ABSTRACT

Objectives. To report on the relationships between cultural identity and stress, coping, and psychological well-being in Yup’ik communities.

Study Design. A quantitative self-administered questionnaire.

Methods. A health and wellness survey was completed by a total of 488 Yup’ik participants (284 women and 204 men) from 6 rural villages in the Yukon-Kuskokwim Delta region. Respondents were fairly equally distributed across an age range of 14 to 94 (mean ± SD = 38.50 ± 17.18).

Results. Participants who reported living more of a Kass’aq way of life (greater acculturation) reported experiencing greater psychosocial stress, less happiness, and greater use of drugs and alcohol to cope with stress. Participants who reported identifying more with a traditional Yup’ik way of life reported greater happiness, more frequent use of religion and spirituality to cope with stress, and less frequent use of drugs and alcohol to cope with stress.

Conclusions. In conjunction with previous research, the data strongly indicates that in general, Yup’ik people in the Y-K Delta tend to associate stress and negative health outcomes with the process of acculturation, and health and healing with the process of enculturation. Research that focuses on documenting the intrinsic strengths of indigenous worldviews may contribute to positive transformations in community health. (Int J Circumpolar Health 2007; 66(1):51-61)

Keywords: stress, coping, enculturation, acculturation, Alaska Natives, American Indians
INTRODUCTION

A substantial body of research indicates that chronic psychosocial stress significantly undermines physical, mental, and behavioral health (1-3). Life in many American Indian and Alaska Native (AI/AN) communities is impacted by a high stress load, due in part to historical trauma and rapid cultural change. AI/ANs are disproportionately likely to experience numerous stressors, including violent crime, personal injury, poverty, family disruption, discrimination, specific trauma (e.g., violent or unexpected death of a loved one), and cumulative historical trauma (e.g., coercive boarding school placement) (4-10). The experience of these stressors among AI/ANs is associated with increased substance abuse and a higher incidence of depressive and anxiety-related disorders (including post-traumatic stress disorder), suicidality, and substance abuse (11-26). Such mental and behavioral states have, in turn, been shown to have direct detrimental effects on physiology relevant to obesity, diabetes, and cardiovascular disease (27-36). These relationships help explain the increased prevalence of chronic, lifestyle-related diseases in AI/AN communities witnessed over the last several decades.

In recent years, there has been a notable increase in empirical and theoretical accounts of the nature of stressful life events (or, risk factors) that are hypothesized to compromise physical, mental, and behavioral health outcomes among AI/ANs. However, our scientific understanding of what constitutes an effective set of coping strategies (or, protective factors) is very limited, for both AI/ANs as well as for other groups (37, 38). The collective social scientific fixation on negative states of human behavior (e.g., diseases, deficits, disorders, social-cognitive biases) has recently been acknowledged in the growing body of work coalescing under the label of positive psychology. Positive psychologists counter with a focus on examining people's intrinsic strengths and capacities for growth and psychic integration (39-42).

Researchers concerned with AI/AN health have argued for a similar paradigm shift – away from focusing on the ‘problems’ experienced in Native communities and towards examining the positive health benefits of greater self-determination and of affirming the intrinsic worth of indigenous worldviews. These indigenist or post-colonial models of stress and coping advocate a systematic examination of the ways in which indigenous spirituality, traditional healing practices, and general processes of enculturation may mitigate the harmful effects of stress and trauma (4, 7, 26). Enculturation is defined as a process where individuals learn about and identify with their ethnic minority culture. Level of enculturation is a function of the extent to which one is actively engaged in living out one’s traditional cultural norms and values. Enculturation is contrasted with acculturation, which refers to the process by which an ethnic minority individual assimilates into the majority culture.

In this article, we report on some of our current efforts to document the relationships between enculturation, acculturation, stress, and coping in Yup'ik communities. Theoretical models have typically described acculturation as a cause of profound stress and impaired mental and behavioral health among ethnic minority group members (43-45). In contrast,
Enculturation has frequently been characterized as part of a healthy lifestyle that buffers the harmful effects of stress and enables one to recover from stress more successfully (4, 5, 46, 47). Although the cross-sectional nature of our work to date prohibits us from making causal inferences about the effects of these cultural identity processes, our findings have been consistent with these existing theoretical conceptualizations.

In preliminary work with Yup’ik communities, we conducted a series of focus groups and interviews in order to examine emic conceptualizations of health and wellness in the Y-K Delta (48). Data from this research strongly indicated that people tend to associate stress and negative health outcomes with the process of acculturation, and health and healing with the process of enculturation. For example, in terms of acculturation, participants spoke extensively about how traditional Yup’ik values have weakened due to the stress of cultural change. Frequently, this stress was traced directly to harsh economic conditions and impaired subsistence opportunities. As one participant commented:

"The state and federal government restrict us from hunting the traditional food that we’ve always eaten. Right now we are about to begin to have a 5-year moratorium in our area for moose... For our life that is pretty much like in between a rock and hard place. This situation causes a lot of stress for some people. Stress can affect your health, too, mentally and physically."

Yup’ik community members had many additional examples explaining how both their physical and mental health has suffered in the struggle to assimilate to the particular structure and sedentary nature of Kass’aq (white) culture. Examples include the lack of physical activity due to over-reliance on 4-wheelers and snow machines, the poor quality of processed store-bought food and the inability to cultivate traditional subsistence resources, and the disintegration of communities because of changes in economy (i.e., working in separate offices instead of together in the harvesting of resources), education (i.e., attending schools taught by predominantly white outsiders rather than inheriting traditional knowledge), and technology (i.e., spending time in separate homes watching television rather than being socially proactive and coming together for community activities).

In contrast, a majority of participants expressed that practicing the traditional way of life (enculturation) is at the core of what it means to be well for Yup’ik people. The following two prototypical comments illustrate the rich matrix of beneficial social, emotional, and spiritual attributes embedded in the traditional Yup’ik lifestyle:

"To live a good life? Cultural activities, the lifestyle itself. It’s like going out fishing, trapping... getting ice, going out hunting, or logging... The lifestyle connects us with our personal identity, our history, our culture, our connections with the land, our families, our relations, and believing that everything has a spirit."

"Our elders always tell us that Tundra is healing, go out and become part of it. Saturday, an elder woman and I went out and spent about seven hours staring at the Tundra. We have to get away from this sitting down and watching TV, and just go out and be a part of nature. It helps you to calm down. It helps you to think of what you need to do."
This emphasis on maintaining harmony with the extended family, community, and natural environment is consistent with the existing literature on Yup’ik worldviews (49-52), as well as traditional AI/AN worldviews in general (53-56). Such values contrast sharply with the competitive individualism and dominance over nature that drives mainstream U.S. society and prevailing psychological theories of well-being (57-61).

Evidence from this preliminary work strongly suggests that processes of acculturation and enculturation are differentially associated with stress and coping dynamics in Yup’ik communities. The next phase of our research examined these same issues utilizing a quantitative, cross-sectional survey methodology with a larger sample from the region. In the remainder of this article, we report on some of the results from this survey research that examine the ability of cultural identity variables (specifically, enculturation and acculturation) to predict perceived stress, well-being, and three distinct coping styles (active coping, coping with religion and spirituality, and coping with drugs and alcohol). In the context of the literature reviewed above, as well as our preliminary findings in Yup’ik communities, we hypothesized that living the Kass’aq (white) way of life (acculturation) would be associated with reports of greater psychosocial stress, and that living the Yup’ik way of life would be associated with reports of greater psychological well-being. Our examination of the relationship between the cultural identity variables and coping styles was more exploratory in nature, although other research suggests that acculturation may be associated with a tendency to use drugs and alcohol as a coping mechanism (15, 17, 22, 25, 26).

MATERIAL AND METHODS

Participants
A survey was completed by a total of 488 Yup’ik participants (284 women and 204 men) from 6 rural villages in the Y-K Delta (3 coastal- and 3 river-based). Respondents were fairly equally distributed across an age range of 14 to 94 (mean ± SD = 38.50±17.18). The survey was completed as part of a larger health study conducted by CANHR researchers that took approximately 3 to 4 hours to complete. Participants were paid $25 and received health information (e.g., blood pressure, BMI, blood lipid profile) from a licensed physician in exchange for their participation.

Materials and procedure
All participants completed a self-administered survey assessing a variety of psychosocial characteristics. The survey was presented in either Central Yup’ik or English (depending on participants’ preference), and bilingual researchers were present in order to help explain the survey and answer questions. Approximately 90% of participants completed the English version of the survey. To ensure that the survey’s content, format, language, and metric style were as congruent as possible with the Yup’ik cultural worldview, a team of bilingual translators and cultural experts was utilized, consisting of Yup’ik community members and one of the co-authors of this paper. When translating, the team worked through the conceptual meaning of each survey item and translated according to a consensual decision. Though fairly time-consuming, this team-based strategy is generally accepted as yielding greater cultural equivalence than word-for-word translations conducted by linguists in isolation via...
the traditional translation-back translation (TBT) technique (62, 63).

In this article, we describe findings from the following selection of measures contained in the survey: cultural identification, perceived stress, happiness, and three distinct coping styles.

Orthogonal cultural identification theory argues that identification with any one culture is essentially independent of identification with any other culture (64). When assessing identification with two salient cultures then, it is often meaningful to distinguish between people who are more strongly identified with their ethnic minority culture (enculturation – Yup’ik), more strongly identified with the dominant ethnic majority culture in the U.S. (acculturation – Kass’aq), strongly identified with both cultures (bicultural), and weakly identified with both cultures (anomic). Accordingly, the measures of cultural identification in this survey consisted of two separate items. One item assessed level of Kass’aq (white) identification, or acculturation, by asking each participant, “How much do you follow the White American (Kass’aq) way of life?” A second item assessed level of Yup’ik identification, or enculturation, by asking each participant, “How much do you follow the traditional Yup’ik way of life?” Participants responded to each of these two items on a 3-point scale (1 = not at all, 2 = some, 3 = a lot). Thus, higher numbers reflected greater cultural identification.

We assessed perceived stress with the extensively validated global measure of perceived stress, consisting of 10 items that assess the extent to which people experienced difficult or challenging situations in their lives in the last month (e.g., “In the last month, how often have you felt nervous or ‘stressed’? In the last month, how often have you found that you could not cope with all the things that you had to do?”) (65, 66). Responses to each item were given on a 3-point scale (1 = never, 2 = sometimes, 3 = often). Each participant was assigned a perceived stress score (calculated as the average of responses across all items), and higher numbers reflected higher perceived stress.

The measure of happiness consisted of a single item in which participants were asked to “consider how your life is currently going, and indicate how happy you are with your life.” Responses were given on a 4-point scale (1 = very unhappy, 2 = fairly unhappy, 3 = fairly happy, 4 = very happy), such that higher numbers reflected greater self-reported happiness. Single-item measures of subjective well-being such as this have been shown to exhibit adequate reliability across cultures, and tend to correlate with other measures of emotional well-being and positive psychological functioning (67).

Finally, the survey assessed coping styles with a number of items adapted from the COPE scale (68), in which participants are asked to indicate the frequency with which they attempt to cope with stress using specific behaviors. In this article, we report the results from items assessing three distinct coping styles: four items assessed active coping (e.g., “I do what has to be done, one step at a time”), two items assessed coping with religion or spirituality (e.g., “I try to find comfort in my religion or spiritual beliefs”), and two items assessed coping with drugs or alcohol (e.g., “I use alcohol or other drugs to make myself feel better”). Responses to each of the
items were given on a 3-point scale (1 = never, 2 = sometimes, 3 = often). Participants were assigned a score for each of the three coping styles (calculated as the average of their responses across all items for a given style), and higher numbers reflected more frequent coping attempts of the given style.

RESULTS

Before reporting the central findings on the relationships between cultural identification and perceived stress, happiness, and coping styles, we present a general descriptive overview of these variables, including relationships with age and gender. The means for all variables, overall and by gender, are presented in Table I.

Overall, participants reported a relatively strong level of Yup’ik identification and a moderate level of Kass’aq identification. A t test comparing responses within subjects indicated that participants were more strongly identified with the Yup’ik way of life (mean=2.43) than with the Kass’aq way of life (mean=2.11), \( t(486)=67.35, p<0.001 \). Women tended to identify with the Kass’aq way of life (mean=2.05) less than men (mean=2.18), \( t(485)=2.78, p<0.01 \). Additionally, older participants expressed stronger Yup’ik cultural identification, \( r(485)=0.24, p<0.001 \), and weaker Kass’aq cultural identification, \( r(485)=-0.18, p<0.001 \).

Participants reported a moderate level of perceived stress overall. Women tended to report experiencing more stress (mean=1.94) than men (mean=1.82), \( t(486)=3.52, p<0.001 \). Perceived stress was uncorrelated with age.

The overall mean for the happiness item indicates that participants were at least moderately happy on average. Self-reported happiness was unrelated to either gender or age.

Participants reported using active coping and religion and spirituality fairly often, and drugs and alcohol fairly rarely. Men reported using drugs and alcohol more to cope with stress (mean=1.46) than did women (mean=1.22), \( t(486)=5.30, p<0.001 \); and women reported using religion and spirituality more to cope with stress (mean=2.50) than did men (mean=2.25), \( t(486)=5.10, p<0.001 \).

### Table I. Means for cultural identification, perceived stress, happiness, and coping styles by gender.

|                      | Overall (n=488) | Women (n=284) | Men (n=204) |
|----------------------|-----------------|---------------|-------------|
| Yup’ik cultural identification | 2.43            | 2.42 a        | 2.44 a      |
| Kass’aq (White) cultural identification | 2.11            | 2.05 a        | 2.18 b      |
| Happiness            | 3.25            | 3.23 a        | 3.26 a      |
| Perceived stress     | 1.89            | 1.94 a        | 1.82 b      |
| Active coping        | 2.33            | 2.35 a        | 2.29 a      |
| Coping with religion and spirituality | 2.39            | 2.50 a        | 2.25 b      |
| Coping with drugs and alcohol | 1.32            | 1.22 a        | 1.46 b      |

Note: Items assessing cultural identification utilized a 3-point scale (1 = not at all, 2 = somewhat, 3 = a lot); items assessing perceived stress utilized a 3-point scale (1 = never, 2 = sometimes, 3 = often); happiness was assessed on a 4-point scale (1 = very unhappy, 2 = fairly unhappy, 3 = fairly happy, 4 = very happy); items assessing coping styles utilized a 3-point scale (1 = never, 2 = sometimes, 3 = often). Means within a given row with different subscripts differ at \( p<.001 \).
Older participants reported using religion and spirituality more to cope with stress than did younger participants, $r(485)=0.34$, $p<0.001$; and using drugs and alcohol less than did younger participants, $r(485)=-0.21$, $p<0.001$.

### Cultural identification and perceived stress

In order to examine the relationships between cultural identification and perceived stress, we conducted a multiple regression analysis in which perceived stress scores were regressed on Yup’ik identity scores (mean-deviated), Kass’aq identity scores (mean-deviated), the interaction between Yup’ik and Kass’aq identity, age, and gender (contrast-coded). This basic model is often utilized in investigations of orthogonal cultural identification theory (62), as it enables one to examine the independent and interactive effects of both identity variables. Age and gender were included as predictor variables in order to isolate the unique effects of cultural identity. We follow this same statistical procedure for all subsequent data analyses. Results indicated that stronger Kass’aq identification was associated with greater perceived stress, $Beta=0.13$, $t=2.74$, $p<0.01$. The model also predicted significantly higher perceived stress scores for women than for men, $Beta=-0.16$, $t=-3.52$, $p<0.001$. None of the other effects were significant.

### Cultural identification and happiness

To examine relationships between cultural identification and happiness, a multiple regression analysis was again conducted, in which happiness scores were regressed on Yup’ik identity scores (mean-deviated), Kass’aq identity scores (mean-deviated), the interaction between Yup’ik and Kass’aq identity, age, and gender (contrast-coded). Stronger Yup’ik identity was associated with greater happiness, $Beta=0.19$, $t=4.10$, $p<0.001$. None of the remaining predictors were significant.

### Cultural identification and coping styles

To examine relationships between cultural identification and coping styles, a series of three separate multiple regressions were conducted in which (1) active coping scores, (2) coping with religion and spirituality scores, and (3) coping with drugs and alcohol scores were each regressed, in turn, on Yup’ik identity scores (mean-deviated), Kass’aq identity scores (mean-deviated), the interaction between Yup’ik and Kass’aq identity, age, and gender (contrast-coded).

More active coping was associated with a stronger Yup’ik identity, $Beta=0.15$, $t=3.24$, $p<0.001$; a stronger Kass’aq identity, $Beta=0.14$, $t=2.98$, $p<0.01$; and with men more than women, $Beta=-0.09$, $t=2.00$, $p<0.05$. More coping with religious and spiritual practices was associated with a stronger Yup’ik identity, $Beta=0.14$, $t=3.29$, $p<0.001$; older respondents, $Beta=0.32$, $t=7.47$, $p<0.001$; and women more than men, $Beta=-0.23$, $t=-5.60$, $p<0.001$. Finally, more coping with drugs and alcohol was associated with a stronger Kass’aq identity, $Beta=0.10$, $t=2.14$, $p<0.05$; younger respondents, $Beta=-0.19$, $t=-4.31$, $p<0.001$; and men more than women, $Beta=0.23$, $t=5.30$, $p<0.001$. None of the other predictors in any of the three models were reliable.
DISCUSSION

The aim of this article was to report on the nature of the relationships between cultural identity and stress and coping in Yup'ik communities. In our previous research, participants from a broad age range and geographic distribution within the Yukon-Kuskokwim Delta have consistently emphasized that traditional values are a source of wellness, cultural changes have often had a negative impact on health, and connecting with the community and the wilderness helps to both heal and sustain a sense of well-being (8). Data from the current survey research enhances the generalizability of these findings. Results indicated that a more acculturated identity tended to co-occur with a fairly distinct psychological and behavioral profile from that of a more enculturated identity. To review, participants who reported living more of the Kass’aq way of life (greater acculturation) reported experiencing greater psychosocial stress and greater use of drugs and alcohol to cope with stress. In contrast, participants who reported identifying more with the traditional Yup’ik way of life reported greater happiness, using religion and spirituality more to cope with stress, and using drugs and alcohol less to cope with stress. Importantly, these effects were reliable when controlling for respondents’ age and gender.

The link between cultural change and negative health outcomes evidenced by participants in this study adds to a growing body of research linking anomic, deculturation, and forced acculturation with physical, mental, and behavioral health problems (11-26). Interpreted in conjunction with our qualitative work in the region (48), it appears that these aversive consequences of acculturation are, in part, a function of the loss of cultural meaning and the absence of viable socio-economic opportunities. As one research participant quoted in the introduction of this article reports, “For our life that is pretty much like in between a rock and hard place”. Indeed, many Yup’ik individuals in the Y-K Delta can neither fully engage in the traditional lifestyle nor can they fully enter into modern wage-earning society (without abandoning their homeland). Our findings suggest that this cultural identity shift may be more problematic for men than for women. Relative to women, men reported living the Kass’aq lifestyle more and using drugs and alcohol more to cope with stress. Exploring the paths from acculturative stress to such destructive coping is a critical task for future research.

Results reported here also clearly indicate that enculturation may have positive mental and behavioral health benefits in this population. This is an important and unique finding, as there has been very limited empirical research examining the extent to which enculturation serves as an effective coping strategy or explaining the processes by which it may do so. We are currently in the midst of evaluating research conducted with a more refined measure of enculturation. The objective is to document the various components of the traditional Yup’ik lifestyle that most facilitate physical and psychological health in the face of profound cultural change. This more intimate understanding of the protective factors inherent in
the Yup’ik lifestyle will then most effectively inform appropriate decisions about interventions and health policies. We anticipate that the Yup’ik emphasis on cultivating harmonious relationships may be a primary mechanism by which many health benefits occur—particularly given what we know about the ubiquitous effects of social support (69-71). A guiding principle of our future intervention work is that research may best inform positive transformations in community health by de-emphasizing the disease and deficit model and moving toward the affirmation of peoples’ intrinsic strengths.

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