



Quality of life and depression in persons with dysphagia: a post-acute brain injury rehabilitation sample

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Background

A general trend exists in the reduction of quality of life (QoL) and increased depression after diagnosis of many medical conditions. Dysphagia is a medical condition characterized by difficulty swallowing and ranges in severity (e.g., feeling food stuck in throat, inability to control muscles for swallowing). Complications can include choking, excessive drooling, and/or regurgitation. Dysphagia is prevalent in approximately 22% of adults over age 50. Many individuals are affected by dysphagia after sustaining an acquired brain injury (ABI), which increases the risk for malnutrition, dehydration, or aspiration. Dysphagia has also been associated with poor QoL, higher levels of depression, anxiety, and stress, and reduced psychosocial functioning. These findings were found in populations with head and neck cancer, laryngectomies, Parkinson's disease, and older adults. Research on the relationship between dysphagia, QoL, and depression in the ABI population is limited. In addition, previous research compared dysphagia populations with healthy adult norms. We sought to increase the specificity of research findings by comparing the relationship between QoL and depression in individuals with and without dysphagia after ABI. We hypothesized that individuals with ABI and dysphagia would report lower levels of QoL and higher levels of depression when compared to individuals with ABI without dysphagia.

Methods

Data was collected at a long-term post-acute rehabilitation facility. The current sample consisted of 22 individuals previously diagnosed with severe brain injury. Two groups were examined in a matched pair design. Participants were matched based on the following variables: age, gender, severity of brain injury, years post injury, and supported community living. Race was 86.4% Caucasian, 9.1% African American, and 4.5% Asian. One group consisted of 11 individuals with ABI and dysphagia and a second group of 11 individuals with ABI without dysphagia.

Participant	Average Matched Age	Gender	Average Years Post Injury
1	70.74	male	32.87
2	65.49	male	25.72
3	59.83	female	28.84
4	33.43	female	13.85
5	43.96	female	28.36
6	46.81	female	26.9
7	65.92	female	21.85
8	35.11	male	12.27
9	48.11	male	16.1
10	54.96	male	22.33
11	26.27	female	8.82

Methods continued

QoL was evaluated using The World Health Organization Quality of Life - BREF (WHOQOL-BREF). WHOQOL-BREF is a self-report measure assessing quality of life in relation to health care, including physical health, psychological health, social relationships, and environment. Questions are rated on a 5-point Likert scale. Higher scores reflect higher quality of life.

Levels of depression were evaluated using The Mayo-Portland Adaptability Inventory (MPAI-4) item 14. The MPAI-4 assesses rehabilitation programs and patients' long-term outcomes in post-acute settings. The current study used the MPAI-4 completed by professional consensus

WHOQOL-BREF

The following questions ask how you feel about your quality of life, health, or other areas of your life. I will read out each question to you, along with the response options. **Please choose the answer that appears most appropriate.** If you are unsure about which response to give to a question, the first response you think of is often the best one.

Please keep in mind your standards, hopes, pleasures and concerns. We ask that you think about your life in the last four weeks.

		Very poor	Poor	Neither poor nor good	Good	Very good
1.	How would you rate your quality of life?	1	2	3	4	5

Mayo-Portland Adaptability Inventory-4

Muriel D. Lezak, PhD, ABPP & James F. Malec, PhD, ABPP

Name: _____ Clinic # _____ Date _____

Person reporting (circle one): Single Professional Professional Consensus Person with brain injury Significant other: _____

Below each item, circle the number that best describes the level at which the person being evaluated experiences problems. Mark the greatest level of problem that is appropriate. Problems that interfere rarely with daily or valued activities, that is, less than 5% of the time, should be considered not to interfere. Write comments about specific items at the end of the rating scale.

For Items 1-20, please use the rating scale below.

0 None	1 Mild problem but does not interfere with activities; may use assistive device or medication	2 Mild problem; interferes with activities 5-24% of the time	3 Moderate problem; interferes with activities 25-75% of the time	4 Severe problem; interferes with activities more than 75% of the time
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Part B. Adjustment

14. Depression: Sad, blue, hopeless, poor appetite, poor sleep, worry, self-criticism

0 1 2 3 4

Results

In a retrospective design, t-tests were used to compare two groups of matched participants. We rejected our hypothesis that dysphagia resulted in lower levels of QoL and higher levels of depression. In contrast, a one-tail t-test indicated the psychological aspects of quality of life were lower for those without dysphagia, and trended toward significance ($p = 0.09$).

Descriptive Statistics		M(SD) With Dysphagia	M(SD) Without Dysphagia	Cohen's <i>d</i>
MPAI-4	Depression	1.18 (0.75)	1.55 (1.03)	-0.41
	Domain 1: Physical Health	22.73 (3.80)	23.36 (2.91)	-0.19
WHOQOL- BREF	Domain 2: Psychological	22.27 (3.50)	20.09 (4.01)	0.58
	Domain 3: Social Relationships	9.18 (1.72)	10.45 (3.45)	-0.47
	Domain 4: Environment	32.55 (4.66)	31.09 (5.75)	0.28

Conclusions

This study suggests that dysphagia does not consistently negatively impact QoL following an ABI as it does in other populations. Unknown moderators may be impacting the relationship between QoL, levels of depression, and diagnosed dysphagia in individuals with ABI. It also stresses the importance of investigating the impact of dysphagia on quality of life within various populations. Specifically, future research is needed within the brain injury population to examine QoL in regards to compliance, severity of illness, adjustment to injury, coping style, and social-problem solving styles. Examining these variables will aid in developing effective interventions.

The limitations of the present study include a small sample size and the primarily homogenous racial background of participants. Due to the small sample size, the power of this study is low. Future research should increase the sample size and include a racially-diverse group of participants to increase external validity. Additional limitations include potentially confounding variables, the quality of matched participants, and the impact of diminished self-awareness of brain-injured participants on self-report. Future research should identify and control for confounding variables and address the influence of self-awareness on accurate self-report.

See presenter for list of references

