

Cognitive Impairment and Social Determinants of Health among Indigenous Women

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Aim(s)

Guided by the Social determinants of health (SDOH) framework, the current study aimed to investigate cognitive impairment and related factors among Indigenous women in the Northern Plains.

Introduction

- The estimated number of people with Alzheimer's Disease (AD) and other dementias in the United States (US) is predicted to be more than double (12.7 million) by 2050 due to demographic factors, such as population growth and aging.
- Cognitive impairment and Alzheimer's disease and related dementias (ADRD) are prevalent among Indigenous peoples, but research investigating these issues is limited. Social determinants of health (SDOH), such as poverty, education, housing, and access to healthcare, contribute to health disparities and increase the risk of developing ADRD. Historical trauma, cultural marginalization, and adverse childhood experiences further compound these inequities.

Method

- A cross-sectional survey between October 2021 through December 2021.
- Purposive sampling with women with their age requirement living in the Northern Plains (N=123).
- Participants from various locations, including Indigenous churches, social service centers, grocery markets, other religious organizations, senior housing facilities, and senior centers.
- Logistic regression to investigate the social determinants of health factors (education, dementia knowledge, social engagement, religious participation, depression, and chronic conditions) associated with cognitive impairment using an 8- item Interview to Differentiate Aging and Dementia (AD8), a brief and culturally sensitive instrument to detect early signs of dementia (Galvin et al., 2005, 2006) (Table 2).

Table 1. Demographic Characteristics (N=123)

Variables	Total N=123	AD8 (≤1) Normal Cognition n=54	AD8(≥2) Cognitive impairment ^a n=69	P values
Age	52.75 (10.03)	49.84(9.23)	55.03 (10.11)	**
Income (≤1,499)	48%	29.6%	62.3%	***
Marital Status (married)	63.4%	72.2%	56.5%	ns
Education (≤High school)	43.1%	29.6%	53.6%	*

*p < .05. **p < .01. ***p < .001.

Table 2. Logistic Regression (N=123)

Variables	AD8 (≥2) Presence of Cognitive Impairment	
	Exp (B)	95% CI
Age	4.751**	(1.5 14.5)
SDOH		
Education and health literacy		
Education	.667	(.36 1.48)
ADK knowledge –symptoms	1.04	(.22 2.0)
ADK knowledge- disease trajectories	.561*	(.31 1.03)
ADK knowledge- caregiving	.890	(.51 1.54)
ADK knowledge -life impact	1.165	(.52 2.6)
ADK knowledge- risk factors	1.270	(.77 2.10)
ADK knowledge- treatment & management	.703	(.36 1.39)
ADK knowledge assessment and diagnosis	1.488	(.75 2.94)
Social and community context		
Social engagement	.951	(.63 1.45)
Religious activity participation	1.550	(.81 2.9)
Health		
Depression	1.25***	(1.10 1.41)
Chronic conditions	1.331	(.93 1.)

Results

- More than half of the respondents were likely to present cognitive impairment. Age was significantly associated with cognitive impairment status.
- Those with higher ADK knowledge of disease trajectories reported approximately 45% lower odds of the presence of cognitive impairment.
- Depressive symptomatology was a risk for of presence of cognitive impairment.

Conclusion

- Our findings suggest a high risk of cognitive impairment among Indigenous women in the Northern Plains.
- Our results are consistent with previous research on risk factors of dementia.

Future research should focus on

- both unique risk and resilience factors associated with cognitive impairment
- family caregivers' stress and coping process within and between Indigenous tribes in the Northern Plains.