

Using Aquariums in Managing Alzheimer's Disease: Influence on Resident Nutrition and Behaviors and Improving Staff Morale. Nancy Edwards, Ph.D., RN, C., Alan M. Beck, Sc.D. Center for the Human Animal Bond, Purdue University, West Lafayette, IN 47907. Presentation from the 10th International Conference on Human-Animal Interactions, People and Animals: A Timeless Relationship, Glasgow, Scotland, October 6-9 2004.

The study proposed: 1) to demonstrate a greater food intake during mealtimes and 2) exhibit less episodes of disruptive behavior. Additionally, staff that work with the individuals with dementia will 1) report less episodes of disruptive behavior from AD individuals, and 2) report an increase in job satisfaction during the study period.

A time series design was utilized incorporating a non equivalent control group approach.

The research participants were residents in three specialized Alzheimer's units located in extended care facilities in North Carolina and Florida. The sample included 70 individuals (males = 18, females = 53). The mean age was 82.2 years. Most individuals were experiencing severe dementia with a mean Mini Mental Status Examination (MMSE) score of 5.57 with a range from 0-20.

Dependent variables included resident body weight and nutritional intake. Nutritional intake was measured by weighing the food for all three meals before and after the resident ate. Nutritional intake was the difference in the two scores. The independent variable was the presence or absence of an aquarium that was specifically designed for use with individuals with AD.

Following the daily collection of baseline data for two weeks the aquarium was introduced in the dining area and data collection continued daily for two additional weeks (treatment). The post data collection consisted of measuring intake weekly for four weeks.

Nutrition: A paired sample t-test examined the difference between the time periods. A significant difference was noted between the baseline/treatment scores ($p=.007$); the treatment/post-treatment scores ($p=.001$); and baseline/post treatment scores ($p=.000$). A total increase of 217 grams (27.1%) was noted between the baseline period and the end of the post-treatment period. When examined by meals, a significant difference ($p<.035$ or greater) was noted in the means of all meals between the three time periods.

Resident weights were examined from the baseline period monthly for a 4-month period. A significant increase ($p=.005$) was noted between the baseline weight mean (129.5) and the weight mean at the end of the research period (132.9).

Behaviors were assessed utilizing the Nursing Home Disruptive Behavior Scale. A pretest/posttest analysis was conducted using a paired sample t-test. A significant decrease in behaviors was noted in physical aggression ($p=.008$) and personal behaviors ($p=.048$).

Job satisfaction was measured utilizing the Nursing Job Satisfaction Scale. The scale was modified to include all healthcare providers. A significant change was noted in the staff perceived ability to influence the decisions of senior managers. It is important to note that the staff perceived no increase in workload from participating in this study.

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