

Social Determinants of Health among American Indians and Alaska Natives ~Focusing on the narratives from retired Community Health Aides~

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Background: With more than 574 federally recognized tribes (1), American Indians and Alaska Natives (AI/ANs) number 3.7 million, representing 1.1% of the total population of the United States and 15.2% in Alaska's population (2). AI/ANs have experienced disproportionately higher rates of mobility and mortality than the average Americans (3). For example, the all-cause age-adjusted mortality rates for intentional and unintentional injuries, suicide, assault/homicide are twice or as high or higher than those for AI/ANs (4). The health disparities are explained by the increasing effects of global environmental challenges as well as Social Determinants of Health (SDH), which are defined as "the non-medical factors that influence health outcome and the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life" (5). Additionally, AI/ANs experienced post-colonial oppression and historical trauma commonly described as forced boarding school attendance, loss of tribal boundary, language and culture, discomfort around White people. (3, 6). Although these SDH have affected their health for generations, few studies have comprehensively examined the SDH of AI/ANs.

Objective: The objective of this study is to extract and summarize the SDH of the AI/ANs, and to determine if there are any SDH specific to Alaska Natives. We also aims to classify the extracted SDH into the NIMHD Minority Health and Health Disparities Research Framework (7) to see if there are any SDH other than those in the framework, and if there are any new findings or other SDH beyond the preliminary review work that might explain the current status of Alaska Natives.

Methods: 1) The electronic databases PubMed and Web of Science were searched for a literature review. Publications from January 2018 to August –2023 which included terms "American Indian*", "Alaska Native*", and "Social Determinants of Health" in abstract were used. 2) A qualitative analysis was conducted from 60 videos of the elderly from; "Legacy of Our Elders" produced by Tanana Chiefs Conference (non-profit corporation that govern social and health services for ANs), and selected the one who had ever engaged as Community Health Aides (CHAs) for their deep insight into SDH and understandings of the community gained from their experience working as CHA.

Results: A total of 83 articles and narratives of the elderly who had been once a CHA were targeted for analysis. Over half of articles are from the field of Public Health and Medicine, followed by Environmental Sciences, Nutrition, and Sociology. Most studies reported both historical factors due to colonization and current issues among AI/ANs. The findings were summarized under following domains such as: Historical trauma due to colonization (e.g. relocation from their native lands onto reservations; loss of language and assimilation; boarding schools attendance); Persistent discrimination (e.g. stereotype and prejudice; systematic racism in employment, health care, police and court; harassment; violence; homicide); Substance use (e.g. smoking as cultural practices; drug addiction due to chronic stress; alcohol abuse); Living condition (e.g. food insecurity; transportation difficulties; environmental pollution; lack of safe/ running water; low education level; poverty and unemployment); Health care resources and access (e.g. access to health care facilities; limited health insurance; insufficiency of health governance; distrust of Western medicine); Cultural strength (self-efficacy from traditional beliefs, teachings and practices of the seniors; knowledge systems developed through observation in nature; network and mutual help). Following domain was found specifically from the data of the Alaskan; Family context (separation from family member; death of the family members; early death of parents; missing families and mother language; adoption by friends and relatives).

Discussion: The extracted SDH are categorized into several domains which are complexly interrelated and may influence each other. For example, historical trauma has contributed to current racism, and the stress caused by stereotype and racism contributes to further drinking behavior and the other way around. Given that many Alaska Native elders have experience undesired separation from their families, it is likely that SDH of the family context and situations are SDH unique to Alaska Native that may have large impact to their health for generations. The elders understand the SDH they have experienced and are passing it on to next generations. Despite the strengths discussed and extracted as domains, many of the article address only negative aspects. Thus, future research should examine positive factor of SDH among AI/ANs that may play an important role in overcoming historical trauma and improve their health, and incorporate them into the NIMHD Minority Health and Health Disparities Research Framework.

Keywords: American Indians and Alaska Natives, social determinants of health, health disparities, circumpolar health, historical trauma, literature review.

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