AMERICAN INDIAN AND ALASKA NATIVE RESILIENCE ALONG THE LIFE COURSE AND ACROSS GENERATIONS: A LITERATURE REVIEW

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Abstract: Examining American Indian and Alaska Native (AI/AN) resilience using the life course framework could inform public health strategies that support favorable health outcomes, despite adversity (e.g., discrimination, historical loss, comorbidity). A systematic review of peer-reviewed literature published from 1970 to 2015 yielded eight articles on AI/AN life course and resilience. A content analysis identified three themes. AI/AN resilience is 1) an ongoing, dynamic process, 2) evident within linked lives and life transitions, and 3) accessed through cultural knowledge and practice. Resilience research could change the paradigm of AI/AN health research to guide asset-based approaches across the life course.

INTRODUCTION

Despite decades of American Indian and Alaska Native (AI/AN) health disparities research, morbidity and mortality rates related to chronic disease, poor mental health, and comorbidity remain high among AI/AN peoples (Espey et al., 2014; Gone & Trimble, 2012; O'Connell, Yi, Wilson, Manson, & Acton, 2010). A shift in health disparities research approach is needed. AI/AN health disparities are associated with the interplay of biopsychosocial and cultural factors within a socioecological system influenced by detrimental historical and contemporary social determinants (e.g., colonization, assimilation policies, discrimination; Beckfield & Kreiger, 2009; Braveman, 2014; Cobb, Espey, & King, 2014; Marmot, 2005; Marmot & Bell, 2011; Walls & Whitbeck, 2011; Wexler, DiFluvio, & Burke, 2009). In the face of these inequities, many AI/AN individuals and communities continue to resist, to be resilient, and to thrive (Gone, 2013; Wexler et al., 2009). The resilience of AI/AN people has not been examined adequately as a process that could inform public health efforts to

address health disparities and inequities. The purpose of this literature review is to explore AI/AN resilience from the life course framework and highlight an alternate approach to achieve health equity.

Resilience: An Evolving Concept

Resilience has evolved as a concept from an individual trait to a developmental process that varies depending on worldview, context, shared experiences, and timing of life events (Kirmayer, Sehdev, Whitley, Dandeneau, & Isaac, 2009; Wexler et al., 2009). Individual resilience is defined as the ability to adapt or respond positively (i.e., to exhibit growth and transformation) to stress and adversity (Norris, Stevens, Pfefferbaum, Wyche, & Pfefferbaum, 2008; Ungar, 2011; Wexler et al., 2009). This ability comes from an interaction of internal and external risk and protective factors derived from individuals, family, community, culture, and environment (Bunch, 2011; Fleming & Ledogar, 2008a; Kirmayer et al., 2009; Norris et al., 2008; Poortinga, 2012; Ungar, 2011). These factors are not discrete, but are processes that affect "trajectories of development" throughout a lifetime (Kirmayer et al., 2009, p. 69).

Resilience does not occur in isolation. From a socioecological perspective, individuals, family, community, culture, and environment are interconnected, and their interactions contribute to resilience at all levels (Kirmayer et al., 2009; Wexler et al., 2009). Communities as well as individuals can display resilience; community resilience is often interpreted as a collective process whose resources and strategies for adaption and transformation come from social networks and relationships, cultural beliefs and practices, and availability of material necessities (Kirmayer et al., 2009).

Resilience research has shifted away from an individualistic, deficit orientation toward the study of individual and collective processes, strengths, and assets within a complex adaptive system (Kirmayer et al., 2009; Stumblingbear-Riddle & Romans, 2012; Ungar, 2011). This perspective resonates culturally with the value placed on collective identity and processes within many AI/AN communities.

Reframing AI/AN Resilience: Cultural Resilience

AI/AN health resilience research is nascent. Over the past 10 years, such research has focused on AI/AN adolescents (LaFromboise, Hoyt, Oliver, & Whitbeck, 2006; Stumblingbear-Riddle & Romans, 2012; Wexler, 2014; Whitbeck, Walls, Johnson, Morrisseau, & McDougall,

2009) and elders (Grandbois & Sanders, 2009, 2012). The work of LaFromboise et al. (2006) was seminal for identifying factors (specifically, family, community, and cultural factors) associated with adolescent resilience. In Grandbois and Sanders' (2012) study, elders identified the unifying theme of culture as a resource they accessed to overcome hardship in their lives.

Studies by Grandbois and Sanders (2009, 2012) and Wexler (2014) reframe AI/AN resilience as synonymous with cultural resilience. Cultural resilience is often equated with community resilience (Fleming & Ledogar, 2008a; Kirmayer et al., 2009). According to Healy (2006, p. 12, as cited in Fleming & Ledogar, 2008a, p. 10), "[indigenous] community or cultural resilience is the capacity of a distinct community or cultural system to absorb disturbance and reorganize while undergoing change as to retain key elements of structure and identity that preserve its distinctness." Therefore, AI/AN resilience is interpreted as the distinct AI/AN worldviews, beliefs, values, and practices that support individual and community resistance and positive transformation (Gone, 2013; Grandbois & Sanders, 2009; HeavyRunner & Sebastian Morris, 1997; Wexler, 2014). For this literature review, AI/AN resilience encompasses individual, community, and cultural resilience.

Critique of AI/AN Health Resilience Research

Despite the evolution of resilience as a concept, some researchers express concern that resilience implies acceptance of the historical and contemporary structural inequalities (e.g., socioeconomic, political, environmental conditions) that contribute to persistent health disparities in Indigenous communities, including AI/AN communities (Boulton & Gifford, 2014; Kirmayer et al., 2009; Lavallee & Clearsky, 2006; Penehira, Green, Smith, & Aspin, 2014; Wexler et al., 2009). Another concern is that resilience studied as a linear causal process that consists of accumulating strengths, may stigmatize individuals and communities that appear to lack these strengths (Kirmayer et al., 2009; Wexler et al., 2009). The life course framework may assuage these criticisms; it is a nonlinear, nondeterministic, health equity theoretical approach.

Life Course Framework: Theory, Approach, and Perspective

The life course theory, attributed to sociologist Elder (1998), is used as a framework in gerontology, social work, and maternal child health research (Braveman & Barclay, 2009; Browne et al., 2014). Central to the life course framework is consideration of the social, cultural, economic, and political factors that impact human development and health (Elder, 1998; Fine &

Kotelchuck, 2010). This consideration situates the life course framework among research paradigms (e.g., critical theory, decolonizing methodologies) used to achieve social and health equity (Braun, Browne, Ka'opua, Kim, & Mokuau, 2013; Braveman & Barclay, 2009). The key constructs of the life course framework are lives embedded in historical context (i.e., cohorts), timing of life transitions (i.e., changing roles and life stages), linked lives (i.e., interdependence, intergenerational connections), and human agency within socioecological context (Elder, 1998). The life course framework defines health development as a nonlinear process, not a series of life stages. This process may be affected by exposure to stressors during crucial times from gestation through adulthood, which can shape responses and impact health and well-being later in life (Braveman & Barclay, 2009; Halfon, Larson, Lu, Tullis, & Russ, 2014).

The life course framework's emphasis on the continuum of life recognizes the potential influence of previous life experiences on current and future responses to adversity. This approach is well suited for resilience research because it considers how life experiences can contribute resilience strategies. Although influenced by personal history, the life course framework is not deterministic but acknowledges that pathways or trajectories can be changed to improve and maintain health and well-being (Fine & Kotelchuck, 2010).

The life course framework was chosen for this literature review as a culturally appropriate approach to study AI/AN resilience. Its constructs align with shared AI/AN worldviews that life is cyclical and that all beings are connected and in relation to each other across time and place (Deloria, 1994; Kirmayer, Marshall, & Phillips, 2011).

AI/AN health resilience research is often framed by historical trauma theory. "Historical trauma…is defined as cumulative emotional and psychological wounding across generations, including the lifespan, which emanates from massive group trauma" (Brave Heart, Chase, Elkins, & Altschul, 2011, p. 283). Within this theory, the AI/AN communal and collective experience of historical adverse events (e.g., colonization, removal, relocation, assimilation) is the cause of such trauma (Brave Heart et al., 2011); collective grieving or bereavement is the response, and is associated with poor mental and behavioral health among AI/ANs (Brave Heart et al., 2011). Assumptions that all historical adverse events were experienced as traumatic and lead to only pathological responses are being challenged (Denham, 2008; Gone, 2013). The life course framework provides a supplemental approach to study AI/AN resilience, a salutogenic response, within the context of historical adverse events that may or may not have been traumatic.

METHOD

This systematic review used guidelines and checklists from the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Group and University of North Carolina Writing Center (UNCWC; Moher, Liberati, Tetzlaff, Altman, & The PRISMA Group, 2009; UNCWC, 2014). The reviewers used the following steps: 1) identified articles that fit the inclusion criteria (described below) for both topics (i.e., AI/AN resilience and life course framework), as shown in Table 1, 2) conducted descriptive and content analyses of selected articles, as shown in Tables 1 and 2, and 3) synthesized findings (Moher et al., 2009; Patton, 2002; UNCWC, 2014).

Table 1
Descriptive Overview of Selected Articles (*N* = 8)

	Authors	Field	Concepts and Theories	Participants	Method
1	Denham (2008)	Health Sciences/ Behavioral	Implied life course – Historical trauma and resilience	Four generations within one family	Qualitative
2	Jackson & Chapleski (2000)	Social Sciences/ Gerontology & Anthropology	Life course theory – Cohort & Native American Ethnicity	Elders	Mixed
3	McCloskey (1998)	Social Sciences/ Anthropology	Life course theory – Cohort & cultural resilience-persistence	Three generations of women	Qualitative
4	Mohatt, Rasmus, Thomas, Allen, Hazel, & Marlatt (2008)	Health Sciences/ Behavioral	Implied life course – recovery process and resilience	Three generations	Qualitative
5	Quintero (2000)	Social Sciences/ Behavioral	Life course theory, recovery process and resilience	Adult men	Qualitative
6	Walls & Whitbeck (2012)	Health Sciences/ Behavioral	Life course theory and Historical trauma	Three generations within families	Quantitative
7	Weibel-Orlando (1988)	Social Sciences/ Gerontology	Implied life course – Ethnicity, aging and culture	Elders	Qualitative
8	Wexler (2014)	Health Sciences/ Behavioral	Implied life course – Historical trauma and resilience theory	Three generations	Qualitative

Table 2
Themes From Selected AI/AN Life Course and Resilience Articles (*N* = 8)

Author/Publication Date	Resilience		Practice of Resilience Along the Life Course		Accessing Resilience	
	A dynamic developmental process	Lives embedded in historical context and contemporary times	Linked lives: Intergenerational connection	Timing of life transitions: Social/cultural roles	Cultural and traditional, beliefs, values and practices	Story, narratives, and lived experiences
Denham (2008)	X	X	X		X	X
Jackson & Chapleski (2000)	X	X			X	
McCloskey (1998).	X	X	X		X	X
Mohatt, Rasmus, Thomas, Allen, Hazel, & Marlatt (2008)				X	X	X
Quintero (2000)				X	X	X
Walls & Whitbeck (2012)		X	X			
Weibel-Orlando (1988)	X	X			X	X
Wexler (2014)		X	X		X	X

Inclusion and Exclusion Criteria

To be included in the literature review, articles had to 1) be peer-reviewed and available in English; 2) be published from January 1, 1970 to December 31, 2015; 3) identify AIs and/or ANs as the focus group; 4) identify the life course as an approach, perspective, theory, framework, or life history; 5) discuss historical or contemporary sociocultural and political determinants of health (e.g., historical adverse events, assimilation policies); and 6) use the term resilience or reference asset-based factors (e.g., social and cultural support). Articles that exclusively focused on 1) secondary analysis of national data sets, 2) biological pathways, or 3) clinical encounter descriptions were excluded.

Data Extraction

Four databases were searched: ERIC, JSTOR, Ovid, and PubMed. Search terms were: life course OR life span OR life stage AND American Indian(s), OR Alaska Native(s), OR North American Indian(s), OR Native American(s). Citations, including abstracts and full text, were imported into EndNote 7.2. The citations then were imported into Microsoft Excel in order to categorize and group them. Findings from descriptive and content analyses are found in Tables 1 and 2.

Analyses

Descriptive and content analyses were conducted to provide the reviewers' interpretation of findings on AI/AN resilience within the life course framework (Denzin & Lincoln, 2005; Patton, 2002; UNCWC, 2014).

Descriptive Analysis

The descriptive analysis provides an overview of the use of life course framework to study AI/AN resilience. The reviewers grouped the selected articles by author, publication date, field, concepts/theoretical framework, participants, and methods (Table 1). The implicit and explicit use of the life course framework was identified and described (Table 1 and Findings).

Content Analysis

A content analysis provides insight into the concept of AI/AN resilience from within the life course framework. It is an inductive and iterative process (Creswell, 2012; Patton, 2002); articles are reviewed repeatedly to identify emerging ideas, patterns, and themes that relate to the topic(s) (Patton, 2002). In this study, the reviewers 1) identified and labeled shared ideas and patterns, 2) used the labels to identify unifying themes, 3) revisited the content of each article to confirm themes, and 4) provided in-depth description of themes (Creswell, 2012; Patton, 2002). The following labels were used: historical adverse events, story/narrative/lived experience, sociocultural roles and responsibilities, inter- and intragenerational connection, identity/ethnicity, strength based, and transformative potential.

FINDINGS

Descriptive Analysis

A total of 231 articles were retrieved from the databases; 26 article abstracts met the inclusion criteria, and 8 full articles were included in this review. The eight articles were in social and health sciences: anthropology (1), gerontology (2), and mental and behavioral health (5). Five had intergenerational participation across three or four generations, two focused on elders, and one on adults. Six used qualitative methods, collecting narratives, responses to semi-structured interview questions, and observational data. One used closed-ended questionnaires that incorporated structured instruments validated in non-AI/AN populations, and one used mixed methods (Table 1).

Life Course Framework: Explicit and Implicit

All eight selected articles used two or more constructs from Elder's (1998) life course framework (e.g., lives embedded in historical context, timing of life transitions, linked lives, human agency). Only three of the selected articles explicitly used the life course framework to study AI/AN resilience. Jackson and Chapleski (2000), McCloskey (1998), and Walls and Whitbeck (2012) used the framework as the theoretical underpinning for their studies. Jackson and Chapleski (2000) and McCloskey (1998) grouped their participants into age cohorts to study the impact of historical adverse events on cultural identity and life course patterns such as education, employment, and childbearing. Walls and Whitbeck (2012) exemplified how the concepts of lives embedded in historical context and linked lives can provide a theoretical framework for AI/AN health research. Their study found an association between historical adverse events (i.e., relocation) and poor intergenerational health outcomes (i.e., substance abuse, depression).

Denham (2008), Mohatt et al. (2008), Quintero (2000), Weibel-Orlando (1988), and Wexler (2014) did not explicitly use the life course framework; life course constructs were inferred in their theoretical approaches and use of life histories as a data collection tool. These researchers implicitly used the construct of lives embedded in historical context to study individual and cultural resilience. They collected intergenerational life histories of participants who experienced historical adverse events and contemporary hardships. For example, the impact of lives embedded in historical context is implicit in Weibel-Orlando's (1988) study on ethnicity and aging among elders who participated in the Bureau of Indian Affairs relocation and

vocational assistance programs of the 1950s, and Quintero (2000) implicitly used the life course framework to interpret the life histories of problem drinkers by exploring motivators for dramatic behavior change (i.e., cessation).

Content Analysis

Three themes that provide insight into AI/AN resilience emerged from the content analysis. AI/AN resilience is 1) an ongoing, dynamic process that responds to a changing environment, 2) evident within the life course framework (e.g., lives embedded in historical context, linked lives, timing of life transitions), and 3) accessed through culture (e.g., origin-creation stories, lived experiences). See Table 2.

AI/AN Resilience is a Dynamic Process

Studies by Denham (2008), Jackson and Chapleski (2000), McCloskey (1998), and Weibel-Orlando (1988) illustrate how resilience is not a trait; rather, it is a non-linear process that varies along the life course and across generations. For example, Weibel-Orlando (1988) studied the interaction of ethnicity and aging in life histories collected from 28 AI elders. The participants were born on tribal lands, lived and worked in urban areas for at least 20 years, and returned to their tribal lands after retirement. They experienced adversity, stress, and vulnerability upon returning to reintegrate into their tribal communities. Their resilience was an ongoing process of reconnecting and investing in regular and ceremonial displays of ethnic group membership. Kirmayer et al. (2009) describes this process as tapping into multiple resources along the life course, depending on context. Findings revealed ethnicity and aging to be resources for resilience, and, subsequently, for well-being, cultural continuity, and community connection.

AI/AN Resilience Within the Life Course Framework

Lives Embedded in Historical Context and Linked Lives

McCloskey (1998), Jackson and Chapleski (2000), and Walls and Whitbeck (2012) studied the impact of rapid sociocultural and environmental changes associated with historical and contemporary events on individual lives and on communities. McCloskey's (1998) study is an early work that used the life course approach by studying resilience in the life histories of three generations (cohorts) of Navajo women ($N = 77$): grandmothers, midlife mothers, and young mothers. McCloskey (1998) explored the resources and strategies for resilience accessed by participants in each cohort during changing and adverse historical and contemporary contexts

(e.g., the boarding school era, changes in agricultural and livestock policies, the relocation era), and identified Navajo culture, values, and beliefs as the resilient core that informed the women's life course patterns. The author identified the principles of the resilient core as: 1) an egalitarian perspective that fostered complementary relationships between men and women, 2) a matrilineal legacy and clan membership, and 3) value placed on motherhood and childbearing. These shared sociocultural principles in turn informed each cohort's life course patterns of education, work, marriage, and childbearing.

Jackson and Chapleski's (2000) study is seminal for its use of cohorts and life histories to study ethnic identity among AI elders. This synthesis study combined findings from two respective studies: one, a quantitative longitudinal study with data collection at baseline ($N = 309$) and 18 months later ($N = 253$); and the other, a qualitative study with a low number of participants ($N = 24$) designed to collect in-depth and nuanced life histories. Participants were placed into cohorts based on the time period of their birth. The conditions experienced by each cohort along the life cycle from birth to middle age (e.g., poverty, prejudice, boarding schools, self-determination era policies), and their impact, were examined. The elder cohort experienced the adverse conditions of poverty, boarding schools, termination, and relocation. In contrast, the middle-age cohort experienced adverse conditions during early childhood that shifted toward supportive conditions associated with self-determination, tuition waivers, and hunting and fishing rights from later childhood through their mid-adult years.

These findings demonstrate that adversity had a differential impact on each age cohort. Jackson and Chapleski (2000) found a seemingly paradoxical reversal between older and middle-aged AIs with regard to participation in traditional cultural activities. The middle-aged cohort had the highest rate of participation in traditional practices and displayed more traditional AI styles and behaviors than their elders. This open expression of cultural engagement was adaptive in an evolving society increasingly tolerant of cultural diversity. In contrast, elders who experienced the oppression of boarding school policies that forbade cultural expression kept their cultural knowledge and practices concealed and appeared acculturated. The elders' response may not have been overtly resilient, yet their strategy of concealing their culture allowed that culture to survive. Jackson and Chapleski (2000) referred to the elder cohort as bicultural, neither assimilated nor acculturated. Bicultural identity is the ability to shift between two cultures' norms, traditions, and styles, and is a strategy of resilience. Examination of the cohorts' differential experiences revealed the dynamic, subtle, complex, context-specific, and time-sensitive nature of cultural resilience (i.e., ethnic identity; Jackson & Chapleski 2000).

Walls and Whitbeck's (2012) study regarding the intergenerational effects of relocation on health behaviors (i.e., substance misuse/abuse, depressive symptoms, parenting style) within AI and First Nations (FN) families in the U.S. and Canada exemplifies the use of the life course framework. Walls and Whitbeck (2012) collected responses from AI and FN youth and their biological mothers, whose parents had participated in urban relocation programs initiated in the 1950s. The results indicated transmission of problem behaviors across three generations. For example, grandparents' drinking problems had a significant indirect effect on their grandchildren's delinquency by way of their parents' deviant and negative parenting behavior. The emphasis placed on lives embedded in historical context in the life course framework guided this study to find an association between cumulative adversity and cumulative poor health and well-being. The findings of Walls and Whitbeck (2012) imply that resilience lies in breaking the cyclical effects of historical adverse events that result in cultural losses by reconnecting generations and educating parents and children about cultural values, spirituality, and practices.

Timing of Life Transitions: Roles, Responsibilities, and Relationships

From the life course perspective, three studies examined resilience responses to stressors and adverse conditions during life transitions (i.e., becoming a parent or grandparent; Mohatt et al., 2008; Quintero, 2000). These studies demonstrate how culturally defined roles, responsibilities, and relationships in parenthood may be a resource for individual, community, or cultural resilience. In these studies, the adversity faced by participants was substance misuse/abuse, and the resilience response was "natural recovery" or "aging out." Mohatt et al. (2008) and Quintero (2000) identified an individual's desire to parent from within his or her traditional culture as a strategy for cessation of problem drinking. Factors associated with natural recovery (e.g., social pressure, time, priorities) are not usually considered resilient (Kunitz, 2006); they are considered the natural life course of the behavior. Yet, in these studies, parenting was considered part of cultural resilience (Mohatt et al., 2008; Quintero, 2000). This transition is a point during the life course where culturally and socially defined roles become a resource to support natural recovery.

Mohatt et al. (2008) collected life histories from 57 AN participants representing three transition periods during the life course: youth, middle age, and elders. These narratives were used to develop a heuristic model of recovery from alcohol dependence. In this study, individuals exhibited resilience through self-reflection and action. Recovery motivators were cultural values and practices that highlight cultural resilience via family and kinship responsibilities and

interconnection. For example, participants shared that they were motivated by their realization of the impact their drinking had on their family and by their desire to fulfill their responsibilities as fathers, mothers, and grandparents.

Quintero (2000) collected 48 life histories from AI men, former problem drinkers, who shared that their primary motivator for alcohol cessation was to fulfill their role as responsible Navajo fathers, to raise their children, and support a good life for their families. This responsibility extended beyond themselves and had implications for the tribe as a whole. For these men, aging out of alcohol abuse meant following cultural teachings and sharing cultural knowledge with their children. For example, they noted that sharing and reflecting on origin-creation stories was a strategy for cultural resilience. These stories describe the cultural and social expectations that shape and guide good thought and behavior, in order to live "the good life" (Quintero, 2000, p. 1042).

AI/AN Resilience is Accessed Through Worldviews, Beliefs, Values, Practices, and Lived Experiences

All eight studies identified cultural values, beliefs, and practices as essential resources for AI/AN resilience along the life course and across generations. Denham (2008), Quintero (2000), and Wexler (2014) specifically explored the use of narratives, lived experiences, and traditional stories as a cultural resource and strategy. Sharing narratives and life histories (i.e., storytelling) is a practice within many AI/AN communities that supports an individual's position, sense of self, collective identity, while reinforcing connections to family, community, and environment (Denham, 2008; Gone, 2013).

Denham's (2008) study used life histories to examine the resilience responses of a multigenerational AI family to historical adverse events. Resilience came from sharing "narratives, metaphors, and strategies of resistance" within the family circle, from one generation to another (p. 405). The stories of resilience and survival were transformed into lessons and teachings with their delivery and interpretation, in addition to their content. For example, the father used a power song passed down from one of his ancestors killed during the wars of colonization to get through his service in Vietnam. Resilience capabilities are revisited in the story to reinforce that the family has the same strong blood as its ancestors. The family circle and narratives provide a space to retain family members' sense of self as well as their connection to one another, their community, and their environment. Resilience was interpreted as maintaining balance in the chaos of life.

Quintero's (2000) study identified traditional stories as an important resource for AI resilience. In this case, the stories supported Navajo men's aging out of problem drinking because of family responsibilities and their desire to live by traditional Navajo values. Establishing and maintaining harmony (in Navajo, *hózhó*) in family relationships was important to this process of resilience.

Wexler's (2014) study used life histories of three generations of ANs to understand the process of cultural resilience. The narratives collected from adults and elders demonstrated "collective suffering and cultural fortitude" in the face of adversity (p. 88). The older generations were grounded in their cultural identity and affiliation, and had a resource with which to confront adversity. Their identity gave them a sense of self-worth, social belonging, and purpose throughout their lives. Youth had less understanding of how their cultural identity and affiliation was a source of strength. As a result, they were less able to access cultural resources that could give them a similar sense of belonging, connection, and purpose. Denham (2008), Quintero (2000), and Wexler et al. (2009) demonstrate how narratives and stories (e.g., origin-creation stories, life histories, lived experiences) are a resource for cultural resilience, and a potential strategy for intergenerational transmission.

DISCUSSION

In this literature review, the use of the life course framework provides insight into AI/AN resilience. Findings reveal that the AI/AN resilience process is relative to age and sociocultural context, is collective and intergenerational, and is derived from AI/AN worldviews, beliefs, values, and practices (Table 2). Combining the life course framework with the study of AI/AN resilience is synergistic and represents a new asset-based, culturally grounded approach to AI/AN health research and efforts to achieve health equity.

AI/AN Resilience is Relative to Age and Sociocultural Context

There are 562 AI/AN tribes, nations, villages, and consortia, each with its own history, language, culture, practices, and, in some cases, tribal lands; over 60% of AI/ANs live in urban areas (National Congress of American Indians, n.d.; Stumblingbear-Riddle & Romans, 2012). Within this diversity are shared adverse experiences of colonization and assimilation that are

considered distal contributors to present-day social inequities (e.g., discrimination, marginalization; Gone & Trimble, 2012). AI/AN resilience is affected by historical and contemporary contexts, life transitions, and lived experiences.

The work of Denham (2008), Jackson and Chapleski (2000), McCloskey (1998), Mohatt et al. (2008), Quintero (2000), Walls and Whitbeck (2012), Weibel-Orlando (1988), and Wexler (2014) shows that AI/AN resilience is a dynamic process that manifests itself differently for each generation. In some situations, AI/AN resilience may be expressed as acculturation, while actually serving as a strategy to protect and sustain culture within the context of assimilation policies. In other cases, cultural beliefs and practices may need to be reclaimed through enculturation practices (Denham, 2008; Jackson & Chapleski, 2000; McCloskey, 1998; Wexler, 2014). This finding is consistent with current resilience research. Ungar (2011) writes of the complexity of understanding resilience as an adaptive response to varying sociocultural contexts, structural conditions, and life events. The life course framework adds the constructs of lives embedded in historical context and differential generational (i.e., linked lives) impact to this concept of resilience, furthering its applicability to the study of AI/AN resilience.

AI/AN Resilience is Collective and Intergenerational

Findings gained from use of the life course framework support AI/AN resilience as a collective and intergenerational process that relies on cultural continuity through shared values and practices (Denham, 2008; McCloskey, 1998; Walls & Whitbeck, 2012; Weibel-Orlando, 1988; Wexler, 2014). These characteristics of AI/AN resilience are consistent with findings from Fleming and Ledogar (2008a), Grandbois and Sanders (2012), Kirmayer et al. (2011), and Stumblingbear-Riddle and Romans (2012) that make the argument for synonymous use of community, collective, and cultural resilience within Indigenous communities. AI/AN resilience is considered a process where traditional community structure and social relationships, cultural identity and practices, spirituality, relationship to place and environment, and lived experiences of adversity are protective (Fleming & Ledogar, 2008b; Grandbois & Sanders, 2012; Torres-Stone, Whitbeck, Chen, Johnson, & Olsen, 2006). The life course framework adds the construct of linked lives, interdependent and interconnected, supporting this evolving concept of resilience, particularly for culturally grounded and nuanced resilience research.

AI/AN Resilience is Derived from Worldviews, Beliefs, Values, and Practices

In the studies in this literature review, participants accessed their AI/AN worldviews, beliefs, values, and practices when faced with stress, adversity, or hardship along their life course (Denham, 2008; Jackson & Chapleski, 2000; McCloskey, 1998; Mohatt et al., 2008; Quintero, 2000; Weibel-Orlando, 1988; Wexler, 2014). For many AI/AN communities, cultural values, beliefs, and practices are a source of strength, power, medicine, and healing (Brave Heart et al., 2011; Denham, 2008; HeavyRunner & Sebastian Morris, 1997; Mohatt et al., 2008; Torres-Stone et al., 2006). Shared cultural values and beliefs include respect, responsibility, reciprocity, spirituality, connectedness, collective memory, and collective identity. Practices include language acquisition or maintenance, storytelling, sharing lived experiences, traditional parenting, participating in traditional and social activities, and developing intergenerational connections. These resources and strategies inform and guide the thought, speech, and behavior of individuals throughout their lives, regardless of exposure to adversity (Kahn-John & Koithan, 2015). In this way, the findings from this literature review equate AI/AN resilience with cultural continuity, health, and well-being.

Mechanism and Strategies of AI/AN Resilience: Narrative and Story Sharing

Within AI/AN concepts of health and well-being, reciprocal knowledge sharing based on historical and contemporary stories and on cultural and lived experiences, and maintenance of relationships and connections, are central. Sharing narratives within a family circle is a cyclical process that informs both individual and collective understanding and action (Denham, 2008; Kirmayer et al., 2011). Denham (2008) describes the family culture and stories that are passed from one generation to another as a cumulative strategy of resilience, but notes that the inability to maintain family or cultural continuity is not a barrier to accessing cultural resilience. At any point in an individual's life course, he/she may begin his/her own family circle and fill it with stories, songs, and teachings that are passed down from generation to generation.

Wexler et al. (2009) considered life histories or narratives important tools for understanding the continuum of resilient responses throughout a lifetime. The AI/AN resilience literature has identified three AI/AN resilience responses: adapting, growing, and awakening (Fleming, 2008a; HeavyRunner & Sebastian Morris, 1997; Kirmayer, 2009; Ungar, 2011). Such responses may be adaptive (positive or negative) or regenerative (i.e., growth; Fleming & Ledogar, 2008a; Richardson, 2002). The third response, awakening, is not predicated on

exposure to substantial adversity (HeavyRunner & Sebastian Morris, 1997). This type of response is considered a state of individual and collective well-being that exists within everyone, regardless of exposure to adversity (HeavyRunner & Sebastian Morris, 1997). Sharing narratives and stories is both a strategy to respond to adversity and a mechanism for passing along or maintaining positive health practices within a group.

LIMITATIONS/CONSIDERATIONS

Few Studies Use the Life Course Framework to Study AI/AN Resilience

The life course framework is primarily used to study the negative impact of adversity, hardship, and stress, both in early life development and at life transitions, on AI/AN adult and elder health and well-being (Burnette & Cannon, 2014; Roh et al., 2015). There were a limited number of articles that focused on AI/AN resilience as an asset-based process across the life course. This literature review used an expanded concept of the life course framework to consider the impact of historical and contemporary sociocultural and political context on cohorts, rather than on individuals, and potential intergenerational responses.

Limited Diversity of Responses for AI/AN Resilience Intervention Development

While there are shared historical adverse events that support AI/AN resilience research, these events may lead to diverse responses within AI/AN communities. Researchers must consider the following when developing interventions based on AI/AN resilience research: diversity of culture, definition of community, tribal government relationship to the federal government, and potential disconnection between generations when accessing resources for cultural resilience.

Limited Evaluation of Resilience Strategy: Sharing Narratives and Stories

The selected studies did not incorporate narrative and story sharing as a strategy within specific interventions; rather, they identified narratives and stories as cultural resources for AI/AN resilience, or used them to study AI/AN resilience. Therefore, it was not possible to evaluate the value or effectiveness of specific narratives or stories.

Challenges for Measuring Community and Cultural Resilience

Researchers are challenged to define, operationalize, and measure community and cultural resilience. Community resilience is currently measured by aggregating individual proxy psychosocial or sociological measures (e.g., sense of self or coherence; social cohesion, social capital, social networks; Goodkind, Hess, Gorman, & Parker, 2012; Wexler, 2014). For example, in the studies included in this literature review, data from narratives or participant interviews were compiled to yield a picture of resilient people. To date, only Kirmayer et al. (2009) have explored other determinants that might reflect community and cultural resilience. They identified several dimensions of cultural resilience, including family and community connectedness, oral traditions and storytelling, and collective knowledge and identity. The challenge offered by their work is quantifying these proposed dimensions of cultural resilience.

IMPLICATIONS

The need to address inequities in AI/AN health and well-being drives a downstream and shortsighted approach in public health research and intervention development. Public health is dominated by a deficit-oriented, individual-focused, and decontextualized approach that aims to identify specific risk and protective factors that affect individual health behavior and to improve health outcomes (Braveman & Barclay, 2009). Yet, the persistence of health disparities requires a change in paradigm.

(Re)naissance: AI/AN Resilience Research Along the Life Course

Using the life course framework to study AI/AN resilience is an innovative approach that can inform asset-based resilience research for intervention and policy development. This framework supports needed structural analyses of the socioecological impact of historical and contemporary events and conditions on the collective health of Indigenous peoples (Boulton & Gifford, 2014; Braveman, 2014; Estey, Kmetic, & Reading, 2007; Kirmayer et al., 2009; Lavallee & Clearsky, 2006). For example, within the life course framework, the link between assimilation policies and contemporary social inequities and health disparities may be studied and findings used for policy and advocacy efforts (Braveman, 2014; Estey et al., 2007; McCloskey, 1998). Additionally, the life course framework provides an umbrella under which

intergenerational responses associated with historical trauma, resilience, vulnerability, and negative social determinants may be studied to understand individual and collective pathways, mechanisms, and strategies (Denham, 2008; Gone, 2013).

AI/AN health research and intervention science is enhanced by use of the life course framework to identify resilience strategies. These strategies are used over time and in changing circumstances, and can be applied to prevent or manage chronic illness and conditions. Narratives and life histories are relevant strategies, as they contain lessons and teachings gained through traditional storytelling and lived experience. Reviewing and analyzing narratives to identify protective factors and processes can inform asset-based interventions. Such knowledge can guide the development of resilience-informed public health prevention interventions. For example, to explore AI resilience and resilience strategies, Kahn et al. (in press) interviewed 15 AI elders to document narratives of resilience. Content analysis of the elders' narratives identified themes that were used to guide 12 modules for an AI youth resilience program. In addition, the narratives were used as prompts for discussion and self-reflection. The curriculum is designed around three resilience strategies expressed by the elders: culture, activity, and education.

Resilience is a poorly understood and underused resource in AI/AN health research and practice (i.e., program and policy development). Applying resilience strategies could redirect and enhance the effectiveness of public health efforts in AI/AN communities. A life course-resilience research paradigm is an innovative approach to understanding both AI/AN individual and collective health behaviors within context, and the determinants that impact health outcomes. It provides a means for understanding the mechanisms and strategies used for AI/AN resilience. This shift in approach is needed within AI/AN health research to eliminate disparities and achieve health equity.

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