## Title:

Cultural Inaccuracy: Misidentification of Alzheimer's Disease Indicators in the American Indian Population

# Dayhna Pamela Marti Ojeda, BSN

Nursing Department, University Of Puerto Rico, Hormigueros, PR, Puerto Rico

#### **Session Title:**

Rising Stars of Research and Scholarship Invited Student Posters

## **Keywords:**

Alzheimer's disease (AD)/Alzheimer's, American Indian/Alaska Native and Cultural sensitivity

#### References:

Allegri, R., Harris, P., & Drake, M. (2000). La evaluación neuropsicológica en la enfermedad de Alzheimer. *Rev Neurol Arg*, *25*(supl 1), 11-15.

Alzheimer's Association (2016). 2016 Alzheimer's Disease Facts and Figures.

Alzheimer's & Dementia, 12(4). Retrieve

from https://www.alz.org/documents\_custom/2016-facts-and-figures.pdf.

American Speech Language and Hearing Association. (n.d.). Right hemisphere brain

damage. Retrieve from

http://www.asha.org/public/speech/disorders/RightBrainDamage/

Chen, H.-Y., & Panegyres, P. K. (2016). The Role of Ethnicity in Alzheimer's

Disease: Findings From The C-PATH Online Data Repository.

Journal of Alzheimer's Disease(Preprint), 1-9.

Fahn S, Elton R, Members of the updrs Development Committee. In: Fahn S,

Marsden CD, Calne DB, Goldstein M, eds. Recent Developments in Parkinson's

Disease, Vol 2. Florham Park, NJ. Macmillan Health Care Information 1987, pp.

153-163, 293-304.

Folstein MF, Folstein SE, McHugh PR: "Mini-mental state: A practical method for

grading the cognitivestate of patients for the clinician." J Psychiatr Res

1975; 12:189-198.

Garrars, J. (2011). Health Sciences Literature Review Made Easy. Canada: Jones & Bartlett Learning.

- Goetz, C. G., Tilley, B. C., Shaftman, S. R., Stebbins, G. T., Fahn, S., Martinez-Martin, P., . . . Olanow, C. W. (2008). Movement Disorder Society-sponsored revision of the Unified Parkinson's Disease Rating Scale (MDS-UPDRS): scale presentation and clinimetric testing results. *Movement Disorders*, 23(15), 2129-2170 2142p.
- Griffin-Pierce, T., Silverberg, N., Connor, D., Jim, M., Peters, J., Kaszniak, A., & Sabbagh, M. N. (2008). Challenges to the recognition and assessment of Alzheimer's disease in American Indians of the southwestern United States.

  \*\*Alzheimer's & Dementia, 4(4), 291-299.
- Heron, M. (2016). Deaths: Leading Causes for 2014. National Vital Statistics Report, 65(5),1-95. Retrieve from https://www.cdc.gov/nchs/data/nvsr/nvsr65/nvsr65\_05.pdf.
- Indian Health Service. (n.d.). Disparities. Retrieved from https://www.ihs.gov/newsroom/factsheets/disparities/
- Jervis, L. L., Beals, J., Fickenscher, A., & Arciniegas, D. B. (2007). Performance on the mini-mental state examination and Mattis Dementia rating scale among older American Indians. *The Journal of neuropsychiatry and clinical neurosciences*, 19(2), 173-178.
- Kochanek, D.D., Murphy, S.L., Xu, J., & Tejada-Vera, B. (2016). Deaths: Final Data for 2014. National Vital Statistics Report, 65(4),1-118. Retrive from https://www.cdc.gov/nchs/data/nvsr/nvsr65/nvsr65\_04.pdf.
- Mehta, K. M., Yaffe, K., Pérez-Stable, E. J., Stewart, A., Barnes, D., Kurland, B. F., .
  . . Miller, B. L. (2008). Race/ethnic differences in AD survival in US Alzheimer's
  Disease Centers. *Neurology*, 70(14), 1163-1170 1168p.
- Mennella, H. D. M. A.-B., & Heering, H. R. C. (2016). Dementia Assessment: Using

- the Mattis Dementia Rating Scale. Ipswich, Massachusetts: EBSCO Publishing.
- Moss, M.P. (Ed.). (2015). American Indian: health and nursing. New York: Springer Publishing Company.
- National Congress of American Indians. (n.d.). Demographics. Retrieved from http://www.ncai.org/about-tribes/demographics#R1
- Panegyres, P., & Chen, H. (2014). Early-onset Alzheimer's disease: a global cross-sectional analysis. *European Journal of Neurology*, 21(9), 1149-e1165.
- Russell, T., & Schub, T. B. (2016). Alzheimer's disease. CINAHL Nursing Guide,
- Spering, C. C., Hobson, V., Lucas, J. A., Menon, C. V., Hall, J. R., & O'Bryant, S. E. (2012). Diagnostic accuracy of the MMSE in detecting probable and possible Alzheimer's disease in ethnically diverse highly educated individuals: an analysis of the NACC database. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, 67(8), 890-896.
- Tombaugh, T. N., & McIntyre, N. J. (1992). The mini-mental state examination: a comprehensive review. *Journal of the American Geriatrics Society, 40*(9), 922-935.
- Weiner, M. F., Hynan, L. S., Beekly, D., Koepsell, T. D., & Kukull, W. A. (2007).
  Comparison of Alzheimer's disease in American Indians, whites, and African
  Americans. Alzheimer's & Dementia, 3(3), 211-216.
- Weiner, M. F., Rosenberg, R. N., Svetlik, D., Hynan, L. S., Womack, K. B., White III, C., . . . Richter, R. (2003). Comparison of Alzheimer's disease in Native Americans and Whites. *International psychogeriatrics*, *15*(04), 367-375.
- Xu, J., Murphy, S.L., Kochanek, K.D. & Bastian, B.A. (2016). Deaths: Final Data for 2013. *National Vital Statistics Report*, 64(2),1-118. Retrieve from

## **Abstract Summary:**

A systematic review of sources of discrepancy from Alzheimer's disease screening tools as applied to the American Indian/Alaska Natives shows the importance of incorporating cultural sensitive information in the identification of signs and symptoms to improve in the diagnosis and treatment of Alzheimer's disease.

# **Learning Activity:**

LEARNING OBJECTIVES	EXPANDED CONTENT OUTLINE
The learner will be able to recognize factors that contribute to the cultural inaccuracy of Alzheimer's disease screening tools on the American Indians/Alaska Natives.	To achieve the goal, I tent to recall part on the cultural history (language, rituals, believes and traditions) of American Indians/Alaska Natives to describe why this part can be crucial in the misidentification of Alzheimer's Disease.
The learner will be able to value the integration of cultural sensitive information in the assessments tools used in the identification of Alzheimer Disease on American Indians/Alaska Natives.	To achieve the goal, I will compare and explain where is that the assessment tools failed to identify the signs and symptoms of Alzheimer's Disease.

# **Abstract Text:**

Background: The American Indian/Alaska Native (AI/AN) are the original inhabitants of North America and are less than 1% of the Unites States population which represent just the federally recognized 567 tribes. The mayor healthcare provider is the underfunded Indian health services (IHS) which can afford primary care but yet not the best quality. This can be translated to \$2,849 per capita for the federally recognized tribe which is less than 60% compared to the national expenditures. Furthermore, they have the highest rates of chronic diseases as compared with other groups. There is lack of data in multiple health areas including Alzheimer's disease (AD) the phenomenon for this research. AD is the most common dementia considered as a progressive disease of cognitive impairment. Furthermore, as of 2016, this type of dementia accounts for approximately 60 to 80 percent of all reported cases (Alzheimer's Association, 2016). According to the National Statistics Report (2016) until 2014 the number of deaths (using the ICD 10) in the Al/AN were estimated as 18,008 in which 304 accounted for AD (sixth place of main causes of deaths). The number of death rate must be considered as inaccurate because there is up to approximately 30% of information that is not reported to the agencies that collect and provide statistical data (National Vital Statistics Reports, 2016) in addition, there is a misidentification in the signs, symptoms (S/S) and diagnostic of AD mostly because of the cultural lack of awareness. Problem: There is lack of data regarding the cultural differences when answering the AD Assessment tools in Al/AN population. Efforts to study this community and identifying cultural differences when answering these tools are very limited. The literature presents little culturally-informed and targeted research. Therefore, this study intended to answer the following statements: What are the sources of discrepancy, if any, in the use of AD Assessment Tools in the Al/AN Population? Using the subsequent aims: To systematically review all relevant literature on AI/AN and AD in the last 10 years and to identify when and why misidentification of Alzheimer's indicators occurs in the Al/AN population using current AD screening tools. **Methods:** The matrix method was used to summarize the data using the following criteria: publication date, the scales, geography, number of participants, type of study, relevance, results, conclusion and limitations. Databases such as Google scholar, PubMed, CINAHL, ProQuest and EBSCOhost were searched using the key words. Findings: Just 8 articles were relevant to the research. Five research articles were systematic reviews. The majority of the studies found, did not have a

representative amount of participants from the AI/AN population. The scales used in those research studies for the identification of the AD were the: Mini Mental State Examination, the Mattis Dementia Rating Scale and the Uniform Parkinson's Rating Scale. **Conclusion:** The sources of discrepancy were identified as language barriers, rituals and beliefs, level of education, and preparation and experience from the healthcare provider who administered the tool. Recommendations include to further research and to incorporate a cultural sensitive AD assessment tool to a sample of each tribe of AI/AN and validate the information obtained so that there is accuracy in the information collected by the screening tool. This will, effectively identify AD with increase accuracy and safe and faster treatment can be provided to this population.