



ABI JOURNAL CLUB

**Video Feedback on Functional Task Performance
Improves Self-Awareness After TBI:
A Randomized Controlled Trial.** Julia Schmidt,
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Lannin

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LAND ACKNOWLEDGEMENT

The Nova Scotia Rehabilitation & Arthritis Center (NSRAC) is located in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq People, and we acknowledge them as the past, present, and future caretakers of this land.

This territory is covered by the “Treaties of Peace and Friendship” which Mi'kmaq Wəlastəkwiyyik (Maliseet), and Passamaquoddy Peoples first signed with the British Crown in 1725. The treaties did not deal with surrender of lands and resources but in fact recognized Mi'kmaq and Wəlastəkwiyyik (Maliseet) title and established the rules for what was to be an ongoing relationship between nations. We are all Treaty people.

Mi'kma'ki includes all of Nova Scotia, Prince Edward Island, part of New Brunswick, the Gaspé region of Quebec, part of Maine, and southwestern Newfoundland.



Disclaimer

The goal of the ABI Journal club is to foster skills of research critique, promote interprofessional interaction and encourage the inclusion of evidence-based practice.

Please join us in creating a safe and approachable learning environment.

Please note that although presenters may have an interest in the article that is presented, they may not necessarily be an expert in that field.

This event is for your learning only. Please do not distribute slides or recordings. Recordings can be distributed by Journal Club organizers only.

Video Feedback on Functional Task Performance Improves Self-Awareness After TBI: A Randomized Controlled Trial

Why is this a good article for journal club?

- awareness/insight is a common issue after ABI
- Applicable to many disciplines
- This is an RCT
- Quality journal

How/why did you pick it?

Reviewing best recommendations for cognitive rehabilitation as part of my role

This article is cited frequently



Primary Issue Discussed

Impaired self awareness is common post ABI

Impaired self-awareness

- May reduce independence and participation in daily activities
- Can reduce participation in rehab, reduce use of compensatory strategies, and affect ability to set realistic goals

HISTORICAL INITIATIVES

Metacognitive strategies promote independence in complex tasks

Metacognitive strategies are recognized as being effective in improving online awareness by targeting error-self-regulation

Feedback is a key component of metacognitive training

Effectiveness of feedback had not been verified through quality RCT's.



BACKGROUND/ADDITIONAL INFORMATION

Self Awareness is defined as:

Understanding of one's own strengths & limitations and how these impact function

Ability to objectively perceive oneself while maintaining a sense of subjectivity

Self-awareness has 2 components

Intellectual

On-line (in-the-moment)



WHAT WERE THE INTENDED OUTCOMES OF THIS RESEARCH?

To evaluate the effectiveness of feedback interventions for improving online awareness in individual with TBI

Comparisons were made with 3 types of feedback

1. video plus verbal
2. verbal
3. experiential



Participants

54 participants from Nov 2009-March 2012

Inclusion Criteria:

- sustained a TBI
- older than 16 years
- functional English language
- demonstrated impaired self-awareness (defined as at least a 2-point discrepancy b/w therapist and participant ratings on the Awareness Questionnaire (AQ))



Participant Characteristics:

76% inpatients

Mean age 40 years

Mean time since injury was 4 years

85% were male

74% TBI from MVA

No difference in meal choices

No significant difference in FIM scores

No significant difference on the neuropsychological function tests used



METHODS

Impaired Self Awareness was defined as at least a 2 point discrepancy b/w therapist and client ratings on the Awareness Questionnaire, in conjunction with observation of errors in a cooking task

Primary Outcome Measure was # of errors during a meal prep task

A change of at least 30% was considered clinically significant

A Meal Independence Rating Scale (MIRS) was created to structure feedback

Secondary Outcome Measures were intellectual awareness (AQ), emotional distress (DASS) and self-perception in rehabilitation (SPIRQ)



METHODS

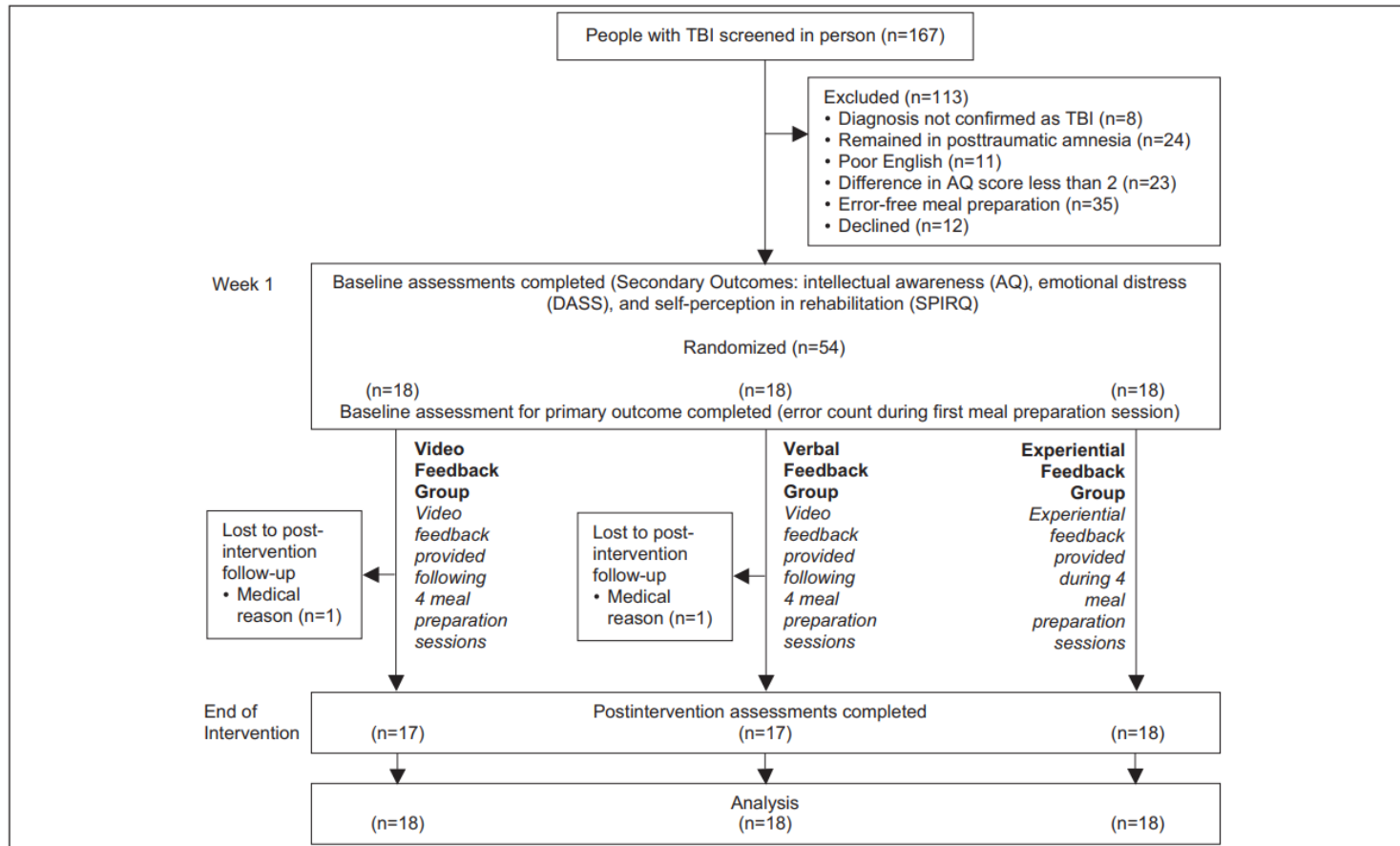


Figure 1. Design and flow of participants through the trial. Abbreviations: TBI, traumatic brain injury; AQ, Awareness Questionnaire; DASS, Depression Anxiety Stress Scales; SPIRQ, Self-perceptions in Rehabilitation Questionnaire.

METHODS

Baseline measures completed

Task completed and videotaped in Rehab Centre kitchen

Chose from 3 meal options

Provided with written recipe that was modified to suit personal preferences

Complete the same meal task 4 times



METHODS

Appropriately timed prompts and on-the-spot feedback was provided during the task

Used “Pause, Prompt, Praise” technique
allowed time to self correct
nonspecific prompt
specific prompt

Positive verbal reinforcement on spontaneous use of self-correction or correction in response to a prompt

Blinded assessor counted all errors from the videotape

Error count from 1st session became baseline score

Error count from final session used as postintervention score



METHODS

Therapist and participants completed MIRS at end of each task for all groups

Post task feedback intervention was provided based on group allocation:

1. Client and therapist reviewed video together and discussed discrepancies b/w MIRS
2. Client and therapist discussed discrepancies b/w MIRS
3. Client and therapist completed MIRS, but did not discuss it

RESULTS

All groups improved as counted by # of errors (70%, 20.7%, 37.6%)

Video plus verbal feedback improved online awareness more than either of the other 2 interventions, as counted by # of errors (70% reduction)

No significant difference in online awareness improvement between verbal and experiential feedback groups

Video plus verbal feedback led to greater intellectual awareness as measured on the AQ

No significant difference in improvements of intellectual awareness between verbal and experiential feedback groups

No difference between any groups in measure of emotional distress



COMPARISON/EVALUATION OF METHODS

Primary outcome measure (# of errors) was analyzed using negative binomial regression to check for differences b/w groups

Primary outcome measure was tested for homoscedasticity and linearity

Secondary measures were analyzed using 2x3 analyses of variance

Groups were compared for demographic, injury, neuropsychological and baseline variables

AUTHOR'S CONCLUSIONS

Video plus verbal feedback significantly improved online awareness AND intellectual awareness

Verbal feedback was not more effective than experiential feedback

Even the experiential group had an improvement in online awareness without improvement in intellectual awareness

Further evidence that on-task metacognitive training may can be effective as a therapy technique

The intervention did not lead to a significant increase in emotional distress

JOURNAL ARTICLE EVALUATION

Are the methods described in sufficient detail? Do they make sense? Should they have done something differently?

Could you figure out how to implement the intervention from what they wrote?

Did they evaluate the method appropriately?

Did the authors make unrealistic simplifying assumptions?

Was there any issues with sampling? Do the participants adequately reflect that the group that they represent?

Was this paper published in the right journal to find the audience who should care the most about it?

What do you like about the method, implementation, and evaluation, especially with reference to the Acquired Brain Injury content?

What don't you like?

Can the results be used to solve other problems? How generalizable are the results?

What might come next?



SUMMARY

Video plus verbal feedback significantly improve online awareness AND intellectual awareness

Verbal feedback was not more effective than experiential feedback

Even the experiential group had an improvement in online awareness without improvement in intellectual awareness

Further evidence that on-task metacognitive training may be key in facilitating the development of independent self-regulatory behaviour

REFERENCES & RECOMMENDED READING

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ACKNOWLEDGEMENT

THANK YOU to those who have assisted in choosing, evaluating, discussing & presenting!

THANK YOU to Annie's Café
<http://anniesplacecafe.ca/>

THANK YOU to Nova Scotia Health

THANK YOU to the Nova Scotia ABI Network

THANK YOU to the Brain Repair Center



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