



INTRODUCTION

- Dementia is a crippling disease that causes behavioral and psychological symptoms that impair a person's ability to engage in activities that bring meaning into their lives (Pendleton & Schultz-Krohn, 2013).
- The dementia population is expected to triple to over 16 million by 2050 (Prince, Guerchet, Prina, 2013).
- Sensory-Based Programs, including drumming groups, provide sensory stimulation to individuals with dementia to facilitate occupational performance (Chung, 2006; Champagne, 2003).

STATEMENT OF PURPOSE

Purpose:

The purpose of this study is to examine whether participation in a sensory-based program affects behavior and engagement in ADLs for individuals with dementia.

Research Question:

Does participation in a drumming group have a positive impact on functional performance among individuals with dementia when engaging in self-feeding?

RESEARCH METHODOLOGY

- Pre-test Post-test Quantitative Research Design
- Participants (n=8) were observed over two days: Baseline and Drumming day
- All participants fall within Allen Cognitive Levels 3-4
- Outcome measures, completed by the researchers, include mood (VAS), agitation (ABS), behavior (FBP), and functional activity of self feeding (SFQ).

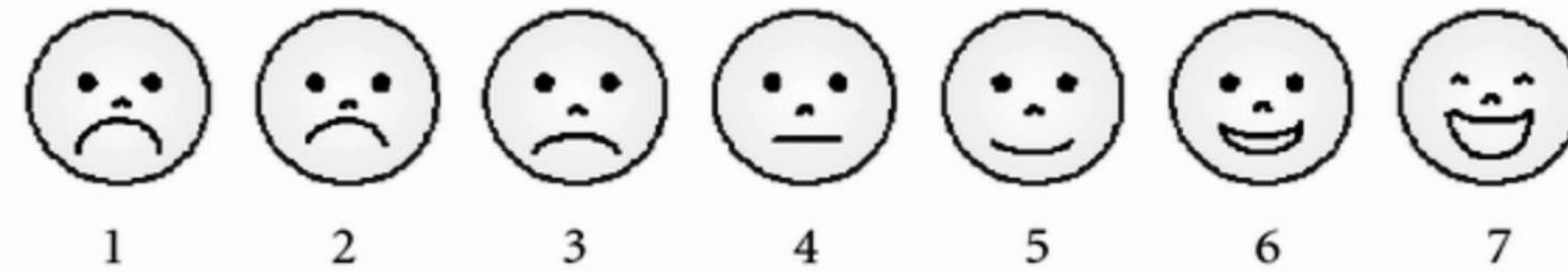
Drumming Group Observation (Drumming Day)

- Participants engaged in a drumming group for 30 minutes led by a drumming instructor.
 - Rhythmic beating while introducing names
 - Singing songs while beating drum

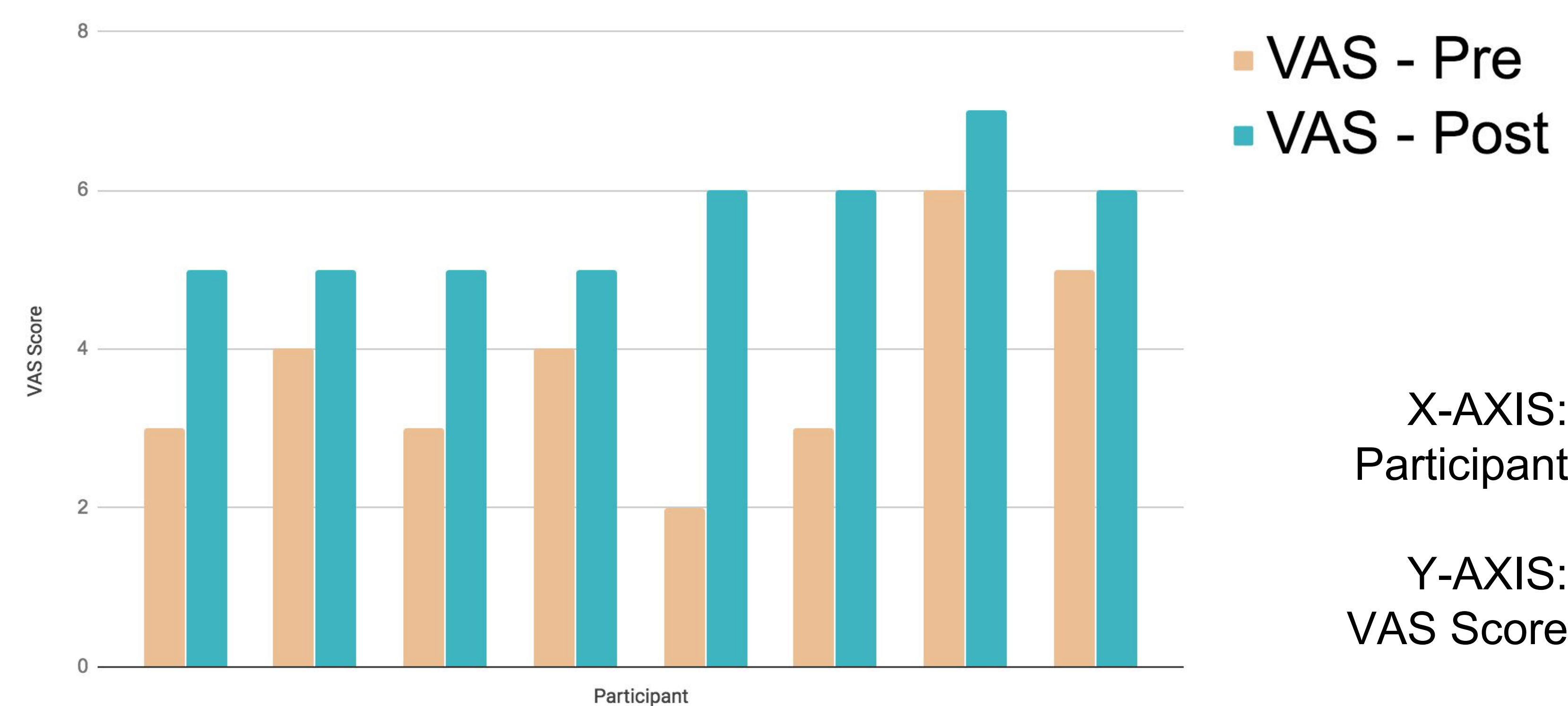
Lunch Observation (Baseline and Drumming Day)

- Participants were observed while self-feeding during lunch for 40 minutes.

"Please, indicate the face that best describes your current mood:"



Visual Analog Scale - Pre and Post Drumming Group



RESULTS

- A paired t-test was conducted to compare mood, agitation, functional behavior, and self-feeding skills before and after participation in a drumming group. There was a positive improvement in mood before (M=3.75, SD=1.282) and after (M=5.63, SD=0.744) the participation in the drumming group.
- A positive trend of improvement was noted in the ABS, FBP, and SFQ after participation in the drumming group, but they did not reach significance.

	Baseline Mean (SD)	Drumming Mean (SD)	t-value	p-value
VAS*	3.75 (1.28)	5.63 (0.74)	-4.71	0.002
ABS**	1.09 (0.15)	1.01 (0.03)	NS	0.164
FBP*	2.92 (1.15)	3.03 (1.24)	NS	0.43
SFQ*	2.26 (0.82)	2.73 (1.29)	NS	0.41

*Drumming mean score increase = improvement
**Drumming mean score decrease = improvement

DISCUSSION AND CONCLUSION

- Participants became more engaged and were responsive to direct cues throughout the course of the drumming group.
- No change was seen in function or agitation in a self-feeding session following the drumming group.
- The lack of effect on self-feeding function and agitation and behavior may have been due to the delayed time between the end of the drumming group and lunch delivery.



Copyright© Ensign Services 2016

IMPLICATIONS FOR PRACTICE

- This pilot study suggests that participating in a drumming group improves mood and engagement during the group.
- A suggestion for future studies would be to measure arousal or engagement as an outcome **during participation in a drumming group**.
- Providing sensory-based interventions may be a viable non pharmacological intervention for the dementia population. Additional research is needed.

ACKNOWLEDGEMENTS

We would like to thank Ensign Cloverdale Healthcare Center, Gina Tucker-Roghi, OTD, OTR/L, our participants, and our faculty advisor, Susan Morris, Ph.D., OTR/L for participating and supporting us in this study. We would also like to thank our families for supporting us through our academic journey.

REFERENCES

- Champagne, T. (2003). *Sensory modulation & the environments: essential elements of occupation*(3rd ed.). Southampton, MA: Champagne Conferences.
- Chung, J. C. C. (2006). Measuring sensory processing patterns of older chinese people: Psychometric validation of the adult sensory profile. *Aging & Mental Health, 10*(6), 648-655.
- Pendleton, H. M., & Schultz-Krohn, W. (Eds.). (2013). *Occupational Therapy: Practice Skills For Physical Dysfunction* (7th ed.). St. Louis: Mosby.
- Prince, M., Guerchet, M., & Prina, M. (2013). *Policy Brief for Heads of Government: The Global Impact of Dementia 2013 – 2050* [PDF]. London: Alzheimer's Disease International (ADI)