ABSTRACT

Valuable functioning, an empowered quality of life evident in Alaska Native communities, is influenced at least in part by a harvest-food based lifestyle dependent on fish, game and plants procured by the consumer. Elders play important roles in the transmission of knowledge and skills necessary for continuation of food harvesting customs, and through this process, Elders feel valued and obtain quality of life. This paper examines how Elders view their roles. Data for this paper come from several sources: narrative data from twenty Voices of Our Elders Conferences sponsored by the National Resource Center for American Indian, Alaska Native and Native Hawaiian Elders at the University of Alaska Anchorage held in 2004-2006, quantitative data from our Inupiaq Elders Study (2004-2006) and observations with Elders from the Healthy Moms Study (2001). In addition, field work observations by the authors are included. Similarities of Voices of Our Elders narrative data lead the authors to propose that harvested food-based communities have similar food cultural experiences even though land, location, language and tribal entities are different. The proposed model of food culture illustrates eight key constructs: traditional Native foods are central and appear to be predicated on continued use, access and participation in the procurement. The communities’ continued inclusion of Elders is viewed as an indication of the respectful status for Elders, and links villages to experiences of the past and provides a vehicle for the Elder’s achievement of valuable functioning, a component of quality-of-life.

(241 words)

Key words: Alaska Native older adults, Elders, valuable functioning, diet, food sharing networks, food culture
AUTHORS

(1) RD, PhD. Research Associate at the Institute for Circumpolar Health Studies at the University of Alaska Anchorage, Anchorage, AK 99508, and was a PhD candidate at Florida International University in Miami, FL at the time of the study. Currently at Bureau of Nutrition Programs, Florida Department of Health, 3101 Maguire Blvd, #100, Orlando, FL 32803. Email at: Janell.Smith@hotmail.com.

(2) PhD, MPH, Professor Emerita, Department of Dietetics and Nutrition, Stempel School of Public Health, Florida International University, Miami, FL 33199; Currently at 2701 Pickett Road, Suite 2028, Raleigh, North Carolina 27705. Email: peaston@nc.rr.com.

(3) PhD, MPH, University of Alaska Anchorage, Anchorage, AK 99508. Currently at 907.258.1176. Email at: BSaylor@gci.net.

(4) PhD, Associate Professor, Department of Sociology and Anthropology, Florida International University, Miami FL 33199. Email: Dennis.Wiedman@fiu.edu.

(5) MA, Research Associate, National Resource Center for American Indian, Alaska Native and Native Hawaiian Elders, College of Health and Social Welfare, University of Alaska Anchorage, 3221 Providence Drive, PSB 207, Anchorage, AK 99508. Email at: afjwl@uaa.alaska.edu.
The role of Elders in continuing the harvested food culture found in Alaska Native communities is explored in this paper through an examination of aspects of traditional food beyond nutrient intake. “Aging” is a biocultural phenomenon, not simply a biological process, and thus, it is important to document observed habits to potentially understand the progression of aging within the context of a Native community.

Included in this essay is a reexamination the testimony gathered at the *Voices of Our Elders Conferences* for the purpose of presenting a broad overview of food issues that affect Alaska Tribes. These conferences heightened our understanding of the similarities between the groups as their comments revealed the importance of harvested foods in their lives. Using quantitative data collected by the authors, we link contributions of harvested food to quality-of-life and the achievement of a sense of well-being by the Elders, or what we are calling achievement of “valuable functioning.”

There is always the possibility that the authors have oversimplified or misunderstood the broad nature of the Elders’ comments. This paper in no way attempts to minimize the importance of cultural differences and the benefits of the diverse diets of Alaska Tribes. It was our goal to use comments of Native Elders to increase our understanding of harvested food customs and the relationship to quality of life as Native Elders age. Consistently in the *Voices of Our Elders Conferences* testimony from both rural and urban locations, the Elders wanted greater access to harvested Native foods, and reported that they did not feel as well when they did not have it. Universally across Tribal groups was the sense of purpose (and thus well-being) that came when the Elders were involved not only in the act of eating a piece of fish, but also in the planning prior to harvest, the actual harvest, as well as in the processing and distribution of the harvest.
The issue of the importance of harvested foods to the lives of Elders is not a new issue for Alaska Native communities. Pioneering work by Dr. Kerry Feldman with students in the late 1970s, documented Elders’ desire for harvested foods when they moved away from their rural village to urban locations such as Anchorage\(^1\). From this initial study, fresh Alaska salmon prepared in traditional ways\(^2\) was added to the menus served in the Anchorage congregate meal program to Native senior citizens.

Roughly speaking, there are 15,600 older Native individuals over the age of 55\(^3\) that identify themselves with one of the 229 federally recognized Alaska Native Tribes (US 2000 Census). Approximately 10,500 Native Elders live in Alaska’s rural communities.

**METHODS**

**Description of Data Sources**

The compilation of data describing food culture forms the foundation of this paper. The primary sources are narrative data from testimony given by over 600 attendees at the 20 *Voices of Our Elders* conferences of Elders sponsored by the National Resource Center for American Indian, Alaska Native and Native Hawaiian Elders (NRC) at the University of Alaska Anchorage. Meetings from one to five days were held during 2004-2006 in

\(^1\) The research project was funded by the National Science Foundation Student Originated Studies Program, and received an award for the best project NSF funded that year.

\(^2\) Currently, USDA does not allow harvested meats to be served in funded food support programs for the elderly without passing federal meat inspection. Work is on-going to permit inspection of locally harvested meats by Alaska Native tribes to serve in Native elderly feeding programs (Title VI programs) which would be less expensive, lower in fat, and a higher quality meat than purchased beef or chicken that requires continuous frozen transport that is frequently a problem to remote, isolated Alaskan communities.

\(^3\) Considerable discussion was presented at the *Voices of Our Elders* conferences on who were “Elders” and who to include in the “elderly” classification. Being “elderly” to them was not a chronological phenomenon as often found in western culture (Social Security comes after 65, because of the 73 years of life expectancy for Caucasian populations), but was based in part on general trends of declining physical and mental functioning ability. Age 55 is commonly used by the US Government for determining services for older individuals in the general US population, and age 50 for American Indian, Alaskan Natives and Native Hawaiians.
Anchorage, Angoon, Barrow, Bethel, Buckland, Dillingham, Fairbanks, Juneau, Kodiak, Kotlik, Kotzebue, Metlakatla, Napaskiak, New Stuyahok, Nome, Nuiqsut, Old Harbor, St. Paul Island, Unalaska, and Wainwright. Meetings were structured to allow for casual discussions among older Native individuals selected by their communities to converse on issues deemed important by the attendees.

Comments gathered at the *Voices of Our Elders Conferences* are supplemented with data from several studies, observations, and field notes by the authors from their work in Alaska communities. These sources included the quantitative Inupiaq Elders survey (2004-2006), and the WIC Healthy Moms Study (Rody 2002, Smith\textsuperscript{a} n.d.). Specifically included are Smith’s field notes from her work in Unalaska and the State of Alaska WIC\textsuperscript{4} program, and the University of Alaska Anchorage Institute for Circumpolar Health Studies; Easton’s field notes from her work as one of the first territorial dietitians from 1948-1950, and her involvement in four research projects with Smith during 1996, 2001, 2004 and 2005. LaBelles’ notes result from his upbringing in rural northwestern Alaska, attendance at boarding schools for Native children, his many years work as a leader and administrator for Native organizations and Alaska State government, and most recently as a key staff member at the NRC. Wiedman, an anthropologist, observed and participated in the food related activities that were occurring during the visits to four villages participating in the WIC Healthy Moms Study during the summer of 2001.

Dr. Graves in her initial analyses of the *Voices of Our Elders conferences* (2005) noted the strong similarities of comments concerning many issues, even though testimony came from 20 different locations representing Native groups from geographical dispersed

\textsuperscript{4} WIC is the acronym for the USDA Special Supplemental Nutrition Program for Women, Infants and Children that provides food and nutrition information to pregnant women, infants and children.
and unique cultural backgrounds. Dr. Graves focused on how communities (and community systems) support Elders and thus how they show respect to Elders.

**Definition of Elders**

 Older individuals from Native communities are referred to in this essay as “Elders”, appropriately used by predominately younger, non-Native researchers from outside the Native communities as an indication of respect. However, it appears that within Native communities, the term “Elder” usually denotes individuals identified as community leaders and role models, compared to “elderly” that simply indicates aging individuals (Graves and Shillings, 2005).

 The Inupiaq Elders Study compared Inupiaq individuals living in urban and rural communities. To ensure sufficient sample sizes to make valid conclusions, the Inupiaq Elders Study included individuals 50 years and older. This demarcation is consistent with the use of 50 years of age to be eligible for the Title VI food programs for Native individuals.

**Definition of Subsistence**

 “Subsistence” is used in this paper to describe the hunting, fishing and gathering of foods on Native lands and at traditional sites. LaBelle noted that subsistence is essentially a western term to describe the harvesting of traditional Native foods. Many indigenous groups in Alaska have their own words, or value concepts, to describe that the activity of harvesting foods. In some cases, there are variations of the term within cultural groups. It should be noted that the quantitative data collection was in Inupiaq villages, and concepts may differ if similar data were collected in other indigenous communities. Where ever possible the authors
have used the terms “harvested food culture or harvested food traditions” instead of the word “subsistence.”

**Theoretical Framework**

Within a theoretical framework, the authors’ examined narrative and quantitative data to increase the understanding of Elders’ views which rate the acts of participation in harvested food activities as vital to their personal fulfillment, and thus their achievement of quality-of-life. The authors acknowledge the contribution of Sen (1993) in the use of the term “value functioning” to provide a theoretical explanation on the achievement of capacity. The broader perspective builds upon the earlier of Claude Levi- Strauss from his writings in *The Raw and the Cooked* (1969) [1964]. MacClancy and Macbeth (2004:5-6) similarly characterized food as both “nature” and “culture.” They describe food as important both “physically and socially, we consume it and make it part of ourselves.”

**Data Collection**

Methodology for the collection of the narrative data from the NRC “*Voices of Our Elders*” Conferences has been previously published by Graves and Shavings (2005) in their examination of other key topics. Elders’ testimony refer to consuming traditionally harvested foods, even though, the respondents may not be currently living that lifestyle.

Quantitative data were collected during the summers of 2004-2006 in Buckland, Deering and Anchorage. Responses from urban Elders, although many were not actively participating in the harvest lifestyle, were used as a comparison sample.
Protection of Subject Rights

All research protocols received Institutional Review Board (IRB) reviews by the University of Alaska Anchorage and Florida International University, as well as a courtesy review by the Alaska Region Indian Health Service IRB.

All data were collected consistent with the guidelines presented in “Ethical Principles for Conduct of Research in the North” by the National Science Foundation (1982), and the “Policy of Research Ethics” published by the Alaska Federation of Natives (2004). To that end, the study was designed to accommodate as much community participation by the Elders as possible, and to foster a productive partnership between the Native Elders and the researchers. Tribal Elders’ Councils invited the NRC to hold a Voices of Our Elders conference, and all community Elders were invited to attend. The Elders received no compensation for the sharing of their thoughts and wisdom, although a contribution was made to the local Tribal Council by the NRC. Tribal Councils distributed small stipends to Elders who contributed in the quantitative survey.

Conceptual Model

The conceptual model of the harvested food culture in rural Alaska is designed to include common aspects of Native life that describes influencing factors on the achievement of valuable functioning by the Elders contributed by or through participation in food harvest and consumption. The conceptual model illustrates the presence and relationships of eight constructs (Figure 1) that were repeated in various communities in various ways in the narrative data. The presentation of the constructs within circles is a creation of the authors for the purpose of this paper, and for the understanding of the importance of harvested food in
the aging process among Alaskan Elders. Although Kawagley (1995) indicated that the circle within a circle is a traditional theme among many Alaska Native groups, our model uses overlapping circles showing that relationships between constructs are neither linear, nor hierarchical, but have intertwined interconnections which appear to be of equal importance.
Figure 1. Conceptual Model of the Food Culture of Alaskan Native Elders.

Harvest-Based Food Culture of Alaska Native Elders

- Vehicle to Convey Tribal History, Culture, Myths, Stories, Healing and Language
- Connection to the Land
- Connection to Family and Community
- Participation in Traditional Food Activities Provide Day-to-Day Structure
- Food Security
- Positive Perspective on Life
- Respect for Sources of Food – both Animal and Plants
- Nourishment as a Recipient of Traditional Native Food Sharing
- Connection to Family and Community
DESCRIPTION OF THE SPECIFIC CONSTRUCTS

The remainder of the paper presents observations and other data which explain each construct. To emphasize the relationship of specific information of the eight constructs, each constructs characterizes related topics.

**Food is a Vehicle to Convey Tribal History, Culture, Myths, Stories, Healing and Language**

Narrative data indicated that traditional harvested food is a conduit to transmit and convey food culture. Testimonies from the Elders indicated that though the discussion of food and the participation in the harvesting process, that much of the strength of the culture, myth, stories, healing and language is retained.

Elders in Atka, a community in the Aleutian Islands, felt that they were losing their traditions after many of their Elders died during the internment during WWII. They recruited a traditional dancer from islands off the coast of Russia who spoke a similar Aleut dialect. She was able to talk with non-English speaking Atka Elders about dances of their childhood. Guided by the arthritic hands of the few remaining Elders, the contractor was also able to follow Elders’ instructions in order to train young women on how to prepare and sew with walrus and seal skins. Harvesting of sea mammals is heavily regulated in the Aleutian Island unlike other areas of the State, thus special permission was necessary to allow the villagers to obtain the furs from other Alaskan communities to construct the dancers’ costumes (Smith field notes, 1992-1994).

In many communities, Elders have preserved traditional food history, songs and dances, often in secrecy to circumvent outside efforts to eliminate them from their culture.
After visiting a regional dance festival in Northwestern Alaska, we inquired if the village sponsored a youth dance group. An Elder told us that dancing had been prohibited by early religious groups, especially a dance where a “man turned into a bird” (Smith field notes, July 2004). It was interesting to note that even though decisions had been made years ago not to perform the bird dance, individuals in the community still knew the dance, and the Elders continued to keep the topic in discussion.

In another village in Southwestern Alaska, Elders were essential in re-introducing dancing after many years of discussion. Through the years, Elders of the community had secretly videotaped older Elders performing traditional and family dances before they died, and are using these tapes to train the current troupe of youth dancers (Smith field notes, December 2003).

Similar to the problems of retaining the dances, the effect of years of western teachings of school teachers, boarding schools, missionary and health workers emphasized the foods and eating styles of the lower-48 western society (Easton field notes, 1948-1950). Today’s Elders were children during these years and remember the difficulties of retaining their food customs, such as use of traditional greens and rosehips. Native people have adapted the changes in food supplies and circumstances into their customs. For example, US Army surplus supplies given to food programs following World War II included powered milk and pilot crackers (Easton field notes, 1948-1950). Aleut seal harvesters were paid in cans of corned beef to harvest seals following the United States purchase of Alaska from Russia in the late nineteenth century. Vestiges of the addition of corned beef as a food staple are still found at community potlucks in the Aleutian Islands in the form of corned beef soup which locals call “Aleut Soup” (Smith field notes, 1994-1996).
Testimony given at the NRC *Voices of Our Elders* Conferences support the importance of gathering and sharing food, and their contribution to the fulfillment of life among Native Elders. One 74 years old speaker described how she was raised by her grandmother in a village located on the riverine plains of southwest Alaska. She said,

*We never stayed still. There used to be lots of fish in those days. My grandmother in the fall would make salted fish in the barrels, then the fish eggs, and they would get mousefood⁵ in the fall. They started traveling, and [carried with them] mousefood, berries. They used to take fish that was salted with the mousefood, and it was very good. A lot of rabbits down there where she was at. She watched them, that’s why she knows them. They never used to waste foods. So they did things really well. They used to make tundra greens after they had been working, rowing, drying fish, and make braided mats and baskets, and make containers, and make string and make kinda a thread out of it, and thread from discarded pants – jeans, and then make little nets. They never stayed still, they always were ice fishing. They never stayed still, being outdoors. Again, not staying idle at all. She didn’t know how big she was, when they used to go to Kwethluk, a place of [on] the River. She would see this little old woman at the end of her life, watching her. That’s the one that had reached the end of their life, a little small old lady, a person who has reached the end of her life. She was happy. I am happy because I do these things.*

Across Alaska, Elders are being called upon to revitalize local Native languages as teachers in the village schools. Elders are also encouraging that public meetings be held in traditional languages. In 1990, the Northwest Alaska Native Association formalized these efforts and described their goals as seeking “to assert and validate Inupiaq identity, [to] reactivate and preserve Inupiaq skills, and solve social problems by using traditional wisdom that is part of the essential heritage of the Inupiat.”

---

⁵ Mousefood are grains gathered by a mouse and buried in shallow tunnels that sprout in the fall or spring rains. The tender green sprouts are often one of the first fresh foods available. Mousefood is eaten much like one would eat a small salad or fresh greens. Tradition dictates that the sprouted grains be replaced with a piece of food to thank the mouse for his work – we were told it was frequently dried salmon.
Results from out Inupiaq Elders Study indicated that most of the Elders spoke English. Twenty-four percent of the 101 Elders reported that they spoke both English and Inupiaq, and a small number indicating that Inupiaq was their primary language. Elders described being punished for speaking in their Native languages when being sent to boarding schools. Today, the village schools have Native days where Elders share myths and stories with the children, and even teach traditional skills, language and culture classes.

The qualitative data presented above provide insight regarding the meaning of “valuable functioning” held by Inupiaq Elders. Elders must be able to fulfill perceived roles as leaders and mentors in order to achieve valuable functioning. While communities make distinctions between those who are old and those who are revered Elders, qualitative data showed that older individuals in general anticipate respect from family and from younger members of the community. Graves and Shaving (2005) describe the Elders’ view of respect in greater detail.

Data from the NRC Voices of Our Elders Conferences showed that Elders expected themselves to be role models and leaders. Achieving the status of Elder could be considered an indicator of also achieving valuable functioning. The Elders expressed that they were trained to exemplify traditional cultural values and proper community behavior. With their wisdom, the Elders’ saw their role as individuals capable of and responsible for helping their communities anticipate and find resolution to problems. The processes of securing and processing food provided the opportunities by which cultural values could be observed by others; and through observations, the community would learn. Elders expressed that through transmitting the knowledge they had been given by their own Elders, the continuity of the community was assured.
Harvested Foods Provide Connection to the Land

In the keynote speech at the 1980 Alaska Federation of Natives annual meeting, Willie Hensley spoke about the Inupiaq relationship with and the importance of Inupiaq lands. He said, “We fought for the land because it represents the spirit of our people, because it represents an intimate knowledge of the environment our people grew up with for ten thousand years…. Our fight for land was a fight for [our] survival…. We cannot look to corporate or political life to fill the void of a century of psychological repression…. A renaissance of our language and culture will give us the basis for the renewal of our people” (as reported in NUNA, the official newspaper published by Maniilaq Regional Corporation).

In the NRC Voices of Our Elders Conferences, testimony from Elders across the state of Alaska reported that when Elders are sent to locations away from the village and traditional lands, the Elders are without family, and thus are without their traditional foods:

*When they relocated our Elders – 3 died, “They willed themselves to die”*

*“When Elders go to the regional senior center, they’re life shortens because they are not with their people”*

*“When elders are sent out, they miss their food… the elders miss having family around”*

The perceptions of the value of moving rural Elders to urban communities have varying proponents. To the Elder, the move is an undesirable separation from their home community and traditional lands, away from family, away from traditional foods, and removes them from participating in seasonal activities which is the focus of their life in the village. To the western medical community, the move from rural villages to urban
communities offers increased access to medical care. This access is often viewed as a positive atmosphere to prolong life. The Elders contend that the western belief lacks broad understanding of the importance of the benefits Elders perceive in being in their home communities.

Despite their age, Elders want to continue to go to be in the locations of summer camp and in the places of the activities that they are familiar. “Going to Camp” involves returning to the physical geographical places that the family had lived and had hunted for generations. Inupiaq Elders described hunting caribou along the same mountain trails today as when their grandfathers took them hunting 60 or 70 years earlier. “The caribou comes down that trail and I sit on this side of the trail behind the rocks so they can’t see”. Camps as a harvest technique focused considerable person-hours during a short period of time to secure food that would be used over many months, or for the year. From a larger perspective, camps also gave younger individuals and children time with grandparents and extended family to hear stories and to learn values by example.

In the WIC Healthy Moms Study (Rody 2002) participants were asked to estimate how much time they spent at “camp” each year. Their responses indicated that with faster boats, snow-machines and four-wheelers, that travel back-and-forth to camp from the village has resulted in fewer long stays at camp.

One Inupiaq man told us that he still remembered the exact location where he first saw his wife-to-be as she picked greens. He had missed a caribou and was tracking it down near her village. He told us that the caribou had “found” his wife (Smith field notes, 2005).
Harvested Foods Provide Connection to Family and Community

Elders emphasize the importance of family and community support by their active encouragement to maintain strong family ties and value for the extended family. Notes from the 1978 Puiguithaat ("meaning Wise Council") Elders Conference, sponsored by the North Slope Borough as published in NUNA\(^6\) in 1980, defined the importance of participation in the community to maintaining good mental health. Elders reported that they wanted "to be close to family," and to have "community support."

Continued immersion in family relationships and community roles is vital to the well being of rural elders. Over their lifetime they build complex social webs that continue to engage them in family and community decisions (Smith and Wiedman 2000). Not only does the status of “Elder” bring responsibilities, but also the traditional kinship patterns and food production lifestyles in each village delegate specific roles for them to fulfill. These roles are particularly powerful positions in everyday activities when access to resources is concerned. Roles pertaining to food procurement, processing, storage and distribution place them in influential and authoritative positions as compared to elders in the urban setting where traditional activities are much more limited.

Conversations with Elders at the NRC Voices of Our Elders Conferences provided their perspective that community support are provided to Native Elders out of respect, seemingly independent of the physical abilities of the Elders. The difference between providing services “out of respect” and “out of need” may be subtle, and the differentiation hard to describe. One of the primary examples of community support is gifts of raw and

---

\(^6\) NUNA is the local newsletter published by the Maniilaq Association in Kotzebue, Alaska. The word “NUNA” means “of the land” in the Inupiaq language.
prepared food. Other community support included walking to the store to purchase groceries or to pick up mail, giving Elders rides to community events, washing dishes, sweeping snow from walkways, and delivering water or firewood to the Elders’ homes. Similar comments were obtained from both rural and urban participants.

The Elders in a Tlingit fishing community in Southeast Alaska expressed that harvest quotas should allow for celebrations in order to honor deceased loved ones, as well as provide sufficient quantities for visiting children and grandchildren. Often these grandchildren and great grandchildren will spend summers with grandparents, depleting the traditional foods when they want to take some of their heritage back to their homes in bigger "urban" communities such as Juneau, Fairbanks or Anchorage. One Elder told the survey team, "Two halibuts do not feed many grandchildren" (Smith field notes, 2001.).

Cultural values are mirrored in the practices and behaviors that shape community interaction with the older adult, and through these activities the identity of the Elder is defined. Native Elders associate the manifestation of these cultural values as “respect.” When Graves and Shavings (2005) analyzed the data from the NRC Voices of the Elders Conferences, they concluded that the ability to share wisdom is seen as the primary role of the Elder in Native communities. Elder speakers indicated that access to their children and grandchildren was important, in that the Elders felt that they had a responsibility to share their wisdom:

*When he looks at his grandchildren, his great grandchildren, he feels “normal” when they come to see him....*

*My husband needs to leave to get [medical] care... at the same time he wants to help his whaling crew get ready for the upcoming whaling season*
Data from the Inupiaq Elders Study indicated that as a member of extended families, only 17.8% of the rural Elders surveyed reported that they frequently ate alone versus 22% of urban Elders. The number of individuals living in rural households ranged from 1-15, and a mean of $3.63 \pm 2.69$ compared to somewhat smaller urban households with a range of 1-9 people, and a mean of $2.94 \pm 1.94$.

Elders Councils are commonly found in rural Native Communities. Elders’ Councils were found in all of the ten villages where our teams collected data, and we received reports that they met on a regular basis. Elders also serve on village government boards in both participating and honorary positions. In one village, our research team was invited to attend an Elders’ Council meeting during our stay, although, only our senior research member (age 83) was the only one of our group asked to sit at the main table. The principal topic for discussion that day was planning activities for the youth during the summer.

**Value of Community Life**

In order to quantify the values of community life as part of the Inupiaq Elders’ Study (Smith n.d.), survey questions were included to illustrate the mental and physical components of quality of life. The multidimensional SF-12.v2 tool (Ware 1996) provided two scores: (1) a physical component score (PCS) that is a composite score based on levels of self-perceived physical function that include the role of physical, bodily pain, and general health; and (2) a mental component score (MCS) based on self-perceived mental health, role of emotional, social function and vitality (Table 1).

Rural Elders had significantly higher scores than the national SF-12 norms for mental functioning (MCS). The normed MCS score for US populations was 49.37 (Ware 2005); the
rural score was $53.9 \pm 1.1$ (p = 0.001), and the urban score was $51.3 \pm 1.7$ (p = 0.263). Comparing groups by location, rural Elders reported higher mental health scores than the national norms, and higher scores than those reported by urban Elders (p = 0.040). Rural also reported higher social functioning scores than urban Elders, although the differences were not statistically significant.

Physical functioning component scores (PCS) were examined. Both groups reported lower scores than national SF-12 norms for physical functioning which was 49.63 (Ware 2005), although total PCS for rural Elders were slightly higher than those reported by urban Elders, 43.4 ± 1.5, and 39.1 ± 6.2, respectively. Component scores of the physical functioning scale received further examination. Comparing Inupiaq Elders by location, rural Elders reported less pain (p = 0.001) and more vitality (p = 0.007) than reported by urban Elders. All mean PCS component scores were less than the SF-12 normed scores for US populations with the exception of vitality.

[Insert Table 1]
Table I. Means and Standard Deviations of SF-12.v2 Total Mental (MCS) and Physical (PCS) Component Scores as Reported by Alaskan Inupiaq Elders Living in Rural and Urban Locations

<table>
<thead>
<tr>
<th>SF-12 Normed Scores</th>
<th>Rural n = 52</th>
<th>Urban n = 48</th>
<th>t-test between location</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Mental Component Score</td>
<td>49.4</td>
<td>53.9 ± 1.1</td>
<td>51.3 ± 1.7</td>
<td>1.36</td>
</tr>
<tr>
<td>Social Functioning</td>
<td>50.0</td>
<td>48.2 ± 11.6</td>
<td>43.7 ± 12.8</td>
<td>1.85</td>
</tr>
<tr>
<td>Role Emotional</td>
<td>50.0</td>
<td>46.4 ± 13.0</td>
<td>48.1 ± 12.9</td>
<td>-0.66</td>
</tr>
<tr>
<td>Mental Health</td>
<td>50.0</td>
<td>53.9 ± 9.5</td>
<td>49.9 ± 9.4</td>
<td><strong>2.08</strong></td>
</tr>
<tr>
<td>Total Physical Component Score</td>
<td>49.6</td>
<td>43.4 ± 1.5</td>
<td>39.1 ± 6.2</td>
<td>2.36</td>
</tr>
<tr>
<td>Physical Activity</td>
<td>50.0</td>
<td>47.4 ± 12.9</td>
<td>46.3 ± 9.7</td>
<td>0.47</td>
</tr>
<tr>
<td>Role Physical</td>
<td>50.0</td>
<td>47.1 ± 12.3</td>
<td>46.9 ± 10.6</td>
<td>0.07</td>
</tr>
<tr>
<td>Body Pain</td>
<td>50.0</td>
<td>39.8 ± 14.9</td>
<td>26.0 ± 10.4</td>
<td><strong>5.34</strong></td>
</tr>
<tr>
<td>General Health</td>
<td>50.0</td>
<td>44.7 ± 12.2</td>
<td>45.1 ± 10.8</td>
<td>-0.21</td>
</tr>
<tr>
<td>Vitality</td>
<td>50.0</td>
<td>58.8 ± 11.1</td>
<td>53.4 ± 7.7</td>
<td><strong>2.78</strong></td>
</tr>
</tbody>
</table>

Higher SF-12 scores indicate higher functioning (such as higher body pain score indicates less pain and greater ability for physical functioning.)

Bolded text indicates significant differences as indicated by p-values less than p = 0.05.

For Elders in the Inupiaq Elders Study as a whole (n = 75), participation in family activities correlated to higher SF-12.v2 physical functioning scores (rho = 0.26, p = 0.023), and higher SF-12.v2 mental functioning scores (rho = 0.24, p = 0.040) (Table 2).

Relationships between participation in community activities were strong for SF-12.v2 mental functioning, but only approached significance.
Table 2. Spearman’s rho Correlations among Measures of Functioning as Reported by Combined Rural and Urban Alaskan Inupiaq Elders (n = 75)

<table>
<thead>
<tr>
<th>Community support variables</th>
<th>SF-12.v2 Physical Functioning Component Summary Score (PCS)</th>
<th>SF-12.v2 Mental Functioning Component Summary Score (MCS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation in Family Activities</td>
<td>rho 0.26 0.023</td>
<td>rho 0.24 0.040</td>
</tr>
<tr>
<td>Participation in Community Activities</td>
<td>rho 0.13 0.260</td>
<td>rho 0.20 0.085</td>
</tr>
</tbody>
</table>

Bolded text indicates significant relationships as indicated by p-values less than p = 0.05.

The authors propose that when Elders are able to fulfill their anticipated and expected role, the Elder has achieved valuable functioning. The traditional harvested food lifestyle allows Elders to maintain valued roles to provide guidance and support for young families. The authors suggest that the continued community involvement appears to make significant contributions to the mental and physical health of Inupiaq Elders. It is possible that the ability of Inupiaq Elders to continue in advisory and supportive roles may be at the heart of defining valuable functioning for the Elders. Elder speakers at the NRC *Voices of the Elders* Conferences said,

*I listen to my father and my grandfather. They tell me how to approach the game, how to hunt, watch the weather, watch*
Participation in Traditional Food Activities

Elders remain at the core of the harvest process (in the planning, timing and supplying of hunting equipment and tools), even though younger community members may perform the actual harvest work. Elders frequently provide cash for the purchase of fuel and ammunition that younger hunters need to secure the harvest and this allows the Elders to have their allotment of fish and game. Many Elders expressed concerns surrounding the loss of the Alaska Longevity Bonus in 2004, and wondered how their role would change in the future because of diminished ability to fund the harvest activities of young hunter.

At a *Nalukataq*, (whale festival) in a large coastal Inupiaq village during the early summer of 2004, we watched as Elders directed the distribution of whale meat, making decisions as to the individuals who were to receive the choice cuts and how many cuts were given at each round of giving. In talking with Elders through out the week during the

---

7 The Longevity Bonus was paid to individuals over the age of 60 years old by the State of Alaska and was abruptly ended in the spring of 2003. Each Elder received $250 per month.
preparation for the festival, we learned that within the privacy of family groups, Elder men had instructed and encouraged the preparation of the hunting crews. Elder women oversaw the routine cleaning of the younger women’s homes and freezers while the hunt was in progress to prepare for the whale’s arrival, as one would prepare for the arrival of a guest in their home. Between the harvest and the festival, Elders directed the care and treatment of the meat and the preparation of the other special foods and gifts to be given away at the event.

Without exception, when we talked with Elders about changes in their food resources that they have observed over the years, they expressed concern over the changes in the system of obtaining food. Their conversations and comments showed a group focused on problems concerned with the declining access to Native foods. To Elders, retaining their lifestyles and their food customs were of the highest priority. The Elders expressed that the disappearance of traditional food customs and related practices and beliefs has been caused by a loss of knowledge of food preparation, loss of hunting and fishing sites, and insufficient quotas to perpetuate food rituals involved with celebrations and the honoring of the deceased. It is their opinion that once these rituals are lost, they will be lost forever.

Although there are younger members of the communities who are learning and practice the customs, the real knowledge continues to be held by the Elders. Reinforcing the traditional methods with the application of modern technology perhaps may lessen the chipping away of their cultural heritage. For example, one Tlingit Elder worked with her son to make "Indian Chips" (dried fish skin) in a dehydrator designed for vegetables and fruit. She was able to retain the flavor of her life, utilizing her skill within her reduced physical capabilities since she can no longer stay up all night watching a fire to keep the drying process uniform.
Wiedman describes his observations of an aging couple using a variety of old and new methods in processing fish and berries for the freezer, and smoked Coho salmon for a memorial party scheduled for the fall. “He talked about the seasonality of the various types of fish and the government regulations for what can be caught and when. When asked about how they smoked the fish, she said the smokehouse belonged to her mother. She then picked up the phone and called her mother to ask if the smoke house was open for my visit. The smoke house was just a few feet from the back door, down a plant lined path. Smoke gracefully rose from the center of the roof. The close density of surrounding houses and buildings impressed upon Wiedman that this was the oldest part of the community with buildings dating back to the 1800s. With a quick introduction she left him standing there with his head in smoke between rafters of a wide assortment of fish of different sizes and colors. The hostess’s “brother” went about his task of collecting dark thin dried salmon strips the size of candles hanging from the rafters. The sunrays through the smoke-hole produced an array of colors of the fish strips. The smoked fish were a translucent white and pink to a burnt orange in the sunlight. The “brother” talked about the kinds of fish, where they were caught, who caught them, and how the colors indicated how long they were in the smoke. He mentioned that this smoke house belonged to his sister and her mother’s people. In a joking tone, he noted that he was not her brother, but married to her sister. He spoke about the types of wood burned, where they traveled to get it and how the fire in the central metal fire place was kept smoking without producing too much heat. Throughout this time, he constantly kept busy removing the cotton string from the fish strips just removed from the rafters.

These observations illustrate the continuing roles and power of elders in this four-generation extended family. Both of these elder males no longer actively fish for a cash
income, yet they were fully involved and had specific food production roles and tasks. This complex web of family and community responsibilities combined with a traditional food lifestyle maintains a range of daily and seasonal activities that may promote physical and psychological wellbeing for all ages, especially Elders (Wiedman field notes, summer 2001).

Measures of Physical Functioning

Elders’ participation in the food gathering activities is partially influenced by their level of physical functioning.

In order to measure the importance of activities of daily life and physical abilities, the survey instruments of Katz and Lawton were included in the Inupiaq Elder’s Study. The Activities of Daily Living (ADL) (Katz, et al. 1963) and instrumental activities of daily living (IADLs) (Lawton 1969) scales are widely used to evaluate levels of physical ability to perform daily self-care activities. ADLs include self-care activities such as bathing, eating, and dressing, and IADLs include more complex instrumental activities of daily living such as making meals, shopping, and cleaning. The ADLs and IADLs were developed for urban-based mainstream populations, and may not capture the activities of the rural harvesting lifestyle.

The low frequency of ADLs reported by rural and urban Inupiaq Elders were not significantly different ($X^2 = 2.32, p = 0.127$). Both groups reported a few limitations of ADLs: 10% of rural Elders had at least one ADL limitation and 20% of urban Elders did. The most frequently reported ADL identified by the total group were difficulties with walking (12%), and difficulties with bathing (9%).
Similar patterns of few IADLs were found between rural and urban Inupiaq Elders ($X^2 = 0.09, p=0.763$): 25% of rural Elders reported at least one limitation, and 22% of urban Elders did. The most frequently reported IADLs were difficulties in performing heavy housework (18%), and problems with shopping (12%).

Within Native communities, physical abilities are not essential when warning crews of subtle weather changes, or notifying family and community members when conditions are “right” to put out the salmon nets. The advisory role established through cultural traditions allows older individuals to have options to direct their own lives and continue to achieve “valuable functioning” even though physical abilities have changed, or are changing. If the Elders were not in their community surroundings, their participation in community activities would decrease, and thus the level of perceived valuable functioning, may be also diminished.

**Traditional Food Culture Provides Nourishment as Recipient of Traditional Native Food Sharing**

In Alaska, working as a family group in the harvesting and distribution of harvested foods is identified as a food sharing network. The networks reinforce cultural identity of the group, as well as enabling the procuring and sharing of essential food. Food sharing in Alaska is a traditional cultural practice that occurs to the present day (Callaway 2003; Caulfield 2002; Magdanz et al. 2002) and is one of the defining attributes of the “harvested food, or subsistence lifestyle.”

Consistent with Mauss’s (1988 [1954]) classic anthropological writings highlighted the benefits of reciprocal relationships evidenced by gift exchanges, feasts, and gifts of food,
food sharing networks links generations and families through a web of social interactions. Also transmitted are community norms and standards. Food sharing networks appear to serve as a highly resilient response to uncertain food supplies (Magdanz et al, 2002) through the distribution of harvested food to members of the network.

Food sharing data were collected in five villages in Northwestern Alaska (Buckland, Deering, Kiana, Kivalina, Noatak, Shungnak) from 1994-2008 by field biologists from The Alaska Department of Fish and Game (ADF&G) using protocols published in Magdanz et al, (2002). The purpose of the ADF&G extensive data collection was to describe characteristics of harvesting and food sharing networks in rural Alaskan communities.

Smith (2007) in the Inupiaq Elders Study examined a small sub-set of the AFD&G food sharing network data to determine the impact of the shared foods on the nutritional intake of Inupiaq Elders. To accomplish this, ADF&G food sharing data from Buckland and Deering were compared to data from urban Inupiaq Elders living in Anchorage collected using the same ADF&G survey forms. Differences between gross total amounts of harvested foods (calculated from the combined total of food received), and the number of food sharing events that provided food to Elders households in two rural communities (Buckland and Deering), and an urban location (Anchorage) were compared.

The household networks of rural Inupiaq Elder had almost 20 times more food sharing events than urban networks. Rural reported a mean of 55.1 ± 8.4 food sharing events with a range of 12 to 217, compared to the urban’s 2.9 ± 0.5 events with a range 0 to 13. Rural households also shared more pounds of harvested foods. On average, rural household received 2,606 ± 2,724 pounds with a range 0 to 12,738, ten times more than the urban’s 251 ± 421 pounds with a range 0 to 1,600.
While the harvest amounts vary, the remarkable adaptation of the rural traditional lifestyle within urban Alaska is important. Food sharing networks bind rural and urban family members together, as well as reinforce cultural heritage that both groups hold in common. Climate changes in Alaska that affect food harvests may severely impact the social fiber that supports both rural and urban Native elderly. Modest food support resulting from fewer food sharing events may increase the vulnerability of the health and well being of Native Elders. These concerns should also be studied in any investigation of climate change impacts on Alaska Natives.

The term “harvested foods” was used to designate foods that are obtained by hunting, fishing or gathering compared to “store-bought foods” that are purchased at the store, or ordered and shipped to the community. A full description of factors related to the nutrition status has been presented previous in this journal (Smith a n.d). Alaska and Canadian Native populations continue to use high quantities of harvested foods on a regular basis (Kuhnlein 2004:1449; Smith b n.d.), in contrast to declining use of indigenous foods reported among the Hopi (Kuhnlein 1978:16-23) and Navajo Indians of the southwestern United States (Wolfe 1985:323-344).

Rural Elders in our Inupiaq Elders Study reported that harvested foods contributed 64% of the total reported intake of protein, and over half of the intake of riboflavin (61%), iron (54%) and phosphorus (51%). For urban Elders, harvested foods generally contributed less than less than half of the total nutrient consumed: protein (42%), riboflavin (39%), iron (40%) and phosphorus (30%). Even though urban Inupiaq Elders received smaller quantities of harvested foods than rural Elders, the amounts are important contribution of vital nutrients.
For both groups, intake of protein by males exceeded minimum requirements by three-fold. Mean protein intake by rural women exceeded twice the minimum protein requirements for women (Smith n.d.). Urban women over 70 years of age reported mean intakes of 69 grams, slightly above the minimum Dietary Recommended Allowance (DRI) of 46 grams. The mean calorie intake reported by Inupiaq Elders living in Buckland and Dearing (3,594 ± 2,122) and in Anchorage (4,319 ± 3,129) exceeded Federal nutrition guidelines of the Dietary Reference Intakes published by the Institute of Medicine (2000, 2002) of approximately 2,000 kilocalories. However, these guidelines may not be appropriate for active individuals living in an Arctic climate being that the recommended calorie intakes are based on data collected in the series of Nutrition and Health Examination Studies of the general US population by the Department of Health and Human Services, Centers for Disease Control and Prevention (HANES 2008) that did not included assessment of Native populations, nor populations living in Alaska. The US Army estimates that individuals participating in winter maneuvers in Alaska may require higher energy requirements which may exceed 4,500 calories per day (Edwards 1991, King 1993) in order to maintain body weight.

Body weights result from energy intakes that are moderated by physical exercise. Excess energy intake has an outcome of increased body fat. Mean Body Mass Index (BMI), a measure of body fat (Keys 1972), was 27.3 ± 4.9 for rural Elders and was 26.6 ± 5.3 for urban elders. While the use of BMI to assess Native populations in Arctic climates may be problematic (Smith 2004), nevertheless, the calculated BMI for the surveyed Elders was only slightly above estimations of “ideal” BMI of less than 25.
Food Insecurity

From the outside (etic) perspective, there appears to be a surplus of food in rural Alaska. The authors were surprised to find that 26% of the Elders surveyed reported that they were worried that they may not have enough to eat. Food insecurity reports from younger rural Alaska women were slightly higher at 37% in the WIC Healthy Moms Study (Smith n.d.). The younger women who reported being food insecure reported moderate intakes of calories or protein (mean intake was 1,493 calories with 59.6 grams of protein). This may suggest that the expression of food insecurity by those living within a rural Alaskan economy may be influenced by anxiety concerning the unpredictable availability of harvestable foods due to low numbers of fish and game or prohibitions issued by regulatory agencies on when food can be harvested.

To understand this phenomenon, we discussed the high rates of food insecurity reported by the younger women from the WIC Healthy Mom Studies with Elders during our visits to the villages in 2004-2005 and at the NRC Voices of the Elders Conferences. Elders could recall times or heard first-hand accounts in the oral tradition of food shortages or of outright famine in their communities. This could explain why some Elders remain concerned about food security in spite of the appearance of ample staples. In some ways, the Elders were looking ahead with concern for what the future might hold (LaBelle field notes, 1988-2008).

---

8 Villages in the WIC Healthy Mom Study asked to remain anonymous. Their locations were a coastal Tlingit village in Southeast Alaska, an Aliiteq village located on the Aleutian peninsula, a coastal village in Southeastern Alaska in the Yukon-Kuskokwim Delta, and a coastal village on the Beaufort Sea. Data from Fairbanks was used for a comparison (n = 103).
9 The villages of Buckland and Deering asked to be identified in the Inupiaq Elder Study (n = 101).
10 Voices of Elders Conferences were held in Angoon, Barrow, Bethel, Buckland, Dillingham, Fairbanks, Juneau, Kodiak, Kotlik, Kotzebue, Metlakatla, Napaskiak, New Stuyahok, Nome, Nuiqsut, Old Harbor, St. Paul Island, Unalaska, and Wainwright (n > 600).
The literature is limited on inter-generational anxiety or concern about sufficient food by younger members in response to periods of starvation experienced by their parents in previous years (See Yehuda 1998:841-843 and Sindler 2004:189-196 for WW II holocaust survivor reports, for examples). However, the closeness of family members and the emphasis on oral tradition among Alaska Natives may have influenced feelings of an insecure food supply in rural Alaska among younger Native women. It is also possible that these younger women (age 19-38) living in rural areas surveyed in 2001 may have had good reason to be more concerned than Elders about the adequacy of the overall food supply, but only a focused investigation on that topic would reveal whether this was true or not. However, the percentage of both Elders and younger women in villages who expressed food insecurity concerns is noteworthy, and will likely increase as rising fuel costs for heating homes and for operating hunting/fishing modes of transportation in rural Alaska negatively impact both food harvests and household income available to purchase food at village stores/co-ops or having food flown in from urban centers.

There may be other anxiety producing influences in Alaska Native communities related to the Elders’ perceptions of insufficient food for older village residents. Campbell (1991) in her classic definition of food insecurity included the precept of “socially acceptable food.” The impact of recent environmental protest on the harvest of Arctic wildlife and whales in the popular press may invoke personal conflict between the Elders’ traditional cultural role as a stewards of land and water resources, versus their perceived abusive role as “harvesters” presented in the media. High rates of food insecurity could also be an expression of the Elders’ concerns towards changing village social climates resulting from the outward migration of young family members who traditionally have provided care for aging Elders.
Elders may fear that the anticipated holistic care (including provision of food) may not materialize or continue in the future.

**Respect for Sources of Food – both Animal and Plant**

The respect for all aspects of the universe is integral to the relationship of the Native peoples with their food sources. A. Oscar Kawagley (1995), a Yup’ik Native from southwest Alaska, wrote

> *Alaska Natives worldviews are oriented towards the synthesis of information gathered from interaction with the natural and spiritual worlds so to accommodate and live in harmony with natural principles and exhibit the values of sharing cooperation and respect.*

He concluded, **“The spiritual landscape exists within the physical landscape.”** He writes of beliefs of the delicate balance between the human, natural and spiritual world (Kawagley 1995), and quotes Chief Seattle [1790-1866] who stated,

> *This we know: the earth does not belong to man; the man belongs to the earth. All things are connected like the blood that unites us all. Man did not weave the web of life; he is merely a strand in it. Whatever he does to the web, he does to himself.*

The intertwining of people with other occupants of the physical world provides a holistic foundation for relationships between humans and the environment, and fosters observance of spiritual beliefs. Elder speakers at the NRC *Voices of the Elders Conferences* reinforced Kawagley’s observations,

> *Growing up with all these traditional values, when I was observing my parents and grandparents, they really respected the land, the rivers and animals, and the fish and birds. They put back into the earth the bone remains of the*
animals instead of putting them in the trash or fed [the bones] to the dogs

One thing that my grandmother told me also to share things... never to be stingy... I remember growing up I went ptarmigan hunting and caught a lot of ptarmigan... and when you gave more... more will come back to you..... Sure enough those animals tend to come to you when you give some of your catch away and share with others...

They went out to get it but the whale put a hole in the Qquay [boat], and it sank so far down that they said, “Qayaq stop!” And the whale stopped. Somehow they paddled across out there and made it and they spent all night there....... He was the last whale hunter.

When they catch game like seal, walrus, whatever is edible. They try to share it with neighbors. They said it has returned; somehow even they don’t know about Creator, they know there’s somebody providing resources for them at that time.

Over coffee one morning, an Elder who had lived most of his life “Outside” (meaning outside of Alaska in the lower-48 States) said that when he came back to his village and harvested a seal, it was difficult in his old age to crawl across the ice to put water in the seal’s mouth. We asked about the cultural basis of this practice, but he told us that he didn’t know. What he told us was, “When I don’t do it, I feel bad” (Easton field notes, 2005).

Harvested Foods Contribute Positive View of Life

Participating in harvested food traditions appeared to be significant contributions to a positive view of life. Participants’ view of life was assessed using self-reported health assessment, and by the perceived health benefits of harvested foods.
a. Self-Reported Health Assessments

During visits to rural Alaskan communities, a repeating phenomenon was observed. Elders expressed a general sense of optimism about life that was reflected in the reporting of their general health, even when their observed health was considered to be quite marginal. Self-reported general health is an expression of the non-tangible aspects of health, and are often a reflection of an individual’s perception of their ability to function within his or her environment beyond the mere presence or absence of Pathak’s (1996:217) “five D’s” – death, disease, disability, discomfort and dissatisfaction. Among rural Elder respondents, 81% reported their health to be “excellent,” “very good” and “good,” compared to 76% reported by urban areas. A total of 19% of rural Elders and 25% of urban Elders reported their health as “fair” or “poor”. Elders stated that their health is better in the rural than in the urban setting, and some individuals reported that they moved back to rural villages for this reason. Being away from family was one of the main reasons that Elders reported why they were reluctant to move to urban areas, even to seek health care.

Alaska rural Elders reported few limitations of their activities, although their observed health was less than ideal. Combined observations of rural Elders bear this out11. For example (Smith and Easton field notes, 2004-2005):

“Barry” brought us a jar of frozen fresh salmon eggs that he had prepared by layering the row and salt in canning jars, then storing them in the freezer. We ate them on the homemade bread he also shared with us. Barry is 54 years old, partially deaf and is often asked to go out-of-state with the village fire fighting team to maintain their base camp. His leadership style and camp management skills have won favor with the Federal Forestry Service personnel. He produces and sells homemade bread and doughnuts to keep “busy” and to supplement his income.

---

11 Fictitious names have been used and similar observations of several individuals have been combined.
“Lucille” cares for her husband, and sells hand woven grass baskets for extra cash. She said that her aunt showed her how to pick grasses to make baskets using the tall green grass that grows on the coastal sand dunes. Her aunt was trained by her Grandmothers’ sister (Lucille’s Great-Great Aunt). She has charge of her grandson while her daughter works at a job in another community near by. We frequently saw her zipping around town on her 4-wheeler with the baby’s head perched on her back, peering from beneath her kuspuk.

“John” reports that he is often unable to get out of the village following his stroke. In town he walked with a profound limp, and accepted a ride on a four-wheeler when one of the young boys in the village stopped. He said that he had to quit hunting 12 years ago. He lives with a niece, the daughter of one of his children, which was fine, except that he could get Native food only two-three times a month. As a result he had to eat a lot of “white man’s food.” He would have liked things to be different, but “this was the way it was.”

A positive view of life was not unexpected from this population. Fienup-Riordan (1983:175-186) wrote of the Alaska Native philosophy that words have power to change the future. It seemed possible to us that if Elders reported that their health as “good,” their health would be “good” and their words would become true. Similar positive projections on future events have been reported by biologists when recording information about the harvest of wild game, sea mammals and fish. As one Elder said, “The fish have ears,” implying the belief that the Elder’s comments about the fish could determine the Elder’s ability to catch the fish in the future (Smith field notes, 2005).

This paper has concentrated on harvest-based food culture of Elders. Although not specifically defined or measured, humor is a vital part of rural life and food gathering. Gentle teasing, repeated descriptions are part of many conversations and may contribute to the benefits of this lifestyle. Our team members were included in the teasing and the laughter. Empathy, as well, for community members and for members of other neighboring
communities was evident in all Native communities visited during the data collection phase of this report.

b. Perceived Health Benefits of Harvested Foods

Traditional Native foods are believed to have healing properties. Narrative data from the NRC *Voices of Our Elders Conferences* supported the belief that health is benefited by consuming harvested foods.

*I told the doctor, I’m going home; I don’t like “White” food.... (home to) eat my Eskimo food and I don’t want to be sick no more.*

*If we don’t receive our foods, there is something missing because not only do the food (feed) our physical self... they also nourish our spiritual and emotional self .....because they bring back a lot of memories and happy times.***

The Elders perceive that harvested foods have greater value than similar non-Native foods, such as harvested salmon is better than commercially canned salmon. A number of health research projects confirm the Elders’ traditional wisdom, and have reported the biological importance of eating Native foods. Adler (1996:355-360) studied traditional diet and harvest activities in villages in Southwest Alaska and the Interior found significant trends in the relationship between eating a traditional diet high in protein and improved glucose intolerance, when combined with adequate levels of exercise. Other studies (Murphy 1992: 1390-1392; Murphy 1995: 680; and Murphy 1997: 275-277) found that individuals who reported eating more traditional food were less likely to have diabetes and hypertension. Wiedman (1987:43-71) found similar phenomena in his work among the Oklahoma

37
Cherokee where diabetes increased after individuals transitioned to store-bought foods away from their traditional food patterns.

The traditions surrounding the harvest rituals contribute special value beyond the actual food gathered. An example was presented during one of three field visits. The oldest woman in the village was very upset that her family was not going to take her to fish camp so that she could pick berries. She told team members in numerous conversations that it was “time” to pick salmonberries. Even though she was not without food, it appeared that she thought her life was not complete because she could not participate in the act of food gathering. Despite their age, Elders want to continue going to locations of summer camp and to the places of familiar activities. We asked a respected community member if her family’s assistance in our research efforts was causing a conflict with their mother’s (and grandmother’s) desire to pick salmonberries. We were told that her grandson was taking her to fish camp to pick berries that afternoon.

In a small village in the upper Aleutian Islands, local leaders as well as the Elders told us that “the sea is our way of life.” One community leader mentioned that after the Valdez oil spill, when village fishermen where prohibited from fishing during the 1989 season, the US government sent cases of commercially canned salmon as a replacement. She said, “It wasn’t just loss of food; it was the loss of our heritage. Fishing is what we do” (Smith field notes, 2001).

In many Sugpiat villages impacted by the Exxon/Valdez Oil Spill of 1989/90, the Elders’ role in overseeing the gathering of subsistence foods from the shoreline was interrupted. This disconnected the Elders from their community members culturally, physically and spiritually. Some mussel, cockle and clam beds remain visually contaminated
by the oil spill. Elders continue to grieve almost twenty years later; even the simple pleasures of walking on the beach can evoke memories of the destruction. Elders also reported changes in their health when they had to rely on processed and canned foods, especially increases in hypertension, heart disease, stroke and diabetes in communities impacted by the oil spill. (LaBelle field notes, 1988-2008).

Elders often report negative health consequences when they had to rely on western processed and canned foods. It may explain why “potlatches” that feature harvested foods shipped in from outlying rural communities are so popular among urban Native people having little or no access to traditional foods (LaBelle field notes, 2008).

Another Elder summarized the multi-faceted holistic nature of the benefits of traditional foods in this way:

*When we eat our food, we enjoy and we remember being in fish camp when we eat it. And when we get a lot of salmon berries, we do think about our experience in picking berries and consider them blessing. There’s also the fact of eating together with family and spending time with family cutting fish, family bonding just preparing the food. So it’s a lot of mental health, spiritual and family bonding just eating it. Our food has a lot more holistic approach to it when we eat it.*

**DISCUSSION**

“Elder” is a status that has common threads throughout all Alaska Native cultures. The range of Native Elders from whom these data flow strengthens the conclusions presented. The conceptual model presented in this paper is an effort to describe aspects of participation in harvest-based food culture, as it impacts valuable functioning for Alaska Native Elders.
Data presented here indicated that harvesting of traditional foods used knowledge patterns set forth by previous generations, that are transmitted through Elders. A striking illustration of their importance in food harvests was our experience of a whaling captain saying that he had to get to the beach early so that he would have time to listen to the Elder men’s advice and warnings before the hunt (Smith field notes, 2004). Even with the numerous activities involved in preparing for a whale hunt, he credited the last minute information given by the Elders with keeping his crew safe and for his success as a whaling captain. When we attended the Nalukataq, the whale festival, former whaling captains, now in advisory roles, took turns standing on the bluff to watch conditions at sea.

On the other hand, Elders living in urban areas may have limited social status based on the lack of a social position to fill related to food harvesting. Psychological and social tensions may develop and affect the individuals’ views of their quality of life.

Participation in the activities of harvest and food preparation served to unite families with their history. Food sharing provided a structure for family interdependence between communities (Burch 2006). Narrative data indicated for Elders that culture and food are inseparable. As one Elder reported, “Our food is medicine. It feeds the body (and)… feeds the Spirit” (NRC Voices of the Elders Conferences).

In the minds of the Elders, retaining lifestyles and food traditions is one of their highest priorities. As a group, the Elders’ conversations and comments focused on problems concerned with the availability of sources and declining access to Native foods. The factors influencing the disappearance the Native food customs and knowledge are complex as communities react and adapt to globalization, technology and global warming. Native communities face increased competition with recreational and commercial fisheries of
salmon, halibut and crab, and with game regulations from multiple government agencies (Nadasdy 2004). The loss or restriction of hunting/fishing sites may further reduce opportunities for Elders to share with younger generations the food preparation knowledge needed to perpetuate food traditions, including those that comprise a major part of honoring deceased ancestors and his or her family. Wage earning jobs outside the villages pull youthful resources away from the influence of Elders. The extensive role of food in the traditions of memorial festivals mirrors the Elders’ values of sharing and reciprocation. These events are much like the stories told by Elders of sharing food today, resulting in increased future harvest. Preservation of food becomes a symbol confirming their circular values and beliefs. Elders’ predict that once food rituals are lost, the rituals and ceremonies will be lost forever, and that the Elders’ must be teachers to the younger community leaders.

The authors suggest that participation in the harvest of food forms the core of valuable functioning for Alaska Elders, as well as providing essential sources of nutrition for sustained activity.

**CONCLUSIONS**

Consistently in testimony from all locations, be it rural or urban, the Elders wanted greater access to Native foods, and reported that they did not feel as well when they did not have it. The narrative data suggests that universally across all groups was the sense of purpose (and thus well-being) that came from the Elders involvement in being part of the harvested food culture. It was not only the act of eating a piece of fish, but also in the planning prior to harvest, the actual harvest, as well as in the processing and distribution of the harvest.
Our conceptual model (Figure 1) of harvest-based food culture presented components of valuable functioning. These expressions included tribal history, a positive perspective on life; family and community; participation in Native life, food sharing and food security; and respect for the land. Valuable functioning, as expressed by Alaska Native Elders, is multidimensional, encompassing social, cultural and psychological influences, with food and food sharing processes as the keystone. This includes the availability and access to culturally significant foods, as well as the community interaction that coexist as part of the food harvesting and food sharing processes. The Elders’ view of harvested food appears to incorporate both objective and subjective experiences, and throughout this process, the value of the Elders’ knowledge is reinforced. The importance of routine activities is consistent with Schlettwein-Gsell’s (1992) view that quality of life encompassed a food component. She proposed that the importance of food related behaviors increased with age, especially routines which surround food that she proposes equates to the pleasure of the food experiences.

In rural communities, extended family members and kin-based food sharing networks provide not only food for the elderly but also provide socially structured food activities (such as planning for the hunt or harvest), and food practices (actual harvest, then the preparation and distribution of food). These food activities increase personal interactions between Elders and the community. Food related activities also provide opportunities for the sharing of traditional knowledge by the Elders and the obtainment of valuable functioning. Elders in the rural setting are near “people they know,” and it is a place “where they can get their Native foods” (Smith 2007:228). The application of the valuable functioning construct also includes
the Elders’ ability to participate in family activities, participation in food preparation activities, and the teaching of traditional cultural skills to younger community members.

These data indicate that the well-being of Native Elders is intricately linked to continued use and access to land and natural resources. As competition increases among various stakeholders both in and out-of state, and as climate change scenarios deleterious to traditional food abundance unfold, the level of anxiety concerning the change also increases. These threats to community balance are not theoretical but are played-out in day-to-day activities with implications for the health of not only Elders, but for other age segments of the village as well.

LaBelle summarized the importance of the findings in the following manner. “We know that the collection of foods to feed our bodies has other values, which creates an interdependence of the spiritual, family, communal and tribal survival constructs. Policy makers should acknowledge that other terms exist within the indigenous world; not just a term created for western usage in making laws and regulations for first peoples to follow. The sad thing here is that federal and state fish and game administrators have attempted to learn of the “subsistence” patterns of certain people, ultimately using that information to regulate their activities, sometimes with ruinous results. And that is because they are attempting to use western concepts and understanding based largely on western economic models while not acknowledging existing cultural models. It’s no wonder that some tribes view regulators with suspicion.”

The quantitative and qualitative data support the value of harvest-based food culture. In this context, Elders’ comments and our observations document how harvest-based food culture retains tribal history, myths, stories, values and language. Connections to the land and
to community members and extended families are demonstrated in day-to-day activities, and a positive attitude toward the health and daily life resulting from contact with the Alaska environment. Food culture is significant in the lives of Native Elders because of its relationship to traditional norms of respect for plants and animals, to their sense of food security and to the special contributions traditional foods make to well-being and quality of life.

Retention of food culture is integral to the retention of Native pride and history. Participation in these activities is viewed as essential preparation in fulfilling the role of an Elder as keepers of historical memory, linked to ensuring their significant future role within the community, and the survival of the community, as well.

**Limitations**

Consistent with Fisher and Ball (2003) there may limitations inherent when broad complex social systems are examined in brief studies, “when the health, social and economic disparities of American Indians and Alaska Natives are viewed outside of the historical context, that events and practices have the potential to be misunderstood and to be addressed in ways that perpetuate rather than resolve problems”.

There is always the possibility that as outsiders, that the authors have oversimplified or misunderstood the complex nature of the Elders comments. This paper in no way attempts to minimize the importance of cultural differences and the benefits of diverse diets of the 229 federally recognized Alaska Tribes. It was our goal to use their comments to increase our understanding of harvested food customs and the relationship to quality of life as Native Elders age.
One of the goals of the authors is to provide data to the villages as they seek their own solutions to problems concerning preservation of the harvested food culture within their communities. The application of the information presented will no doubt be as diverse as the communities from which the constructs were derived.

Acknowledgements

The authors greatly appreciate the participation of the Elders from Buckland and Deering, their Tribal Councils, and the Elders’ committees who organized and participated in the NRC *Voices of Our Elders Conferences* who shared concerns about the well-being of Native Elders. Special thanks are due to Dr. George Charles and Dr. Kathy Graves from the (NRC) National Resource Center for American Indian, Alaska Natives, and Native Hawaiian Elders for their endless encouragement and suggestions.

Funding

This research was funded in part by the program of National Resource Center for American Indian, Alaska Native and Native Hawaiian Elders at the University of Alaska Anchorage (AoA Grant #90AM2752 from the Administration on Aging, US Department of Health and Human Services, Washington DC); Alaska Native Science and Research Partnerships for Health at the University of Alaska Anchorage: ANSRPH (NIH Grant NCMHD-R24-MD000499); the National Science Foundation Dissertation Enhancement Grant (NSF-OPP-0611871. Day-to-day support was provided by The Institute for Circumpolar Health Studies at the University of Alaska Anchorage.
Literature Cited

Adler, Amanda I., Edward J. Boyko, Cynthia D. Schraer, and Neil J. Murphy

Alaska Federation of Natives

Burch, Ernest S, Jr.

Callaway, Don

Campbell, Cathy C.

Caulfield, Richard A.

Edwards, Jeremy S., and Diane E. Roberts

Fienup-Riordan, Ann

Fisher, Philip A., and Thomas J. Ball

Graves, Kathleen and Louise Shavings

Institute of Medicine, Food and Nutrition Board, National Academy of Sciences 2000  Applications in Dietary Assessment. National Academy Press, Washington D.C.


MacClancy, Jeremy and Helen Macbeth


Rody, Nancy, Janell Smith, Penelope S. Easton, Dennis Wiedman, Elizabeth D. Nobmann, Diane Peck and Jennifer Cipra

Sen, Amartya

Schlettwein-Gsell, Daniela

Sindler Amy J., Nancy S. Wellman, and Oren Baruch Stier

Smith, Janell and Dennis Wiedman

Smith, Janell, Penelope S. Easton, Dennis Wiedman, Nancy Rody, Kari Hamrick, Elizabeth Nobmann, Emma G. Widmark, Diane Peck and Jennifer Cipra

Smith, Janell

Smith, Janell, Paulette Johnson, Penelope S. Easton, Dennis Wiedman and Emma G. Widmark

Smith, Janell, Brian L. Saylor, Penelope S. Easton, Dennis Wiedman and the Elders from the Alaska Villages of Buckland and Deering

“Voices of Our Elders Conferences”

Ware, John E, Mark Losinski and Susan D. Keller

Ware, John E., Mark Kosinski, Diane M. Turner-Bowker and Barbara Gandek

Wiedman, Dennis

Wolfe, Wendy S.

Yehuda Rachel, James Schmeidler, Earl L. Giller, Larry J. Siever and Karen Binder-Brynes