

The Impact of Adaptive Interaction Training on Nursing Staff in Advanced Dementia Care

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Introduction

- **Objective:** We examined the impact of AI Training on communicative behaviours of nursing staff on a specialized geriatric dementia unit (GDU).



Methods

- 6 staff from GDU were paired with 6 non-verbal PWD
- Staff video recorded a brief interaction with patients before training
- Staff used videos to identify the non-verbal communication repertoire of patient and to evaluate and adapt their communication



Methods

- **2-day training:**
 - Day 1 - Fundamentals of Communication, initiated communication strategy;
 - Day 2 - ABCs, continued adapting communication
- **4-week adoption period** (AI into practice)
- **1-day follow up session** (final videos, reviewed communication repertoires, group discussion)

Analysis

- Videos were examined to compare dyad communication pre and post
- Frequency and/or duration of non-verbal communication fundamentals
- Clinical scenario responses were used to examine changes in awareness & knowledge uptake



Results

Communicative repertoire of caregivers at baseline and after training

Speech

Mirroring

Functional Behaviour
Initiate Vocalization

Modality	Behaviour	D1S1 Pre	D1S2 Pre	D2S1 Pre	D2S2 Pre	D3S1 Pre	D3S2 Pre	Modality	Behaviour	D1S1 Post	D1S2 Post	D2S1 Post	D2S2 Post	D3S1 Post	D3S2 Post
Eye gaze	Partner's eyes face							Eye gaze	Partner's eyes face						
	Partner's body								Partner's body						
	Eyes closed								Eyes closed						
	Elsewhere								Elsewhere						
Facial Expression	Neutral							Facial Expression	Neutral						
	Smiling								Smiling						
	Frowning								Frowning						
	Surprise								Surprise						
	Other/Unknown								Other/Unknown						
Bodily Position	Face to face							Bodily Position	Face to face						
	Side to side								Side to side						
	Side to face								Side to face						
	Other position								Other position						
Vocalizations	Silence							Vocalizations	Silence						
	Vocalization								Vocalization						
	Laughter								Laughter						
	Speech								Speech						
	Other vocalization								Other vocalization						
Physical Contact	Physical contact							Physical Contact	Physical contact						
	No physical contact								No physical contact						
Imitation	Verbal							Imitation	Verbal						
	Non-verbal								Non-verbal						
Gestures	Pointing							Gestures	Pointing						
	Nodding								Nodding						
	Shaking head								Shaking head						
	Other head								Other head						
	Other hand/arm								Other hand/arm						
	Other foot/leg								Other foot/leg						
	Facial gesture								Facial gesture						
Functional Behaviour	Moving away from partner							Functional Behaviour	Moving away from partner						
	Moving closer towards partner								Moving closer towards partner						
	Feeding/Blood Pressure Reads								Feeding/Blood Pressure Reads						
Turn Taking	Initiate Vocalization							Turn Taking	Initiate Vocalization						
	Respond to Vocalization								Respond to Vocalization						
Total communicative behaviours		20	16	17	22	15	19	Total Communicative Behaviours		14	17	23	15	12	19

In general, staff showed reduced reliance on verbal communication and utilization of functional "care" in their interactions, while increasing the use of non-verbal fundamentals.

Results

Eye Contact

Smiling

Laughter

Physical Contact

Initiating vocalizations

Modality	Behaviour	DIS1 Pre	DIS2 Pre	DIS1 Pre	DIS2 Pre	DIS1 Pre	DIS2 Pre	Modality	Behaviour	DIS1 Post	DIS2 Post	DIS1 Post	DIS2 Post	DIS1 Post	DIS2 Post
Eye gaze	Partner's eyes face	■		■	■	■	■	Eye gaze	Partner's eyes face	■	■	■	■	■	■
	Partner's body	■		■	■	■	■		Partner's body	■	■	■	■	■	■
	Eyes closed		■						Eyes closed						
	Elsewhere	■		■	■	■	■		Elsewhere	■	■	■	■	■	■
Facial Expression	Neutral	■		■	■	■	■	Facial Expression	Neutral	■	■	■	■	■	■
	Smiling	■		■	■	■	■		Smiling	■	■	■	■	■	■
	Frowning								Frowning						
	Surprise		■		■				Surprise						
	Other/Unknown	■			■	■	■		Other/Unknown						■
Body Position	Face to face				■	■	■	Body Position	Face to face				■		
	Side to side			■					Side to side						
	Side to face	■		■	■	■	■		Side to face	■					■
	Other position	■		■	■	■	■		Other position						
Vocalizations	Silence	■		■	■	■	■	Vocalizations	Silence	■	■	■	■	■	■
	Vocalization	■		■	■	■	■		Vocalization	■	■	■	■	■	■
	Laughter								Laughter						
	Speech	■		■	■	■	■		Speech	■					
	Other vocalization	■		■	■	■	■		Other vocalization			■	■	■	■
Physical Contact	Physical contact							Physical Contact	Physical contact	■				■	
	No physical contact	■		■	■	■	■		No physical contact	■		■	■	■	■
Imitation	Verbal							Imitation	Verbal						
	Non-verbal				■	■	■		Non-verbal						■
Gestures	Pointing							Gestures	Pointing	■					
	Nodding			■	■				Nodding	■	■	■	■	■	■
	Shaking head								Shaking head	■	■	■	■	■	■
	Other head								Other head	■					■
	Other hand/arm	■		■	■	■	■		Other hand/arm	■		■	■	■	■
	Other foot/leg								Other foot/leg						
	Facial gesture	■		■	■				Facial gesture				■	■	
	Moving away from partner								Moving away from partner						
	Moving closer towards partner			■	■				Moving closer towards partner						
	Functional Behaviour	Feeding/Eating/Other	■		■	■	■		■	Functional Behaviour			■	■	
Turn Taking	Initiate	■		■	■			Turn Taking	Initiate	■	■	■			
	Respond to	■		■	■	■	■		Respond to			■	■		
Total communicative behaviours		17	14	16	17	9	18	Total Communicative Behaviours		16	10	15	11	16	16

Patients exhibited unique communication repertoires, however, in general more eye contact and positive emotions were expressed, and greater initiation of communication seen.

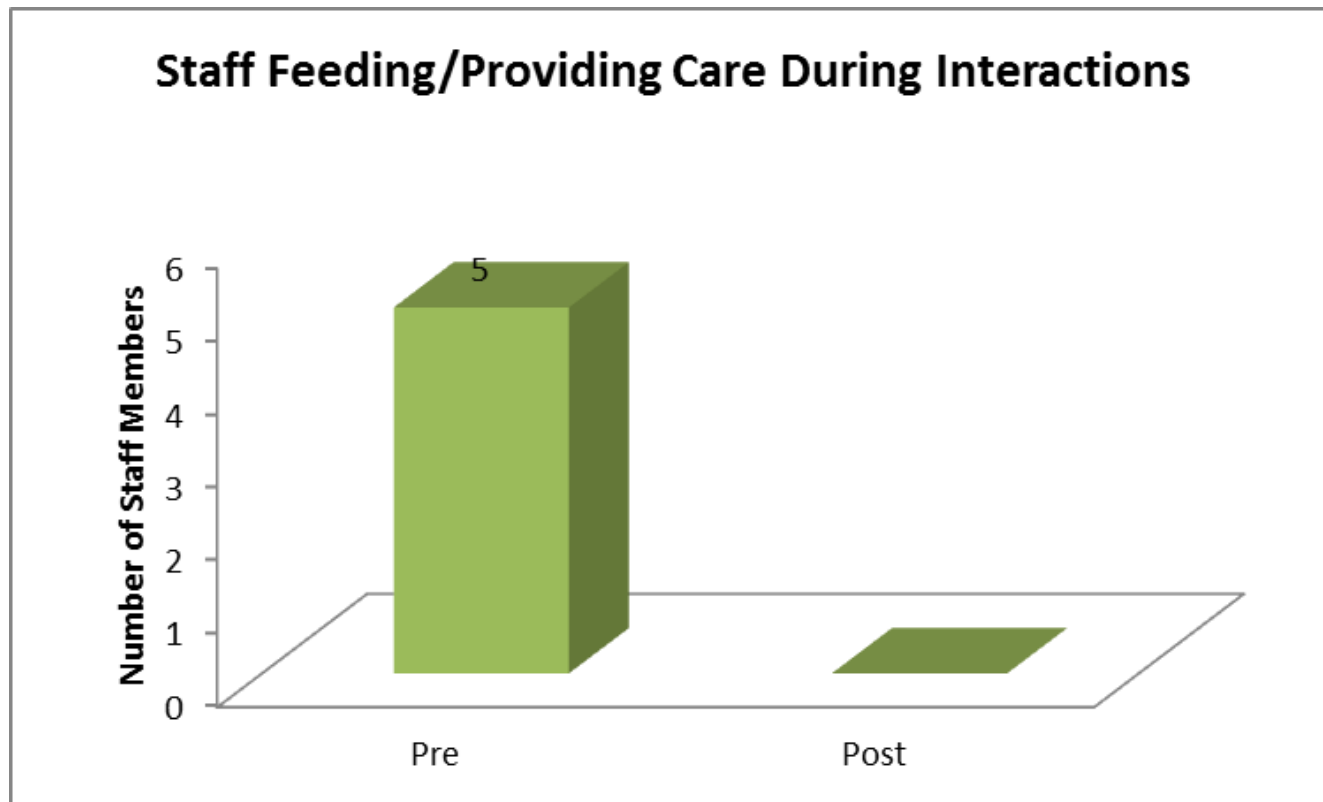
Results – Dyad 1 Pre



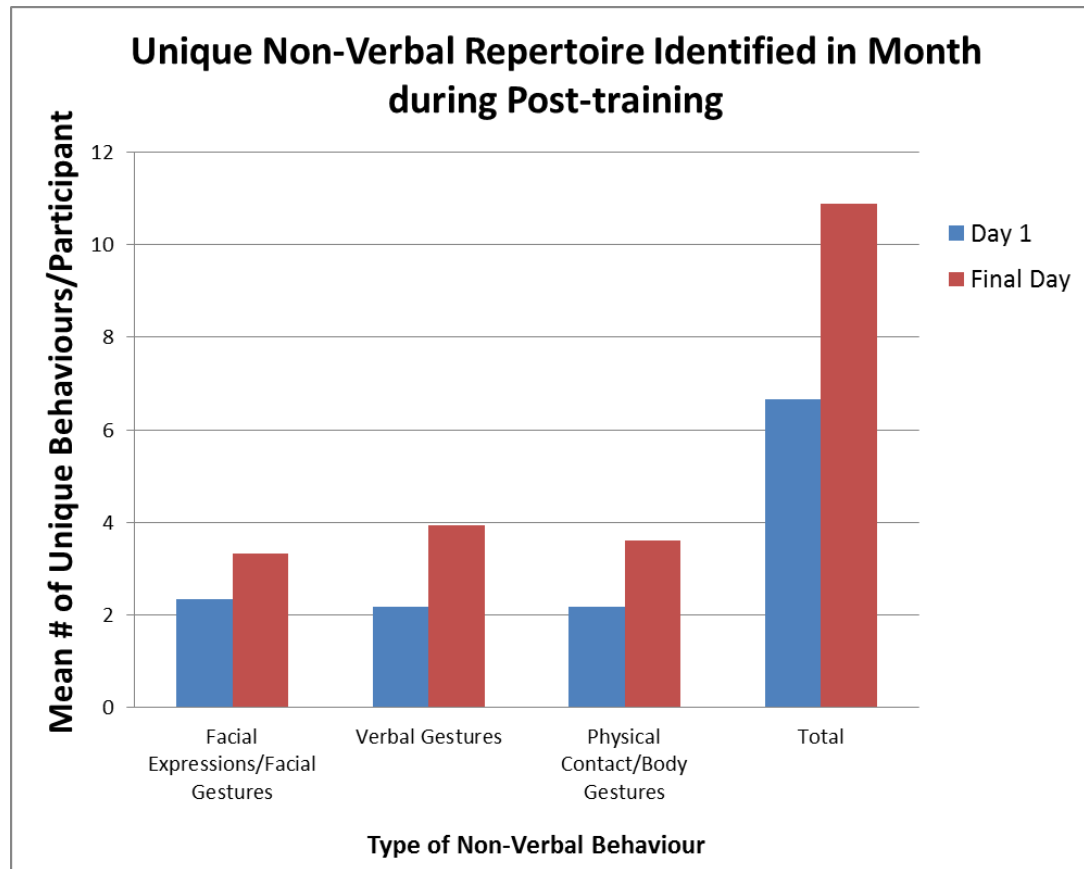
Results – Dyad 1 Post



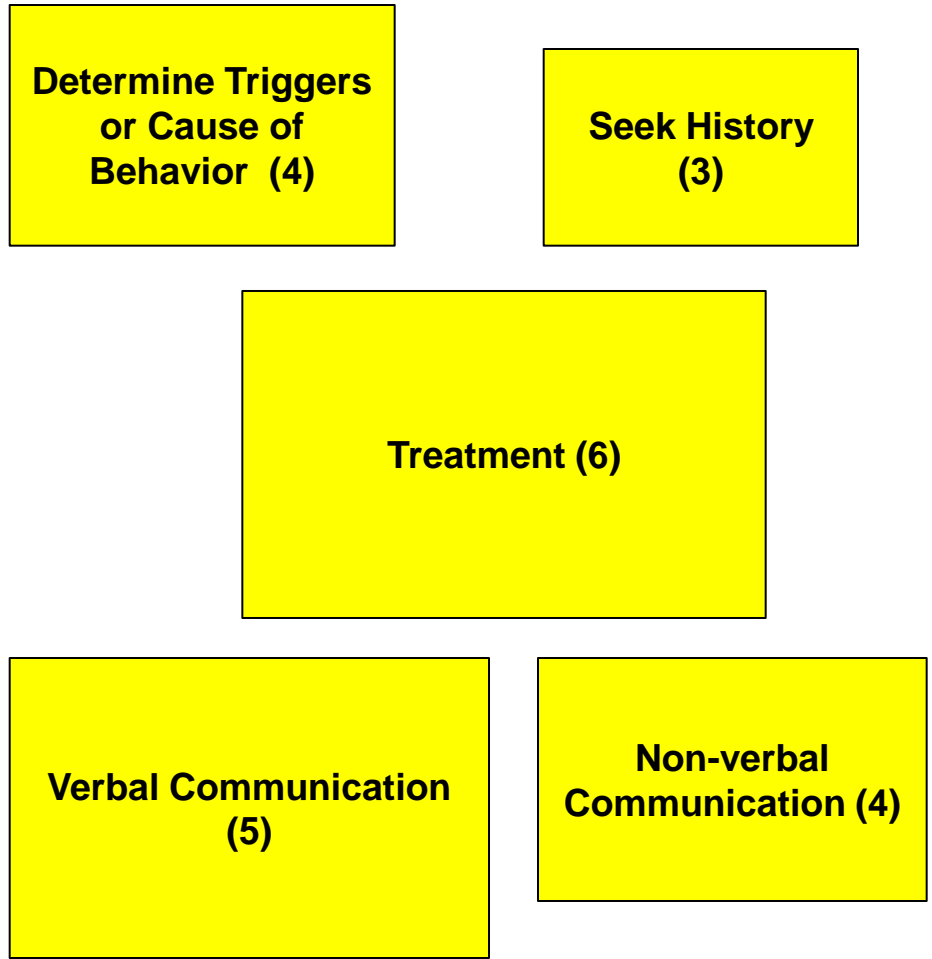
Results – Videos



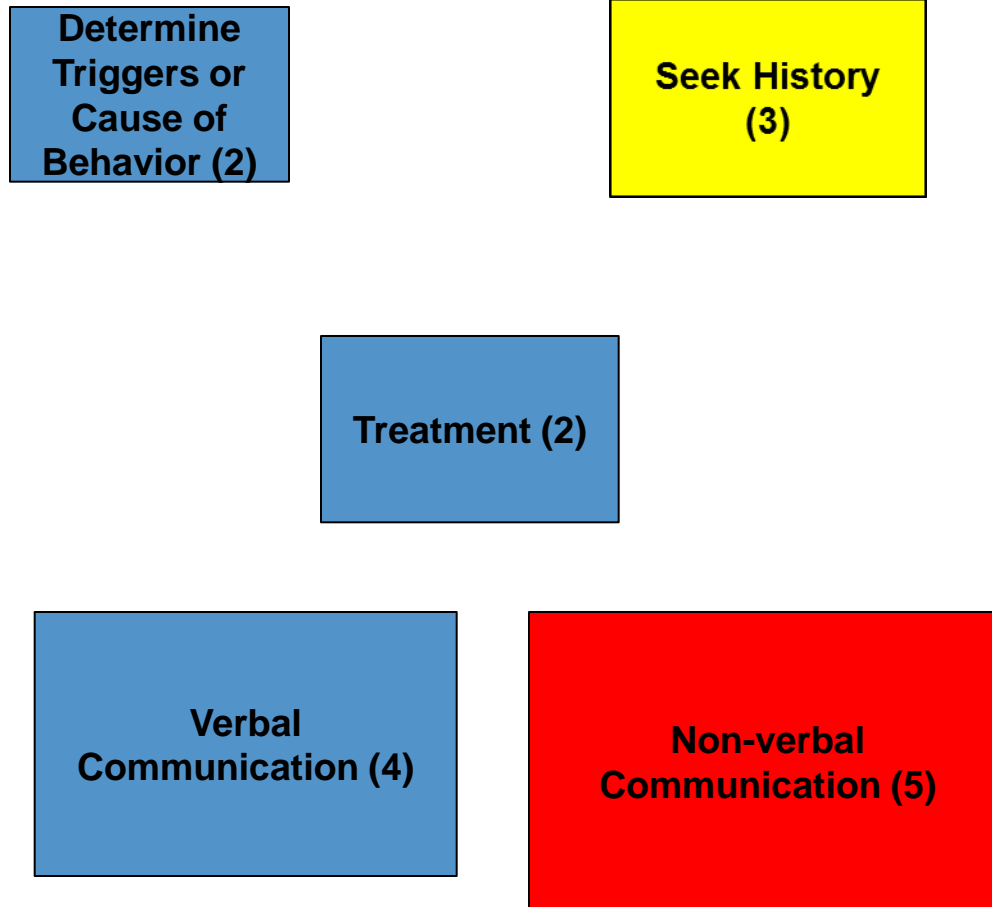
Putting adaptive interaction into practice



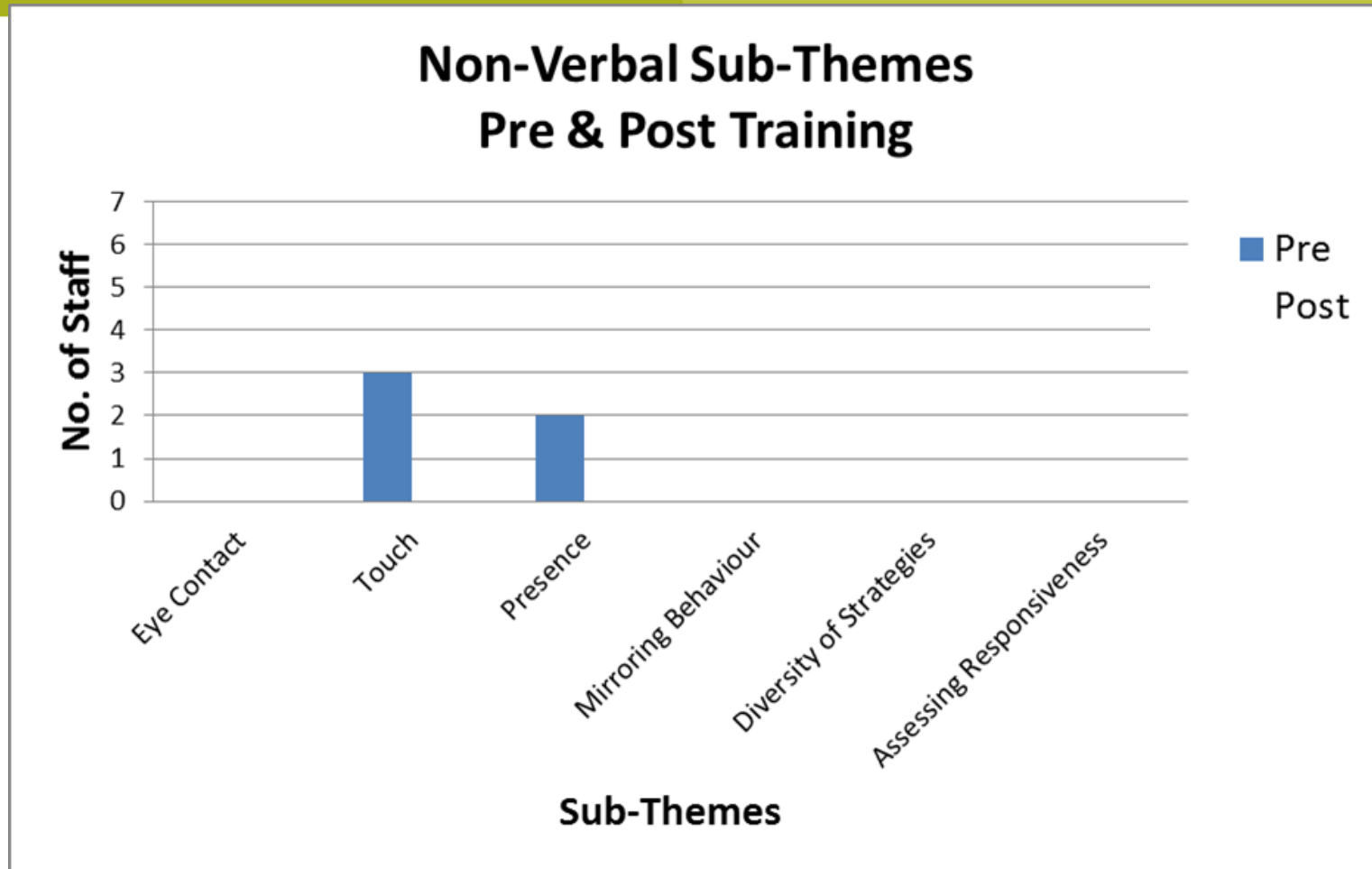
Clinical Scenario – Themes Pre



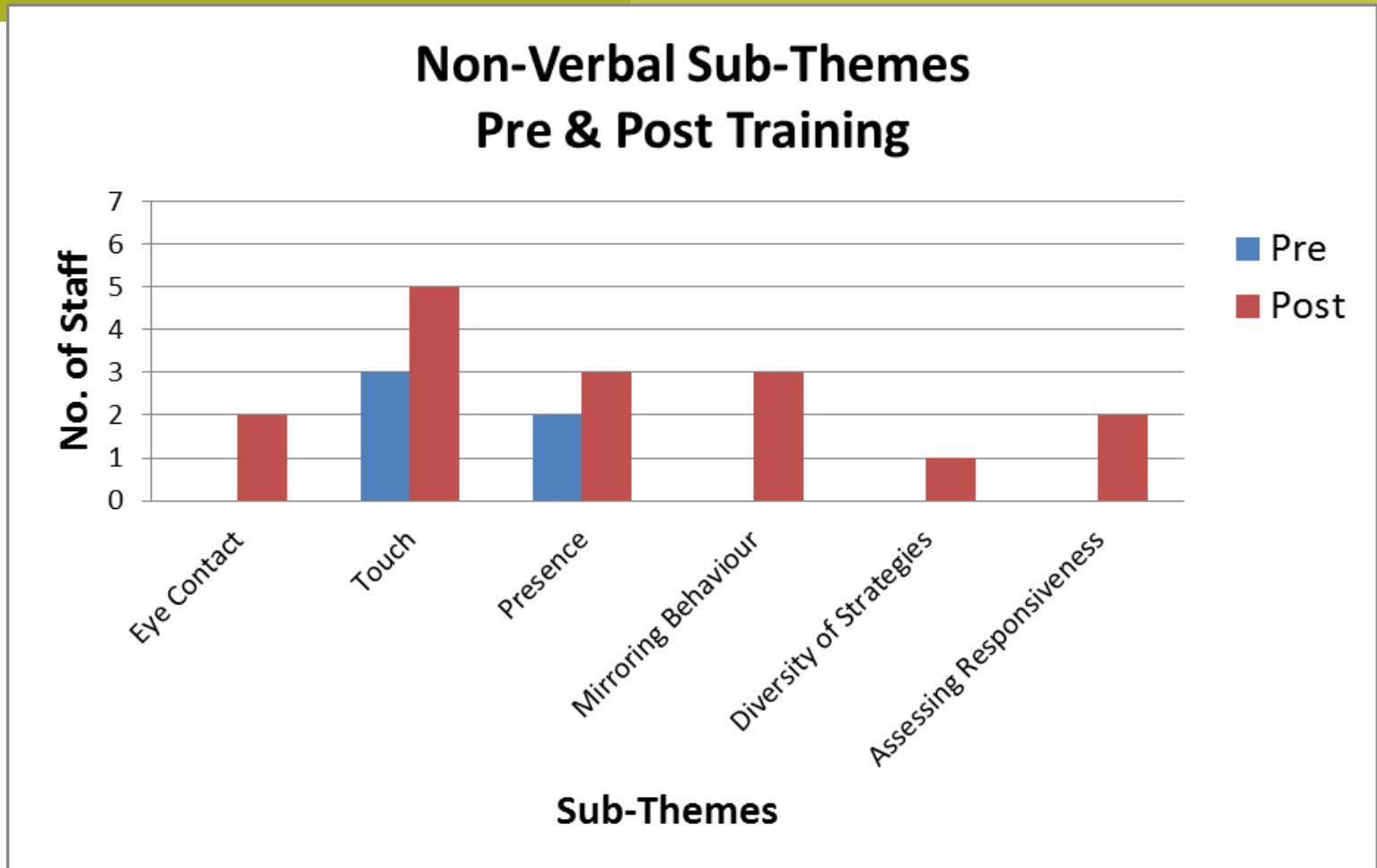
Clinical Scenario – Themes Post



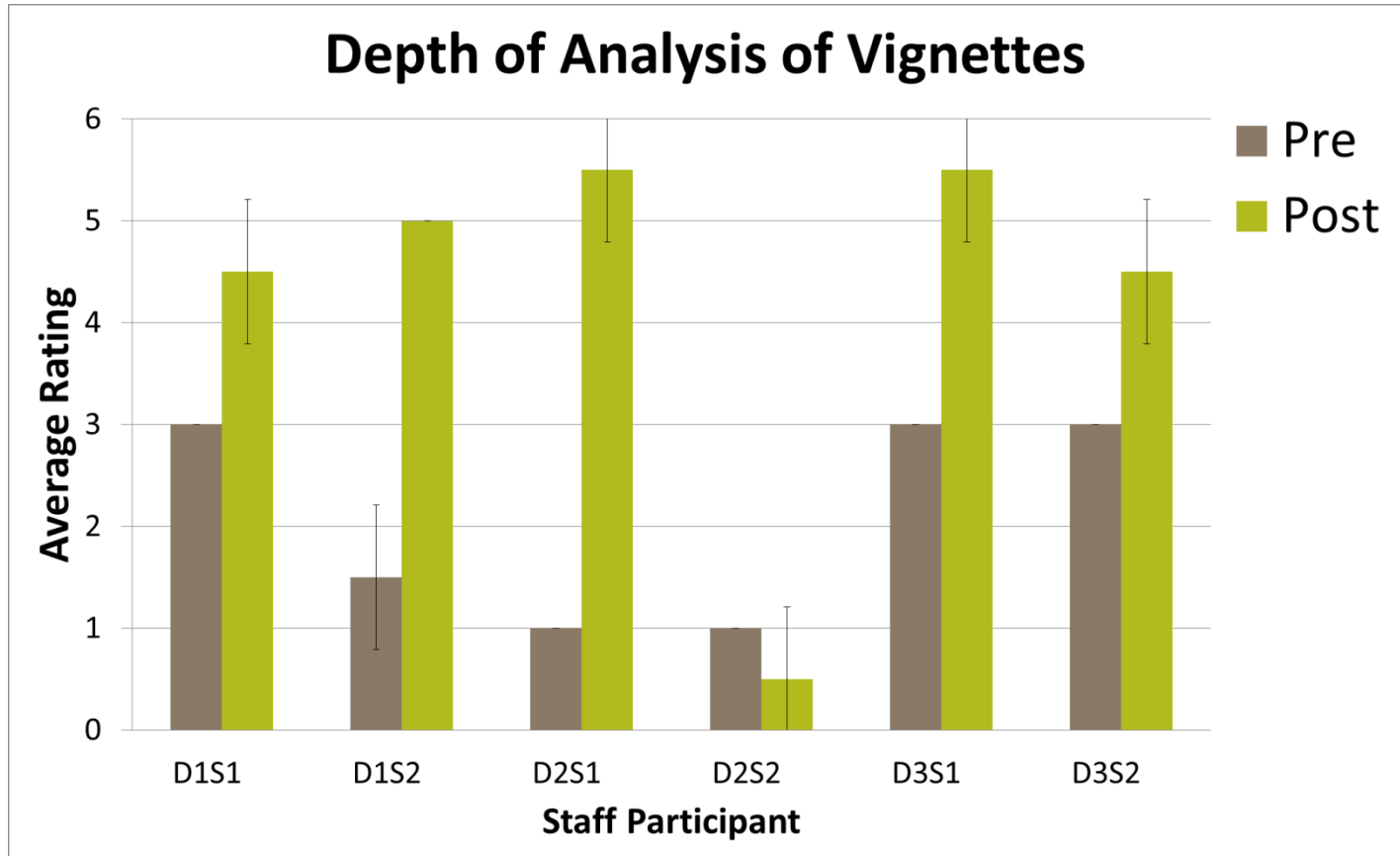
Clinical Scenario



Clinical Scenario



Clinical Scenario

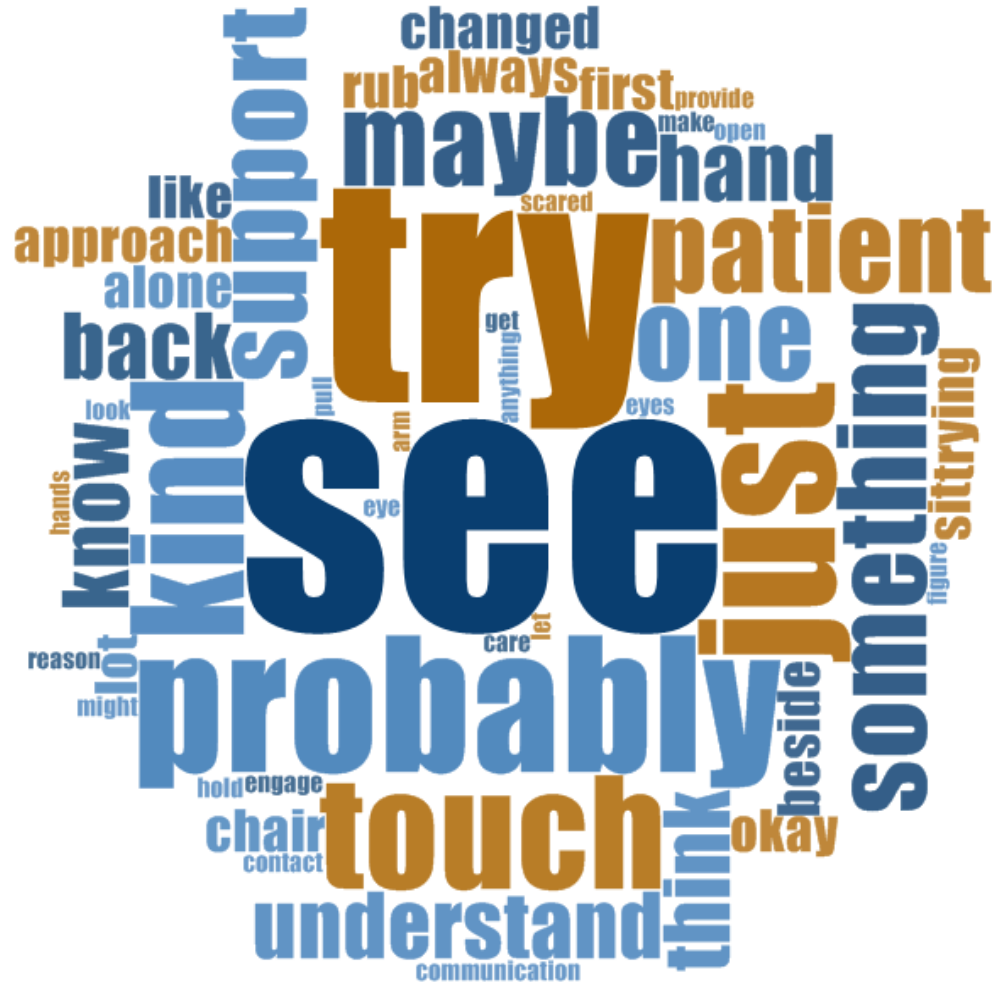


Conclusions

- Staff learned to recognize, reciprocate and adapt their communication
- Staff show greater awareness and utilization of non-verbal communication
- This can support greater engagement and enable a therapeutic relationship with non-verbal patients



Questions?



References:

Astell, A.J. & Ellis, M. (2011). *Journal of Dementia Care*, 19(3): 24-26

Ellis, M. & Astell, A.J. (2008). In S. Zeedyk (Ed.) *Techniques for promoting social engagement in individuals with communicative impairments*. Jessica Kinsley Publishers: UK



Adaptive Interaction Training: Experiences of Nursing Staff in Advanced Dementia Care



Ontario Shores
Centre for Mental Health Sciences

Adaptive Interaction

- **Staff:**
- Katelyn Cossar, RPN
- Chris Kask, RN
- Laura Gianfriddo, RPN

- **Funding:**



Adaptive Interaction – Getting Started



Adaptive Interaction – Learning the Ropes



Adaptive Interaction

Getting There



Adaptive Interaction – Future Opportunities

