cease (Johnson & Rhoades, 2000b). Simply changing the environment and access to care are not sufficient factors for changing personal behavior (Johnson & Rhoades, 2000b). Therefore, IHS has actively engaged in developing a long term strategy to promote participation of AI/AN in programs (Johnson & Rhoades, 2000b). However since its inception, IHS’ limited resources have made large scale impacts difficult (Johnson & Rhoades, 2000b). Anyone who is a member or descendent of a federally recognized tribe is provided services free of charge and IHS does not cover long-term care (Dixon, 2001). IHS has also faced criticism due to extensive waiting times for appointments and services being solely dependent on federal funding (Dixon, 2001). Still, the creation of IHS has provided a melding of multiple services and programs into over 500 communities, “each of which possesses a strong element of sovereignty” (Johnson & Rhoades, 2000b).

**Consequences of Historical Events**

In reviewing historical events that have impacted Native communities, it is easy to see how each has negatively impacted AI/AN health. Repeated colonization, forced relocation and assimilation have resulted in a loss of culture and identity, economic suppression, and racial
discrimination (Gover, 2007; LaFromboise, Coleman & Gerton, 1993; Robbins, 1992; Wilkins, 2007). These consequences continue to interact with AI/AN social determinants of health today.

Social determinants of health are “the conditions in which people are born, grow, live, work and age…shaped by the distribution of money, power and resources at global, national and local levels” (World Health Organization [WHO], 2013, pp.1). The recognition of socioeconomic factors as determinants of health is a way to view the current health disparities present within Native communities (Wilkinson & Marmot, 2003). The conditions that many AI/AN live in provide healthy, happy environments that allow children, youth and adults to thrive (Flores & Tomany-Korman, 2007). Yet there are just as many AI/AN born into a life of poverty, systems of inadequate education, complex social issues, insufficient housing, patterns of substance use, and violence (Flores & Tomany-Korman, 2007). The environmental factors associated with poverty and lack of adequate education systems have been associated with negative health outcomes (Benzeval, Dilnot, Judge & Taylor, 2001). The social factors, such as parenting styles, violence, and substance use have been associated with negative health outcomes (Whitesell, Bachand, Peel & Brown 2013). When environmental and social factors are combined with historical trauma due to colonization, forced relocation and assimilation, it is not surprising that AI/AN are experiencing health disparities (Castor, et al., 2006; Frank et al., 2000).
Colonization. The colonization of AI/AN began in the 16th century, and according to many, continues in various forms to this day (Gover, 2007; Hill, 2013; Robbins 1992; Waldman, 2009). Europeans brought violence, epidemic diseases, enslavement, displaced Native communities and introduced intermarriage (Waldman, 2009). Each of these aided in the decline of AI/AN, as was the intent of colonization. Europeans introduced many terrible diseases to AI/AN (Waldman, 2009). Native communities had no immunity to any of these diseases and with the arrival of epidemics, entire villages were destroyed. Many historians estimate that up to 80% of some tribes died due to introduction to European diseases (Waldman, 2009). Throughout the last 500 years, introduction of disease has occurred, but the violence and enslavement experienced alongside colonization has left deeper scars (Frank et al., 2000; Waldman, 2009).

Forced relocation. Many of the historical Acts reviewed earlier resulted in forced relocation of AI/AN. Not only does forcibly removing someone from their home cause an initial trauma but it ultimately separates a person from their lands, extended families, language, traditions, food, healing rituals, access to resources, and their overall history (Frank et al., 2000). Best described by Michael E. Bird (2003), former president of the American Public Health Association, forced relocations were “the massive dispossession that removed Native people from their ancestral lands and took away their language, culture, and labor resulting in significant damage in health, in educational levels, and in social well-being” (pp.1). Along with forced relocation came with it economic suppression as the result of confining AI/AN to small parcels of land, removing traditional forms of commerce (Shelton, 2001) and introduction of alcohol to Native communities (Hill, 2013; Frank et al., 2000; Thatcher, 2004); with current poverty rates among high density AI/AN communities ranging from 22-50% (U.S. Census Bureau, 2013).
**Assimilation.** Assimilation is the act of taking a person or population and making them a part of the larger society by stripping away all non-normative characteristics (Champagne, 2005). Native communities have found it challenging to adapt to the Eurocentric approaches introduced during colonization (Champagne, 2005). One of the tangible aspects of assimilation can be seen in the re-writing of AI/AN history, or at the very least the re-framing of it to view the practices of the U.S. government in a more positive light (Wilkins, 2007). Even providing inadequate numbers that reflect how many AI/AN were killed during colonization in the U.S. is an act of assimilation (Stiffarm & Lane, 1992). Many of the historical Acts resulted in removing AI/AN names and replacing them with Anglo-Saxon approved names (French, 2000). Through boarding school education, AI/AN culture, traditional dress, spiritual practices, and healing methods were stripped away to “make Indians into whites” (French, 2000). Indian boarding schools created physical and emotional separation between children, their families and their communities. Separation resulted in parents not being able to parent and children not being able to learn parenting skills through parental modeling and social learning (Braveheart, 2011; Markstrom, 2008).

**Cultural identity and enculturation.** Through colonization, forced relocation, and assimilation, a loss of AI/AN culture, identity and enculturation has occurred (Champagne, 2005; Hill, 2005; Lerma, 2012; Lowe, 2002; Milholland, 2010; Zimmerman, 1998). The question of ‘what does it mean to be AI/AN?’ still permeates today (Schmidt, 2011). Furthermore, racism and discriminatory practices toward AI/AN continue (Gonzales, 2008). These practices lead to a loss of identity as many AI/AN avoid association with being Native as it is often viewed negatively (Gonzales, 2008). Moreover, negative views of AI/AN poverty add to the already rampant racial discrimination in U.S. culture (Johnson, 2007), with research showing racism and
discrimination to have lasting negative physical and mental health effects, including anxiety and depression, high blood pressure, and low self-esteem (Whitbeck, Hoyt, McMorris, Chen, & Stubben, 2001). Lastly, perpetual racism surrounding ATOD use, primarily alcohol use, among AI/AN has resulted in stereotypes since the early 1770’s (Ahmed, 2007; Mancall, 1995; Thatcher, 2004).

**Substance abuse prevention in AI/AN communities**

The prevention of substance use and abuse falls into all three levels—primary, secondary and tertiary (Cohen & Chehimi, 2007). Primary prevention is the ideal, and “applications of primary prevention extend beyond medical problems…including the prevention of other societal concerns that affect health and well-being. Primary prevention efforts are proactive by definition and should generally be aimed at populations, not just at individuals” (Cohen & Chehimi, 2007, p. 5). In relation to SAP, primary prevention “involves the promotion of health and elimination of alcohol abuse and its consequences through community-wide efforts, such as improving knowledge, altering the environment, and changing the social structure, norms, and values systems” (National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2005, p.1). The next level, secondary prevention, focuses on early detection and intervening to reduce substance use. Finally, tertiary prevention attempts to reduce and minimize the effects of long-term substance use, typically as substance abuse treatment programs (NIAAA, 2005). However, only primary prevention focuses efforts on stopping the behavior of substance use before it begins (Cohen & Chehimi, 2007).

SAP programs are also delineated by a three tier preventive intervention classification system focused on who the interventions are designed for and which participants will gain the most through the intervention (Gordon, 1987). Gordon (1987) describes the first tier as *universal*
prevention efforts; these apply to the general population. Focus is on individuals who are not considered high-risk compared to those around them. The second tier is selective prevention efforts with a focus on certain individuals within the population who are at-risk for developing problems or who are already engaged in substance abuse. The third tier are indicated prevention efforts, these are programs that are for specific individuals who exhibit specific behaviors or conditions that place them at high risk for substance abuse and/or dependence (Gordon, 1987).

Currently, there are many SAP efforts underway in AI/AN communities. A recent in-depth article reviewed published empirical trials, promising programs (both published and unpublished), and examples of innovative grassroots programs (Whitbeck et al., 2012). Of these SAP programs, many are driven by grassroots prevention methods and focus on creating cultural practices that match the needs of AI/AN communities (Whitbeck et al., 2012). Another review article described numerous promising prevention strategies and programs for AI/AN communities (Hawkins et al., 2004) and a systematic review of SAP efforts in AI/AN communities (2003-2013) found wide variation in types of programs and target audiences in AI/AN communities (Walsh & Baldwin, under review).

Of the 220 evidence-based programs and practices, the National Registry of Evidence-based Program and Practices (NREPP) identifies two SAP programs that have been adapted for use with AI/AN (with at least 50% of the evidenced group representing AI/AN): Families and Schools Together (FAST) and Project Venture (Substance Abuse and Mental Health Services Administration, 2014a). NREPP also identifies the Red Cliff Wellness School Curriculum as a SAP intervention rooted in AI/AN tradition and culture (also evidenced in AI/AN communities) (SAMHSA, 2014a). Other evidence-based programs on NREPP’s registry are recommended for use with AI/AN communities, however those programs have not been tested for efficacy with
AI/AN populations (SAMHSA, 2014a). NREPP’s purpose is to thoroughly assess SAP interventions, and provide the public with information “on evaluated interventions and reduce the lag time between the creation of scientific knowledge and its practical application in the field” (SAMHSA, 2014b, p. 1). Although SAMHSA’s NREPP website states “policymakers and funders in particular are discouraged from limiting contracted providers and/or potential grantees to selecting only among NREPP interventions” (2014, p.1), this is not often the case (Cooney, Huser, Small & O’Connor, 2007; Grants Northwest, 2014). Many federal and state departments and agencies are highly encouraged and/or required to fund a certain level of evidence-based practices or programs (Executive Office of the President, 2013). Often it can be challenging to locate rigorously evaluated SAP programs deemed as evidence-based or as a promising practice (SAMHSA, 2009). Furthermore, for many communities it is extremely difficult for community grassroots programs to reach that level of evaluation rigor necessary for those classifications (SAMHSA, 2009, 2014c).

It is not unusual for prevention efforts in AI/AN communities to lack proper efficacy evaluation (Beauvais and Trimble, 2003; Dixon et. al, 2007; Hawkins et al., 2004). Typically most evaluation of prevention research for AI/AN communities is based on “commentary and recommendations and not on the science of prevention” (Beauvais and Trimble, 2003, pp. 397). More often than not, the specific details of programs are not published or are unavailable for review (Hawkins, et. al, 2004). The nuances in evaluation of SAP programs are an area of much needed attention for AI/AN communities (Dixon et. al, 2007; Hawkins et. al, 2004; Whitbeck et al., 2012).

Moreover, a key recommendation for successful SAP programming is that they need to be relevant to the communities in which they are taking place (Hernandez, Nesman, Mowery,
Acevedo-Polakovich, & Callejas, 2009; Martinez, Callejas & Hernandez, 2010; Walsh & Baldwin, under review). Using practice-based evidence (PBE) or community-defined evidence (CDE) to report success of substance abuse prevention programs are both manners that could facilitate reporting representative outcomes of success (Hernandez et al., 2009; Martinez et al., 2010). PBE is defined as the knowledge and experiences associated with the use of practices, for example culturally specific interventions or traditional healing practices, that match the overall cultural environment where they are developed and used (Issacs et al., 2008). The majority of PBEs lack empirical support but often they are refined through “experiential and historical processes as communities continue to use those that are found to be helpful and discard those that are found to be less efficient” (Isaacs, Huang, Hernandez & Echo-Hawk, 2005, p.625).

Similarly, CDEs have been defined as a set of practices that communities use based on community consensus and acceptance (Community Defined Evidence Project [CDEP] Workgroup, 2009). CDE will take into consideration the worldview, the historical and social contexts of a given population or community, all of which are culturally rooted. The ‘evidence’ in CDE is purposively not defined because every population group, entity, or geographic area defines itself differently and should be properly defined by the group itself. CDE came to be because evidence-based practices were not designed for, or appropriately standardized, on populations of color (L. Callejas, personal communication, September 19, 2013).

Additionally, there has been an upsurge in the use of community based participatory research (CBPR) to guide substance abuse prevention programs in AI/AN communities (Whitbeck et al., 2012). Many AI/AN community members have a voice in what is getting implemented in their communities, but it appears that many of the programs being chosen for implementation are evidence-based programs based on Western paradigms. Whitbeck et al.
(2012) point out that given the many AI/AN cultures that are so diverse and widely dispersed, having culturally specific AI/AN prevention programs for each tribal community may be impractical. At the same time “Pan-Indian” prevention approaches “are often viewed with suspicion in that they blur cultural distinctions among people who have been striving for generations to keep their cultures vital” (p. 429). Whitbeck et al. (2012) recommend the use of cultural adaptations tribe by tribe but that again, “supporting and empirically evaluating such a multiplicity of culturally specific programs may be unachievable” (Whitbeck et al., 2012, p. 429).

Many of the current SAP programs describe SAP generally, as opposed to focusing on single substance prevention (Hawkins et al., 2004; Whitbeck et al., 2012). Combining prevention messaging can be problematic, as each substance (ATOD) is very different from the other, especially when used or abused by youth (Luna, 2002). Prevention efforts are best suited if targeted and specific in relation to the substance of interest (Gabrielsen, 2002). There are universal approaches that can positively influence the use and abuse of ATOD, for example: improving refusal skills, increasing self-efficacy, addressing attitudes and beliefs, or increasing overall awareness (Baldwin, Brown, Wayment, Nez, & Brelsford, 2011; Hawkins, Catalano, & Miller, 1992). However, specifically in regards to alcohol abuse prevention, there are key focus areas that, when addressed, have been shown to have more effective results. These areas include: addressing and altering social norms surrounding alcohol use and abuse, navigating peer pressure related to alcohol, addressing environmental triggers, and most importantly, incorporating family, friends, school and community members to reinforce positive non-alcohol related behaviors of youth (Hanson & Dusenbury, 2004). However, it should be noted that the efficacy
of these target areas has not been rigorously assessed for AI/AN alcohol use and abuse reduction (Hanson & Dusenbury, 2004; Whitbeck et al., 2012).

**Research and resources for SAP in AI/AN communities**. Building on the idea that local communities know what works best, there are many regional centers and institutes that focus their research and programming efforts to address and health disparities in AI/AN communities. Funding for these agencies often originates from community coalitions, private funding, university allocated funds, state incentive grants, federal grants, and/or IHS-related funding sources. One such funding mechanism is the Native American Research Centers for Health (NARCH) grants. These grants are supported by IHS and the National Institute of General Medical Sciences (NIGMS) and focus on supporting partnerships between AI/AN tribes or tribal organizations and institutions conducting intensive academic-level biomedical, behavioral, and health sciences research (IHS, 2014). As of January 2014, there were 14 NARCH affiliated sites, and of those two (Albuquerque Area Indian Health Board and Alaska Native Tribal Health Consortium (ANTHC)) reported having SAP related programs (National Institutes of General Medical Sciences, 2014). Another common AI/AN SAP funding mechanism is through Community Anti-Drug Coalitions of America (CADCA) whose focus is on strengthening capacity of community coalitions to address substance abuse prevention and treatment (Community Anti-Drug Coalitions of America [CADCA], 2009a). CADCA provides a listing of 23 tribal-associated programs and efforts, and links to documents and resources specific for AI/AN communities (CADCA, 2009b).

Prior to 2014, SAMHSA promoted use of its Strategic Prevention Framework (SPF) State Incentive Grants (SIGs), which focused on use of a five-step process that promoted community-based risk and protective factor approaches primarily for *building capacity* for SAP programs.
through collaboration between states, territories and tribes to best address the needs of communities (SAMHSA, 2014d). However as of 2014, SAMHSA shifted its attention from SIGs to Substance Abuse Prevention and Treatment Grants (SABG), focused on building capacity. Upon closer inspection, the 2014-2105 SABG announcement included the following language: “in times of declining federal, state, and local resources, states need to make the most efficient use of substance abuse prevention funds, which should be used to support evidence-based substance abuse programs and practices” (SAMHSA, 2014d, p. 21). Furthermore another previous resource for AI/AN communities was the Native American Center for Excellence (NACE) funded through SAMHSA. NACE provided a one-stop site for AI/AN communities and others to locate SAP programs, resources, services, and funding opportunities, and for AI/AN communities to collaborate with other AI/AN communities and agencies. SAP programs in AI/AN communities, not deemed as evidence-based or promising programs, were also highlighted on the website. Again, with SAMSHA’s recent shift, their focus has moved from “helping to address issues related to SAP and other behavioral health issues in AI/AN communities to providing more tailored technical assistance to states, territories and tribes as requested” (S. Locario, personal communication January 31, 2014).

SAMSHA’s Tribal Affairs website still exists and does provide opportunities for information for Tribal leaders on SAMSHA policies and programs. Tribal Affairs developed under the Office of Behavioral Health Equity to assist in coordination and communication of SAMHSA’s polices and resources with Tribal communities (SAMHSA, 2014e). The Tribal Affairs website lists funding opportunities, SAMHSA’s Tribal portfolio, and SAMHSA mental health and substance abuse data and educational resources (SAMHSA, 2014e). Again, the described programs on the Tribal Affairs website are all considered evidence-based practices, but
have not necessarily been shown to be effective or adaptable for AI/AN communities. Moreover, there is a lack of described grassroots programs, programs defined as practice-based, programs based on community-defined evidence or any non-empirically reviewed programs (SAMHSA, 2014e). This is not to say that the programs described on the Tribal Affairs, NREPP, and CADCA websites (to name a few) are not applicable or adaptable for AI/AN communities. But there is clearly a lack of evidence-based and alternative SAP programs designed, and readily available, for AI/AN communities.

**Theoretical Orientation**

To best appreciate the meaning and role of theory, theory must be understood in the context in which it is to be applied (Goodson, 2010). Theories “are propositions that have meaning, validity, and truth (or falsity) within a specific context, such as historical context, a social context, or a cultural context” (Goodson, 2010, p. 26) and it is within those contexts that the theories are meaningful (Edberg, 2007). Therefore one must “understand the contextual ground rules” (Edberg, 2007, p. 26) if they are to evaluate the validity of a theory. Furthermore, in relation to theories of health behavior “most of the answers we now have tend to be ‘universal’, fixed, blatantly ignoring that health behaviors are context-bound and contingent on their socio-cultural-economic contexts” (Goodson, 2010, p. 15). It is important to determine whether or not the context, that is, where AI/AN SAP is occurring is meaningful in relation to the underlying and guiding theories that are being used.

**Substance abuse prevention theoretical approaches.** Central to the understanding and prevention of substance abuse is an exploration of individual and group factors that are necessary for effective programs and interventions. The field of SAP has a complex history and many avenues for effective prevention have been explored, but ultimately “a few systematic
approaches have survived tests of theoretical coherence and empirical plausibility” (Gerstein & Green, 1993, p. 45). These systematic approaches differ in their focus but all include some level of predisposing, enabling, and reinforcing elements central to human behavior (see Glanz et al., 2008). The three main theoretical approaches used in SAP include: risk/protective factor, developmental, and social influence (Botvin, 1983; Gerstein & Green, 1993; Hawkins et al., 1992; Simons-Morton, McLeroy & Wendel, 2012; Sussman, 2013). The risk and protective factor approach is used to determine what factors lead to someone being at-risk for substance abuse (Hawkins et al., 1992). Over twenty years of SAP research has shown certain contextual, individual and interpersonal factors to be associated with a greater likelihood of potential substance use (please see Hawkins et al., 1992 for greater detail). However, there are also protective factors that have been shown to buffer those negatively associated risk factors (Hawkins et al., 1992). These protective factors decrease the likelihood for substance abuse. The risk and protective factors approach to SAP tends to emphasize educational approaches to modifying self-perceptions, beliefs, attitudes, and other associated predisposing factors of an individual with substance abuse (Gerstein & Lawrence, 1993; Hawkins et al., 1992). The intent is to decrease or modify identified risk factors and increase and highlight protective factors to reduce risk for substance abuse (Hawkins et al., 1992). Simply knowing potential risk factors for substance abuse does not provide a clear strategy for prevention but does allow multiple areas in which to focus programs and interventions (Hawkins et al., 1992). The National Institute of Drug Abuse (NIDA) (2003) embraces the risk and protective factors approach as being a universal approach to substance abuse prevention. However criticism of the approach focuses on its circular and correlational logic and a lack of instruments available to assess levels of risk and protective factors (Corrigan, Loneck, Videka & Brown, 2007).
Developmental or lifespan approaches for SAP are those approaches directly tied to one or more of the five developmental stages (Botvin, 1983; Hawkins et al., 1992). These stages include: (a) young child, (b) older child, (c) young teen, (d) older teen, and (e) adult (emerging, young-to-middle and older adult substages) (Botvin, 1983; Hawkins et al., 1992; Sussman, 2013). At each stage a different, developmentally appropriate method is used to address a behavior (please see Erickson, 1963 and Piaget & Inhelder, 1972 for more information on developmental theory).

The approaches of social influence and social learning for SAP stem from McGuire’s (1964) ‘social inoculation’ ideas and are heavily based on Bandura’s theories on social learning (1962, 1971, 1986, & 1992). Bandura (1971) began postulating that humans learn behavior (i.e., learning theories) through social contexts in which the dynamic and reciprocal interactions of an individual, their environments, and behaviors influence one another. As an example, social cognitive theory (SCT) combines the main facets of behavioral and cognitive theories to explain behavior changes; it does not view behavior solely as passive or active, but rather a combination (National Cancer Institute [NCI], 2008). By addressing both the psychosocial dynamics that influence health behavior and methods for promoting behavioral change, SCT aims to explain the behavior of humans through a triadic, dynamic, and reciprocal model that accounts for individual and environmental factors (Bandura, 1986; Baranowski, Perry, & Parcel, 2002; Simons-Morton, McLeroy, & Wendel, 2012). The individual factors include a person’s thoughts, perceptions, capabilities to symbolize, anticipate, model and learn behavior. Moreover, individual factors include a person’s capacity for confidence in performing a behavior, self-regulating, self-determining, and being able to reflect, analyze, and learn from the behavior associated outcomes (Bandura, 1992, 1997). Further, there is special emphasis placed on the
internal and external social influences and how they positively or negatively reinforce behavior. Each individual’s knowledge and behavior is thought to be related, among other things, to the direct observation of others within the context of experience and social interactions (Bandura, 1986; Baranowski et al., 2002; NCI, 2008 Simons-Morton et al., 2012). Under each of these approaches there are multiple associated guiding etiological (causes of use) and intervention theories (best methods for addressing etiology) (Nation et. al, 2003).

Community-specific approaches represent a fourth, less well-recognized and rigorously evaluated SAP approach (Gerstein & Green, 1993). These approaches take into account community structure and dynamics often overlooked in other SAP methods (Gerstein & Green, 1993). More specifically, these approaches are interested in how a community is defined, how community features influence substance abuse, and “what features are instrumental to the effectiveness of interventions to prevent drug abuse” in a specific community (Gerstein & Green, 1993, p. 122). Community-specific approaches often lack generalizability and may often differ based on multiple contextual factors such as, what works best for specific communities, the size and location of a community (rural or urban), and how membership within a community is determined (Gerstein & Green, 1993). Compared with the three other approaches for SAP, community-specific approaches are the most flexible, non-linear and adaptive. As Gerstein and Green (1993) note, “it is critical to learn what constitutes the communities that are relevant to drug abuse prevention. What normative symbols, practices, events and institutions do those at risk, and those who can influence them, identify with and respond to? How do drug-specific norms and behaviors dovetail with other health norms and behaviors?” (p. 141). A community-specific approach takes each of the other three approaches (risk/protective, developmental, and social) and applies them within community context to understand a complete picture of
Differing theoretical perspectives. The majority of theories used in health promotion tend to exhibit/embrace the following attributes: “1) exaggerated focus on individual-level factors; 2) undue emphasis on rationality; and 3) a deliberate privileging of linearity” (Goodson, 2010, p. 90) and when viewing these patterns, “you will begin to “see” the worldviews these theories reveal and which worldviews these theories blind us to” (Goodson, 2010, p. 90). There are linear and nonlinear theories, with Western ideologies tending to focus on linear theories to explain human behavior and non-Western nonlinear theories focusing on complex adaptive systems (Goodson, 2010). Yet for many AI/AN, ‘ways of knowing’ are a well-established practice to explain human behavior but often underused in mainstream practices (Champagne, 2007).

It is also known that the theories being used to guide program development may not appropriately match beliefs and cultural nuances in AI/AN communities (Frank et al., 2000). AI/AN typically operate from a collectivistic perspective, compared with a more individualistic stance of a Western worldview (Champagne, 2007; Duran, 2006; Vandello & Cohen, 1999; Walsh & Baldwin, 2012; Whitbeck et al., 2012). An individualistic perspective is based on the idea of being self-reliant, independent from others, and able to function without aid (Norton-Smith, 2010). Whereas a collectivist perspective describes individuals that are integrated into cohesive networks that rely on sharing in-group similarities and operate from a shared
understanding that the behaviors of one individual impact the larger group (Norton-Smith, 2010). Beyond differences between individualistic and collectivism perspectives, there are other components of thought, seeing, and being that differentiates Western and Indigenous perspectives.

Western perspectives, particularly in relation to research, hold a “set of values and conceptualizations of time, space, subjectivity, gender relations and knowledge…it is encoded in imperial and colonial discourses that influence” (Wilson, 2001, p.215) all of those who come in contact with it. From program conceptualization to implementation, all parties affiliated with research (researchers, program developers, staff and participants, and anyone reading published articles) based in a Western perspective are subject to those specific values and principles—even if they are unaware of it. There is a need to remind those affiliated with research “to reflect on and be critical of, one’s own culture, values, assumptions and beliefs and to recognize these are not the ‘norm’” (Wilson, 2001, p. 217). Unfortunately, western-based research will simply “interpret Indigenous knowledge from a Western framework, effectively distorting reality” (Cochrane et.al, 2008). Further, the distinction between methodology and epistemology is something that is not well understood or recognized in Western research (Cochrane et. al, 2008; Wilson, 2008). Epistemology is best described as “the understanding of knowledge that one adopts and the philosophy with which research is approached…this issue cannot be disentangled from history or from the social position one holds within society as a result of that history” (Cochrane et. al, 2008, p. 24). Whereas, “knowledge reflects the values and interests of those who generate it, and it is these values that then determine the methods that are used and the conclusions that are drawn” (Cochrane et. al, 2008, p. 24). When these values and worldviews are Western based, or
of the majority culture, knowledge that is gained through another minority perspective or value is then often disregarded (Cochrane et. al, 2008).

There has been an emphasis on how different Indigenous perspectives are compared with dominant Western perspectives seen within today’s modern day society (Little Bear, 2000; Hart, 2010; Pichette, Garrett, Kosciulek, & Rosenthal, 1999; Walker, 2004), with most of the focus on defining and ascribing best practices to Western perspectives (Walker, 2004). Even though these differences exist, Gill (2002) and Hart (2010) have noted that many scholars are reticent to address comprehensive concepts such as worldviews, or to explore what an Indigenous perspective might look like.

**Indigenous perspectives.** Research into the field of chaos and complexity theories and the study of nonlinear dynamic systems has begun to pique the interest of Western thinking and research directions (Capra, 1996; Sahtouris, 2000). Yet, the concept of interdependency is not new to those who operate from an Indigenous perspective (Barnhardt & Kawagley, 2005). In fact Struthers et. al (2003) states:

A basic principle of American Indian culture is wholeness and interrelatedness (Pierotti & Wildcat, 1997). Everything is considered to have life, is interconnected (Cohen, 1998), intertwined; there is oneness in the universe and all actions and thoughts effect all of creation (Lowe, 2002; Struthers, 1999). Thus, American Indian individuals see themselves as part of all creation, living life as one system, and not in separate units that objectively relate to each other (Duran & Duran, 1995) (p.1).

Further, this construct of interdependency is often referred to as operating from a holistic or cyclic perspective (Sue & Sue, 2003) or being “dependent upon relationships and connections to living and non-living beings and entities” (Simpson, 2000, n.p.).
Along the same lines of interconnectivity lies a sense of belonging (Hill, 2006). As a part of relatedness, or the idea that everything is intertwined, a sense of belonging applies to the well-being of individuals, family and communities expressed through the combined worldview or perspective of the AI/AN populations (Hill, 2006). “We are all relatives” is how Deloria (1999, p. 34) describes the belongingness that is inherent within an interconnected perspective. Further, Wilson (2008) quotes what being “Indigenous” meant to his friend as,

It’s collective, it’s a group, it’s a community. And I think that is the basis for relationality. That is, it’s built upon the interconnections, the interrelationships, and that binds the group…but it’s more than human relationships. And maybe the basis of that relationship among Indigenous people is the land. It’s our relationship to the land. There’s a spiritual connection to the land. So it’s all of those things (p. 80).

Additionally, the literature on Indigenous worldviews has listed certain qualities of Indigenous perspectives as having a strong connection to nature, place, ceremonial life, and family (Magoullick, n.d.; Norton-Smith, 2010). Hart (2010) quotes Leanne Simpson (2000) who describes seven key factors for an Indigenous philosophy that mirror those cited by Magoullick (n.d.) and Norton-Smith (2010). Yet, a second factor she describes is that “there are many truths, and these truths are dependent upon individual experiences” (p. 3). That although everything is connected and interrelated, how that relatedness is viewed is based individually. Further, Fixico (2003) describes what “Indian Thinking” looks like and how it is ““seeing” things from a perspective emphasizing that circles and cycles are central to the world and that all things are related within the universe…”Seeing” is visualizing the connection between two or more entities or being, and trying to understand the relationship between them” (p. 1-2). So
although there may be multiple truths dependent on individual experiences, how those experiences are related to others is the essence of having an Indigenous perspective.

Research has shown that it is possible to integrate scientific theories of behavior change (Western-based) with Indigenous holistic health belief systems (Baldwin, Johnson & Benally, 2009). However, even with a movement toward more community-driven prevention strategies and the need for cultural specificity, as recommended by many programs (see Appendix A), many of the theories used to guide development of SAP programs continue to be based on individualistic paradigms (Nation, et.al, 2003). Many AI/AN communities have sustained their unique worldviews, associated knowledge, values and beliefs for millennia, even while undergoing upheavals from transformative forces beyond their control (Barnhardt & Kawagley, 2005). Numerous AI/AN core values, beliefs and practices associated with their worldviews have survived and are beginning to be recognized for their adaptive integrity that is as valid for today’s generations as it was for generations past (Duran, 2006; Garrity, 2000). But again, the majority of theories predicting and explaining substance abuse prevention efforts in AI/AN communities stem from Western ideologies and lack Indigenous ways of knowing (Champagne, 2007; Duran, 2006; Walsh & Baldwin, 2012).

Nonetheless, there may be some Western theories that may have meaning within AI/AN communities related to SAP. Based on preliminary research, it appears that the following theories are able to address at least portions of the complex contexts in which substance use and abuse are occurring in AI/AN communities: social cognitive theory, social capital theory, cluster theory, triadic theory, primary socialization theory, and the matrix model (Walsh & Baldwin, 2012). Yet, the components of these theories that resonate with Indigenous perspectives need to be explored in more depth. Further, when the main constructs of these theories are applied
within AI/AN communities, it does appear that each is not adequately or explicitly addressing: 1) colonization; 2) collective trauma; 3) racism; 4) social cohesion; 5) collective efficacy; and 6) intergenerational conflict (Walsh & Baldwin, 2012). Thus, more research is necessary to assess how these constructs are defined and how (if at all) they are incorporated into SAP efforts in AI/AN communities. Furthermore, many other mainstream theories guiding SAP appear to lack holistic, culturally-relevant and applicable values needed to provide meaning within the complex contexts of AI/AN communities (Walsh & Baldwin, 2012). Walker (2004) states that the “marginalization or blinding of Indigenous worldviews “has been and continues to be one of the major tools of colonization” (p. 531). Continually AI/AN have to fit within Western ideologies (Hart, 2010), beyond those inherent in SAP programs. In fact, many SAP programs “value individualism and self-efficacy…and these constructs at best do not fit well either with Indigenous cultural values or the realities of Indigenous life (Gone, 2008; Kirmayer, Brass, & Tait, 2000; Weaver, 2008) and at worst are at the heart of psychological and philosophical imperialism (Calabrese, 2008; Duran & Duran, 2000)” (Hart, 2010, p.5)

The current study focused on how researchers perceive the role of theory in SAP in AI/AN communities and the ways in which Indigenous theory or Indigenous ways of knowing may guide future research. Through interviews with researchers, the current study explored what theories guide current SAP programs in AI/AN communities, what aspects of those theories fit with Indigenous perspectives, and how to incorporate Indigenous perspectives into future SAP programs in AI/AN communities. Barnhardt & Kawagley (2005) call for collaboration between people from Indigenous and Western perspectives to transfer their individual knowledge and facilitate integration of the two worlds to strengthen the intersection of Native knowledge and Western science. This study aimed to assess and explore this issue.
Chapter Three: Method

Overview of Research Design

Using an interpretive orientation and a two-tiered theoretical framework, the study conducted in-depth interviews with researchers, and completed a content analysis of published participant authored literature. A total of N=22 researchers were interviewed. In combination with the interviews, a content analysis of 47 journal articles and six brief-member check interviews were conducted to answer the following research question:

From a researchers’ perspective, what is the role of theory in SAP in AI/AN communities?

a) Specifically, what does SAP look like in practice?

b) What are the components of guiding theories that are key for success in AI/AN communities?

c) How do differing theoretical perspectives influence SAP in AI/AN communities?

Study population and sampling. The study population included Native and non-Native researchers who have published on AI/AN SAP in the U.S. As the qualitative research study was an in-depth exploration into the views of Native and non-Native researchers on the theoretical context of SAP programs in AI/AN communities, and does not aim to generalize outside of the sample population, a non-probability sampling frame was appropriate. To answer the research question, the sampling frame was purposive in who was asked to participate in the study—specifically Native and non-Native researchers who have experience with SAP programs in AI communities, insomuch as they have published at least one article on SAP in AI/AN communities. Although there are a wide variety of sampling methods that could have been employed (Glazer & Strauss, 1967; Miles & Huberman, 1994; Patton, 2002), the specific use of
an intensity sampling frame was utilized. Intensity sampling is a process where a researcher is seeking specific, rich examples on or around the topic of interest (Patton, 2002). It requires preliminary research to be conducted to be able to identify those participants who would likely provide the highest quality information (Patton, 2002), as was conducted in this study.

**Recruitment procedure.** Researchers were recruited via a non-probability, purposive sampling method. A list of participants (n = 30) was generated based on well-known key researcher’s contributions to the literature (i.e., peer-reviewed publications), current and past research, involvement with AI/AN communities, and knowledge of SAP in AI/AN communities. Researchers were recruited through an initial email solicitation, followed by a phone call. The goal was to recruit a total of 20 researchers, with an equal number of Native and non-Native participants. A total of 22 participants were interviewed, of those 15 identified as Native and 7 as non-Native.

**Sample size.** Ascertaining what sample size is necessary for a qualitative study can be a complex task; as it depends on the intent of the study, population of interest, complexity of interview questions, and cost and time available to complete the research (Guest, Bunce, & Johnson, 2006; Lincoln & Guba, 1985). There are not clear guidelines on *how many* interviews are enough (Guest et al., 2006). In fact, there is wide disagreement for the number of participants necessary for purposive qualitative studies ranging from 6 (Morse, 1994) to 25 interviews (Creswell, 1998), with the average being 12 before saturation is typically reached (Guest et al., 2006). The sample pool for the proposed study was fairly small, as there are a limited number of researchers who study SAP in AI/AN communities (Ericksen, 1997). Further, the interview questions revolved around complex concepts that are not readily thought about or discussed; therefore, using a non-probability, purposive intensity sampling frame, a list of 30 potential
researcher participants was generated, with a goal of recruiting a total of 20 participants, and resulted in 22 interviews.

Furthermore, as social constructivism and phenomenology are the guiding qualitative lenses of this study, the proposed research was not interested in explaining the perceptions of all researchers. The study was only interested in views of those who are considered active in the field of AI SAP. The distinction was important because the use of intensity sampling called for a small number of rich interviews that would provide in-depth context of the phenomenon of interest (Patton, 2001). Saturation was met upon the completion of the 18th interview; however four additional interviews were already scheduled and were therefore completed (Glaser & Strauss, 1967; Glaser, 1992; Guest et al., 2006; Strauss, 1987).

**Instrumentation.** A semi-structured interview guide was developed and was piloted in three cognitive interviews, approved by the USF Institutional Review Board (IRB# Pro00008561). The approved researcher interview guide is included in Appendix B. The interview questions were guided by phenomenology and social constructivism, and focused on addressing the research questions. Through the lens of phenomenology, each interview question assessed individual perceptions, experiences, and views of theory and SAP in AI/AN communities. Moreover, using the lens of social constructivism, analysis of those same interview questions then provided information on the collectivist and interpersonal experiences and interactions pertaining to theory and SAP in AI/AN communities as viewed by the collective of researchers. Both views were equally important in gaining insight into the phenomenon in question. Throughout data collection, the interview questions were re-assessed for appropriateness (Lincoln & Guba, 1985; Seidman, 2006). Probes were used throughout all of the interviews (Bodgan & Bilken, 2007, p. 104).
**Guidelines for content analysis.** In addition to the researcher interviews, a content analysis of selected journal articles by interviewed researchers was conducted. As part of the non-probability, purposive sampling method- to find potential researcher participants- systematic literature searches were conducted. The content analysis included a total of 47 peer-reviewed publications. Article inclusion criteria included: 1) published within the last five years (2009-2014); 2) peer-reviewed; 3) retrieved from Psych Info or Academic Search Primer; and 4) the article had to be related to substance abuse prevention and/or AI/AN communities. Furthermore, there was overlap between participants and publications, with many (n=12) repeatedly publishing with other researchers who had been interviewed. Overlapped articles were only included once. Four participants were excluded as they had only published books, book chapters or non-peer reviewed articles within the selected timeframe. Therefore, articles from 18 out of 22 participants were included. On average, three articles per eligible participant comprised the sample. Once data analysis of all of the interviews was completed a thematic assessment of the articles was conducted. The content analysis followed Mayring’s nine stages:

1) determination of the material; 2) analysis of the situation in which the text originated; 3) the formal characterization of the material; 4) determination of the direction of the analysis; 5) theoretically informed differentiation of questions to be answered; 6) selection of the analytical techniques (summary, explication, structuring); 7) definition of the unit of analysis; 8) analysis of the material (summary, explication, structuring); and 9) interpretation (Kohlbacher, 2006, p.1).

Specifically, the selected publications were assessed regarding theoretical orientation, perspectives, and approaches related to SAP in AI/AN communities.
Data Collection Procedures

After submitting an amendment for Institutional Review Board (IRB) approval (IRB# Pro00008561) from the University of South Florida (USF) initial research with potential participants began. The inclusion criteria included: 1) Native and non-Native researchers; 2) involved in SAP program research, development, implementation, and/or evaluations within AI/AN communities; and 3) having a history of research with AI/AN communities as evidenced by published publications related to AI/AN.

Identified researchers were recruited through an email solicitation, followed by a phone call. After agreement to participate, an email was sent individually to each participant to schedule a time for their in-depth interview. Each interview was conducted over the phone, digitally audio-recorded, and lasted between 45-90 minutes. Interviewees were emailed an electronic copy of the informed consent to review before providing verbal consent on the audio-recording (a waiver of written informed consent was granted). All audio recordings were only available to the researcher and a certified transcriptionist who converted them into a transcript of the interview (Poland, 1995).

Additional data collected included detailed process notes, reflexive journaling, and electronic communications throughout the duration of the study. During each interview, the researcher kept detailed notes about the interview, thoughts concerning the study, and anything else that pertained to the research. After conclusion of each interview, the researcher made entries in a reflexive journal with the aim to identify and reduce researcher biases (Ortlipp, 2008). The entry included thoughts and feelings associated with the interviews. The reflexive journals were a way for the researcher to note how the codes were interpreted and combined to form themes (Braun & Clarke, 2006).
Data management. All appropriate steps were completed to maintain the integrity of the data throughout data collection and analysis. Only the researcher had access to the recruitment list, participant emails and phone numbers, and doodle poll responses. Along with interview audio-recordings, all information was saved on a password-protected computer to which only the researcher had access. The transcriptions of the interviews were sent to a certified transcriptionist who denoted each transcript with an interview number and all identifying information was removed (Poland, 1995). After transcription, each interview was uploaded to Nvivo 9 (QSR International, 2013) on the same password-protected computer.

All transcribed interviews were read to ensure verbatim transcription. All electronic data was, and will be, kept on a locked, password-protected computer for the minimum amount of time mandated by the USF’s IRB. During data analysis, integrity of data was maintained by only sharing access to transcripts with one additional coder; no other information concerning participants was shared with the second coder.

Data Analysis Approaches and Interpretation

The analysis approach for the proposed research was based on phenomenology and social constructivism. In combining two analysis approaches, a greater understanding of both individual and collective influences on SAP in AI/AN communities was reached. Additionally, assessment of the role of theory and definitions of success with SAP programs was explored.

Moustakas (1994) emphasized two broad aspects of the phenomenological analysis method, bracketing and phenomenological reduction, and an emphasis on intuition, imagination, and universal structures in analysis. To analyze the data through a phenomenological method, one must incorporate bracketing, horizontalization, and elimination to determine invariant themes (Moustakas, 1994). Bracketing is the first step in the phenomenological reduction
process. The researcher sets aside, or brackets, all preconceived notions about the question at hand, to the greatest extent possible. The process allows the researcher to better understand the experience from the participant’s own point of view.

Horizontalization is the second step of the phenomenological data analysis process, in which the researcher lists every significant statement relevant to the topic. The researcher writes a “structural” description of the experience after the textural description is written. The structural description investigates how the phenomenon was experienced, looking at all possible alternate meanings and perspectives.

Lastly, the third step in the phenomenological data analysis process is when the researcher groups the statements into clusters of similar meaning units, or themes, paying attention to delete repetitive and overlapping statements. The primary goal of using the phenomenological data analysis is to reduce the meanings of the experience to their essential, or common, structure (Moustakas, 1994). The researcher uses the textural description to reveal what happened and the structural meanings to reveal how the phenomenon was experienced. Aspects, which are universal to all participants, are the invariant structures and reveal the essence of the experience.

The assumptions of phenomenology ascertain that there are essential components of life (i.e., personhood, social nature, temporality, spatiality, and mood-as-atmosphere) and each one of these components holds a way in which an individual views their world (Ashworth, 2003; Husserl, 1931). A researcher must approach the understanding of a phenomenon through each of these components (individually and combined) to truly understand the lived experience of an individual (Husserl, 1931). The most important aspect is to grasp the notion of an individual’s intentionality. Intentionality is the way that an individual’s consciousness is directed toward
something outside of the individual and how the individual thus relates to that object. And how 
that individual relates to the object, whether to interact and become joined or to disregard and 
disassociate, refers to an individual’s intentionality (Husserl, 1931). For a researcher the focus is 
then to figure out what that intentionality has to do with how an individual is experiencing, and 
how that experience is experienced. Phenomenology analysis assumes that a researcher will be 
able to glean an individual’s intentionality based on how they describe the relation of their lived 
experiences with their essential components of life. A researcher must figure out a way to assist 
participants to “express world as directly as possible; and how to explicate these dimensions such 
that the lived world – the life world - is revealed” (Finlay, 2005, p. 1).

Compared with phenomenology, constructivism takes a slightly different approach to 
data analysis; information is analyzed in order to understand the context or setting of 
participants’ engagements within their environment (Creswell, 2013). Often a researcher 
personally visits the context in which participants are immersed; however, any type of immersion 
into the subject area will do (Creswell, 2013). The information collected is analyzed based on the 
processes of interactions that have influenced the participants’ current perspectives (Creswell, 
2013; Finlay, 2005). Constructivism focuses on specific environmental and situational contexts 
and how those interact with individuals’ past social interactions to create their current 
perspectives (Creswell, 2013). It is important that data is analyzed as a whole picture and, within 
this, the researcher’s own views and interpretations will shape how the participants’ 
interpretations are viewed; such is constructivism, the integration of socially constructed views 
into one worldview, taking into account the specific constructs that aid in the development of one 
whole picture (Creswell, 2013). Constructivism also acknowledges differing perspectives of a 
phenomenon may exist. Therefore, the use of both the phenomenological and constructivism
lenses allowed for examination of commonalities and differences between individual and collective perceptions of interviewees.

The assumptions of using constructivism, as an analysis method, are similar to those that are inherent in phenomenological analysis. In constructivism the assumption that there is *no one right worldview* exists and that every world view is influenced by an individual’s social and environmental interactions (Golafshani, 2003). Building on individual intentionality of phenomenology analysis, constructivism analysis emphasizes sociological ideas, such as norms, identity, culture, and community, and the process of *how* an individual engages and experiences these concepts to form their world view (Tsai, 2009). Constructivism assumes that people actively engage in this process and are able to articulate their experiences into how they view their world. There is an assumption that a researcher will be able to adequately untangle an individual’s intentionality (how a person views the world) with sociological concepts (e.g., norms, identity, culture, community) and processes behind how each interacts to form the world view relating to the phenomenon at hand (Tsai, 2009).

**Data analysis procedures.** The following describes the sequential steps of data analysis conducted for the study. Data analysis began with reviewing process notes and reflexive journal entries kept throughout data collection. Detailed notes were kept (described in data collection, above) and were thematically analyzed using both phenomenology and constructivism analyses. The intent of this process was to assess researcher biases, overt viewpoints, and any prejudices (Ortlipp, 2008).

All 22 interviews were analyzed, first, using phenomenological analysis. Based on the analysis of the process notes and reflexive journal entries, the researcher identified and acknowledged all “prejudices, viewpoints or assumptions regarding the phenomenon under
investigation” in writing (Katz, 1998, as cited in Merriam p. 158). Next, phenomenological reduction of bracketing out presuppositions to be able to see the true data occurred. The steps, as Denzin (1989) described the process of bracketing, of 1) locating key phrases and statements that address the phenomenon of interest; 2) a researcher who has been immersed in the phenomenon in question then interprets the meanings of these phrases or obtains the interviewees’ meanings during the interviews; 3) assessment and reflection of what those meanings reveal about the patterns of the phenomenon in question are completed; and then tentatively 4) providing a statement concerning the phenomenon in question, focusing on reoccurring patterns.

Next, a written description of each bracketed key phrase and statement, known as horizontalization, was completed. It is during horizontalization that the researcher explored how the phenomenon was experienced, looking at all possible alternate meanings and perspectives. This process then lead to the fourth and final step of developing a structural synthesis of the interview. Each interview was summarized based on information from bracketing and horizontalization, with the intent to show the true meanings of the experiences of each interviewee (Creswell, 2002; Giorgi, 1997, 2008; Hycner, 1985). The findings from the phenomenological analysis were set aside to compare with the content analysis that took place after conclusion of the constructivism analysis.

After the steps of phenomenological analysis, the lens of social constructivism was then used to analyze the same set of data. Similar to the steps of a phenomenological analysis, a constructivism analysis begins with identifying patterns within each interview, but with a focus on the environmental and situational contexts that appeared to influence interviewees’ current views. For example, one of the identifying patterns within interviews was references to grant funding and how the context and process of applying for funding had collectively shaped
interviewees’ views on overall availability and accessibility of funding in SAP for AI/AN communities. Each interview was assessed as a whole picture, focused on events that shaped participant views, and/or how social interactions influenced viewpoints (Creswell, 2013). Key events and processes of interactions thus become codes and were set aside while each subsequent interview was assessed using the same process.

Each transcription was read twice, before coding began. Themes of meanings, identified from each method of analysis resulted in identification of core patterns and a code book was developed (Creswell, 1998; Saldana, 2013). A thematic analysis was completed for all of the interviews, using codes from the two analyses. The researcher first coded using the patterns identified from the phenomenological analysis. After the first phase of analysis, then the social constructivism analysis was completed. A second, trained coder read through and coded (for both analyses) a sub-sample of transcripts to ensure reliability (Saldana, 2013). The second coder was trained in qualitative methods during her doctoral program and coded three transcripts per analysis, for a total of six transcripts. Furthermore, each coded interview was compared for between-coder inclusiveness and disagreements. Through two meetings, consensus on codes was met and once final codes were agreed upon both coders independently analyzed a sub-set of the interview data. Any discrepancies in the coding of themes between the researcher and second coder were discussed and resolved by consensus (Saldana, 2013). Code book development, revisions, and notes on code interpretations and theme definitions were kept. To facilitate data organization of data analysis all transcripts were coded using NVivo 9 (QSR International, 2013). All results are presented in thematic categories associated with the developed codes for the constructivism analysis.
As for the content analysis of researcher participant publications, upon completion of data analysis of all interviews, a thematic assessment of 47 articles was conducted. The content analysis followed Mayring’s nine stages referenced earlier (Kohlbacher, 2006). Specific themes of the articles were decided based on the analysis of interviews. These themes included: 1) described theoretical constructs; 2) worldview perspectives; 3) role of community; and 4) future directions of SAP in AI/AN communities. Specifically, information abstraction to address the following questions was completed: 1) Was theory used in the description of the article? ; 2) Was there adequate description provided on how theory was used)? ; 3) Was the theory named? ; and 4) Were theoretical constructs identified? Additionally, the content analysis allowed extraction of information on how researchers described what they did in practice, if and how they adapted programs, and whether or not theory usage was described in their articles. Findings from the content analysis were compared with findings from the phenomenological analysis to assess consistency between what researchers said in their interviews with what they published in recent articles. However, all information collected from the content analysis was aggregated to ensure confidentiality of participants.

Furthermore, a total of six brief member check interviews were conducted with participants, who had asked to be contacted at the end of their initial interview, to share the main findings of the study and elicit additional feedback. The brief member check interviews served as a validity check for the findings (Cho & Trent, 2006; Lincoln & Guba, 1985). The six participants were contacted via email, after all data analysis had been completed, to schedule a time for a 20-30 minute phone call. During the phone call, participants were verbally provided with the main findings and asked the following questions for each finding: 1) Does this finding surprise you, why or why not?, 2) What are your thoughts on this finding?, and 3) Based on this
finding where do we, as a field, go from here? Upon completion of the call, participants were offered a $25 Amazon gift card for their time.

As the final step in data analysis, a report of the findings from the interviews was returned to all participants to provide them with an opportunity for final feedback. Lastly, as stated earlier, Denzin (1978) identified four modes of required for triangulation: sources, methods, investigators, and theories. For the study, a total 22 interviews and content analysis of 47 articles was conducted (sources); use of process notes, interviews, six member-check interviews, and returning findings (methods); a second reader/coder assisted in data analysis of interviews (investigators), and a two-tiered theoretical framework was used.

**Strengths of Methods**

The main strength of qualitative research is it allows flexibility in providing context for a phenomenon (Bogden & Bilken, 2007). It is through flexibility of the researcher, research design, questions, data collection procedures, and analysis that a deeper understanding of an issue, exploration of concepts, definitions, and of lived-experiences is attained (Bogden & Bilken 2007). For the study, it was unknown how researchers viewed the use of theory in SAP programs in AI/AN communities, and how researchers defined, operationalized, measured, and/or evaluated theoretical constructs. Through the qualitative design that was used, the research question was adequately explored.
Assessing trustworthiness. To show the credibility of the study, extensive research was completed on AI/AN culture and SAP programs. It was not within the scope of the study to engage in face-to-face prolonged engagement with potential participants. However, trust-building was established based on prior networking conducted by the researcher and continued credibility assurance on behalf of the researcher’s mentors.

Furthermore, the qualitative lens of social constructivism requires triangulation of data to ensure that the true representation of the participants is emerging and findings are credible (Golafshani, 2003). Denzin (1978) identified four modes of triangulation: sources, methods, investigators, and theories. For this study, N=22 interviews and N=47 articles were analyzed (sources); use of process notes, interviews, and N=6 brief member-check interviews (methods); a second reader/coder assisted in data analysis of interviews (investigators), and a two-tiered theoretical framework was used. Although Lincoln & Guba (1985) disagree with using multiple theories as a triangulation method, the intent of the study aimed to assess both individual perspectives as viewed through phenomenology and collectivist perspectives viewed through social constructivism.

Additionally, ongoing member checks took place throughout the current study. As part of the interviewing process, periodic probes were used to ensure that interviewees were being interpreted correctly. After completion of interviews, summaries of findings were sent to participants. Each participant was given the opportunity to provide written feedback or additional comments if clarification was necessary. Furthermore upon completion of analysis, six brief follow-up member check phone interviews were conducted as additional level of member checks. The intent was to gain additional feedback on the main findings of the study and to ensure validity of findings.
Transferability (i.e., the description of context) of the proposed study can be seen in the in-depth literature reviews and background research conducted with potential participants. Background research included systematic collection of published articles from participant authors. Background information is included as to the qualifications of participants (de-identified). In summation, the trustworthiness of the proposed research study was evaluated from multiple angles throughout the duration of the study.
Chapter Four: Results

The primary purpose of the current study was to assess how researchers view the role of theory in SAP in AI/AN communities. The study used an exploratory qualitative design in which in-depth interviews were conducted with researchers and a content analysis of peer-reviewed publications was completed. Results from the in-depth interviews were analyzed first using the lens of phenomenology and then the lens of constructivism (please see analysis procedures for greater detail). All in-depth interview results presented here are based on findings from the constructivism analysis. Analysis conducted during the content analysis of peer-reviewed publications helped to frame the findings from the phenomenological analysis of the in-depth interviews and are thus presented under content analysis results. In addition to exploring how researchers view theory in SAP in AI/AN communities, the following questions were also of interest: What does SAP look like in practice? What are the components of guiding theories that are key for success in AI/AN communities? How do differing theoretical perspectives influence SAP in AI/AN communities? The chapter is divided into related findings addressing each of these questions. Results are presented by research questions and corresponding emergent themes from the constructivism analysis. All interviewees were provided with an identification number to maintain confidentiality of respondents.

Sample Description for Interviews

Researcher interviews made up the sample for this portion of the study. A total of 22 individuals participated in the in-depth phone interviews. Fifty-four percent (n=12) of the participants were male and 45% (n=10) were female. A total of 68% of the sample (n=15)
identified as Native, with 32% (n=7) as Non-Native (inclusive of White or Other). Participants averaged 26 ½ years working with AI/AN communities, with 41 years as the highest number and five as the lowest number of years; the majority, 91% (n=20), identified their current job role to be in academia. The educational backgrounds of participants fell into the following general disciplines: 46% psychology (n=10), 23% sociology (n=5), 18% public health (n=4), 9% social work (n=2), and 5% education (n=1). As part of the inclusion criteria, participants’ current research areas had to pertain to AI/AN communities and/or SAP.

**Interview Findings**

As these results showed, the role of theory in SAP in AI/AN communities is a complex and unexplored topic. The following section provides evidence in the form of emergent themes to address how researchers view the role of theory in SAP in AI/AN communities.

**What is the role of theory in SAP in AI/AN communities?** How theory is viewed, that is, the role that it plays in SAP can be best derived from the themes described by researchers: 1) the general importance of theory, 2) how theory is viewed to be used in the field of SAP, 3) views of theory within AI/AN communities, and 4) how integration of theory into practice in SAP in AI/AN communities takes place.

**General importance of theory.** Each participant was asked to describe their overall views on the importance of theory. Responses varied from ‘essential’ to more of ‘situational dependence’. All participants agreed that theory was important yet the perceptions on the importance of when and how theory is used and defined varied: “that’s [theory-driven] the kind of research that needs to be done; but only when it is community-driven and community-based can it truly be effective” (#3); and “theory is like your operating system and then you develop from there and see how it does or does not work” (#4).
Most often participants described the need for theory to be used from the beginning of study or at the very least, in the initial stages of program development: “theory helps us develop questions, new directions, and helps to communicate to others what is working or not” (#9);

Our work should be grounded in theory from the beginning; I mean, before we write the grant proposals. We shouldn’t have a shotgun approach of “oh I have a great idea” and launch out there without tying it to past work (#2).

Yet, some respondents stated that more often theory use occurs as an afterthought. As one participant noted:

I do think that a lot of times when people get funding to do prevention programs or when the rubber hits the road and you need to start working on a project, people forget about theory. And you get stuck in, dare I say, sloppy processes and reasons for throwing variables into your outcome measures (#1);

There needs to be more emphasis around asking “are we working with the right set of theories, are we driving enough of our work by theory?” I mean if you go to a public health conference you are going to hear a lot more about doing the intervention, what did we change? What did we get people to do differently? And you don’t hear a lot of people saying “oh this is all couched in theoretical foundations”…in fact, you never hear that! (#21).

**Theory use in SAP.** The role of theory in prevention of substance abuse was described as having undergone ‘massive change’ in its short time, reflecting changing views on theoretical constructs that have driven funding and programming. When asked to describe his views on theory use in SAP one interviewee provided a ten minute historical narrative on the changes in the field of SAP over the last 30 years. Another provided a listing of the main theories driving
SAP funding and programming over the last 20 years, ending with the following statement that mirrored many other participant sentiments:

Now the field tries to focus on multi-level approaches, theories that address multiple etiologies for use, multiple techniques for prevention, and uses theories that aren’t focused simply on individual or interpersonal or social levels (#18).

There was also a perception that the field of SAP is theory-driven, but the field may be more reactive to human behavior as opposed to taking the time to test the theories behind perceived behaviors in SAP:

I think there’s a lot of unevenness in it. I think in terms of you know, prevention science itself I think is pretty attune to theory. I think there’s a lot happening now that is now on the ground in practice that is not very theoretically driven. It seems like a good idea so let’s try this and I think that comes a lot from people’s frustration and urgency and feeling the need to do something quickly and it seems like a good idea so do it. But that really stepping back and thinking through and should it work and why should it work and how does that relate to what we know about you know, behavior and resistance skills and risk avoidance and all that (#14).

Theory in AI/AN communities. When participants were asked about theory use in AI/AN communities, most researchers (n=16) described some theory being used in AI/AN communities, but disagreed on what that looked like:

Theory is based on what I know of the culture and what I was taught growing up. Others would have different experiences but at some point all of those individual experiences come together to form a platform that multiple people can operate from that maybe isn’t complete, doesn’t completely mirror what they have known but it also doesn’t contradict
what they have known. So there is an area where people come together, where things overlap, where the individual experience overlaps with the group and those are the kinds of theories that culture come from (#6);

As a scientist I know it’s important to base the work that you do on existing theories however there’s not a lot of that theory that applies to Native people, especially when you take into consideration that there are 565 federally recognized tribes and all of them are different. And one theory will not fit all. I’ve seen so many tribes doing these things within their communities that would never be considered theory-driven or evidence based practice, but they’re very valid and work for their area (#12).

Yet, a few researchers (n=6) reported that there are no real differences between AI/AN and other communities regarding theory use. These participants perceived theory use to be irrelevant, regardless of the specific needs of a community:

Theories for SAP should be broad when addressing basic prevention, but as soon as you move into interventions we need to be more specific in the types of theories we apply (#5);

If you’re doing your job, you take a theory or a group of theories and you go spend time with the community that you are trying to understand and then officially work on a problem (#8).

Integration of theory in SAP in AI/AN communities. When participants were asked about how well integration of theory, in SAP, was occurring in AI/AN communities there were two clear views; those reporting a great job (n=3):
We’re doing as good as can be expected; there are just too many factors that have to be acknowledged before we can say this {integration of theory in SAP in AI/AN communities} isn’t happening as it should (#8).

The other prominent perspective was voiced by participants who viewed the integration of theory in SAP in AI/AN communities as less than adequate (n=19), “I don’t think they’ve done a good job on looking at Indigenous approaches, or ways of understanding substance abuse and alcohol use in native communities” (#22);

I am concerned with how well some of our theories fit in distinct cultural settings. A lot of the theories that are used in public health come out of psychology, which is a little concerning because the theory we should be using should be something more akin to what comes out of sociology. Rather than individual, more collective (#10);

One of the weaknesses of Western science is that it’s a secularization of Judea-Christian worldview: one answer, one God, one methodology, one particular approach. And you know that’s not how it is in Indian country. Our strengths is a plurality of worldview, a plurality of methodology, so I wouldn’t want to try to understand a Native approach to social science by couching it within a Western Judea-Christian worldview of calling something “theory”(#7);

Let me go on record by saying that, as a person who tries to monitor the Indigenous theory that is coming out as so-called folk theory, which is a derogatory term and does not fly but that’s what many might call it, that is some of the most powerful and useful theory you can find anywhere. And that’s because it’s not coming out of a laboratory, or a big research institution, but instead comes out from where we will be intervening and so
that’s what we should be using... because it really is derived from people’s lived experiences (#12).

During the interview, two main views of theory use, in SAP in AI/AN communities, emerged. One view (n=14) adhered to the concept of one size does not fit all regarding theory use, “please don’t just hang a feather on a program or put a medicine wheel on your logo and think “oh well this will work”” (#20);

You can’t treat tribes as homogenous. So there’s gonna be tribal differences. Kinda talking to some of the other researches, some of the things that we maybe did in state X wouldn’t work in state Y or state Z. So I think it comes down to, like a lot of research actually whether it’s with any kind of group, it’s trying to match the method to the population and what you’re trying to study (#14);

For Native communities, when you look to the reason why you’re drinking it’s because you’re battling the boundary of the spirit of alcohol and your relationship with it; which is very different than a disease model of alcoholism. We need to look at how we were originally taught to relate to medicine in the world, not how everyone else views it (#1).

Whereas, the opposing view perceived any need for tailoring, any theory for SAP in AI/AN communities, as arbitrary and unnecessary (n=6): “people are people; human behavior is pretty consistent across the board” (#2).

However many participants referenced their background discipline and training as influential in how they view theory:

I think maybe one of the reasons it was easier for me to recognize how to approach this was ‘cause I was trained as a social worker, or social work researcher, where we put premium on cultural differences and respecting and honoring different populations;
whereas other disciplines are much more conceptually focused instead of population focused (#11);

I actually think its disciplines that do that but maybe it’s the theory people learn in their disciplines that’s the driving factor there. So I think a psychologist’s approach to prevention is very different than what I do as a sociologist and I don’t know if that’s the culmination of my training with multiple theories and multiple ideas or if it’s one particular theory as opposed to theirs (#1).

Furthermore, those participants who identified as Native were less likely to have a favorable view on the role of theory in SAP in AI/AN communities:

If you’re imposing theories that are trying to address---or if you’re working on theories that are trying to address policy issues from the American point of view---across the board you’re not really understanding Indigenous peoples within those frameworks…most theories are generated from---within the point of view of say, the US---they are built on American solutions and American culture (#13);

There is a general community resistance to research and academic theories. I think a lot of the communities I have worked with…there is this idea of culture as prevention, getting people reengaged with their language and their culture, it works. I see it more as a belief, I guess and not a theory that guides our work. I think it’s more comfortable for Native communities and that it also allows sometimes quicker implementation---which is always appealing—and just in general, most Native communities do not want to talk about research or theory (#22);

I really believe this, and that is that it’s so arrogant for non-Indian researchers to somehow think that they bring theory to American Indian cultures because American
Indians have theories that are hundreds, if not thousands of years old, and they have developmental theories about how kids grow up and theories about parenting and theories about health and spirituality and that research would need to be sensitive to those and to take those into account, not the least of which would be the kind of balanced theory you would get (#15).

**What does SAP look like in practice?** To explore what SAP looked like in practice in AI/AN communities a combination of the phenomenological analysis of interviews and content analysis of articles was used. In the interviews, researchers were asked to describe their past and current SAP projects. The majority of participants had had extensive experience with SAP programming and almost all (n=19) began a description of their projects with a brief history of the field of SAP as related to theory or implementation:

I think is kind of had a, I don’t’ know, I want to say 25-30 year battle between environmental perspectives and individually based perspectives. So I think that we’ve seen the pendulum kind of swing back and forth and so when I got into the field in the early ‘80s we were still kind of talking about substance use problems were an individual level problem and what we were really trying to do was prevent people from becoming addicted or alcoholics. Then it kind of shifted, morphed, into okay we’re gonna focus on binge drinking and kind of problem based things and harm reduction and so then there was a bunch of environmental strategies that came out and people kind of got away from the individual. I think we’re starting to move over to an era of more holistic ecological models where people are really kind of trying to figure out for a specific problem what are the key factors at a number of different levels. To look at in terms of what influences a drug or alcohol problem and what could be done to prevent it (#17).
When assessing what SAP looks like in practice in AI/AN communities, neither the questions asked during the researcher interviews nor the information elicited from the content analysis were sufficient to adequately address this research question. During interviews participants were asked their perceptions of SAP implementation occurring in AI/AN communities. Participant responses varied from ‘who knows what takes place’ (n=7) to ‘fidelity is occurring’ (n=3), with variations in between. Yet, most participants were limited in their ability to describe implementation as most (n=17) participants interviewed were not necessarily a part of, or present during, the implementation process: “it seems we have a few things {programs} out there that we can say “ok, well this seems to have succeeded or not succeeded” but firsthand, I’m not really sure” (#19);

Well, I think there is a disconnect first between what Indian communities are doing and what they think they’re really doing. There’s a lot occurring but I’m not sure that is ever translated back into journals or disseminated elsewhere…but that might actually be behind the success of a lot of the programs (#6);

Whatever it is we’re doing is obviously not working, none of us have come up with a huge magic wand that’s been a fix for the social problems we see—which I think are the root causes, well actually I think colonization and historical trauma are the root causes and they lead to all of these contemporary factors that we’re dealing with (#7).

In fact, most participants (n=18) would be describing their perceptions of program implementation and then would switch topics and begin discussing program evaluation. Over half of all participants (n=17) described the state of evaluation for SAP in AI/AN communities as paltry, “ah, evaluation efforts in Native communities, well it’s spotty at best” (#17);
I think helping our Native communities continue to grow their educational experiences so they can create the tools, and look at the tools that currently exist in how to develop efficacy of that study, for their programs. Really good program evaluation doesn’t happen, instead its haphazard program evaluation (#2);

Even though there are some things that we know work, not all of those things have been adequately evaluated to publish about and to spread the word and I think that if we had more people to provide services to the tribes, or if we provided some kind of TA or capacity building assistance then some of those models could be written up (#21);

Obviously there are gaps, our effect sizes for even the best programs (in substance abuse prevention in general) are still not massive. We’re still only having effects on some of the people some of the time! (#2).

Upon further discussion, three themes related to evaluation emerged: design, measures, and what constitutes evidence. Participants described gaps in applicability of traditional evaluation designs, measures used and how ‘evidence’ is defined for AI/AN communities.

Discussion on challenges associated with evaluation designs centered on randomized control trials (RCTs) and how RCTs may not be the best design for AI/AN communities. “Mainstream designs aren’t appropriate basically because they don’t work. I don’t think there’s anything wrong with the methods themselves but they’re not flexible” (#11);

Randomized control trials are difficult to implement in these communities. And we don’t have that scientific standard to go by. The people who are running these homegrown programs “know that they work” but they don’t have the ability or the inclination to test whether or not they work (#5);
Ah, randomized control trials, the gold standard. I’m not sure they are the best way forward, I think you can come up with ways to do trials that would be more culturally appropriate, but I think we have to start thinking in other ways in terms of getting information, in terms of what is effective for Native communities (#2);
You know control groups are a joke up there (reservation) because these are small communities and you distribute a game (as part of his intervention) and everybody plays the game and they share it and they, own it. And we have a blanket ceremony, the elders come up and he talks of family very briefly and they go forward and then they have a blanket and the parents drape the blanket around the kid’s shoulders and they have a little piece of the blanket and they say you know “this is for you to out and you’re going to take this blanket out into your life, but I’ve got a little piece of it and I’m going to hold that piece always because you’ll always be a part of who we are”. And when we do that with the kids, there is not a dry eye in the house. So I ask you, how do you do a control group in this situation? (#8);
Randomized control trial in interventions in just one approach and it’s a rigorous approach and it has a lot of strengths to it in terms of really not providing alternative explanations for finding any effects. But in a small tribal community, a randomized control trial isn’t going to work for a variety of reasons so if you march in and say, “This is what we have to because this is the method, this western science or this is the method to get the answer, it’s the gold standard.” You could conduct a study but you would end up with data that’s garbage because it ignored local protocols and local values around you know, providing services to everyone. Right? For example, that’s something we get a lot. And so thinking through how to come up with design that honors the values of rigor that
are gone in randomized control trial but does it in a way that’s also responsive to the community context I think is really critical so maybe it means you do a weight listed control or maybe you provide some alternative intervention and that helps you know, keeping in mind what alternative explanations you want to be able to rule out and think being thoughtful in creating the design that’s appropriate for the particular context or community (#14).

Further discussion focused on a need for new and culturally relevant evaluation designs for AI/AN communities. “If you hang onto the design too tightly, you end up with data you cannot trust” (#4);

I see many Native communities developing their own unique evaluation methods to prove what works and to prove who it works for, and how much it costs to implement…and I think that cultural specificity is the direction that everything is taking (#6);

Evaluation is the next thing our field needs to look at. It will have to be adapted because how things are evaluated can be different. The normative group that you are working with; their evaluation can be successful or not successful from what you are getting in your measures. It’s not only the measures but it’s also going to be the overall process evaluation and how satisfied the community is, and whether or not they think what you have done is useful or will continue to be useful (#12).

Regarding measures, participants discussed a need for measurement development, testing and validation in AI/AN communities; particularly, many participants (n=8) discussed how current measures do not adequately assess the Native experience and therefore are incapable of capturing what is actually occurring in AI/AN communities:
Most of the measures that we use have never really been validated with Native people, so there’s a whole kind of measurement complement that technically should come first before we can presume that results from these measurements are transparently obvious, in terms of their interpretation (#4);

Metaphors, original instructions, thinking about building relationally, growing positive health models, creating positive narratives…these are hard to measure! From a scientific point of view it’s like “well, how will you measure that? How will you maintain fidelity to the intervention?” and then from a traditional view it’s kind of nervous going into something to find out what works and doesn’t work. So we don’t want to disrespect or muck around with that element of it. Instead it’s like saying “does this cultural connectedness or individual connectedness play a role in people’s recovery?” (#10);

I don’t think we measure it right, I don’t think we talk about it correctly. I don’t have the answers but I think that a big piece of the puzzle is missing; and I don’t know if it’s necessarily theory but theory could have a key role in guiding how we view mental health (#4);

It’s a challenge, I think we need to develop much better ways to measure the role of culture in people’s lives and we need to really measure those really culturally relevant outcomes. You know, those things that matter, that’s what we should be measuring. Maybe it’s not self-efficacy so much as the communal efficacy. And we need to think about a community level kind of measure of how we, well if we’re really trying to change the community in terms of substance abuse, those community norms and practices, then we should be measuring changes at that community level (#1).
Evidence was the final piece of evaluation that appeared to be an important topic to almost all of the participants who discussed evaluation (n=16). Specifically, how evidence is defined appeared to be of the utmost importance:

We get stuck in one paradigm and we don’t think about the possibility, even though we are very well educated and very smart people, that maybe we don’t have a lock on how to define evidence because we have only been given one yardstick to measure it. So why not think about the possibility of using other yardsticks to measure evidence that may not conform to our gold standard, but that may be just as good as measuring effectiveness and what we know and what we have been taught? (#20);

The challenge is that often in SAP in order to get funded you have to show that there is evidence that this works. So obviously there’s a lot of talk about evidence-based interventions but the kind of evidence that is relevant in many Native American communities is just a very different kind of evidence and evidence that isn’t really recognized (#18);

You know right now a lot of state and federal funding agencies will not fund substance abuse prevention or treatment unless it’s a so-called evidence-based. And a lot of the evidence-based packages out there that some people buy or the approaches have really weak sociological and psychological theory that has very limited efficacy in the population that it works with (#22).

**What are components of guiding theories that are key for success in AI/AN communities?** To address this research question, it is best described through themes of: 1) those theories that seem to work in AI/AN communities, 2) components of those theories that seem to
be key for AI/AN communities, and 3) what constructs might be missing in those guiding theories, and 4) AI/AN contextual factors that might impact success.

**Theories that seem to work in AI/AN communities.** Participants described several theories that seemed to resonate with AI/AN communities. The key components as to why those theories appeared to work were also explored during interviews. Theories have been separated into Western and Indigenous theories and only named theories were included (Table 1.).

<table>
<thead>
<tr>
<th>Western Theories</th>
<th>Key Components</th>
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<tbody>
<tr>
<td>USI (Universal, Selected &amp; Indicated) Models of Prevention (SAMHSA)</td>
<td>Able to fit multiple groups, contexts and issues</td>
</tr>
<tr>
<td>Stress Coping Model</td>
<td>Addresses individual and groups</td>
</tr>
<tr>
<td>Cluster Theory</td>
<td>Group-based</td>
</tr>
<tr>
<td>Social Cognitive Theory</td>
<td>Multiple levels addressed</td>
</tr>
<tr>
<td>Social Disorganization/Organization</td>
<td>Group and population based levels</td>
</tr>
<tr>
<td>Social Learning Theory</td>
<td>Learning from others; addresses influences from outside of the individual</td>
</tr>
<tr>
<td>Theory of Planned Behavior</td>
<td>Links between behavior and beliefs</td>
</tr>
<tr>
<td>Triadic Theory</td>
<td>Multi-Level and flexible</td>
</tr>
<tr>
<td>Matrix Model</td>
<td>Multi-Level</td>
</tr>
<tr>
<td>Primary Socialization Theory</td>
<td>Learning from others</td>
</tr>
<tr>
<td>Community Readiness Model</td>
<td>Based on need of those using model, flexible</td>
</tr>
<tr>
<td>Socio-Ecological Model</td>
<td>Multi-level</td>
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<table>
<thead>
<tr>
<th>Indigenous Theories</th>
<th>Key Components</th>
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</thead>
<tbody>
<tr>
<td>Indigenous Motivational Interviewing</td>
<td>Adapted for AI/AN beliefs and cultural nuances</td>
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<tr>
<td></td>
<td>Guidance on how to conduct but allows for flexibility</td>
</tr>
<tr>
<td>Indigenous Stress Coping Model</td>
<td>Adapted for AI/AN; includes addressing historical issues</td>
</tr>
<tr>
<td>Native Model (Talking Circle)</td>
<td>Based on AI/AN cultural practice</td>
</tr>
<tr>
<td>Interconnectedness Ideology</td>
<td>Multi-level and interconnections</td>
</tr>
<tr>
<td>Wellbriety Movement</td>
<td>Adapted to address cultural beliefs and practices</td>
</tr>
</tbody>
</table>

**Key components of theories.** Why those theories (identified in Table 1) were thought to be “key”, or what parts of the theories were important were then explored. The common
elements included adaptations for AI/AN communities, addressing cultural beliefs and practices, and assessing different levels and their factors for behavior and prevention (i.e., individual and community factors). Interestingly upon further questioning, a number of participants described certain methods as theories that appear to work well with AI/AN communities. For example, community-based participatory research (CBPR) was mentioned numerous times (n=11), as were qualitative research methods (focus groups, in-depth interviewing) (n=10) and needs assessments (n=4). For example, “And one of the thing that might be interesting and this just pops into my head is I think a lot of us do CBPR and CBPR is meant to be like the method and I think we almost use it as theory” (#2).

Upon further questioning it appeared participants were in fact describing the process, inherent in CBPR and other community-based methods, as key constructs or components (key constructs are underlined in the quotes below):

It’s definitely the community based participatory kind of approach where the people from the community are involved in the whole process from the beginning to the end that seems to be the most important (#15);

Qualitative methods allow us to get to know communities and their needs. It’s almost like a needs assessment with trust building, and community-driven ideas (#1);

You just have to do it {programming} in a way that is culturally recognizable and acceptable to those people who you’re doing it to. I know researchers who have spent months before they initiated a research and prevention program in the far north, months getting the questionnaire translated to the Native language and they go up to start to implement it and guess what? No one reads or writes it! And they were surprised. I mean you need to know you community folks. I mean academics are way too distant from the
local community and the local communities are distant from the academics. There’s just not a lot of meeting of the minds (#19).

**Missing constructs.** When researchers were asked what constructs seemed to be lacking or not fully expressed in current theories used in SAP in AI/AN communities, a wide range of responses were provided. Information included in Table 2 provides missing cultural elements or components and some definitions as described by participants. Where noted, constructs or concepts were identified by multiple participants.

<table>
<thead>
<tr>
<th>Construct or Concept</th>
<th># of Participants Identified</th>
<th>Definition/Representative Quotes</th>
</tr>
</thead>
</table>
| Balance              | n=8                         | “The need to bring the body, mind, soul to center”  
<p>|                      |                             | “Most Western theories have no sense of balance”  |
| Respect              | n=2                         | “Acknowledging those who came before you and those who will come after; mostly appreciating the contributions them.”  |
| Holistic             | n=8                         | “All factors relying on one another. You cannot piecemeal aspects of a human and expect any sort of lasting change.”  |
| Modesty              | n=1                         | “Think of, the opposite of ego-focused”  |
| Spirituality         | n=2                         | “Most theories completely lack any discussion of a higher element”  |
| Harmony              | n=3                         | “From our perspective a lot of this stuff occurs because of an imbalance…it has to be restored to fix things”  |
| Collective Efficacy  | n=3                         | “One way people in Indigenous communities normally think about it, is that as a collective group, it means that people are concerned about their grandchildren and everyone connected to them. Only together will they make any sustainable changes”  |
| Collective Trauma    | n=4                         | “I think substance abuse is a very personal issue and related to intergenerational trauma and historical patterns. So I think it’s just more laden with history meanings and some other issues might be for Native communities”  |</p>
<table>
<thead>
<tr>
<th>Topic</th>
<th>n</th>
<th>Quote</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family/Parenting Skills</td>
<td>6</td>
<td>“Any intervention that does not focus on the family is not going to work. We have laid the burden on the schools when we need parenting models instead”</td>
</tr>
<tr>
<td>Poverty</td>
<td>15</td>
<td>“I mean here we are trying to change hundreds of years of history; the poor socioeconomic issues, absolutely crappy education situation”</td>
</tr>
<tr>
<td>Historical trauma</td>
<td>3</td>
<td>“I don't know that historical trauma as a conceptual model is actually changing the face of substance use yet because it's still relatively new. But I think it has the promise and it's creating – it's sparking a lot of research ideas and it's resonating with Native people – a lot of them.”</td>
</tr>
<tr>
<td>Racism</td>
<td>5</td>
<td>“So much of the history is just based on stereotypes, based on the version of the victor, it’s not really looking at what’s the cultural issues. It’s just like those old pictures that we have of Native people the photographers dressed them up. They might have their stuff on backwards, they might have on the totally wrong dress for their tribe. They just wanted a picture. But those kinds of things become iconic and they become the representation that other people know and believe and that’s where their theories spring from is erroneous information.”</td>
</tr>
<tr>
<td>Social perspectives on wellbeing</td>
<td>6</td>
<td>“I think that that understanding, to take the blame off of Native people or any community of color, to take the blame off of their cultural systems or individual characteristics and put it back on the social determinants, where it belongs. That a lack of social determinants approach to theories of health problems and health disparities is what’s causing people to rely on individual victim blaming approach”</td>
</tr>
<tr>
<td>Original Instructions</td>
<td>3</td>
<td>“we need to go back and see what our ancestors taught us; we’re too removed from the original instructions”</td>
</tr>
<tr>
<td>AI/AN identity</td>
<td>2</td>
<td>“what characterizes Indigenous folks…it’s not about ethnicity. It’s not about culture. It’s not about race. It’s about this contention of trying to maintain a community, an identity, a social and political order that existed prior to the formation of the states, in which the states are not easy to incorporate these types of terms that the Indigenous people will accept in general.”</td>
</tr>
<tr>
<td>Historical components</td>
<td>2</td>
<td>“I mean you don’t have to come up with a huge magic wand to fix dome these social problems. Instead the root causes of colonization and historical trauma all lead to the contemporary problems we are facing”</td>
</tr>
<tr>
<td>Table 2. (Continued)</td>
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<tr>
<td>----------------------------------------------------------</td>
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<tr>
<td><strong>Colonization</strong></td>
<td>n=11</td>
<td>“we are working against 400 years of colonization so it may take 400 years of working against that to make things better, to change those things like substance abuse”</td>
</tr>
<tr>
<td><strong>Social cohesion</strong></td>
<td>n=10</td>
<td>“Communities are influenced by the community, and there doesn’t seem to be much theory that includes that perspective”</td>
</tr>
<tr>
<td><strong>Social capital</strong></td>
<td>n=9</td>
<td>“Look in; SAP, it needs to become more community-based and obviously some things work at the individual level but at the community-level it needs to be known that individuals are part of the larger community. And the community needs to be used as a tool for that healing process. It’s hard for those outside to understand that”</td>
</tr>
<tr>
<td><strong>Stress Adaptation</strong></td>
<td>n=6</td>
<td>“If you just go to a community and say “you think this is a result of historical trauma?” they won’t really know what you’re talking about. You have to step it to them, “this happened a long time ago, and because of this, because of annihilation, because of revitalization, all these things happened and all are stressful”, but it’s like you get so used to the stress that you live on one foot twisted around and that’s how you think the world is and you don’t really understand the adaptation that you’ve had to make. And it’s taken a toll on the body. If you’re born into that and you don’t know any better, and the history doesn’t tell you that, then that you have to rely on the stories, the truths that come through if you look for it. To be able to say “oh gosh because of that we know this and because of this then this has happened.””</td>
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<tr>
<td><strong>Belonging</strong></td>
<td>n=15</td>
<td>“To renew and remind everybody that the common thread and the idea of belonging and the strengths there is to that. Those are all around social cohesion. And just leveraging that whole social cohesion, we are part of this group and we all need to play together. There really is the danger of making this into an individual problem.”</td>
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<tr>
<td><strong>Indian ritual</strong></td>
<td>n=7</td>
<td>“you know, if we had intact cultural norms about cultural values around drinking, family-wise and parenting, we wouldn’t have the level of social problems that we have now”</td>
</tr>
<tr>
<td><strong>Shared experiences</strong></td>
<td>n=2</td>
<td>“I think GONA has the right approach because it kind of gets everybody together to think about where we have been, what do we share.”</td>
</tr>
</tbody>
</table>
AI/AN contextual factors. AI/AN contextual factors were explored to determine those factors that seemed to influence how well theories operated in AI/AN communities. During the participant interviews the following contextual factors were repeatedly brought up: colonization (n=11), historical trauma (n=6), enculturation (n=8), endemic poverty (n=17), low SES (n=10), and learned helplessness/hopelessness (n=4). Participants viewed these contextual factors as highly important, and if left unaddressed, would undermine how well theory would “fit” with a community. Upon further discussion, participants would describe how avoiding these factors in program development and implementation render the theoretical basis of a program void; that if appropriate theories are being used then they would address these contextual factors. “So we do have Indigenous knowledge traditions but I think we have parts of them that are fragile in a lot of ways and have been oppressed through colonization” (#7);

Looking at relational, the opportunities for relational restoration because of the effects of colonization on communities, how can people begin to, through whatever intervention they are doing, incorporate some relational restoration? (#18);

How can you walk away from these deeply dysfunctional systems of poverty with very little means of escape? How could you expect anything different for substance abuse disorders and why would you think treatment would help? We need to have some structural change that can support people moving into better lives that are simultaneously more meaningful as well as more livable (#13).

How do differing theoretical perspectives influence SAP? To understand how differing theoretical perspectives may influence SAP in AI/AN communities themes that arose focused on: 1) defining what are Western and Indigenous perspectives, 2) exploring the funding
vs. practice disconnect, and 3) determining what an ideal theoretical framework look like for SAP in AI/AN communities.

**Western and Indigenous perspectives.** When researchers were asked to describe what a Western perspective meant to them, the terms *old white men* (n=18), *randomized control trials* (n=14) and *one size fits all* (n=18) overwhelmingly were used. Upon further discussion many researchers (n=10) described a Western perspective as old-fashioned or traditional:

That’s typically expert driven, more top down authoritarian kind of approach to research. You come in as the expert and you say “Here’s how we’re doing the study” and then you do the study and so without really taking into account what the population that you’re studying wants or needs or cares about (#6);

I don’t know if I can say there’s one western perspective, but certainly it’s kind of coming in with the idea that we need to accumulate enough evidence to show that this is valid, reliable, like whatever we’re doing. And it’s definitely kind of a differing approach than what exists in some communities (#14).

A portion of participants (n=9), most of whom were Native (n=5), equated a Western perspective with research:

Western means all of us who are formally educated and credentialed as researchers, which has lead us into knowing and doing work in that way. The second thing that Western research describes is the usual opposition that people who care about Indigenous issues want to describe to contrast, you know, formal, educated PhD inquiries (#15);

Ah, a Western perspective is one that is based on theories created by a lot of old white men that don’t apply to a lot of our communities. We are told that these are the correct models to use, rather than allowing our communities to build what they need (#4).
However, descriptions of an Indigenous perspective were much more abstract, fluid, and informal compared to those of a Western perspective. “An indigenous perspective is more of local theory, more informal” (#1);

The Indigenous perspective privileges local knowledge as opposed to more broadly-accepted scientific or ‘scientistic’ knowledge, and in particular things like wisdom of elders and interventions or prevention activities that were – originated in the community – either ring true or hold more value in the Indigenous perspectives than in the Western model that you referred to previously (#2);

So we do have Indigenous knowledge traditions but I think have parts of them that are fragile in a lot of ways and have been oppressed through colonization, being on the margins even in our own communities in some places, and mostly what we mean by Indigenous knowledge is Western knowledge with Indian ethics (#14);

But for Native people in general, I still believe that whatever is specific to the culture, even though it may not have a theory-base or a theory-based foundation, or maybe even a strong evaluation program, I believe that culture has to be at the heart of everything for it to be effective, even minimally (#22).

When asked what an Indigenous perspective in regards to substance abuse might look like, one participant stated:

Well, the elders say you can talk to the kid and you’ll know, right? Like if you spend time with them, you talk with them, you see how they’re living their life. You see like how they’re treating other people. You see how they’re treating their natural environment around them. You see how they’re treating themselves, how they’re like living their life in balance. You know if you’re gonna see it, like you don’t have to really
measure it with a scale or with specific questions. But you’ve gotta spend time with them and you’ll know (#13).

There was an even split between participants on whether or not there was a dichotomy between Western and Indigenous perspectives:

But I think that Indigenous peoples have been involved in the Western world for so long that the Western world has been heavily influenced by Indigenous influences, practices, and understandings – material goods and so on – in a way that Western isn’t really Western anymore, it’s evolved. Indigenous people today are quite Western. Most of us can speak English, most of us can speak in terms of things, the conventions of the common society, most of us are accessing mainstream media every day. So I would say the main thing here is that this binary, Indigenous versus Western ideology, really doesn’t exist….but it’s really more about the thing itself and how much meaning makes relative to being able to alter those experiences that plays out. That’s to say, the more mediating by meaning these things are, the more likely they are to be able to be influenced by things like so-called Indigenous knowledge or Indigenous perspectives or Indigenous methodologies; because those are meaningful to Indigenous people in a variety of reasons and in a host of ways (#15);

You know and I don’t think that they’re necessarily mutually exclusive at all times, but I think that it’s really hard for researchers trained in the dominant paradigm, the dominant Western paradigm, to come in and understand that they’re coming in with that paradigm and that there are other paradigms. I think it’s easier for people with Indigenous paradigms because they’re non-dominant in the United States. They you know have already have some understanding of Western paradigms, but they can see both; they to be
able to see both in a different way than often people only who grew up and were trained in a dominant paradigm (#4).

Researchers who did view Western and Indigenous perspectives as dichotomous disagreed on whether or not the two could be integrated in practice. “You cannot find an absolute truth in some rational, linear Western thinking…that only comes from intuitive thinking and spiritual insight that definitely does not come from Western thinking” (#14);

I think the goal is that they can complement each other. They can inform each other.

Both can be helpful to people. But in some ways trying to integrate them you risk sort of diluting the value of one. And so I think in some ways I think we can have them both in same interventions or the same approaches but not like I think one thing is looking carefully about what does it mean to bring together these different approaches? (#1).

But some participants cautioned adaptation and integration of perspectives:

I think substance abuse prevention that is really kind of – you know there’s a different take sort of outside evidence-based models and it does sort of superficial adaptations, like let’s make these more appropriate to the tribal community. We’ll change the graphics. We’ll change a few names; like we’ll do things like that. But then it’s still really a Western perspective, and then I think there’s some approaches that really come out more grounded or centered in a particular Native culture. And then starting from that perspective, they will look pretty different. And then there’s some that are sort of the middle where there’s some sort of a Western frame around them, such as we’ll have this many sessions and we’ll structure them this way, but they still have a lot of pertinent cultural content from the beginning, not added at the end (#18);
One of the difficulties we have is these “approved programs” and people go to a lot of trouble developing these programs and then when we get out into the field we have people adapt these programs and I think that it’s absolutely necessary for people to adapt them according to their own unique circumstances, BUT then often times we lose, the loss of fidelity, and the punch. And then the program is unable to carry out what it was intended to do. So these programs can get watered down (#13).

**Disconnect between funding and practice.** As one of the most mentioned topics, funding was cited by all participants as one of the main challenges for SAP in AI/AN communities. To maintain confidentiality, all identifying funding agency names have been omitted and replaced with ‘funding agency A’ or ‘funding agency B’. The majority of participants (n=20) discussed challenges associated with having to tailor the needs of AI/AN communities to fit funding opportunities:

We have to say that it {SAP} has been working well (laughs), simply because we have to use the evidence-based programs and pretty much any funding out there wants you to use evidence-based programs (#6);

Right now a lot of state and federal funding agencies will not fund substance abuse prevention or treatment unless it’s a so-called evidence-based. And a lot of the evidence-based packages out there that some people buy or the approaches have really weak sociological and psychological theory that has very limited efficacy in the population that it works with and I think that there’s a HUGE, there’s a huge backlash against evidence-based approaches in Indian country. I see that from the leaders in the field, again and again (#4).
There was wide agreement that funding agencies should instead be the ones to adapt to the specific needs of AI/AN communities. “You know there is a lot of opposition and way more ambivalence toward funding AI driven projects even when they ask for them” (#2);

I know that funding agency A is just not going to fund that stuff unless you can tailor it in a very specific way. A lot of tribes are knocking on doors, and they aren’t getting responses because they’re not couching their research in a way that funding agency A will fund. And you know their stuff is probably pretty good if you put it in the right language but they just don’t want to have anything to do with a mainstream white man approach (#6);

I think that the federal funding agencies need to step back and listen to the communities. I think that they need to hold more consultations and really listen to some of the urban areas as well as the reservation areas because most of all I think that they hear the tribal side, they do hear it because those consultations are set up to be tribal consultations. We know that almost 70% of our Native people live in urban areas and so those groups are kind of left out of the conversation. And since a lot of the treatment facilities are in urban areas that is an issue. So the funders need to pay attention, be aware of that, and they need to understand that just because they may mandate an evidence-based practice there aren’t that many in Native country. So they need to fund some of those, they need to let those people who have new models have extra money to evaluate them, maybe even provide them with some technical assistance through good culturally competent evaluators that they might offer training or send out evaluators to some of the more promising programs. And to help them to document the successes that they are having (#1).
In fact, most participants (n=19) mentioned a disconnect between how community-based work actually functions in AI/AN communities and how funding thinks it works, which then influences how grants are written:

Well, one thing that happens when you are submitting a proposal, and this has happened to us many times, they want to know, the review committees want to know that you have a good working relationship with the communities that you’re researching. That takes time (laughs). And there’s nothing scientific about it, it just takes good hard commitment and the ability to meet and to get some common goal between the researchers and community. And *funding agency A* won’t fund that kind of work. I’m sorry, they’re getting more and more in line with that but I hate to go into an Indian community and say “would you participate in this research *if* it gets funded. ‘Cause the answer is often “no” (laughs). And then here’s another broken promise (#10);

We need to give researchers the time and fund upfront community work and help organizations. Get the time for buy-in from communities. Have some greater expectations that whatever is discussed will be followed through. I mean that just has to happen.

*Funding agency B* used to do a lot of that, community-development, but now that kind of funding just isn’t available. *Funding agency A* just doesn’t get it. There are some advocates there that will buy into the community-based participatory research but the main committees are not in tune with that. They don’t see some hard science coming within five years they’re not going to fund it (#4);

There're a lot of grassroots programs out there that American Indians are developing and using and cultural immersion programs, and they've never been tested and probably never will be tested, but they've been tested in community ways and so that the people are
satisfied with them and feel like they actually see some different in their kids. So in comes the funding agencies and say, "We're not gonna fund that, what we're gonna fund is Program X, un-adapted Program X," and so then they get in and do Program X and teach American Indian parents to be white individualist parents instead of community driven non-competitive more sharing kinds of kids, which they don't want to have (#20);

But going to a funder before working with the community is probably hard, right, 'cause you know you don’t ideally know the kind of work you’ll be doing and you need to build some of those relationships with the community before you go in and try to get funding together so that you have some idea of what you wanna do and how you’re gonna work together on it. So but that being said, yeah I think that to some degree you do, you have to learn how to somewhat frame it in ways that funders understand. And yeah you can’t really go in and say well we’re not really gonna collect any data to see if it works. We just gonna kind of hang out with people and see what we think you know, you can’t tell the funders that! (#11).

Participants often related seeking funding to a game and having to play a role. Participants described the challenges associated with seeking funding for work in AI/AN communities, but would simultaneously acknowledge that in academia they had to “continue to play that role”, that their “own success relies on obtaining funding agency A funding”. Other participants noted they have “opted out” of chasing large national funding agency opportunities and instead have turned to foundation grants that are not as requirement heavy. “Are you familiar with the story of coyote? Okay, good. You have to take on all aspects of coyote to play the funding game. Coyote is trickster. You have to wear the human suit and do the dance” (#17);
Even funding agencies, like foundations and stuff, they have their own agendas, and it’s the same thing with the federal government and the people who design their programs. They don’t have a tremendous amount of knowledge or understanding of the dynamics of Indigenous communities, and so virtually, the theory behind them already is not – even the legislative funding purposes of a lot of those programs are simply not compatible and not designed to be compatible (#13);

I think you have to play within certain parameters and I think a lot of tribes, they don’t want to play within a set of rules. They get caught on the side of tribal sovereignty and think, we’re going to take your money and not do anything you tell us to do. We’re not going to follow the reporting requirements because we’re a tribe and we don’t have to. If you’re going to take that attitude, you’re just going to piss somebody off and then there’s not going to be a lot of progress made. For whatever it’s worth. I get hired by these tribes and do my best to try to make things work for them so that when you’re gone, this agency wants to give them more money. And a lot of times that means spinning, taking what they’re doing and spinning it and translating it into more scientific terms and more data – what you do for them (#22).

Furthermore, participants also cited unintended consequences of forcing AI/AN communities to seek funding that requires use of SAP programs that do not fit the unique cultural needs of AI/AN. “I really do think that people are viewing the “requirement” for EBI’s as another round of forced enculturation” (#12).

A lack of sustainability of funding and broader funding mechanisms for AI/AN communities were both cited as areas for needed improvement:
That with more theory, evidence-based programs, they don’t last after the funding is gone. I think on a practical level, when the money dries up – that’s where they got the money for prevention specialists or outreach coordinators and things like that. So I think when there’s not an external mandate and external resources, a lot of tribes can sustain prevention. Even though I would say that most of them absolutely need prevention is where the resources need to be driven. I think they get caught up in responding to crises. Living on the crisis side and not being more proactive when it comes to prevention. So I think a lot of it is practical and it’s driven by funding – you can get funding for treatment by actually seeing people. You don’t get money for prevention the same way, for the most part. Some states have prevention block grants that trickle down to tribes in different ways that I would say probably most don’t (#7); I mean it’s funding though, let’s face it, it sort of drives everything. If we had broader funding mechanisms where people could work together across disciplines, more multidisciplinary work I think it might give us that chance to learn from each other better. But I don’t think people are going to be motivated to do that {integrate Indigenous theories} unless the funding mechanisms support that work (#3); Lots of projects are brought into communities because you have the funding and stuff, and you can go do stuff to people, and lots of people will participate. But as soon as you leave and the money runs out for that grant, it’s like back to zero. But if you want something that is built in to the community and becomes part of their institutional order, part of their world view, it has – you have to work within their context and build it up and try to provide some sustainable way in which it can be continued and sort of be a
permanent healing, rather than sort of a Band-Aid and then back to being out of the game (#15);

It really comes down to funding. And if we could find a way to fund the community development work that needs to be done, I think we’d be a long ways down the road. I have seen, time after time after time, these five year shots of money without any upfront work being done. They just don’t work and people are tired of them. We have to be able to fund people to go spend three or four years upfront, before any programs are implemented (#13).

**Ideal theoretical framework.** Participants were asked to describe an ideal theoretical framework that could be used to guide SAP in AI/AN communities. The core themes were reminiscent of the components described as key for AI/AN, including a need for adaptability, addressing cultural beliefs and practices, and assessing different levels and their factors for behavior and prevention (i.e., individual and community factors) while also addressing those contextual factors (colonization, historical trauma, enculturation, endemic poverty, low SES, and learned helplessness/hopelessness) that appear to influence how theory operates within AI/AN communities. Most participants (n=18) cited a need for multi-level, innovative, and re-tooled theoretical frameworks to be developed for AI/AN communities. “Again I think it’s that holistic model, looking at all of the elements that contribute to substance use” (#7);

It would have to have the three elements I talked about earlier, bringing in the foundation of original instructions, what were the original instructions around relating to medicine/healing/returning to wellness, dealing with the idea of disease our equilibrium, the values surrounding that. The second piece would be looking at relational, the opportunities for relational restoration because of the effects of colonization on
communities, how can people begin to, through whatever intervention they are doing, incorporate some relational restoration. With alcohol or drugs, or whatever the issue is as well as with the people in the communities, that restoration as well. And then the narrative, with substance abuse how can we talk differently about it? So we’re not an alcoholic in relation to alcohol, it’s not a disease, we have a relationship to whatever that is that we are trying to deal with. So to me, those are the foundational elements and then from there they may be another element of working with the community. And those tools from that community, their cultural perspective to be brought in and looked at. What are their stories? That goes way back, and out of those stories you can figure out ways of-, well what are the protocols of living healthily? What did your ancestors pass down to you? (#22);

Well it {a new theoretical framework} takes into consideration historical and present day stressors and also points to Native cultural involvement and positive enculturation, protective factors for health outcomes (#7);

So it starts out, it goes geographical location, enculturation, community context, family context, school context, peer context, and then it shows historical cultural losses driving a big wedge through all of those and how that these losses and these colonization has had an impact on each one of these basic cultural socialization contexts. So that's how we've come to think about it and that's kind of the state of our thinking right now (#2).

The remainder of participants (n=4) voiced concern about developing new theories or “over-adapting what already works”:

Standard public health model with targeted treatment/interventions simply adapted to the local culture. So go into a community, analyze it, collect data to analyze it further, about
what the alcohol problem really is, do an environment kind of perspective, looking at all
the variables at play and then designing a program that can implement various theories
and treatment modalities that may have been useful elsewhere in Indian country or in any
given society (#5).

Almost all participants (n=19) stressed the importance for the role of the community in
regards to any future theoretical framework developed for use in AI/AN communities:

Well a theory would have to be flexible enough to, general enough to, not a practice
time, more of a grand theory if you want to go that big. You have to look at the worldview, it
has to take that into account, it has to allow for the individual expression of that worldview
within a community and it has to be able to handle the complexity and the flow of the theory
through the different aspects of a community. Whether it be the elders, the historians, the youth,
they are all going to have a different perspective and well, yeah it has to be like a 3D model.
(laughing). It can’t be a flat on paper model, it has to have dimension to it to allow for that kind
of accommodation (#4);

I mean I guess the first thing that comes to mind is that it just was really embed the
individual with the community and incorporate how the different community experiences
are vetted to substance abuse and then at the same time, linking those across the
developmental structure so as a child that’s growing and acknowledging their own but
while you’ve vetting between that community. How does it work and what are the
interactions look like? How do learn to define themselves and how definition in turn is
related to the choices they make about substance use and how they’re embedded within
their extended family and community related to that and how do they figure how to
navigate those competing demands on time (#14).
**Summary of themes table.** The purpose of the following table is to facilitate clarity of the research questions and associated themes and sub-themes that arose from this study. Each research question was divided into the collective main themes that arose from the social constructivism analysis of the participant interviews. Furthermore, each main theme was then separated into sub-themes that provided additional information to address the research questions.

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Main Themes</th>
<th>Sub-Themes</th>
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</table>
| 1) What is the role of theory in SAP in AI/AN communities? | General importance of theory | Essential  
- Situational dependence  
- Theory is important but depends on how theory is used and defined |
| | How theory is viewed to be used in the field of SAP | Has undergone change  
- May not be based on tested theory, just on what people have come to think works |
| | Views of theory within AI/AN communities | Theory use occurring  
- Theory use not occurring |
| | How integration of theory into practice in SAP in AI/AN communities takes place | Integration occurring well  
- Integration not occurring well  
- One size of theory does not fit everyone  
- One size of theory does fit everyone |
| | - Educational background and training influential in how view integration of theory  
- Native participants less likely to have favorable view of theory use in SAP AI/AN communities |
| 2) What does SAP look like in practice? | Extensive practice/descriptions of projects | Details of theory use over time  
- Theory use in implementation  
- More often no implementation experience |
| | Descriptions of evaluation practices | Fidelity occurring  
- No evaluation being done  
- Lackluster evaluation conducted |
| | Evaluation in AI/AN communities | Need for evaluation designs for AI/AN SAP  
- Need for evaluation measures and defining evidence for AI/AN SAP  
- Gaps in traditional evaluation methods  
- RCTs incompatible  
- Measurement testing, validation |
Table 3 (Continued)

<table>
<thead>
<tr>
<th>3) Components of guiding theories key for success in AI/AN communities?</th>
<th>Theories that seem to work in AI/AN communities,</th>
<th>Please see Table 1 for details</th>
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</thead>
<tbody>
<tr>
<td>Components of those theories that seem to be key for AI/AN communities</td>
<td>Please see Table 1 for details</td>
<td></td>
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<tr>
<td>What constructs might be missing in those guiding theories</td>
<td>Please see Table 2 for details</td>
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<tr>
<td>AI/AN contextual factors that might impact success.</td>
<td>-Colonization -Historical trauma -Enculturation -Endemic poverty -Low SES -Learned helplessness</td>
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<tr>
<td>4) How do differing theoretical perspectives influence SAP in AI/AN communities?</td>
<td>What are Western and Indigenous perspectives</td>
<td>-Western perspective: old white men, randomized control trials, one size fits all, old-fashioned or traditional.</td>
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<tr>
<td></td>
<td></td>
<td>-Indigenous perspective: abstract, fluid, and informal, local</td>
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<td></td>
<td></td>
<td>-Disagreement on if the two perspectives are dichotomous</td>
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<td></td>
<td></td>
<td>-Disagreement on whether or not two perspectives can (or should) be integrated</td>
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<tr>
<td>Exploring the funding vs. practice disconnect</td>
<td>-Challenges associated with funding SAP in AI/AN communities</td>
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<td></td>
<td>-Need for tailoring of funding to needs of community</td>
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<tr>
<td></td>
<td>-Community-based work vs. what funding agencies think it to be</td>
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<td></td>
<td>-Game playing in funding</td>
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<td></td>
<td>-Sustainability and lack of funding mechanisms</td>
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<tr>
<td>Determining what an ideal theoretical framework look like for SAP in AI/AN communities</td>
<td>-A need for adaptability</td>
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<td></td>
<td>-Addressing cultural beliefs and practices</td>
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<td></td>
<td>-Able to assess different levels and their factors for behavior and prevention (i.e., individual and community factors) while also addressing those contextual factors (colonization, historical trauma, enculturation, endemic poverty, low SES, and learned helplessness/hopelessness)</td>
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<td></td>
<td>-A need for multi-level, innovative, and re-tooled theoretical frameworks to be developed for AI/AN communities.</td>
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<td></td>
<td>-Community to be center in theory development for AI/AN communities</td>
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Content Analysis Results

The purpose of the content analysis was to provide additional context for the phenomenology analysis of the participant interviews (please see analysis procedures for greater detail). Aggregate findings from the information extracted from the selected articles are presented below.

Sample description content analysis. Peer-reviewed publications made up the sample of this study. The content analysis included a total of 47 peer-reviewed publications. Article inclusion criteria included: 1) published within the last five years (2009-2014); 2) peer-reviewed; 3) retrieved from Psych Info or Academic Search Primer; and 4) the article had to be related to substance abuse prevention and/or AI/AN communities. There was overlap between participants and publications, with many participants (n=12) repeatedly publishing with others who had been interviewed; overlapped articles were only included once. Four participants were excluded as they had only published books, book chapters or non-peer reviewed articles within the selected timeframe. Therefore articles from 18 out of 22 participants were included. On average, three articles per eligible participant comprised the sample. Results were aggregated and no identifying information was extracted in order to maintain confidentiality.

Content analysis findings.

Theory. As a first step in addressing the main research question on how researchers view the role of theory in SAP in AI/AN communities, all 47 articles were assessed for: 1) theory use (i.e., was theory used in the description of the article?) ; 2) if theory was used, was it explicit? (i.e., was there adequate description provided on how theory was used?) ; 3) was it a named theory, and if so, what was the theory name? ; and 4) were theoretical constructs identified? The following Table 4 provides aggregate results.
Although authors often (51%, n=24) stated that the program, work or study was theoretically based, only 30% (n=14) of the articles included a named theory or theoretical approach. These named theories reflected those mentioned in the interviews as theories that appear to work well in AI/AN communities and included the stress coping model, social learning theory, theory of planned behavior, socio-ecological model, Indigenous motivational interviewing, Indigenous stress coping model, and the Native model. Of those articles that stated theory was used, 33% (8 out of the 24 articles stating theory use), explicitly stated that their programs were driven by Indigenous approaches, although these approaches were not elaborated. The discrepancy between articles stating that theory was used (51%, n=24) and articles that included a named theory (30%, n=14) might be attributed to non-named theories and approaches being used. Furthermore, as corroborated by the interviews, a total of 33% (7 out of 21) articles described CBPR as an explicit theory. All of those articles described components of the process of CBPR as the constructs of the ‘theory’. It should be noted that of the 24 articles that used theory, six of the same participants published 18 of those articles constituting 75% of the sample.

Regarding theoretical constructs, 15 articles (32%) identified how theory was operationalized by describing the measured theoretical constructs: six articles (40%) described theory as related to survey questions used in data collection, five (33%) were related to how the program was designed, and four (27%) were in relation to evaluation processes. Specific information on how components of theories were used was not typically elaborated.
**What does SAP look like in practice?** To explore what SAP looked like in practice in AI/AN communities, a combination of the phenomenological analysis of interviews and content analysis of articles was used. During interviews, participants were asked about their perceptions of SAP in practice in AI/AN communities; further, the content analysis allowed extraction of information on how researchers described what they did in practice, if and how they adapted programs, and whether or not theory usage was described in their articles. However, when assessing what SAP looks like in practice in AI/AN communities, neither the questions asked during the researcher interviews nor the information elicited from the content analysis were sufficient to adequately address this research question. Therefore the content analysis conducted (N=47 articles) derived information on present (if any) descriptions of SAP practice in AI/AN communities. Related to implementation and evaluation the following components were abstracted from the articles: 1) Was implementation discussed, yes or no?; 2) Was evaluation discussed, yes or no?; 3) Were cultural accommodations made, yes or no?; and 4) Were there recommendations related to implementation, evaluation or cultural adaptations? The subsequent Table 5 provides aggregated results on these findings.

<table>
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<th>Table 5 Content Analysis Implementation, Evaluation, Adaptation Findings</th>
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<tr>
<td>Implementation Discussed</td>
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<td>10% (n=5)</td>
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The majority of articles (90%, n=42) did not discuss implementation of SAP programs in AI/AN communities. Slightly more (91.5%, n=43) of the articles did not discuss evaluation-- formative, process or outcome. Yet, over half of the programs 57% (n=27) stated cultural adaptations that were made, but only 19% (5 out of 27) described those adaptations. The descriptions of the adaptations were typically general statements such as “cultural adaptations were made” or “there was a need for cultural adaptation”. There were only a couple of articles (n=2) that detailed the
adaptations as that appeared to be the purpose of those articles. Both of these articles described taking an existing SAP program and tailoring the content for use in AI/AN communities. The tailoring and adaptations included changing pictures and references within the curriculum to be more relevant to AI/AN communities, and using more “Indigenous” stories to reflect the experiences of participants in AI/AN communities.

**Brief Member Check Interviews.**

After completion of data analysis, a total of six brief member check interviews were conducted. The intent of the brief member check interviews was to validate the main findings from the study (Cho & Trent, 2006; Lincoln & Guba, 1985). The six interviewees participated in 20-30 minute phone calls to discuss findings of the current study. During the brief interview follow-up phone calls main findings were verbally shared with interviewees. The main findings discussed during the brief member check interviews included the: 1) apparent influence of training and educational background on a researcher’s view of theory, its importance and use in SAP in AI/AN communities; 2) seemingly common transference of theories from one discipline to another without adequate theory-testing; 3) identified missing theoretical constructs referencing unresolved historical experiences of AI/AN communities; 4) disconnect between funding agency requirements and what is needed for SAP practice in AI/AN communities; and 5) perceived next steps for SAP in AI/AN communities. After each main finding interviewees were asked the following questions: 1) Does this finding surprise you, why or why not?, 2) What are your thoughts on this finding?, and 3) Based on this finding where do we, as a field, go from here?

Overwhelmingly all six of the interviewees agreed with, and validated, the main findings from the in-depth participant interviews. Perceptions on the main findings were consistent
among the six interviewees insomuch as they were not surprised by the influence of a researcher’s academic training, nor that missing theoretical constructs reflected historical atrocities that are not adequately being addressed or dealt with in many AI/AN communities. Furthermore, there was agreement and concern about the clear, and very apparent, disconnect between perceptions and requirements of funding agencies compared with the needs of AI/AN communities. All of the interviewees mentioned the importance, and need for, addressing the larger contextual factors in AI/AN communities. These contextual factors included historical events, historical trauma, poverty, and the collective trauma of many AI/AN communities. The member checks corroborated the need for acknowledging, addressing, and/or incorporating those contextual factors to facilitate the effectiveness of SAP programs in AI/AN communities.
Chapter Five: Discussion

This chapter provides a discussion of the results in relation to the proposed research questions and reviewed literature. The chapter includes the following sections: a brief research summary, discussion of main findings, recommendations and next steps, limitation and strengths of the study, implications for public health, proposed dissemination of findings, and conclusion.

Research Summary

The results from this study provided insight into how researchers perceive theory in SAP in AI/AN communities and highlighted researchers’ perspectives on the role of theory in SAP in AI/AN communities. As the main findings were based on specific research questions, these included: How researchers view theory in SAP in AI/AN communities? What does SAP look like in practice? What are the components of guiding theories that are key for success in AI/AN communities? How do differing theoretical perspectives influence SAP in AI/AN communities? Overall findings focused on researcher views on theory use and integration, types of theories that are key for success in AI/AN communities, and differing theoretical perspectives and their potential influence on SAP in AI/AN communities. Furthermore, participants’ perceptions about outside factors that influence how theory may be used, integrated, and assessed in SAP in AI/AN communities were explored.

Main Findings

As the current study utilized an inductive approach of assessing how researchers perceived the role of theory in SAP in AI/AN communities, two additional theoretical frameworks will be used to situate the overall findings from this study: meta-theory and systems
theory. By couching the results in these theoretical contexts, the intent is to illustrate the complexity inherent in theory use in SAP in AI/AN communities. Furthermore, using these theories to frame the discussion will provide a venue for further exploration into the potential implications and recommendations for next steps derived from this study.

**Meta-Theory.** As described by Neufeld (1994), meta-theory is an inquiry into theoretical frameworks or lenses that have provided guidance for research within a field of study, as well as, an investigation into those theories that have thus arisen from research within a specific field. It is often referred to as “theory of a theory” (Neufeld, 1994). Meta-theory is used to systematically understand and evaluate theory from qualitative research, although it has been used in quantitative studies as well, and is considered the equivalent of a meta-analysis done in quantitative studies (Paterson, Thorne, Canam, & Jillings, 2001). Ritzer (1992) described three main foci of meta-theorizing. These include “a) a means to attain a deeper understanding of what a theory entails, b) a technique to develop a new theory to explain the phenomenon under study, and c) a process for developing overarching theory that includes two or more theories” (Paterson, Thorne, Canam, & Jillings, 2001, p.92). Typically meta-theorizing is conducted by “analyzing primary research reports, noting the theoretical perspective used and emergent theory, and deciding which additional theories may have had significant influence on the primary research…with the most significant step being a careful and thoughtful reading to identify the various ways in which theory may have influenced the research” (Paterson, Thorne, Canam, & Jillings, 2001, p.95).

The current study conducted a meta-theory analysis insomuch as the primary research question for this study—how do researchers perceive the role of theory in SAP in AI/AN communities?—allowed an opportunity for a deeper understanding of how the theory is
perceived SAP in AI/AN communities, what current theories and their components appeared to be key for success in AI/AN communities, what constructs might be missing from current theories, and potential AI/AN contextual factors that might impact success of SAP in AI/AN communities. Each of these perspectives was explored, in one or more, of the in-depth interviews, content analysis, and follow-up member check interviews. Furthermore, the end products of a meta-theory analysis focus on tangible, applied recommendations that are used to facilitate a better understanding of the phenomenon at hand, clarify the theoretical underpinnings of a field of research, and if necessary, identify and create new theory (Paterson, Thorne, Canam, & Jillings, 2001), just as recommendations from this study.

Based on the in-depth interviews, there was variation in how participants’ perceived the role of theory in SAP in AI/AN communities. It was divided between those who viewed theory use as good and working well, compared with those who viewed theory use in SAP in AI/AN communities as insufficient and inadequate and it seemed that these views were influenced by a participants’ academic training. For example, researchers who were trained in their doctoral programs in psychology (46%, n=10) had a tendency to describe individual, psychological theories as being the most effective, rigorous and useful for addressing SAP in AI/AN communities, regardless of whether or not these theories truly were effective and useful. These participants were much more likely to state that theory integration in SAP in AI/AN communities was actively occurring and were less likely to see a need for tailoring of theories for AI/AN communities. More often than not, participants trained in psychology were likely to see existing theories as sufficient to addressing needs of AI/AN communities. However, the majority of those participants trained in psychology who viewed theory use and effectiveness in this way were overwhelmingly non-Native.
On the other hand, participants trained in sociology (23%, n=5), tended to describe more
global or grand theories and were less inclined to promote individual-based theories often found
in psychology. Sociologists were more likely to describe broader social theories as those that had
a lead role in being effective in SAP in AI/AN communities. Furthermore, they were more likely
to state that integration of theory in SAP in AI/AN communities was not working as well as it
could be. Additionally, participants from sociology were more likely to call for the need for
tailoring of theories to AI/AN communities. Further when combining those trained in other
academic disciplines (18% public health (n=4), 9% social work (n=2), and 5% education (n=1))
there was a tendency to describe multi-level theories and shy away from endorsing only
individual or environmental theories, which may be reflective of their academic disciplines.
Furthermore, those trained in the other academic disciplines were also less likely to endorse the
current state of integration of theory in SAP in AI/AN communities and were more likely to
recommend tailoring of theories for use in AI/AN communities.

It also appeared that a participants’ training had influence on the type of, and need for,
the recommendation for an ideal AI/AN theoretical framework. Many participants with a
psychology background were much more likely to cite the need for individual-level components,
and stressed the importance of using existing theories for AI/AN communities. Whereas
participants from sociology and other disciplines were more likely to describe a need for multi-
level or grand theories that could be tailored for use in specific AI/AN communities.

It is not surprising that an individuals’ academic training would continue to have such a
strong influence on their perceptions of theory use long after graduation. Pedagogy, the science
and art of education, varies from discipline to discipline. For example, the tenants of psychology
differ from those inherent within sociology, and how each is taught is very different compared to
the other. For example, the theories used to describe and frame how sociologists view human behavior tend to focus on those “interactions, institutional context and dynamics, structure, identity, and culture” (Halasz & Kaufman, 2008, pg. 302) that occur at a societal level, compared with the more individualistic cognitive, developmental, behavioral, humanist, personality, and learning theories taught in psychology (About Education, 2014). However, there is some overlap between the two disciplines, for example social psychology focuses on addressing the social behavior of individuals in groups; yet, none of the participants of this study identified their training as social psychology. It is important to shed light on the influence that an individual’s academic training can have on their future work. The average length of time in the field (post-graduation) was 26 ½ years (with 41 years as the highest number and five as the lowest number of years). Still, participants seemed to be loyal to the pedagogy from which they had been trained, regardless of how many years it had been; and during the brief member check interviews, all six participants corroborated this sentiment. The theoretical worldview of a participants’ discipline shapes how individuals are trained, and appears to continue to influence how they view their world long after graduation.

Furthermore, there is often an issue of theory borrowing that occurs between disciplines. Theory borrowing arises when theories are taken from the disciplines in which they were developed and then implemented within a different discipline (Murray & Evers, 1989). Often theories can be transferrable from one discipline to another; however there are appropriate steps to be taken to ensure that the theoretical underpinnings from which the theory was developed fit within the new discipline (Whetten, Felin, & King, 2009). Murray & Evers (1989) argue that it is imperative that the overall borrowing process is “explicit, purposive and conscious and can only be accomplished if researchers understand the important philosophical issues at stake”
These issues stem from assessing the “harmony or consonance of theory superstructure, type of science, and social context” (Murray & Evers, 1989, n.p.) with the borrowing discipline. When there are inconsistencies between the elements of theoretical underpinnings, assumptions, and contextual factors between disciplines, substantial problems can arise (Murray & Evers, 1989; Whetten, Felin & King, 2009). When theory borrowing is done, theory testing is advocated as a method to assess theoretical fit, appropriateness, and effectiveness (Villarruel, Bishop, Simpson, Jemmott, & Fawcett, 2001). Yet, proper theory testing before use is very rarely conducted (Murray & Evers, 1989; Whetten, Felin & King, 2009).

Issues surrounding theory borrowing were brought up during the interviews, as well as during the brief member checks. The most frequent comments centered on the perception that theory borrowing occurs often in SAP in AI/AN communities, and yet, theory testing is very uncommon. There was a belief that many of the common theories that permeate SAP -- risk/protective factor, developmental, and social influence theories (Botvin, 1983; Gerstein & Green, 1993; Hawkins et al., 1992; Simons-Morton, McLeoy & Wendel, 2012; Sussman, 2013) -- were developed in other disciplines (such as psychology and sociology) and may have not been properly vetted for use in AI/AN communities. The potential issues associated with borrowing theories from other disciplines without properly assessing if the theoretical assumptions transfer appropriately was only mentioned by three participants who cited that it was something that should be done but that “none of us have enough time for that”. Moreover, during the brief member checks, participants elaborated on their concerns about what happens when researchers are trained in one theoretical orientation, such as psychology with a focus on individual theories and then use a sociological theory that operates under different assumptions to guide their work. How does that influence how the theory is operationalized, implemented, measured, or
articulated in a journal article? These discussions ended with more questions than answers. Furthermore, the content analysis found that based on researcher discipline those who did use or mention theory in their journal articles were more likely to have been trained in their doctoral programs in psychology or sociology, but were not always using theories from their specified disciplines nor were measures to assess theoretical fit, due to theory borrowing, discussed in the articles.

Perhaps adding to the complexity of theory borrowing between disciplines is the implementation of any of these Western theories in AI/AN communities. All participants in this study were academically trained in the United States where, regardless of discipline, theoretical underpinnings stem from Western ideologies. Even participants who identified as Native tended to describe a loyalty to the theoretical worldviews that they had received during their doctoral training, although there was much more variability in how closely they adhered to those worldviews compared with non-Native participants. Even though most participants described inherent differences between Western and Indigenous perspectives (or worldviews), almost all participants still reported that if they used theory it was more often a theory developed from a Western perspective. Most participants described an Indigenous perspective to be one that operates quite differently from a Western perspective (i.e., the elements of theoretical underpinnings, assumptions, and contextual factors differed). Yet, more often than not, theories being used in SAP in AI/AN communities stem from a Western perspective (Champagne, 2007; Duran, 2006; Vandello & Cohen, 1999; Walsh & Baldwin, 2012; Whitbeck et al., 2012).

Participants were asked about theories and their key components that appear to work well for SAP in AI/AN communities (see Table 1.). Western theories typically were multi-level, group-based and took the context of AI/AN communities into account. Whereas the Indigenous
theories that appeared to work well in AI/AN communities were often adapted specifically for AI/AN communities, they addressed cultural beliefs and practices, and/or assessed different levels and their factors for behavior and prevention (i.e., individual and community factors). During the member check interviews, participants were asked their thoughts on why these named Western theories appeared to work well in SAP in AI/AN communities. Overwhelmingly participants stated that these theories, and the assumptions behind these theories, work within the context of an AI/AN community; that is, there is theoretical fit. However, it is unknown if theory testing has been conducted on any of these Western theories to ascertain if this is true. Gill (2002) and Hart (2010) have explored the issue that many researchers are reticent to acknowledge comprehensive concepts such as worldviews, or to explore what an Indigenous perspective might look like theoretically. So it would be surprising if theory testing of Western theories in AI/AN communities has been widely conducted.

After participants were asked about the theories that appear to work well in SAP in AI/AN communities, exploration into what theoretical constructs might be viewed as missing but important, essential, or necessary for theories to truly fit and operate appropriately within AI/AN communities was conducted (see Table 2.). The types of constructs described fell into two categories, the first are those that described aspects specific to AI/AN culture or referred to by some researchers as the “Native experience”. The second category referred more to broader issues that are often ignored or left unaddressed in AI/AN communities.

Beginning with the first category, missing constructs that described aspects specific to AI/AN culture, the majority of these constructs are components of non-Western nonlinear theories (Goodson, 2010). These identified constructs are reflective of a collectivist perspective (Norton-Smith, 2010), and stem from an idea of relatedness, or sense of belonging often
attributed to AI/AN communities and Indigenous perspectives (Hill, 2006). Participants would often mention the same constructs, specifically: balance (n=8), holistic (n=8), social cohesion (n=10), social capital (n=9) and belonging (n=15). Each of these constructs reflects core elements of AI/AN communities and Indigenous perspectives (Hill, 2006; Magoullick, n.d.; Norton-Smith, 2010). Therefore it is not surprising that these identified constructs would be viewed as important, essential, or necessary for theories to truly fit and operate appropriately within AI/AN communities.

Regarding the second category, missing constructs that refer to broader issues, the majority of these referenced the historical experiences and current context of AI/AN communities. When participants began to describe these historical and contextual missing constructs, they fell into the following categories: family/parenting skills (n=6), poverty (n=15), colonization (n=11), racism (n=5) and Indian ritual (n=7). Participants often described historical events that have left deep scars in AI/AN communities. The constructs that participants thought should be included in theories were thereby representative of those historical events as each of these constructs is associated with specific historical events. For example, participants would describe the need for theories to include or address parenting skills or stress the importance of family. At a glance, this construct is often included in the application of a theory in SAP programing. There are a number of SAP programs that include a family and/or parenting skill component. However, what participants stressed is that those programs are designed for non-Native individuals and do not include any reference to why there is a need for parenting skills to be taught or included in programming. Again, the contextual piece necessary for proper theoretical fit is not included. Many Native participants described the lasting traumas associated with the Indian boarding schools that had systematically removed children and “decimated the
Native family systems” (Gover, 2007, pp.189). The removal of Native children resulted in an inability to parent in a culturally-appropriate way for many AI/AN, and that ripple effect is still felt today (Grande, 2004). There is a perception that even if parenting skills are being taught in programs in AI/AN communities, participants would often note that “it’s just more assimilation, we’re teaching Natives how to parent like whites”; as most of the theories guiding programs that include parenting skills are based in a Western perspectives. A return to including Native parenting skills as a component or construct of theories to be used with AI/AN communities was often a suggestion for decreasing substance use.

The broader issues of poverty and racism can be traced back to AI/AN historical events, as each of these are considered to be consequences of colonization, assimilation, forced relocation, and enculturation (Johnson, 2007). Participants cited a need for these to be included, at the very least, in the guiding perspectives of those who are developing and implementing programs (not just SAP programs) in AI/AN communities. It appeared that the reasons as to why and how these historical events occurred are an important component of the experience of AI/AN communities and need to be included in how that experience is addressed theoretically. During the member checks, participants noted that in their experiences working in AI/AN communities simply acknowledging that these events have occurred was often an essential part of why a program was thought to work. Participants overwhelmingly discussed how imperative it is for these broader issues of poverty and racism to be included in how theories operate, either as constructs or as the underlying assumptions that guide implementation. These broader issues were deemed important, essential and necessary for inclusion in theories.

As the final step in attempting to gain a deeper understanding of how researchers view the role of theory in SAP in AI/AN communities, participants were asked about contextual
factors that might impact the success of SAP in AI/AN communities. Again, participants discussed the need for theories to acknowledge and address contextual factors within AI/AN communities that may influence how theories operate. These contextual factors included historical events, historical trauma, poverty, and the collective trauma of AI/AN communities. It was perceived that if these contextual factors were not acknowledged, addressed, and/or incorporated, the corresponding programs would not be as effective or operate as intended. However, it was beyond the scope of the current study to assess how these constructs should be operationalized. During the member check interviews, all six participants did acknowledge that operationalization of these AI/AN constructs would require another study entirely.

Thus, to facilitate a better understanding of what the true role of theory is in SAP in AI/AN communities, the use of meta-theory is an appropriate lens. Meta-theory, as applied in relation to these results, indicates that there is a continued need to systematically assess theories that are being used in AI/AN communities and assess the perspectives (or worldviews) that drive those theories. To facilitate how theory operates in AI/AN communities and to clarify and justify the theoretical underpinnings of SAP in AI/AN communities, meta-theory allows for an avenue for exploration to address these issues. Further, to provide additional context for the results, beyond exploration about how theory is perceived in SAP in AI/AN communities, investigation into the systems in which theory in SAP in AI/AN communities operate must also be explored.

**Systems theory.** Results from the current study provided rich information on how theory use in SAP in AI/AN communities is perceived by researchers. Although it was not the focus of the study, findings also resulted in ardent discussions about issues that may influence how theory is used, integrated, and assessed in SAP in AI/AN communities. To frame the discussion of these findings, systems theory will be used.
Systems theory is the process of viewing how one system interacts with others. Defining what a system is can be a complicated task, however typically it is defined by: “it’s elements, that is, all of the parts that make up the whole; the links between the parts, that is, the processes and interrelationships that hold the parts together in view of the whole; it’s boundary, that is, the limit that determines what is inside and outside of a system” (Williams & Hummelbrunner, 2009, pg. 17). Furthermore, a system is “an interconnected set of elements that is coherently organized in a way that achieves something” (Meadows, 2008, p. 11). Others argue that instead of focusing on defining what constitutes a system, system thinking is a more appropriate manner to make sense of the world around us (Meadows, 2008). Systems thinking is a process by which the goal is to understand how systems, or situations, influence one another; one must understand the parts to understand the whole (von Bertalanffy, 1969). There are a number of approaches for using systems theory to gain a better understanding of a phenomenon. The approach of assessing systems relationships will be the focus of the following section.

Systems relationships focus on the context in which a system takes place, that is, the relationships, connections, exchanges among the parts, the whole and the environment (Meadows, 2008). These relationships can be formal or informal, organizational or social. And systems function is usually assessed through information flow, data knowledge, funding flow, communication channels, and collaborative partnerships expressed within system relationships (Meadows, 2008).

One of the most often stated topics was the systems relationship of funding versus practice; and was cited by all participants as one of the main challenges facing SAP in AI/AN communities. As all of the participants currently work, or have worked, in academia each has relied on grant funding to support the majority of their SAP research efforts in AI/AN...
communities. Participants overwhelmingly stated that the needs of AI/AN communities are not always reflected in funding opportunities. Furthermore, participants would describe how academics are not the only ones applying for grant funding, and that often AI/AN community agencies encountered the same funding challenges. Most participants (n=20) described multiple instances where they would have to tailor the needs of AI/AN communities to fit funding opportunities. Moreover, during the member check interviews, participants agreed that often researchers and AI/AN agencies engage in wordsmithing to “sound white” in order to obtain funding. The majority of participants viewed funding agencies as “inflexible” and “out of touch with how things really work” in AI/AN communities. An external evaluation conducted by the Office of Civil Rights Evaluation (2003) determined the funding opportunities, agencies, and avenues by which Native communities acquire funding are not only unsustainable but insufficient in meeting the needs of AI/AN. The report systematically stated that although the United States federal government continues to designate funding for AI/AN programs, particularly within the Department of Health and Human Services (DHHS), there appears to be a diminished return on investment. A reported $1.1 billion is annually set aside for grants to be awarded specifically to tribes, individuals, and organizations. And yet, the same health issues that the DHHS focuses on (such as SAP), continue to permeate many AI/AN communities (Office of Civil Rights Evaluation, 2003).

Based upon participant information, it appears that the majority of funding opportunities for AI/AN communities prefer to receive a proposal that includes a randomized control trial (RCT) design, rigorous data collection methods, and robust sample sizes. Even those grant announcements that claim to be made for those who want to conduct community capacity building, CBPR, or collaborative endeavors are still met with the same evaluation methods that
are found in, say an RO1 (name omitted, personal communication, July 31, 2014). Both of these scenarios are often problematic for AI/AN communities. In fact, most participants (n=19) mentioned a disconnect between how community-based work actually functions in AI/AN communities and how funders and funding opportunities think it works; which thereby influences how grants are written.

Many of the participants described the difficulties associated with gaining access and building trust within AI/AN communities, prior to any research or programming taking place. None of the grant opportunities that participants had received, or applied for, provided specific time for, or resources to, build relationships that would be necessary to conduct sustainable research or programming with AI/AN communities. Furthermore, based on a collectivist perspective, it is culturally unacceptable to provide part of a community something and not everyone else, as is typical in a RCT design (name omitted, personal communication, July 31, 2014). Even when participants described how they would attempt to use a wait-list control design, whereby one group gets an intervention and then the other gets it after a certain period of time, this method was not always supported by for AI/AN communities. Simply put, the funding systems are structured in a way that limits how grant applicants can incorporate the culturally unique needs and approaches necessary for SAP success in AI/AN communities. In fact, over half of the participants equated acquiring funding to that of game playing. Participants described the challenges associated with seeking funding for work in AI/AN communities, but would simultaneously acknowledge that in academia they had to “continue to play that role”, that their “own success relies on obtaining funding”. Others stated that they have “opted out” of chasing large national funding agency opportunities and instead have turned their attentions to foundation grants and other funding opportunities that are not as requirement heavy. As one participant
noted, the funding system has set up a structure that has allowed, and almost encourages, game playing to take place. She noted that it is not surprising that many researchers have misled funding agencies in order to obtain funding as “these federal agencies continue to place carrots in front of deprived communities. Many of us will do everything we can to ensure that our AI/AN communities get funding, regardless of what that looks like.”

However, the member check interviewees noted that the federal funding agencies are provided with monetary allocations from what congress deems as important, and those individuals within congress are “simply mouth pieces for the American people”. As some of the respondents explained, if there is a desire to expand the current range of fundable projects, one must first educate and inform the American people on the need for culturally-specific interventions that may utilize alternative methods, measures, and evidence. Only then will congress see a need to shift the focus of what should be funded, and thus influence how (and what) federal funding agencies include in their call for proposals.

Regardless of whether or not there is a breakdown in communication channels, information flows, data knowledge, funding flows, and/or collaborative partnerships (Meadows, 2008), the perception of the system of funding programs for AI/AN communities is that it is not as effective, efficient, or sustainable as it could be. Furthermore, participants and member checks also cited the unintended consequences of forcing AI/AN communities to seek funding that requires use of SAP programs, specific methods, measures, or evidential outcomes that do not fit the unique cultural needs of AI/AN. As one participant stated “by having AI/AN communities conform to these specific, inflexible requirements for funding, it’s almost like another round of forced assimilation”.
There exist complex relationships between the systems present in AI/AN communities and the multitude of systems that are encountered by AI/AN when they try and receive services. During the interviews and member checks it became apparent that nothing is simple when it comes to working in AI/AN communities. For example, the typical AI/AN living on-reservation will have to deal with an average of six agencies if they want to attend a SAP program off-reservation or at an non-IHS designated site, even if they are geographically unable to reach the designated IHS location (J. Bartis, personal communication, July 25, 2014). There is a lack of communication between agencies on-reservation, much less between agencies on-reservation to those off-reservation. Even more complex are the situations that urban AI/AN often encounter when trying to access services, as they are often off-reservation (J. Bartis, personal communication, July 25, 2014).

Furthermore, there is a struggle to enroll AI/ANs in healthcare services under the Affordable Care Act, as historically AI/AN are distrustful and tentative when it comes to engaging with federal agencies (J. Bartis, personal communication, July 25, 2014). The result is an overwhelmed and underfunded IHS that is left to address the needs of mental health and substance abuse care of individuals who are scared to seek or access services (Dixon, 2001; Hawkins & Blume, 2000; DHHS, Indian Health Services, 2011; Johnson & Rhoades, 2000a). Even with most of the 566 federally recognized tribes offering some type of mental health and/or substance abuse services or programs (Dixon, 2001; Manson, 2001), there is still a need for additional funding as there is continued poverty of the tribal system regarding how it addresses and funds healthcare for AI/AN (J. Bartis, personal communication, July 25, 2014).

Reimbursement from Medicaid to the tribes is done through each state, not through the tribe directly; therefore the tribes are reimbursed less than the cost of the care, as the state is
reimbursed 100% but typically siphons off their cut before returning dollars to the tribes, which in some states is as much as 50% (J. Bartis, personal communication, July 25, 2014). As for whether or not this reimbursement structure is applicable to grant funded SAP programs, it depends on whether or not those programs are associated with IHS (name omitted, personal communication, July 31, 2014). If SAP programs are delivered through or at an IHS designated location, often times portions of funding are provided to IHS, thus decreasing the amount of dollars spend on actual programming provided in AI/AN communities (name omitted, personal communication, July 31, 2014). The point is, there are “multiple players, with multiple agendas, and each operates from a different rule book” when it comes to providing SAP services in AI/AN communities (name omitted, personal communication, July 20, 2014). Therefore it is not surprising that each “player views the needs of AI/AN communities, and how best to address them, differently” (name omitted, personal communication, July 20, 2014). In fact, based on the last 200 years of American politics, the state of addressing the needs of AI/AN communities greatly depends on the messenger, but current efforts are really questionable (Gover, 2007; Robbins, 1992; Wilkins, 2007).

As to how system challenges influence how theory is used, integrated, and assessed in SAP in AI/AN communities, one must step back and view how theory is regarded by individual systems. Regarding funding agencies, many require that grant applications include a theory or at the very least are theoretically-driven. However, as noted by most participants, these funders only want, and expect, Western, linear theories. A few of the participants described their experiences of applying for a grant when they used a non-Western theoretical framework for how their program would operate or how the program would be assessed. Needless to say, none of those grants were funded and reviewer remarks stated that the use of a non-tested theory was
unacceptable and the researchers were encouraged to reapply using “well-known and well-tested theories” to guide their work. Furthermore, the fact is there is often a difference in guiding perspectives-- of the Western funding agencies compared to those of the applicants who are either operating from an Indigenous perspective or trying to design a SAP program that is specific (i.e. from an Indigenous perspective) for AI/AN communities. Until funding agencies are open to funding and understanding what an Indigenous perspective is, and what it looks like operationalized, restrictions in the types of theories that are acceptable for grant applications will continue.

Additionally, based on how participants described them, funding agencies appear to have a very narrow view of what theory-based applications actually look like. Participants and member check interviewees were quick to note that most funding agencies and grant reviewers expect an unambiguous description of how something will work, why it is thought it will work that way, and what outcomes will be seen and by when. However, SAP work in AI/AN communities was described as a much more fluid, changeable, and contextually-dependent experience. The theories that would be used to account for these factors are often difficult to describe when writing grant proposals. This is the point when many participants stated that they engage in wordsmithing or they simply omit the true guiding theories, or perspective, in favor for other Western theories that are easier to describe. However, this is where issues in matching design, measurement, data collection, and assessing outcomes often arises. For example, if a researcher applies for a grant using a Western theory that guides the development of measures to ascertain how well the SAP program impacts self-efficacy but in reality is assessing group-efficacy as described from a non-Western theory, the outcomes will be different and not reflective of what actually happened. If one theory is used in a grant application to secure
funding but a different theoretical framework is used in practice, this may also be a concern.

Theory should guide how a program is designed, measured, and how and what outcomes are reported (Glanz, Rimer, & Viswanath, 2008; Goodson, 2010). There were a few researchers who did say that when they receive funding but either have to, or already intended on, changing the theoretical orientation they will reference that there was a need for “community adaptation” or “culturally-tailoring”.

**Recommendations and Next Steps**

Although there are many SAP efforts and many more experienced Native and non-Native researchers who are moving the field forward in SAP within AI/AN communities, there is always room for improvement. It is recommended that in order to gain a deeper understanding of how theory is viewed and how it operates in SAP in AI/AN communities, a complete meta-study should be conducted. A meta-study is “systematic research process that culminates in the generation of new knowledge within a field of study” (Paterson, Thorne, Canam & Jillings, 2001, p. 2). The steps of a meta-study include “four distinct components: the analytic components of meta-data-analysis, meta-method, and meta-theory, and the synthetic component of meta-synthesis…together these form a comprehensive approach that aims to generate new or expanded theoretical frameworks for a field of study” (Paterson, Thorne, Canam & Jillings, 2001, p. 14). It allows for researchers to understand “what has been “ignored, misconstrued, or mistreated” (Kasper, 1994, p. 268) within a field of study. As most recommendations for next steps typically focus on addressing what has gone wrong or what is missing in previous research, a meta-study instead focuses on both the strengths and limitations within a field of study (Paterson, Thorne, Canam & Jillings, 2001). As Messeri, Silverstein, & Litwak (1993) stated, as
the knowledge in a research area increases, inherently there are “new and greater demands for alternative approaches and theoretical frameworks” (n.p.).

A meta-study would be an excellent method to address the differences between the Western and Indigenous theories, and how they operate in the field of SAP in AI/AN communities. Furthermore, systematic assessment in how AI/AN communities view theory use in SAP, and whether or not it is different than how researchers in this current study perceive theory use in SAP in AI/AN communities, is necessary. If AI/AN communities are in agreement that there are differing perspectives in regards to how SAP is addressed, determining how to bridge those differences is paramount. It is equally important to assess if AI/AN communities disagree with the findings from this current study. Further steps include working with AI/AN communities to assess their perceptions and recommendations regarding SAP implementation, evaluation, and how they recommend addressing these issues and the funding challenges mentioned by researchers.

As Gerstein and Green (1993) noted, “it is critical to learn what constitutes the communities that are relevant to drug abuse prevention. What normative symbols, practices, events and institutions do those at risk, and those who can influence them, identify with and respond to? How do drug-specific norms and behaviors dovetail with other health norms and behaviors?” (p. 141). Use of a community-specific approach would take the three approaches to SAP (risk/protective, developmental, and social) and apply them within a community context to understand a complete picture of substance use for that community. Additional research is necessary to assess what that “complete picture” would look like for different AI/AN communities; as it is thought that each community would have its own specific normative behaviors, practices, and cultural approaches.
Lastly, a meta-study on missing or key theoretical constructs and the operationalization of those constructs in SAP in AI/AN communities is recommended. After a better understanding of what theory truly looks like in practice in AI/AN communities, theory-testing should be conducted to determine if theories that are being used in AI/AN communities are representative of the AI/AN experience. It is thought that results gleaned from delving deeper into how theory functions in practice related to SAP in AI/AN communities would result in additional recommendations for future studies and future directions for SAP.

Additionally, more work is necessary to understand how AI/AN cultural identity influences theory, theory development, and implementation. As mentioned previously, due to many historical events, a loss of AI/AN culture and overall identity has occurred (Champagne, 2005; Hill, 2005; Lerma, 2012; Lowe, 2002; Milholland, 2010; Zimmerman, 1998). Many AI/ANs question ‘what it means to be AI/AN’ (Schmidt, 2011), much less how that influences theoretical assumptions, implementation, and program development. These are all aspects that must be explored to ensure theoretical fit; as many of the current theories guiding SAP in AI/AN communities do not address AI/AN cultural identity as it is such a complex topic in and of itself.

Furthermore, through the process of a meta-study, information could be ascertained on whether or not there is a need for interdisciplinary academic training for doctoral programs. It is hypothesized that providing future researchers with a varied theoretical background would give them a wider range of theories to draw from depending on the communities that they will work with. Some participants in the current study encouraged the development of doctoral programs to include more than single discipline theories, incorporation of Western and Indigenous perspectives, and encouragement of on-site field experiences for those graduate students who are
interested in working with AI/AN communities. A meta-study could provide an avenue to study the above recommendations in practice and assess their feasibility and efficacy.

In addition to one or more meta-studies being conducted to further assess the role and perceptions of theory in SAP in AI/AN communities, there are a few recommendations for bridging the funding and practice disconnect reported by many of the participants. There is a definite need for in-depth discussions to occur between researchers, AI/AN communities, and funding agencies. These conversations must move beyond the current annual meetings that occur between funding agencies and tribes, as these have been referred to as a “dog and pony show” and that “no real communication occurs between groups”. Funding agencies need to be informed that what they are requiring related to methods, measures, evidence, and theories are not always applicable or appropriate for AI/AN communities. During one of the member check interviews, it was recommended that funding agencies return to conducting site visits with funded sites. The idea was to encourage those individuals from the funding agencies to view, firsthand, what it is like to work in AI/AN communities. Perhaps after seeing how differently things operate, funding agencies would be more open to allowing and encouraging different types of grant proposals.

Moreover, training of the grant peer reviewers on other methods, measurements, and evidences of success is necessary as well. Participants described how disconnected grant reviewers often are from the context in which research is conducted in AI/AN communities. Specifically, issues surrounding inadequate sample size are often cited as reasons for not funding a proposal. However, sample sizes in AI/AN communities are often smaller than non-AI/AN communities; this may be due to a number of reasons such as, lack of participation, recruitment, access or availability issues. It appears that grant reviewers should be educated on these factors.
Also, some level of evaluation must be required for all grant funded activities, especially for SAP in AI/AN communities. Evaluation is one method to ensure accountability but these evaluations should be related to the theoretical design and intent of the programs. Perhaps a nationwide evaluation on AI/AN programs should be conducted to assess what success actually looks like at the community-level, not what program developers had intended or what guiding theories suggest will occur. Further exploration into evaluation and research designs that are appropriate for AI/AN, and still are acceptable for most funding agencies, need to be developed and tested. Measures need to be developed and validated for use with AI/AN. And if new forms of evidence, such as Community Defined Evidence (CDE) and Practice Based Evidence (PBE) (Hernandez et al., 2009; Martinez et al., 2010) or others, are to be readily accepted and funded, we must assess, track, and show that these new types of evidence are equal to, or surpass, evidence found from the current gold standard of a RCT.

Finally, a lack of sustainability of funding and the need for broader funding mechanisms for AI/AN communities were both cited as recommendations from participants. Almost all participants recommended some tailoring of the format and process of grant funding to the needs of AI/AN communities. During member checks interviewees stated “no more 5 year shots of money, we need more funding calls for that allow for capacity building and the time and resources to build trust with AI/AN communities before the clock starts!” It is recommended that the focus for grant funding in SAP in AI/AN communities must be on sustainable programs, policies, and practices that are able to continue long after the funding is gone. If these programs are built with AI/AN needs and perspectives in mind they are much more likely to match the beliefs and cultural nuances found in AI/AN communities (Champagne, 2007; Duran, 2006; Vandello & Cohen, 1999; Frank et al., 2000; Whitbeck et al., 2012).
Yet, none of the recommendations included here will be fruitful without the most obvious recommendation of all, that of a public apology. Many individuals and scholars have advocated for the United States government to provide a public apology to AI/ANs for the atrocities that have occurred over the last 200 years. The repeated colonization, forced relocation and assimilation of AI/ANs have resulted in a continued loss of culture and identity, economic suppression, and racial discrimination for AI/ANs (Gover, 2007; LaFromboise, Coleman & Gerton, 1993; Robbins, 1992; Wilkins, 2007). These consequences continue to impact the historical trauma experienced by generations of AI/ANs (Duran & Duran, 1995; Duran, 2006; Morgan & Freeman, 2009; Struthers & Lowe, 2003; Walters et al., 2002).

McKinnon (2009) wrote a brief article that was buried in an issue of the Wall Street Journal. Ironically the article began with “buried in the billions of dollars of spending on new weapons and other items in the 2010 defense appropriations bill is ‘an apology to the Native Peoples of the United States’” (n.p.). Evidently the United States apologized “on behalf of the people of the United States to all Native Peoples for the many instances of violence, maltreatment, and neglect inflicted on Native Peoples by citizens of the United States” (McKinnon, 2009, n.p.). However, the “apology” was “not intended to support any lawsuit claims against the government (and there are still plenty)” (McKinnon, 2009, n.p.).

President Obama signed The Native American Apology Resolution in December of 2009, privately, without press coverage (Pember, 2011). And although the Obama administration did something no other presidential administration has done, many still think that a “public apology is warranted and would go a long way toward healing our people and the nation as a whole…further, an apology could provide a much-needed shift in public attitudes toward tribes
in the country, as well as attitudes of Native people toward the federal government” (Pember, 2011, n.p.); this notion was echoed during the participant interviews and member checks.

Limitations of Study

The current study is not without limitations. This study included a total of 22 individuals and a review of 47 articles on SAP in AI/AN communities. Findings from this study are not generalizable to all 566 federally-recognized tribes, all state tribes recognized by the NCAI, all SAP researchers working with AI/AN communities, and all SAP programs operating in AI/AN communities. The findings only reflect the perceptions of those interviewed and the articles reviewed.

Furthermore, issues of self-selection bias were possible for those participants. Out of 30 potential participants, a total of 22 agreed to participate. Perhaps the perceptions of those who did not participate would run contrary to the findings presented. Further, limitations relevant to in-depth phone interviews included an inability to assess non-verbal communication and interviewees may multitask while on the phone (Bisman & Highfield, 2012). Both of these limitations were addressed by having an engaged and persistent interviewer who engaged in active listening (Bisman & Highfield, 2012).

Moreover, the content analysis had additional limitations. The analysis was limited by the articles that met the inclusion criteria, resulting in N=47. Of those articles only 60% (n=28) described SAP programs; the rest were epidemiological, trend or state-of-the-state articles. Content analyses can only describe what is present in the chosen material; it cannot speak to motives or underlying assumptions of authors and may not represent true events (Kohlbacher, 2006). Therefore it is unknown what role the participants played as authors of the articles, as not all were first author publications. Nor is it known if there are other reasons as to why there was
no mention of a named theory in 70% (n=33) of articles or why over 57% (n=27) of the articles stated cultural adaptations were done, but only 19% (5 out of 27) described those adaptations. Future content analyses should explore peer-reviewed articles published prior to 2009, as well as explore the grey literature, defined as written material that has been informally published (Childress & Jul, 2003), to determine additional potential gaps. As was mentioned during the interviews, often researchers will disseminate their findings in non-academic settings, as such the grey literature should be searched for additional briefs, reports and articles to capture a full picture of theory use in SAP in AI/AN communities.

**Strengths of Study**

There are multiple strengths of the current study. Several advantages arose from using a two-tiered phenomenological and constructivist qualitative study design with both individual and collective views of how researchers perceived the role of theory in SAP in AI/AN communities. Currently, there is paucity of research on how researchers view the role of theory in SAP in AI/AN communities; this approach fostered a greater understanding and description of the participants’ personal experiences. This method allowed for rich descriptions to arise and additional contextual factors to emerge; thereby enhancing the overall quality of the interviews (Bogdan & Biklen, 2007). Data collected from this study unearthed researcher perceptions and experiences on the role of theory in SAP in AI/AN communities, how theory appears to operate in AI/AN communities, the challenges associated with working in AI/AN communities, and factors that appear to influence the success of SAP in AI/AN communities. Thus, the findings from this study contribute to the body of AI/AN literature by providing information that aids in the construction of a clearer picture of the world in which researchers, AI/AN communities, and
federal, state and tribal systems function. This information may be utilized in the development of future research studies, programming, evaluations, and theory-building.

Moreover, to show the credibility of the study, extensive research was completed on AI/AN culture and SAP programs. Trust-building was established based on prior networking conducted by the researcher and continued credibility assurance on behalf of the researcher’s mentors. Triangulation of data was completed to ensure that the true representation of the participants emerged and findings were credible (Golafshani, 2003). Denzin (1978) identified four modes of triangulation: sources, methods, investigators, and theories. For the study, N=22 interviews, N=47 articles were analyzed, and N=6 brief member checks were conducted (sources); use of process notes, interviews, and member-checks (methods); a second reader/coder assisted in data analysis of interviews (investigators), and a two-tiered theoretical framework was used.

Additionally, as member checks took place throughout the current study as part of the interviewing process; periodic probes were used to ensure that interviewees were being interpreted correctly. After completion of interviews, summaries of findings were sent to participants. Each participant was given the opportunity to provide written feedback or additional comments if clarification was necessary. Furthermore upon completion of analysis, six brief follow-up phone interviews were conducted as additional member checks. The intent was to gain feedback on the main findings of the study and to ensure validity of findings. To the best of the researcher’s knowledge, no other studies have looked at researchers’ view on the role of theory in SAP in AI/AN communities.
Implications for Public Health

To address the rates of AI/AN substance abuse, there is a need to understand why certain SAP programs work in AI/AN communities. One way to understand that process is by linking theoretical underpinnings of program development with appropriate measures and ensuring accurate program evaluation (Weiss, 2004). A critical assessment of evaluations of SAP programs in Native communities, regardless of theory inclusion, is necessary (Dixon et. al, 2007; Hawkins et.al, 2004; Muraskin, 1993; Whitbeck et al., 2012).

As AI/AN communities continue to experience the detrimental effects associated with substance abuse, there is a need to effectively design and integrate prevention methods applicable for AI/AN (Coyhis & Simonelli, 2008; Noe, Fleming & Manson, 2003). Ways to accomplish this include identifying appropriate theories to guide development and adaptation of prevention programs (Champagne, 2007); integrating AI/AN culture and cultural elements into programming (Goodkind, LaNoe & Milford, 2010; Nebelkopf & Wright, 2011); and through the use of CBPR to assist in understanding what AI/AN communities want and need (Teufel-Shone, Siyuha, Watahomigie & Irwin, 2006; Thomas, Donovan, Sigo, Austin & Marlatt, 2009).

Yet, these efforts are in vain if proper evaluation and reporting of results are not conducted (Edgerly et. al, 2009; Goodkind et al., 2011; Gorman, Clapp, Calac, Kolander, Nyquist & Chambers, 2013; Montag, Clapp, Calac, Gorman & Chambers, 2012; & Nelson & Tom, 2011).

Potential implications from the study include recommendations that may focus on areas already identified in the literature: strengths-based factors, such as family resiliency (Cross, 1998); the role of AI/AN women as core components of the Native family unit (Jaimes & Halsey, 1992); integrating positive cultural beliefs of being a good relative, inclusive sharing, contributing and participating in non-coercive leadership (Dixon, 2001); and enhancing the focus...
on nurturing Native cultural identity (Mihesuah, 1998; Nagel, 1995). Furthermore this study provides knowledge on those aspects of Indigenous theory or ways of knowing that can be included through the development, cultivation and integration of Indigenous theories to explain and predict substance use within AI/AN communities (Gone & Calf Looking, 2011). As many participants described an Indigenous perspective as being abstract, fluid and informal—compared to the formal, linear traditional Western perspective that has typically guided theory development--each of these characteristics should be explored as potential avenues of theory development, expression, and integration for theory use in SAP in AI/AN communities.

Champagne (2007) called for an Indigenous paradigm to research, create and postulate theory concerning the interactions inherent in the complex systems impacting AI/AN communities. This study is an initial step in doing so. Using established Indigenous ways of knowing, AI communities would be able to contextualize how substance abuse is viewed and addressed in their communities to provide added avenues for SAP interventions (Grayshield, 2010).

Since “a growing mass of evidence shows that the most carefully designed scientific interventions intended to reduce modern health problems have not proven successful” (Buchanan, 2000, pp. 10), future research, such as this study, needs to assess how theory is used with program development, program materials, implementation, measurement, and evaluation. Goodson (2010) states “public health practitioners are shortchanging themselves when they avoid using theory to help develop their programs” (p. 38). There needs to be special attention paid to those A/AN communities with cultural identities, values and beliefs that differ from those present in mainstream theoretical approaches to ensure fit. As “theories not only provide a blueprint of which variables to measure, they also come to the rescue when it is time to analyze what was measured” (Goodson, 2010, pp. 46). Consistently research literature has indicated that
prevention interventions are more effective in producing desired outcomes if they are based on, or informed by, theory (Goodson, 2010; Whitehead & Russell, 2004).

**Dissemination of Findings**

The findings from this research study will be disseminated through the defense of a doctoral dissertation, as well as peer-reviewed publications, scholarly presentations, and community presentations. It is anticipated a minimum of four publications will arise from this study. The first paper, a systematic review on SAP programs in AI/AN communities is already under review. Paper two will focus on the incorporation of theory into the development of SAP programs, inclusive of recommendations for new directions for theoretical development using Indigenous perspectives, and will likely be submitted to either the *Journal of Community Psychology* or *American Indian Alaska Native Mental Health Research*. A general results paper may be submitted to *Qualitative Inquiry*. Lastly, the fourth paper will discuss the challenges associated with evaluation design, measurement, and defining evidence in AI/AN communities and will likely be submitted to either the *American Journal of Evaluation* or *New Directions for Evaluation*.

It is anticipated that findings from the proposed study will be presented at the following professional conferences: American Public Health Association, American Indian Health Research, Native Health Research, American Evaluation Association, International Network of Indigenous Health Knowledge and Development and/or the American Academy of Health Behavior. Additionally, if requested, community presentations of findings will be presented. All information will be shared with participants as appropriate.
Conclusion

The current study focused on ways in which theory might provide a fruitful lens to improve the utility in predicting and explaining SAP in AI/AN communities and the ways in which Indigenous perspectives may guide future SAP research. Through interviews with researchers, the current study explored what theories guide current SAP programs in AI/AN communities, what aspects of those theories fit with Indigenous perspectives, and provided recommendations on Indigenous perspectives that may need to be included in future SAP programs in AI/AN communities. A deeper understanding on the role of theory in SAP in AI/AN communities and the challenging relationship with funding agencies was also explored.

As many AI/AN communities have historically participated in many SAP programs that were unable to meet their distinct cultural needs (Beauvais & LaBoueff, 1985; Hawkins, Cummins & Marlatt, 2004; May, 1999; Whitbeck, Walls & Welch, 2012), we must ensure that future SAP programs for AI/AN communities are guided by theories that are inclusive of culturally-appropriate theoretical constructs of AI/AN worldviews. If SAP programs in AI/AN communities are truly reflective of the community and are able to address the needs of the community in which they are implemented, they are more likely to be sustained for longer periods of time and viewed as successful (Glanz, Rimer, & Viswanath, 2008; Green & Kreuter, 2005). The intent of any SAP program is to prevent substance abuse, and as AI/AN communities continue to have some of the highest rates of health disparities related to substance use (NSDUH, 2010) it is imperative that efforts expand past a one-size-fits-all approach to prevention to reduce these disparities.
References


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Appendices
## Appendix A. Researcher Interview Guide

### Background

What is your current job title?
- What are your duties in that role?
- How long have you been in this role/position?
- Professionally, what did you do prior to this?
- How long have you been in the academic field?
- Do you teach courses?
- What type of research do you conduct?

What has motivated you to work with American Indian communities?

What substance abuse prevention research have you conducted?

### Theory

What are your general thoughts about research driven by theory?

How well do you think AI/AN substance abuse prevention research has incorporated theory?

- Why do you think that is?
- What has facilitated that process?
- What has worked as a barrier to that process?

How would you personally define ‘culturally-driven theory’?

Would that definition change for different research focus, particularly substance abuse prevention? And if so, how?

What about with theory that is AI/AN culturally-driven? How would you define that?

- What are your thoughts on its development?
- What do you think has helped or hindered its development?

### Theory Implementation

How do you think the translation of theory to practice is working in AI/AN substance abuse prevention?

How would you like to see the field of substance abuse prevention, within AI/AN communities, progress?

### Theory Evaluation

What current theoretical models or frameworks/theories appear to work best with AI/AN communities? And why they think that may be.

What theoretical constructs are missing, if any, from current theories used in general with AI/AN? What about substance abuse prevention programs specifically

What would an ideal theoretical framework or model look like for a substance abuse prevention program for AI/AN?
Appendix B. University of South Florida IRB Approval

July 18, 2012

Margaret Walsh
Community and Family Health
9456 Hunters Pond Dr

Tampa, FL 33647

RE: Expedited Approval for Initial Review
IRB#: Pro00008561
Title: Designing Theoretically-Based Substance Abuse Prevention Interventions for American Indians: Reflections on the Need for Community-Driven Creation

Dear Margaret Walsh:

On 7/18/2012 the Institutional Review Board (IRB) reviewed and APPROVED the above referenced protocol. Please note that your approval for this study will expire on 7/18/2013.

Approved Items:
Protocol Document(s):

IRB Protocol AI FINAL 6/30/2012 12:04 PM 0.02

Consent/Assent Documents:

Name Modified Version
Adult ICF has been granted a Waiver

It was the determination of the IRB that your study qualified for expedited review which includes activities that (1) present no more than minimal risk to human subjects, and (2) involve only procedures listed in one or more of the categories outlined below. The IRB may review research through the expedited review procedure authorized by 45CFR46.110 and 21 CFR
56.110. The research proposed in this study is categorized under the following expedited review category:

(6) Collection of data from voice, video, digital, or image recordings made for research purposes.

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Your study qualifies for a waiver of the requirements for the documentation of informed consent as outlined in the federal regulations at 45 CFR 46.117 (c): An IRB may waive the requirement for the investigator to obtain a signed consent form for some or all subjects if it finds either: (1) That the only record linking the subject and the research would be the consent document and the principal risk would be potential harm resulting from a breach of confidentiality. Each subject will be asked whether the subject wants documentation linking the subject with the research, and the subject's wishes will govern; or (2) That the research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside of the research context.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB. Any changes to the approved research must be submitted to the IRB for review and approval by an amendment.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

John Schinka, PhD, Chairperson
USF Institutional Review Board