Executive Summary
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Physical and social environments are important but often not actualized resources that can have a significant impact on the overall goals of food consumption and quality of life. The purpose of this pilot study was to examine the effect of improved lighting and table setting contrast on residents’ meal consumption, communicative interaction, independence, and behaviors during meals in both assisted living and long term care environments serving people with dementia. A three day calorie count, footcandle measures, the Meal Assistance Screening Tool (Steele, 1996), and the Communication Outcome Measure of Functional Independence (Santo Pietro & Boczo, 1997) were administered at baseline and posttest four weeks later. Twenty-five residents with dementia at two long term care facilities participated in the study.

Two distinct aspects of the lighting environment were assessed. The first was light intensity at the table surface. The second included light level readings around the perimeter of the room, to determine the contrast ratio in lighting in the dining rooms. The contrast ratio is the ratio between the lightest and darkest part of a room. Navy blue tray liners were added under the plates to increase contrast at the table setting, and additional dark green table cloths were added at one facility (to cover a peeling finish). Lighting at Facility 1 was increased to a mean footcandle level of 35.05 Fc from 24.68 Fc, and the ratio between the lightest and darkest part of the room was reduced from 12:1 to 3:1. At the second facility, light intensity levels were increased significantly from 8.82 Fc to 22.96 Fc.

After a lighting and contrast intervention, there were significant improvements in both oral intake and functional abilities at both facilities. There were statistically significant increases from baseline to posttest in the frequency with which the residents engaged in and started conversations with staff, and answered questions with on topic responses. This result suggests that nursing home staff and designers should consider modifying the barriers in the dining environment, such as dim lighting and poor contrast, to increase clients’ ability to participate in meals. Doing so will facilitate favorable therapeutic outcomes by supporting independence.
In many long term care facilities the room in which people eat is also the room in which they participate in social, therapeutic, and recreational activities. It is even more important that multipurpose rooms have adequate lighting, as many of the residents read, create crafts, play games, visit with friends and family, and eat in these rooms, all of which require the ability to see details.