Abstract

These are findings from in-depth interviews conducted with residents of Northwestern Alaska, part of a study to evaluate the health effects of climate change in rural Alaska. Findings showed food security is a major domain of concern for residents in rural Alaska. Participants discussed changes in animal availability, seasonal synchronicity, as well as losing access to coastal food sources due to changes in sea ice. The existence and effects of these factors present potential for further study.

Objectives
Collect detailed information regarding participants’ observation of environmental change observed over participants’ lifetime, and related adaptations.

Materials & Methods

Unstructured, in-depth interviews were conducted with eight participants in two Northwest Alaskan communities. “One of the 8 participants in the NW were between the ages of 40 and 56— with one older, and one younger. Five were men, three were women. All participants were lifelong community members and subsistence practitioners. The unstructured interview guide followed a historic interview model. Transcripts of these interviews were analyzed using a qualitative data analytic software package. Initial and emergent themes were identified and their frequency assessed across and within regions and demographic categories.

Climate Change and Health: Northwest Voices on Food Security

“We mainly depend on subsistence because of high cost of flying in food here.”

Results

Study participants described local environmental effects of climate change. All participants described unusual variations in local temperatures, and increasingly intense weather patterns. These variations in temperatures were associated with changes in fish and animal behavior, coastal ice structure and concerns about food security. Reduced food security was the second-most frequently mentioned trend related to long-term environmental change—second only to observed weather fluctuations. The warming conditions in northwest Alaska represent a threat to indigenous winter fishing traditions as well. For example, in the winter of 2012, water that usually freezes into navigable ice in November was soft into December, requiring residents to rely on harvests from Kotzebue, Alaska.

“Yes, it [the sea ice] melted faster, way faster. We used to go park right on the ice. Put our anchor down, eat right there, erguson, the bearded seal. The big one, we get our seal oil and meat. And nowadays we go up to that kind of ice, you have to check with a pole, to see if you can get on it.”

“The past couple years they had to bring the women home because of the bad ice, and left the cooking for men. Like the past couple years, this year and the past year, I had to stay home, because of the bad ice.”

Discussion

The ability to procure subsistence foods holds particular cultural, economic and nutritional importance to the residents of rural communities in Alaska. Food that is not provided by subsistence practices must be brought into communities by barge, and often must travel an additional distance via airplane. Due to these challenges, markets are predominately populated by foods with high added cost and lengthy shelf life. The reduction or elimination of subsistence practices creates greater reliance on these processed, store-bought foods. Subsistence foods represent a low-cost and healthy dietary resource for residents of rural and isolated communities across Alaska.

We see that climate change is affecting participants’ subsistence practices, and therefore their mental, physical and community health. Subsistence food sources can also take on tremendous emotional significance for those who traditionally consume them. Food security is thus situated in a complex network of systems including economy, ecology, as well as individual and community health. Climate change is having wide reaching effects on Northwestern Alaskan subsistence practitioners’ health, and further research is needed to address these detrimental effects.

“T melts really quickly. This past year all the inland melted really quickly. Rows out to the river and gets soft all over. We have to watch before we go. We might get stranded out there for a week.”

When I started whaling, we used to go whaling just out here. But as years passed by, we had to move more further down because of the ice has changed, and the leads...