

Community Health Needs Assessment Survey – A Focus on Concerns Voiced by Urban Indians: A Step Toward the Development of Culturally Appropriate Health Care

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- ▶ Research Team:
 - ▶ Donna Grandbois (Turtle Mountain), RN, Ph.D., NDSU Assistant Professor of Nursing and MPH Faculty Member
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- ▶ Fargo Native American Commission
- ▶ Greater Fargo-Moorhead Community Health Needs Assessment Collaborative

Stark health disparities for ND American Indians (AI)




Source: http://ndstudies.gov/legendary_maps_charts

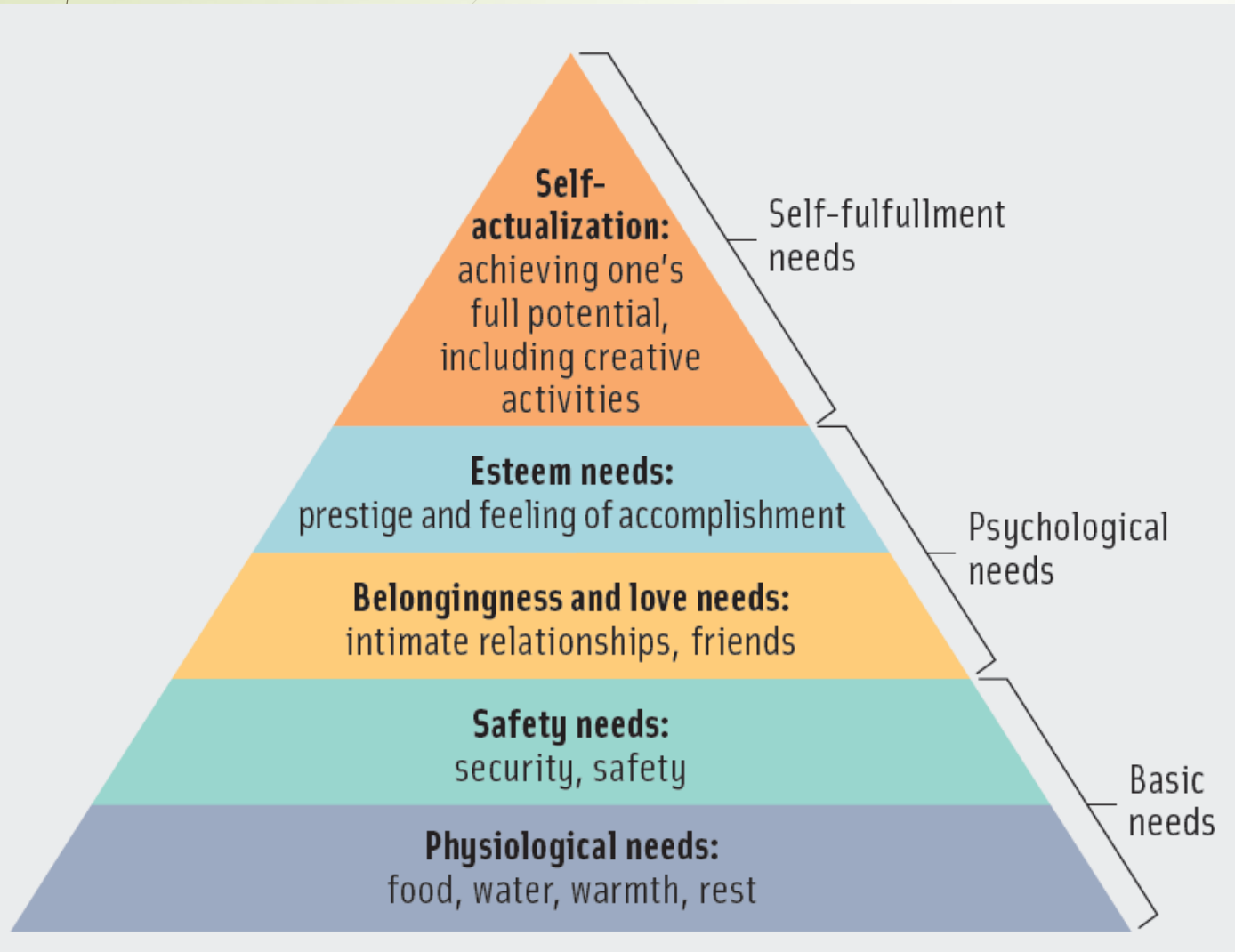
- Largest minority population:¹
 - 6.4% of state population / 2.1% of F-M Metro Area
- On average, AI in ND die 20 years younger than whites:²
 - 57.4 years vs. 77.4 years from 2007-2012
- Disparities cross a broad spectrum of issues³
 - infant mortality, substance use, injuries, chronic disease (diabetes)
- AI are challenged to access health services, and to find culturally competent health care when they do⁴
 - Providers trained in patients' culture, culturally-specific healthcare setting, images used, readability of materials



Disparities in broad context

- Inter-generational impacts of historical trauma
 - Adverse Childhood Experiences (ACEs)⁵
 - Abuse, neglect, household dysfunction → toxic stress
 - Increased risk for health problems as an adult
 - Need for trauma-informed care⁶
 - Social determinants of health⁷
 - Economic stability, education, social & community context, health & health care, neighborhood & built environment
- 

Context for prioritizing “community needs”



- Maslow's Hierarchy of Needs⁸
 - First 4 are “deficit” needs
 - Expect different priorities based on where person is at in the pyramid
 - Doesn't mean other needs aren't important



Assessing community health needs

- ▶ Look systematically at health of community⁹
 - ▶ Ensure services are provided effectively/efficiently
 - ▶ Identify health inequalities, unequal access to services
 - ▶ Prioritize resources
- ▶ Greater Fargo-Moorhead Community Health Needs Assessment Collaborative
 - ▶ Formed in response to 2010 Health Care Reform mandate to non-profit hospitals
 - ▶ Designed a survey to assess opinions and concerns about a broad array of community issues

Survey Design

- 88 questions, measured on 1 to 5 Likert scale, where *larger value* → *greater concern*
- Organized into 12 different areas, in 3 broad sections
 - Statements about the community (3 areas, 19 questions)
 - 1. The people (7)
 - 2. Services and resources (6)
 - 3. Quality of life (6)
 - General community concerns (6 areas, 36 questions)
 - 4. Economic issues (8)
 - 5. Transportation (6)
 - 6. Environment (4)
 - 7. Children and youth (7)
 - 8. Aging population (5)
 - 9. Safety (6)
 - Health-related community concerns (3 areas, 33 questions)
 - 10. Access to health care (19)
 - 11. Physical and mental health (10)
 - 12. Substance use and abuse (4)

General Concerns about Your Community

Using a 1 to 5 scale, with one being "not at all" and 5 being "a great deal," please tell us the level of concern you have about your community in each of the following areas: ECONOMIC ISSUES, TRANSPORTATION, ENVIRONMENT, CHILDREN AND YOUTH, THE AGING POPULATION, and SAFETY.

Considering your community, what is your level of concern with...	Level of concern (1=not at all; 5= a great deal)				
	Not at All				A Great Deal
Q5. ECONOMIC ISSUES	1	2	3	4	5
a. Availability of affordable housing	1	2	3	4	5
b. Availability of employment opportunities	1	2	3	4	5
c. Wage levels	1	2	3	4	5
d. Poverty	1	2	3	4	5
e. Homelessness	1	2	3	4	5
f. Cost of living	1	2	3	4	5
g. Economic disparities between higher and lower classes	1	2	3	4	5
h. Hunger	1	2	3	4	5



Prior data collection efforts

- Generalizable community survey (N=236) – April 2012
 - 1,500 mail surveys; ~15% response; 95% confidence level with error rate of +/- 6%
- Community leaders (N=58) – May 2012
 - Not generalizable but key insights from: mayor, city commissioners, nonprofit directors, leaders in health field
- Only 2 American Indians in generalizable survey, none among the community leaders
- Overall priorities chosen by GFMCHNAC:
 - ❖ *Mental Health*
 - ❖ *Obesity*
 - ❖ *Aging Issues*




Assessing needs of American Indian residents?

- ▶ Critical need to address health disparities for urban Indians → special survey effort
 - ▶ Spearheaded by Urban Indian Health & Wellness Center of F-M
 - ▶ Support from Fargo Native American Commission
 - ▶ Utilized community-based participatory research principles
 - ▶ Convenience sampling (e.g., community events)
 - ▶ Summer of 2012
 - ▶ Additional 101 surveys, 97 after data cleaning (88 AI)



Goals of the project

- Demonstrate the unique needs of American Indian residents
 - Compare among 3 survey groups
 - Used the same survey so we could compare across groups
 - Proxy for “general” community, community leaders, and the urban Indian population
 - Inform policy-making
 - Promote culturally appropriate health care
 - Assess over time
- 



Analysis

➤ Missing Data

- Respondents who did not respond to 75% or more of the survey were removed from the dataset (N=8)
- Final N=387: 232 for the generalizable community survey, 58 for community leaders survey, and 97 for the urban Indian survey

➤ Determine if it would be appropriate to create composite indices

- Reliability (Cronbach's alpha) was excellent for all of the factors, across all three survey groups (.7+) → scores for individual Qs within each of the 12 factors were combined/averaged to create an index
- Handling of missing data (included if answered at least 67% of Qs for that index)

➤ Means, for factors and individual Qs

- Qs asked on a 1 to 5 scale, where 5 indicates greater concern → averages

➤ Rankings, for factors and individual Qs

- Qs ranked with highest mean (greatest concern)=1

➤ Multivariate Analysis of Variance (MANOVA)

- Examine whether there are significant differences among concerns by survey group
- Used listwise deletion for respondents missing data (SPSS)

Demographics → Reflect Distinct Experiences

▶ American Indian survey respondents (N=97):

- ▶ Mostly American Indian
- ▶ Younger overall; no elders
- ▶ Lower education levels
- ▶ Even split for gender
- ▶ ~Half work/volunteer outside home
- ▶ Low homeownership
- ▶ Lower income levels
- ▶ More who are parenting a child 18 or younger (2 in 5)

▶ Generalizable community survey respondents (N=232):

- ▶ Mostly white
- ▶ *Older (*skews older*)
- ▶ *Half with at least a 4-year degree (*skews high*)
- ▶ *More females
- ▶ $\frac{3}{4}$ work/volunteer outside home
- ▶ *High homeownership level (*skews high*)
- ▶ *Middle to upper-middle income (*skews high*)
- ▶ Fewer who are parenting a child 18 or younger (1 in 4)

*Not representative of overall community

▶ Community leader survey respondents (N=58):

- ▶ Mostly white
- ▶ Older, but fewer elders
- ▶ Very highly educated
- ▶ More females
- ▶ (~100% work/volunteer outside home)
- ▶ Nearly universal homeownership
- ▶ Upper-middle to high income
- ▶ Fewer who are parenting a child 18 or younger (1 in 3)

Top 11 Ranked Community Concerns Among All 88 for American Indian Respondents

Factor	Community Concern	American Indian survey		Generalizable community survey		Community leaders survey	
		Rank* (of 88)	Mean** (1 to 5)	Rank* (of 88)	Mean** (1 to 5)	Rank* (of 88)	Mean** (1 to 5)
<i>physical & mental health</i>	Stress	1	4.06	➔ 11	3.66	➔ 12	4.09
<i>physical & mental health</i>	Depression	2	4.03	➔ 15	3.54	➔ 9	4.16
<i>substance use & abuse</i>	Alcohol use and abuse	2	4.03	➔ 19	3.52	➔ 11	4.12
<i>economic issues</i>	Homelessness	4	3.97	➔ 52	3.01	➔ 36	3.64
<i>access to health care</i>	Cost of health care	5	3.94	2	4.25	2	4.48
<i>substance use & abuse</i>	Smoking and tobacco use	6	3.90	➔ 23	3.46	➔ 19	3.98
<i>physical & mental health</i>	Poor nutrition/eating habits	7	3.86	13	3.59	5	4.28
<i>safety</i>	Domestic violence	8	3.79	➔ 23	3.46	➔ 21	3.97
<i>physical & mental health</i>	Chronic disease	8	3.79	9	3.70	7	4.24
<i>access to health care</i>	Cost of health insurance	10	3.78	1	4.33	1	4.57
<i>physical & mental health</i>	Inactivity, lack of exercise	10	3.78	14	3.58	5	4.28

*Ranking is of all 88 questions, where 1 is greatest concern, across all of the 12 factors in the survey. **Mean reflects average level of concern among respondents for that question, on a scale from 1 to 5 where 1=no concern at all and 5=a great deal of concern (so a higher average indicates greater concern).

Among Top Individual Areas of Concern Among American Indian Residents:

➔ Stress

➔ Ranked 11th / 12th

➔ Depression

➔ Ranked 15th / 9th

➔ Alcohol use, abuse

➔ Ranked 19th / 11th

➔ Homelessness

➔ Ranked 52nd / 36th

➔ Smoking, tobacco use

➔ Ranked 23rd / 19th

➔ Domestic violence

➔ Ranked 23rd / 21st

Top 11 Ranked Community Concerns Among All 88 for Each Survey Group

Rank* (of 88)	American Indian survey		Generalizable community survey		Community leaders survey	
	Community Concern	Mean** (1 to 5)	Community Concern	Mean** (1 to 5)	Community Concern	Mean** (1 to 5)
1	Stress	4.06	Cost of health insurance	4.33	Cost of health insurance	4.57
2	Depression	4.03	Cost of health care	4.25	Cost of health care	4.48
3	Alcohol use and abuse	4.03	Cost of prescription drugs	4.07	Obesity	4.36
4	Homelessness	3.97	Adequacy of health insurance	3.96	Cost of prescription drugs	4.34
5	Cost of health care	3.94	Access to health insurance coverage	3.78	Poor nutrition/eating habits	4.28
6	Smoking and tobacco use	3.90	Availability, cost of dental, vision insurance	3.76	Inactivity, lack of exercise	4.28
7	Poor nutrition/eating habits	3.86	Availability, cost of dental, vision care	3.76	Adequacy of health insurance	4.24
8	Domestic violence	3.79	Cancer	3.76	Chronic disease	4.24
9	Chronic disease	3.79	Chronic disease	3.70	Access to health insurance coverage	4.16
10	Cost of health insurance	3.78	Obesity	3.69	Depression	4.16
11	Inactivity, lack of exercise	3.78	Stress	3.66	Alcohol use and abuse	4.12

Top Individual Areas of Concern Among the Other Survey Groups

- Generalizable community focused strongly on cost/ access to health care
- Community leaders focused on cost/ access to health care AND obesity, poor nutrition, lack of exercise

*Ranking is of all 88 questions, where 1 is greatest concern, across all of the 12 factors in the survey. **Mean reflects average level of concern among respondents for that question, on a scale from 1 to 5 where 1=no concern at all and 5=a great deal of concern (so a higher average indicates greater concern).

Average Scores for Overall Factors, and Ranking Among the 12 Factors

Factor*	American Indian survey		Generalizable community survey		Community leaders survey	
	Rank# (of 12)	Mean** (1 to 5)	Rank# (of 12)	Mean** (1 to 5)	Rank# (of 12)	Mean** (1 to 5)
Substance use and abuse	1	3.85	2	3.47	2	3.97
Physical and mental health	2	3.73	1	3.49	1	4.04
Economic issues	3	3.63	6	3.28	6	3.51
Safety	4	3.58	4	3.31	7	3.45
Children and youth	5	3.54	8	3.13	5	3.60
Access to health care	6	3.53	5	3.29	3	3.74
The aging population	7	3.51	3	3.40	4	3.72
Transportation	8	3.27	7	3.13	8	3.15
Environment	9	3.08	9	2.56	9	2.34
The people	10	2.66	10	2.38	10	2.16
Quality of life	11	2.48	11	1.89	12	1.79
Services and resources	12	2.46	12	1.84	11	1.91

Notes: *Each factor is a combination of the individual questions that were asked within that factor. #Ranking is from 1 to 12 for American Indian respondents, where 1 is greatest concern, for each of the 12 factors in the survey. For the other two survey groups, the ranking reflects that groups' ranking. **Mean reflects average level of concern among respondents for questions within that factor, on a scale from 1 to 5 where lower values indicate less concern and higher values indicate greater concern.

Correspond to priority area chosen by Collaborative

Overall Community Factors of Greatest Concern Among American Indian Residents

#1: SUBSTANCE USE & ABUSE

Ranked 2nd / 2nd

#2: PHYSICAL & MENTAL HEALTH

Ranked 1st / 1st

#3: ECONOMIC ISSUES

Ranked 6th / 6th

#4: SAFETY

Ranked 4th / 7th

#5: CHILDREN & YOUTH

Ranked 8th / 5th

General PATTERN in responses:

- **Community leaders** answered across the board with higher values than the other two groups (more likely to give 4 or 5)
- **Generalizable community** survey respondents answered across the board with lower values than the other two groups (less likely to give 4 or 5)

Survey Group:	Substance use and abuse	Physical and mental health
American Indian	3.85 (1)	3.73 (2)
Generalizable community	3.47 (2)	3.49 (1)
Community leaders	3.97 (2)	4.04 (1)

Comparisons of Estimated Marginal Means Among Factors

Factor	Estimated marginal means, compared to American Indian Survey Respondents*			
	Generalizable community survey		Community leaders survey	
	Mean Diff.	SE	Mean Diff.	SE
Substance use and abuse**	.656 [#]	.259	-.235	.342
Physical and mental health**	.546 [#]	.206	-.604 [#]	.273
Economic issues**	.785 [#]	.187	.288	.247
Safety	.490 [#]	.237	.164	.313
Children and youth**	.666 [#]	.218	-.261	.287
Access to health care**	.424 [#]	.200	-.557 [#]	.264
The aging population	.131	.244	-.518	.323
Transportation	.242	.179	.069	.236
Environment**	.843 [#]	.254	1.258 [#]	.335
The people**	.550 [#]	.173	1.032 [#]	.229
Quality of life**	1.181 [#]	.151	1.281 [#]	.199
Services and resources**	1.101 [#]	.169	.995 [#]	.224

*Multivariate Analysis of Variance omnibus test shows differences between survey groups are significant: Pillai's Trace=.381, $F(24,646)=6.334$, $p=.000$, Partial Eta Squared=.191.

**Univariate tests show that the mean differences for the individual survey question are significant at $p<.05$.

[#]Comparing two groups only, there are significant differences between estimated marginal means at $p<.05$.

Significant Differences

Compared to generalizable community:

- AI have MORE concern
 - Substance use and abuse
 - Physical and mental health
 - Economic issues
 - (Safety)
 - Children and youth
 - Access to health care
 - Environment
 - People, quality of life, and services and resources

Compared to community leaders:

- AI have MORE concern
 - Environment
 - People, quality of life, services and resources
- AI have LESS concern
 - Physical and mental health
 - Access to health care

Comparisons of Estimated Marginal Means for Questions Relating to THE PEOPLE

Question relating to THE PEOPLE	Estimated marginal means, compared to American Indian Survey Respondents*			
	Generalizable community survey		Community leaders survey	
	Mean Diff.	SE	Mean Diff.	SE
People are friendly, helpful, and supportive**	.504 [#]	.100	.630 [#]	.134
There is a sense of community/feeling connected to people who live here**	.380 [#]	.115	.734 [#]	.153
People who live here are aware of/engaged in social, civic, or political issues**	.286 [#]	.113	.298 [#]	.150
The community is socially and culturally diverse	.159	.133	.049	.177
There is an engaged government**	.632 [#]	.119	1.075 [#]	.159
There is tolerance, inclusion, and open-mindedness	.104	.121	.261	.161
There is a sense that you can make a difference**	-.176	.122	.331 [#]	.163

Note: Higher means indicate “concern” (i.e., less agreement with the statement).

*Multivariate Analysis of Variance omnibus test shows differences between survey groups are significant: Pillai’s

Trace=.283, F(14,686)=8.067, p=.000, Partial Eta Squared=.141.

**Univariate tests show that the mean differences for the individual survey question are significant at p<.05.

[#]Comparing two groups only, there are significant differences between estimated marginal means at p<.05.

Significant Differences

Compared to generalizable community:

- AI have MORE concern
 - Supportiveness
 - Sense of community
 - Civic engagement
 - Engaged government

Compared to community leaders:

- AI have MORE concern
 - Supportiveness
 - Sense of community
 - Civic engagement
 - Engaged government
 - Sense of making a difference

Comparisons of Estimated Marginal Means for Questions Relating to SAFETY

Question relating to SAFETY	Estimated marginal means, compared to American Indian Survey Respondents*			
	Generalizable community survey		Community leaders survey	
	Mean Diff.	SE	Mean Diff.	SE
Child abuse and neglect	.182	.141	-.169	.190
Elder abuse**	.351 [#]	.142	.180	.191
Domestic violence**	.334 [#]	.136	-.178	.183
Presence and influence of drug dealers in the community	.059	.140	.080	.189
Property crimes	.084	.134	.409 [#]	.180
Violent crimes**	.578 [#]	.144	.614 [#]	.194

Note: Higher means indicate “concern” (i.e., less agreement with the statement).

*Multivariate Analysis of Variance omnibus test shows differences between survey groups are significant: Wilks' Lambda=.813, F(12,688)=6.270, p=.000, Partial Eta Squared=.099.

**Univariate tests show that the mean differences for the individual survey question are significant at p<.05.

[#]Comparing two groups only, there are significant differences between estimated marginal means at p<.05.

Significant Differences

Compared to generalizable community:

- AI have MORE concern
 - Elder abuse
 - Domestic violence
 - Violent crimes

Compared to community leaders:

- AI have MORE concern
 - (Property crimes)
 - Violent crimes



For Urban Indians in the Fargo-Moorhead Metro Area

Top Individual Areas of Greatest Concern:

- Stress*
- Depression*
- Alcohol use, abuse*
- Homelessness*

*Significantly greater concern compared to generalizable community

Overall Community Factors of Greatest Concern:

- SUBSTANCE USE & ABUSE*
- PHYSICAL & MENTAL HEALTH*#
- ECONOMIC ISSUES*
- SAFETY*

*Significantly greater concern compared to generalizable community

#Significantly smaller concern compared to community leaders



Implications for Addressing Health Disparities and Next Steps

- ▶ Disseminate results

- ▶ Bring results to Collaborative, Fargo Native American Commission, Fargo City Commission
- ▶ Compile a public report, pursue publication opportunities
- ▶ Will post online at the Collaborative's page on the ND Compass website


- ▶ Help demonstrate that there are different needs in the community

- ▶ Help community make the connection between health disparities and health needs
- ▶ Seek to meet people's needs where they are at in their life
- ▶ Seek culturally appropriate health care
- ▶ Seek trauma-informed health care

- ▶ Additional research

- ▶ Focus groups about how to address these disparities
- ▶ Repeat survey in 2015 (add Qs specific to urban Indians)

<http://www.ndcompass.org/health/greater-fm-community-health-collaborative.php>



Implications for Addressing Health Disparities and Next Steps

- Broadly speaking, American Indian health needs are consistent with community priorities
- However, different concerns (such as economic issues, safety issues) are on urban Indian's "radar" compared to the general community and community leaders
- The survey results offer a wealth of detailed information that can help inform decision-making



Limitations

- ▶ Survey design
 - ▶ The survey was not tailored to issues specific to American Indians, such as cultural appropriateness of care
- ▶ Survey methodology impacts generalizability
 - ▶ Generalizable survey
 - ▶ Low response rate for generalizable survey → error rate
 - ▶ Generalizable survey did not match the demographics of the overall community – skewed older, higher education, more females, more homeowners, higher incomes
 - ▶ Community leaders survey
 - ▶ Convenience sampling method; still a relatively large representation of leaders and clearly a distinct group by looking at demographics
 - ▶ American Indian survey
 - ▶ Convenience sampling method; acceptable as there is no sampling frame for this population and oversampling in a random sample would be cost prohibitive
 - ▶ No elders participated
- ▶ Data not missing at random (NMAR)
 - ▶ Many respondents skipped individual survey items
 - ▶ Pattern behind why certain respondents skipped certain questions likely relates to the independent variables of interest (race, income, education)
 - ▶ Can impact the validity and generalizability of statistical analyses



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