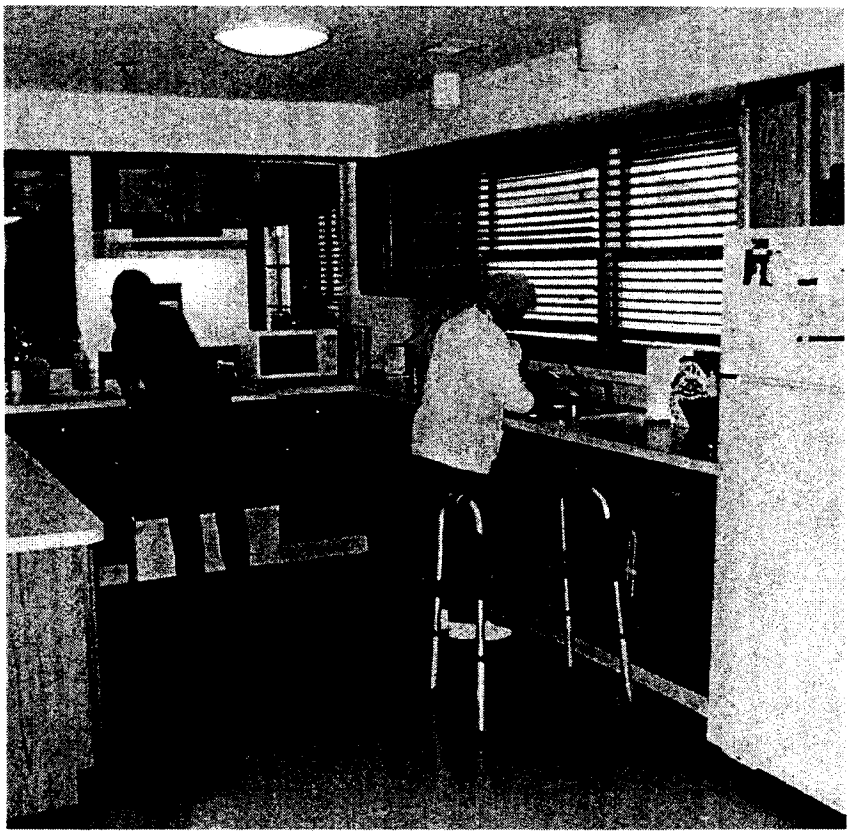
Dementia and the Environment Research Initiative

Therapeutic Kitchens in Dementia Care Settings



a report of research by
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Therapeutic Kitchens in Dementia Care Settings

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Abstract

"Therapeutic kitchens," also referred to as "country kitchens," "domestic kitchens," or activity-based kitchens," have been cited as supportive spaces for residents with dementia. The purpose of this research is to identify physical features that are typically included in therapeutic kitchen design and to explore how these features support daily use of the space for residents and staff. The study included two phases of data collection. In the first phase, four half-day site visits, consisting of interviews and observation, were conducted in northern Ohio at facilities with a therapeutic kitchen. For the second phase, a two page questionnaire regarding therapeutic kitchens was distributed to 631 nursing homes and assisted living facilities throughout the United States. Several major themes were identified across the four case studies, and 116 questionnaires were returned. Results suggest that universal design principles, certain appliances and safety features, as well as homelike imagery should be incorporated in therapeutic kitchen design. In addition, activities that are familiar but more recreational in nature, as opposed to household chores, are recommended. Staff education appears to be an important concern since there is some confusion concerning the definition and use of therapeutic kitchens. Finally, cooking one or more meals in therapeutic kitchens is suggested to make these spaces more integral to meal service systems. Although the study was exploratory and descriptive in nature, the results serve as a foundation for additional research.

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Chapter 1 Executive Summary

Problem Statement

"Therapeutic kitchens," also referred to as "country kitchens," "domestic kitchens," or "activity-based kitchens," have been cited in the literature as supportive environmental spaces for residents with dementia. In the long-term care industry, nursing homes and assisted living facilities are increasingly incorporating some sort of kitchen for resident, staff, and family use through remodeling efforts or new construction. Despite the popularity of therapeutic kitchens, few researchers or designers have clearly articulated what the components of a therapeutic kitchen actually are. There is also little, if any, empirical evidence to support the efficacy and utilization of such spaces. Consequently, "therapeutic" kitchens are often comprised of various arrangements and equipment and are used in a variety of ways to support the daily program for residents. The purpose of this research is to identify physical features that are typically included in therapeutic kitchen design and to explore how these features support daily use for residents and staff in relation to food service systems and activities programming.

Research Method

The exploratory study included two phases of data collection. In the first phase, four half-day site visits were conducted in the northern Ohio area at facilities with a therapeutic kitchen. Facilities were selected with kitchens that varied in terms of design, activities programming, and food service systems. At each site, a physical features checklist was completed, four interviews were conducted with staff, and residents and staff were observed in the kitchen during a meal and structured activity. For the second phase, a two page questionnaire was developed using information gleaned from the site visits. The questionnaire was distributed to 631 nursing homes and assisted living facilities located in nine of the 22 largest chapters of the Alzheimer's Association in different regions of the United States. For facilities in five of the chapters, each facility was contacted directly by telephone to determine whether a therapeutic kitchen existed. If a kitchen was present, the survey was mailed directly to a director or activities coordinator. Questionnaires were mailed to facilities in the other four chapters without ascertaining whether kitchens were present in those facilities.

Results

Several major themes were identified across the four case studies based on interviews with staff and observations. In general, baking is the main activity that takes place in the kitchens that were visited, and some (usually three or four)

residents are involved in meal set-up and clean-up. With the exception of one site, food is typically cooked in a commercial kitchen of the facility and transported on a cart to the therapeutic kitchen. Snacks and beverages are available to residents between meals, but most residents either access these items with staff assistance or prefer staff to wait on them. Staff use the kitchen to complete their care plans but always take their breaks off the unit away from the kitchen and residents.

Overall, 116 questionnaires were returned, yielding a response rate of 18%. Thirty-one surveys were not useable because 30 participants indicated that they did not have kitchens and one indicated that the kitchen was part of a group home. The resulting sample size is 85. Due to the low sample size, the extent to which generalizations can be made are limited. Nevertheless, the data can be used to describe characteristics of the kitchens that were sampled in the study. Fifty-seven percent of the facilities surveyed are nursing homes while 43% are assisted living facilities. The majority of the sample (60%) identified themselves as non-profit as opposed to for-profit (40%) facilities. In addition, the majority (61%) of the sites are located in a suburban setting as opposed to 34% in urban locales and 15% in rural areas. On average, the kitchens were constructed or updated in 1993, although construction and remodeling dates ranged from 1942 to 1999.

With respect to design components, over half of the respondents indicated that their kitchen is part of an activities room, and the majority indicated that the configuration of their kitchen is a counter against one wall. The most common physical features included sinks, full refrigerators, ovens, cooktops, microwaves, and standard height counters. The majority of respondents described their kitchens as residential and indicated that certain features including decor, wood cabinets, and plants and flowers contribute to that image. Safety features mostly included some sort of shut-off device for the stove and locked cabinets. Respondents suggested making kitchens larger, more homelike, and more accessible to improve the designs. With respect to activities programming, a higher number of residents participate in more recreational activities such as sitting and socializing, arts and crafts, and baking while a lower number participate in household activities such as meal set-up, meal clean-up, and housekeeping. The majority of respondents indicated that all meals are prepared in the commercial kitchen of the facility, and the use of food trays for meal service is prevalent. The therapeutic kitchen was considered quite important for residents, staff, and families, but declined in importance for facilities with residents in the later stages of the disease.

Implications

Although the study was exploratory in nature without intentions of drawing definitive conclusions from causal relationships, the results have direct implications for design,

activities programming, and food service. The findings can also serve as a foundation for future research. With respect to design, it appears that universal design features should be incorporated to a greater extent in therapeutic kitchens. Common features that should be incorporated as well include certain appliances (sinks, full refrigerators, ovens, cooktops, microwaves, dishwashers, and bread machines), windows with views to the outdoors, and counters or islands that provide sufficient space to work at or sit around and socialize. Homelike imagery is important and can be reinforced through the decor, wood cabinetry and furniture, greenery, knickknacks, countertops, and windows. Safety features related to the stove and suggestions for restricting access to potentially dangerous supplies or the kitchen in general are provided. In addition, activities that are familiar but more recreational in nature, as opposed to mundane household chores, are recommended for therapeutic kitchens. Staff education appears to be an important concern since there is some confusion regarding the definition, use, and value of therapeutic kitchens. There may also be a need for staff to examine appropriate ways to use kitchens depending on the cognitive status of the residents. Finally, cooking one or more meals in therapeutic kitchens is suggested to help make these spaces more integral to food service systems.

Chapter 2 Literature Review

Although there is a paucity of empirical research that addresses the impact of the physical environment on older persons with dementia, a growing body of literature suggests that the environment has great therapeutic potential (Calkins 1988; Cohen and Day, 1993; Cohen and Weisman, 1991; Coons, 1991). Various recommendations ranging from overall unit layout and access to outdoor spaces to individual features such as orientation cues are provided to help make the environment an active part of a therapeutic program. More specifically, Mathew and Sloane (1991) studied several environmental factors, derived with the assistance of experts in long-term care, that are thought to impact the care of residents with dementia. They found that a kitchen that is available for resident use is a supportive environmental feature. The following chapter discusses the various ways in which therapeutic kitchens can be supportive and identifies design features and patterns of use associated with kitchens.

The Importance of Therapeutic Kitchens

A number of investigators have identified numerous reasons why therapeutic kitchens, also referred to as "country kitchens," "domestic kitchens," or "activity-based kitchens," are supportive spaces in both nursing homes and assisted living facilities. Some have stressed that a therapeutic kitchen, through its physical design, can provide a familiar setting with a homelike image and atmosphere (Calkins, 1988; Cohen and Weisman, 1991; Judd, Marshall, and Phippen, 1998). Some have also indicated that a therapeutic kitchen can function as a social area if tables and islands are available or can replace the traditional nurses' station and provide an informal surveillance point (Cohen and Day, 1993; Cohen and Weisman, 1991).

Others have addressed the benefits of activities that are associated with therapeutic kitchens. For instance, familiar household tasks such as washing dishes or setting tables can contribute to feelings of pride and instill a sense of usefulness through positive outcomes or the creation of something worthwhile (Cohen and Weisman, 1991; Zgola, 1987). This is particularly possible with household activities that consist of simple, limited, repetitive tasks and draw upon over-learned patterns that residents have retained. Familiar household tasks can also reinforce previous roles and engage residents in normal, day-to-day activities. Certain activities such as cooking can stimulate the senses through color, aroma, and touch (Berenbaum, 1994). Food-related tasks, such as chopping or stirring, can have health benefits if the tasks improve or maintain muscle strength, range of motion, gross hand coordination, concentration, and attention (Bowlby, 1993). (See Figure 1). According to Robin Orr, a kitchen that patients, staff, and family members can use in a healthcare setting can enhance desired clinical outcomes if patients are encouraged to get out of bed and ambulate to access nutritional foods. In this sense, a kitchen can be part of the healing process (cited in Ruga, 1997).

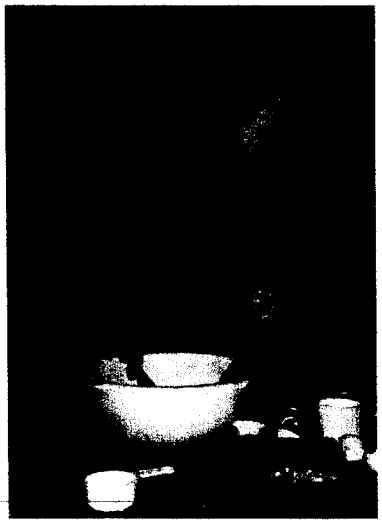


Figure 1. Familiar household tasks may help improve or maintain gross hand coordination.

Design Components of Therapeutic Kitchens

Although there is general consensus that a shared kitchen has therapeutic potential for residents with dementia, there are few references in the literature to design features that constitute a therapeutic kitchen. As a result, the kitchens that are present in nursing homes and assisted living facilities are comprised of various arrangements and equipment. For example, they may be located on or off of a unit, may be a separate room or part of a dining room or activities room, and may include appliances ranging from as little as a sink and microwave to a full residential kitchen with refrigerator, oven, and dishwasher.

A number of investigators who have addressed the design of therapeutic kitchens for residents with dementia have primarily focused on safety and universal design features (Brawley, 1997; Calkins, 1988; Cohen and Weisman, 1991). They have recommended storing dangerous equipment such as food processors and blenders, utensils, cleaning agents, and nursing station items including paperwork and medications in locked cabinets. They have suggested restricting access to appliances that are potentially hazardous through timers and inaccessible power switches so that the kitchen can remain accessible to residents when staff are not present. They have also suggested lowering wall mounted upper cabinets several inches, minimizing under-counter cabinets, providing shelving with a shallow depth, lowering counters two to three inches below standard height, providing rounded corners for counters, providing sinks without fronts for easier wheelchair access, incorporating high lighting levels, and providing non-slip flooring. They have indicated that there is a need for work space as well and that can be accomplished with small tables near the counters.

Although there is general consensus that a shared kitchen has therapeutic potential for residents with dementia, there are few references in the literature to design features that constitute a therapeutic kitchen.

Some investigators have focused on the kitchen's relationship to other spaces in a facility. Judd, Marshall and Phippen (1998) have indicated that in Australia it is typical for the kitchen area to be separated from a dining area by a counter that is at a standard height on the kitchen side and at a low table height on the dining side. This permits residents to sit in the dining area and socialize or watch those working in the kitchen. In one of the earliest references to a shared kitchen, Valins (1988) indicated that the travel distance between resident units and the kitchen should be kept to a minimum, a kitchen size of approximately 107 square feet should be used for a group of 10 residents, and the secondary dining and sitting areas should be clustered round the kitchen. Other design features have addressed finishes to reinforce homelike imagery. Cohen and Day (1993) have asserted that tile, wood, and bright carpeting can be used instead of stainless steel and other glossy, institutional surfaces.

Patterns of Use in Therapeutic Kitchens

In addition to the various arrangements of therapeutic

kitchens, these spaces are used to varying degrees to support the daily program for residents with dementia in nursing homes and assisted living facilities. In some settings, for example, a therapeutic kitchen may be used for structured activity programming with staff present to supervise. Activities may include weekly cookie baking or cake decorating, daily household chores such as sweeping, dusting, and drying dishes, weekly arts and crafts, and morning coffee hour with a discussion of major headline news. Alternatively, the therapeutic kitchen may be used primarily as a marketing tool to present a homelike image to family members and may not be used for activities programming.

In other facilities, the therapeutic kitchen may be incorporated more holistically with the meal service. Residents may be encouraged to participate in meal preparation activities such as cleaning or chopping vegetables, stirring soup or grating cheese if meals are actually cooked in the therapeutic kitchen. If meals are prepared in a central, commercial kitchen, a microwave and refrigerator in the therapeutic kitchen may still be used to prepare substitute foods quickly, to reheat food, or to provide extra food (Hellen, 1992). Regardless of where the meals are prepared, residents may also help with setting tables and can assist with clean-up by clearing and wiping the tables, putting items away, and washing and drying dishes. (See Figure 2). In addition, the therapeutic kitchen can be used for beverages and snacks which residents can access when desired, saving staff the time involved in distributing these items to individual units (Cohen and Weisman, 1991). Alternatively, food may be cooked in the commercial kitchen, transported to the therapeutic kitchen, and served on multicourse trays, depriving residents of the cooking aromas and other familiar routines associated with past eating and household experiences (Bowlby, 1993).

Figure 2. Residents may help staff with meal clean-up by washing and drying dishes.

Chapter 3 Research Methods

Therapeutic kitchens have been cited in the literature as supportive environmental spaces for residents with dementia. Kitchens, in relation to activities and food service, have also been discussed at various gerontological conferences. In addition, nursing homes and assisted living facilities are increasingly incorporating some sort of kitchen for resident, staff, and family use through remodeling efforts or new construction. Despite the references to therapeutic kitchens, few researchers or designers have clearly articulated or documented what the components of a therapeutic kitchen actually are. There is also little, if any, empirical evidence to support the efficacy and utilization of such spaces.

The purpose of this research is to identify physical features that are typically included in therapeutic kitchen design and to explore how these features support daily use for residents and staff in relation to food service systems and activities programming. This was accomplished through a research design that combined components of both qualitative and survey approaches. More specifically, the study included two distinct phases: (a) a preliminary ethnographic component consisting of a physical features checklist, observation, and semi-structured interviews with staff at four different dementia care facilities in Ohio and (b) a two page mailed-out questionnaire that was distributed to 631 facilities in the United States. The ethnographic portion served as a foundation for the questionnaire. Both phases of research were exploratory in nature and are intended to serve as a basis for future research. A more detailed description of the two phases of research follows.

Phase 1 - Site Visits

In the first phase, four facilities in the northern Ohio area were selected with therapeutic kitchens that varied in terms of design, activities programming, and food service systems. Three were located in assisted living facilities and the fourth was part of a nursing home. A kitchen in a nursing home was identified as a fifth site, but it was decided that a sufficient amount of data had been generated after four site visits. The fifth one would have been redundant. Each site visit took approximately four and a half hours.

During each site visit, the investigator, with the permission of the director of each facility, initially walked through the therapeutic kitchen and photographed it. The investigator also completed a physical features checklist that addressed the location of the kitchen and its relationship to adjacent spaces, accessibility of the space, types of appliances, safety features, storage, work space, furnishings, lighting, finishes, decorations, and the presence or absence of windows. (Refer to Appendix A). The investigator then observed residents, staff, and visitors in the therapeutic kitchen for about 3 hours, recording activities taking place, resident and staff behavior as they used the space, and the general surroundings. Observation occurred during one meal time (typically lunch) and one scheduled activity (typically baking). Once observations had taken place, the

Half day site visits, consisting of observation, staff interviews, and the completion of a physical features checklist, were conducted at four facilities with a therapeutic kitchen in northern Ohio.

investigator met with four staff at each facility for individual, open-ended, semi-structured interviews. Those interviewed included caregivers, activity directors, staff in dietary and housekeeping, and facility directors. Interview questions addressed the types and frequency of activities that take place in the kitchen, meal preparation and distribution, the involvement of residents in meal preparation and clean-up, resident access to snacks and beverages, staff use of the space for work-related activities and breaks, and satisfaction with the kitchen. (Refer to Appendix B). Each interview ranged in duration from ten to fifteen minutes.

Phase 2 - Mail Questionnaire

Information from the sites visits was used to develop a questionnaire that was mailed to 631 nursing homes and assisted living facilities throughout the United States.

For the second phase, a two page questionnaire was developed using information gleaned from the site visits. Several questions addressed design issues including the location and configuration of the kitchen, appliances, counters, storage, imagery, and safety features. Other questions addressed the types and frequencies of activities that take place in the kitchen, food preparation and distribution, and food items that are regularly accessible to residents. In addition, participants were asked to indicate, using a five point rating scale, how important the kitchen is to staff, residents and family members. They were also asked to provide some background information about the cognitive status of the residents and the facility in general. (Refer to Appendix C). Once the questions were formulated, the questionnaire was pilot tested and revised.

The questionnaire was distributed to a total of 631 nursing homes and assisted living facilities in the United States. A cover letter, accompanying the questionnaire, explained the purpose of the study and requested participation. A bright colored sticker was placed on the cover letter indicating that the questionnaire could be completed in less than ten minutes. Participants were instructed to return the questionnaire in a pre-addressed, postage paid envelope. (Refer to Appendix D).

The following procedure was used to identify potential participants. The investigator initially contacted nine of the 22 largest chapters of the Alzheimer's Association in the United States. The nine chapters were selected to represent different regions of the country and included: (a) Southeastern Pennsylvania, (b) Central Maryland, (c) Atlanta, (d) Minnesota Lakes, (e) St. Louis, (f) Dallas, (g) Rocky Mountain (Colorado), (h) Western and Central Washington, and (i) San Diego. Each chapter furnished contact information for nursing homes and assisted living facilities that provide dementia care.

The investigator telephoned each facility directly for five of the nine chapters (Southeastern Pennsylvania, Atlanta, Dallas, Rocky Mountain, and San Diego) to increase chances of positive return rates. The receptionist (or whomever answered the telephone) was asked the following question: Does your facility have any kind of kitchen or

kitchenette for activities, such as baking, for residents with dementia? If the receptionist indicated that the facility did not have a kitchen, the investigator asked whether the activities room included a refrigerator, sink or microwave and whether any kind of household tasks took place there. This was to determine whether a facility did indeed have a space that was used as a kitchen (even if it was not defined as a kitchen). Nourishment centers that were part of nursing stations or kitchens that were only used for rehabilitation were not considered for the study. If the receptionist indicated that the facility did have a kitchen, the investigator asked for the name of the director or activities coordinator and stated that a short survey would be mailed to that person in the future. A total of 276 phone calls were made to facilities in the five chapters. Of those, 167 (60%) indicated that a kitchen for resident use was present in the facility. Questionnaires were distributed to the 167 facilities.

Questionnaires were mailed directly to the nursing homes and assisted living facilities of the remaining four chapters (Central Maryland, Minnesota Lakes, St. Louis, Western and Central Washington) without ascertaining whether kitchens were present in those facilities. A total of 464 questionnaires were distributed for this portion of the mailing to the attention of directors or activity coordinators.

Chapter 4 Results: Phase 1

Four half-day site visits were conducted in the northern Ohio area at facilities with a therapeutic kitchen. The following chapter describes the kitchens for each site visit and documents the information that was gleaned from observations and interviews with staff. In addition, several major themes are identified across the four case studies and discussed in detail.

Site Visit A

Facility A is a nursing home with an open plan. The kitchen is centrally located on a unit that accommodates 15 residents and is within view from the resident bedrooms that surround the space. The kitchen essentially consists of a standard height counter against one wall and a standard height counter that separates the kitchen from the adjacent dining area. (See Figure 3. A portion of the counter between the kitchen and dining area projects beyond the lower cabinets but is not low enough for those in wheelchairs to comfortably use. A staff work space abuts the other end of that counter, and a notch is cut out of the center of the counter so that staff can move closer to residents in the dining area. (See Figure 4). Although the kitchen is generally accessible, it can be closed off with a half height door when staff are cleaning the area. Appliances are similar to ones typically found in a residential kitchen and include a double sink, full refrigerator, cooktop, oven, microwave, coffee maker, and toaster. Cabinets are only located below the counters. Safety features include a fire extinguisher, smoke alarm, and sprinkler system. The kitchen appears institutional in nature due to the high ceiling height, clerestory windows, pink colored, laminate counters and cabinets, and its location in a larger space. This is offset somewhat by the painted drywall, refrigerator magnets, and a decorative quilt on the wall.

Figure 3. The therapeutic kitchen of Facility A consists of a standard height counter against one wall and a second standard height counter that separates the kitchen from the adjacent dining area.

Based on interviews with staff, the kitchen is primarily used for baking activities, although the adjacent dining area is used for music groups, bridge, ice cream socials, visiting with families, and newspaper reading. Food is cooked in a central kitchen, placed in steam wells, transported in a heated cart to a pantry that is located off of a service corridor behind the therapeutic kitchen, plated in the pantry, transported in a cart to the therapeutic kitchen, and served to residents in the dining area. Toast for breakfast is the only food that is made in the kitchen. Some residents help a little with meal set-up and clean-up. Residents have access to beverages and snacks in the kitchen between meals. In particular, coffee is made throughout the day. However, residents generally do not retrieve these items on their own, often because they do not know where these items are. Consequently, staff serve residents. In addition, staff often fill out care plans and other paper work in the kitchen and will talk to other staff in the space at the shift change.

Figure 4. A staff work space abuts one end of the kitchen counter.

Site Visit B

Facility B is an assisted living special care unit for 18 residents, that is part of a larger continuing care retirement community. The kitchen is an open space, off of a circulation route, and accessible from two ends. It consists of a standard height counter and cabinetry that wrap around three sides of a pentagon-shaped space that accommodates a staff work area. An opening above the sink overlooks the staff space and is adorned with curtains to simulate a window. A second standard height counter mimics the flow of the counter against the wall and acts as an island separating the kitchen from an adjacent dining area. The second counter also includes a lower portion to accommodate those in wheelchairs. (See Figures 5 and 6). Newspapers are usually placed on that portion of the counter. Appliances include a full refrigerator, oven with cooktop, microwave, coffee maker, dishwasher, juice machine, a glass enclosed cooler for snacks, and steam wells. Dark wood cabinets and drawers are located above and below the counters. Safety features include a fire extinguisher, smoke alarm, and sprinkler system. (See Figure 7). Finishes are residential in nature. Magnets and artwork are on the refrigerator, and holiday decorations are often displayed. In addition, views to an enclosed outdoor courtyard are provided in the dining area.

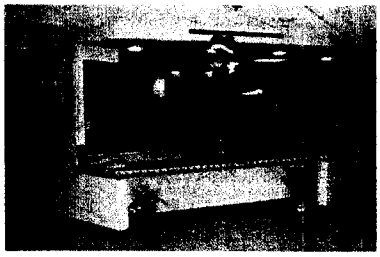


Figure 5. In Facility B, the therapeutic kitchen has an opening above the sink that overlooks a staff work space. There is also a low counter for those sitting.

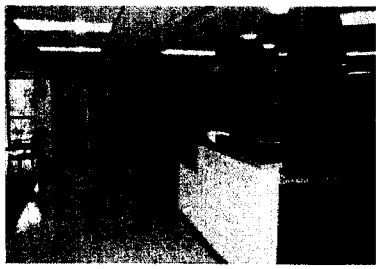


Figure 6. The therapeutic kitchen is separated from the adjacent dining area by a counter with steam wells.

According to staff who were interviewed, baking is the primary activity that takes place in the kitchen. The adjacent dining area, however, is used for cards, bingo, puzzles, manicures, and musical entertainment. Three to four residents regularly help with meal set-up. Staff will put items such as glassware, silverware, and linens out on the counter to encourage residents to set the tables. With staff supervision, some residents may also help with the meal preparation by cutting up vegetables for salads. Food is transported on carts from a central kitchen and placed in steamer wells in the unit kitchen to keep the food warm. Staff plate the food, show the two entree choices to residents, since they might not understand "chicken" or "pork," and serve the residents. The same three to four residents who assist with meal set-up will also help to clean up by bringing plates from the tables to the counter. Residents will help themselves to the juice machine and to items in the glass cooler, but generally like to be waited on. The space was described as "kind of like their own kitchen and a restaurant at the same time." Breakfast is not served at a set time; residents can have breakfast whenever they wake up.

Figure 7. The kitchen has residential features including wood cabinets and standard home appliances.

Site Visit C

Facility C is an assisted living special care unit for 12 residents. The kitchen is located right near the entrance to the unit and is adjacent to a dining area. (See Figure 8). Staff, residents, and visitors must walk through the dining area (right near the kitchen edge) to get to the living room

and resident bedrooms. Based on observations, this can be distracting at times. The kitchen is a U-shape configuration, with cabinets and standard height counters against two walls and a standard height counter that functions as an island between the kitchen and dining area. Two large windows are located above the sink, and two small openings on each side of the oven provide views into a living room. Finishes are very residential and include wood cabinetry and drawers, drywall, vinyl flooring, and other items one would find in a home such as a draining board, fruit bowl, cake plate, cookie jar, etc. Appliances include an oven with a safety switch, microwave, double sink, and toaster. Some locked cabinets, a fire extinguisher, smoke alarm, and sprinkler system are safety features. (See Figure 9).

Figure 8. The kitchen of Facility C is located near the unit entrance and is adjacent to the dining area.

Interviewees indicated that all meals are cooked in the therapeutic kitchen. However, fried foods or foods that require more space, such as a turkey, are cooked in the commercial kitchen. The intention is to fill the unit with aromas at meal time to stimulate the residents' appetites. Residents help with meal preparation by stirring food, requesting spices, buttering bread, and tasting soup. After the food is prepared in the therapeutic kitchen, it is plated by one staff member on the kitchen side of the island and handed across the counter to another staff member in the dining area to carry to the residents. Table setting occurs a few minutes before the meal service to deter residents from taking items on the table. Residents do not help with table setting, but three to four residents help with meal clean-up, drying dishes and wiping tables. For breakfast, items (dry cereal, muffins, rolls, breakfast bars) are set on the counter for residents to choose. Snacks and beverages are available between meals, but residents are used to being served. If no one is around, they may go into the refrigerator or cabinets to help themselves. The main activity that takes place in the kitchen is baking, although residents are constantly socializing at the counter. Three to four ladies will tidy the drawers from time to time, and one woman likes to vacuum. In addition, staff will use the area to review paperwork.

Figure 9. The kitchen has a U-shape configuration, residential finishes, and windows above the sink.

Site Visit D

At full occupancy, 17 residents can use the therapeutic kitchen in Facility D. Ten residents are currently occupying the assisted living special care unit. The kitchen is an open space, off of a circulation route, and accessible from two ends. It consists of a standard height counter and white cabinets above and below the counter against one wall. A second standard height counter with cabinets below separates the kitchen from an adjacent dining area. (See Figure 10). A living room with a television is adjacent to the dining area. Appliances in the kitchen include a full refrigerator, oven with cooktop, and microwave. There is also a soap dispenser and pencil sharpener. Safety features include a fire extinguisher, smoke alarm, sprinkler system, and automatic shut-off stove. Views to an enclosed outdoor courtyard are provided in the dining area. (See Figure 11).

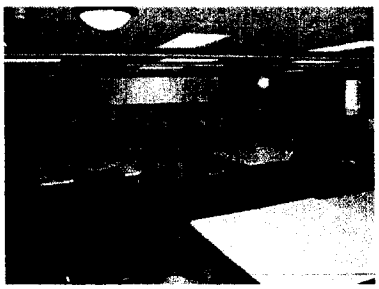


Figure 10. The kitchen of Facility D is adjacent to the dining area

Based on information gathered from the interviews with staff, meals are prepared in a central kitchen for each unit, transported in casserole dishes (Corning ware) on a cart to the therapeutic kitchen, plated by staff from the cart, and served to residents. The microwave in the therapeutic kitchen is used to warm food for those who eat slowly. All table supplies are brought from the central kitchen to the therapeutic kitchen approximately one half hour before each meal. Residents do not help with meal preparation or set-up but a few will help clean up. Two entrees and five alternates are offered at lunch and dinner. Theme dinners, including Hawaiian, Italian, and Oriental, are provided twice a week. Finger foods are also offered for those who have greater difficulty eating. Residents are asked to offer suggestions for meals or to share recipes once a month. Like a restaurant, residents can order breakfast. The breakfast is made in the central kitchen and brought to residents in the dining area adjacent to the therapeutic kitchen. Fruit is always on the kitchen counter for residents to help themselves, and crackers and popcorn are kept in the cabinets. Liquor is kept in a locked cabinet; one resident receives a shot of liquor before dinner. The only activity that is offered in the therapeutic kitchen is a weekly cooking class.

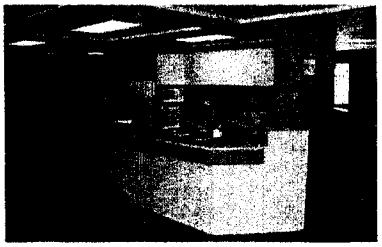


Figure 11. The kitchen consists of one counter with white cabinets and appliances against a wall and a second counter that acts as an island.

Major Themes

Several major themes were identified across the four case studies based on interviews with staff and observations. These themes are related to activities programming, food services systems, and staff use of the kitchen.

Activities Programming

Aside from household activities associated with meal set-up and clean-up, baking is the main activity that takes place in the therapeutic kitchen. Based on observations, baking consists of pouring ingredients (usually measured out by staff) in a bowl, mixing ingredients, frosting or decorating desserts, washing and drying dishes afterwards, and smelling and eating the baked goods. It appears that residents need specific directions to participate in the baking activity and do best with one-to-one interaction with staff. (See Figure 12). Staff often ask residents several times if they would like to help. Two to three residents usually participate, although several others may sit and watch. A few residents may walk through the kitchen periodically to assess what is going on or to receive hugs and kisses from staff. Interviewees indicated that the baking activity is offered anywhere from twice a week to twice a month.

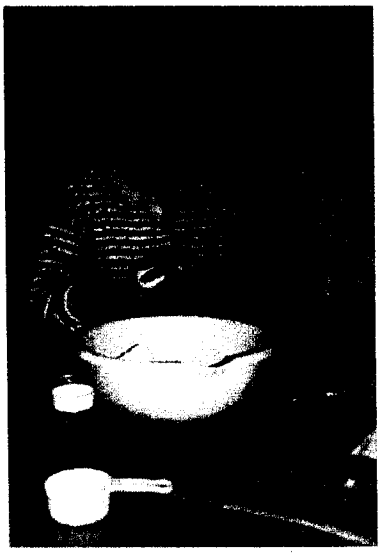


Figure 12: Residents appear to need specific directions to participate in baking activities and do best with one-to-one interaction.

Interviewees from all sites that were visited for this study also indicated that male-specific activities are not offered. Ethnic activities are limited to different holiday dinners or crafts (Christmas, Thanksgiving, Hanukah). Other household activities were evident at Facility C. At that facility, some residents would tidy drawers, sweep or

vacuum, season vegetables or add spices during meal preparation.

Food Service

Except for Facility C where meals are actually cooked in the therapeutic kitchen, interviewees at the other facilities indicated that lunch and dinner are cooked in a central kitchen, placed in either warmers, a heated cart or Corning ware on a cart, transported to the therapeutic kitchen, plated by staff, and served to residents. (See Figure 13). For breakfast, items are usually left out on the counter for residents to help themselves, with some staff guidance. Generally two to four residents will help with meal set-up a few minutes before meal time. Staff often put items out on the counter (from cabinets in the kitchen) and ask residents to help set the table. Residents will pour drinks in glasses, fold napkins, and set tables with silverware, salt and pepper. Residents help with clean-up less frequently than they do with meal set-up. For those that do help, cleaning rags are usually provided by staff, and residents will wipe tables or bring their plates to the counter in the kitchen. Observations revealed that most residents leave the kitchen or dining area as soon as they are finished eating. During meal times, residents will often signal to staff, as if they are waiters or waitresses, to request something.

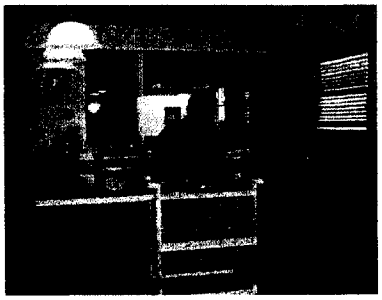


Figure 13. Most meals are cooked in central kitchens and transported on carts to therapeutic kitchens.

Interviewees indicated that residents have access to snacks and beverages between meals. Fruit is often placed in a basket on the kitchen counter, and residents will help themselves to these items. Other snacks are kept in cabinets and cold beverages are kept in the refrigerator. Interviewees also indicated that residents like staff to wait on them, and they generally will not retrieve snacks or beverages on their own. One facility kept cold beverages and some snacks in a glass enclosed cooler, in an attempt to encourage residents to help themselves. At other times, staff will serve residents because they do not know where to find these items. Locked cabinets are used for knives and cleaning supplies.

Staff Use

Staff indicated that they will use the kitchen to complete their care plans or daily paper work, especially if the books are kept in the cabinets. (See Figure 14). Some of the paper work is filled out at tables in the adjacent dining area in these facilities since this area is open and staff can monitor residents at the same time. At shift changes, staff tend to talk to the next shift in the kitchen area. Staff do not use the kitchen as a break area. The staff who were interviewed indicated they feel compelled to take breaks off the unit, out of the view of residents, in order to ensure that their break is a break.

Figure 14. Staff often use the kitchen to complete care plans.

Chapter 5 Results: Phase 2

Questionnaires were mailed to a contact person at 167 sites with kitchens for resident use after telephoning the facilities ahead of time. Of the 167 facilities, 45 (27%) questionnaires were returned. Of the 45 surveys returned, 12 respondents indicated that they did not have kitchens, despite the fact that the receptionists (or whomever answered the telephone at each facility) had stated that kitchens were present. Although the terminology that was used over the telephone was also used in the cover letters accompanying the questionnaires that were sent to contact persons, it appears that there was some confusion over the definition of a kitchen. A total of 464 questionnaires were mailed to other sites without ascertaining whether kitchens were present in the facilities. Seventy-one (16%) questionnaires were returned from those facilities.

Overall, 116 questionnaires were returned, yielding a response rate of 18%. Thirty-one surveys were not usable because 30 participants indicated that they did not have kitchens, and one indicated that the facility was a group home. One survey was returned due to an incorrect address. The resulting sample size is 85. In addition, a few cases were eliminated during analysis when outliers for certain variables were removed based on quartile exclusion. The responses that were removed were ones that fell outside the normal distribution of responses. Due to the low sample size, the extent to which generalizations can be made are limited. Nevertheless, the data can be used to describe characteristics of the kitchens that were sampled in the study. The following is a description of the design components that were characteristic of the kitchens as well as the activities and food service systems that were most common in the kitchens.

Design Components

Several design components are addressed in this section. These include the spatial configuration and layout of the kitchen, the appliances, counters and cabinetry of the kitchen, imagery, safety features, and best and worst features of the space.

Spatial Configuration

When asked "which best describes your kitchen? (check all the apply)," over half (52%) of respondents indicated that the kitchen is part of an activities room. Other responses indicated that the kitchen is part of a dining room area (39%), an open space that cannot be closed off (32%), an open space that can be closed off (11%), and a separate room with a door (19%). Only 2% of the respondents indicated that a hallway was near the kitchen. The majority (52%) of respondents indicated that the configuration of their kitchen was a "counter against one wall." The counter against one wall was often part of an activities room (66%) and, to a lesser degree, part of a dining area (32%).

Over half (52%) of respondents indicated that the kitchen is part of an activities room.

Other configurations included "L-shaped" (20%), "U-shaped" (11%), "counter against one wall and island" (10%), "table" (3%), and "full kitchen/dining area" (1%).

Physical Features

When asked about specific appliances, counter areas, cabinetry, and windows that are part of the kitchen, the most common features that were checked by the respondents included sinks (92%), full refrigerators (88%), ovens (87%), microwaves (78%), standard height counters (77%). and cooktops (74%). Other features that were mentioned to a lesser degree included windows (57%), coffee makers (52%) toasters (48%), and kitchen tables (45%). Features that were not particularly common included mini refrigerators, dishwashers, washers, dryers, low counters, islands, and desks or work areas. With respect to cabinetry, more respondents indicated that "some cabinets/drawers were locked" (52%) as opposed to "all cabinets/drawers locked" (19%). Refer to Table 1 for a list of the most common features.

Table 1. Kitchen Features Specified (check all that apply)

Feature	Percentage With
Sink	92
Full refrigerator	88
Oven	87
Microwave	78
Standard height counter	77
Cooktop	74
Window(s)	57
Some cabinets / drawers locked	53
Coffee Maker	52
Toaster	48
Kitchen table	45
Bread Machine	35
Hand washing sink	28
Desk or work area	21
Dishwasher	21
All cabinets/drawers locked	19
Some cabinets/drawers labeled	15
Mini refrigerator	13
All cabinets/drawers labeled	13
Island	12
Low counter	8
Washer	6
Dryer	6
Juice Machine	1
Blenders & Grills	1
Small size range	1
Steam table	1

An analysis was conducted to determine whether these features differed by the type of facility (nursing home or assisted living facility). Certain appliances, including microwaves, coffee makers, toasters, and dishwashers, were part of kitchens in assisted living facilities more often than they were part of nursing home therapeutic kitchens. Refer to Table 2 for the percentages. There was also a greater likelihood that all cabinets and drawers would be locked in the kitchens of nursing homes as opposed to only some cabinets and drawers being locked in assisted living kitchens.

Table 2. Facility Type by Features [percentage (n)]

Kitchen Feature	Assisted Living N=31	Nursing Home N=51
Sink	97% (30)	88% (45)
Full refrigerator	94 (29)	86 (44)
Oven	90 (28)	86 (44)
Standard height counter	81 (25)	75 (38)
Microwave	90 (28)	71 (36)
Cooktop	77 (24)	71 (36)
Window(s)	65 (20)	51 (26)
Some cabinets / drawers locked	55 (17)	53 (27)
Coffee Maker	71 (22)	40 (20)
Toaster	58 (18)	40 (20)
Kitchen table	42 (13)	45 (23)
Bread Machine	36 (11)	35 (18)
Hand washing sink	36 (11)	23 (12)
Desk or work area	29 (9)	18 (9)
Dishwasher	42 (13)	10 (5)
All cabinets/drawers locked	13 (4)	22 (11)
Some cabinets/drawers labeled	55 (17)	18 (9)
Mini refrigerator	10 (3)	14 (7)
All cabinets/drawers labeled	10 (3)	16 (8)
Island	19 (6)	8 (4)
Low counter	16 (5)	4 (2)
Washer	16 (5)	0 (0)
Dryer	16 (5)	0 (0)

Imagery

The majority of respondents described their kitchens as " a residential kitchen that could be in someone's home" (64%). Others described their kitchens as "institutional" (20%), "an old-fashioned country kitchen (6%), an "apartment kitchen" (5%), a "dining room" (3%), "make-shift" (1%), or provided some other description (1%). Table 3 includes the appliances, counters, cabinetry,

The majority of respondents (64%) described their kitchens as "a residential kitchen that could be in someone's home."

and windows listed by over 50% of the respondents for each distinct image type (residential/homelike, country, institutional, apartment-like). The greatest distinctions include the use of mini refrigerators in the "apartment-like" kitchens and the inclusion of windows in the "residential" and "country" kitchens. As Table 3 shows, the same features were evident in the "country" and "residential" kitchens.

Table 3. Features by Kitchen Image

Kitchen Image	Features Listed By Over 50% of Sites in Each Image Type
Country Kitchen*	Full refrigerator, sink, cooktop, oven, microwave, toaster, bread machine, standard height counter, kitchen table, some cabinets/ drawers locked, and windows
Residential/Homelike *	Full refrigerator, sink, cooktop, oven, microwave, toaster, bread machine, standard height counter, kitchen table, some cabinets/ drawers locked, and windows
Institutional	Full refrigerator, sink, cooktop, oven, microwave, toaster, coffee maker, standard height counter, kitchen table
Apartment-like	Mini refrigerator, sink, cooktop, oven, microwave, coffee maker, all cabinets/ drawers locked

*These image types have the same features listed.

Respondents were also asked to list one to two features, such as the decor, that contribute to the image of the kitchen they described. For the analysis of this question, responses from the residential and country kitchens were grouped together and compared with the responses from the kitchens that were identified as institutional in appearance. Open-ended responses suggested that the decor of the kitchen (window dressings such as curtains, wallpaper, and bright colors) (26%) as well as wood cabinetry (19%) contributed most strongly to a residential or homelike image. Other features mentioned included plants and live flowers (11%), countertops (10%), knickknacks such as dishtowels, linens, aprons, potholders, teapots, and crafts (9%), wood tables (7%), and standard appliances you would find in a home (7%). Refer to Table 4 for a list of these features. In contrast, a lack of decor, white color or a cold appearance (38%) and plain cabinetry (23%) contributed most strongly to an institutional image. Some respondents described the cabinetry as "basic" suggesting that cabinets which lacked decorative detail were viewed as institutional. Other features included institutional furniture such as feeder tables (15%) institutional looking, larger appliances (8%) and kitchens that were part of an activities room (8%).

Table 4. Features for Residential vs. Institutional Kitchens

Feature	Residential (percentages)	Institutional (percentages)
Décor (wall paper, color)	26	-
Wood Cabinetry	19	-
Plants and Flowers	11	-
Countertops	10	-
Knickknacks (dish towels, aprons, crafts)	9	-
Wood table/Furniture	7	-
Home Appliances	7	-
Other	6	-
Window to Outside	4	-
Lack of Décor/Color	-	38
Basic/Plain Cabinets	-	23
Institutional Furniture/Equipment	-	15
Institutional Appliances	-	8
Against One Wall	-	8
Part of Activities Room	-	8

Safety Features

When asked "what safety features are part of your kitchen," respondents, in an open-ended format, mentioned devices for the stove (43%). These included a hidden switch, circuit breaker, key, automatic shutoff, and knobs that could be removed. Locked cabinets or drawers (23%) were also mentioned for cleaning agents, chemicals, and medications. Locked doors, gates, and half doors as well as policies that only permit residents in the kitchen area when staff are present, were used to restrict access to the kitchen (15%). Protective devices for other appliances such as switches for microwaves or protective coverings for bread machines (6%), hidden knives (4%), fire protection devices such as smoke detectors and fire extinguishers (4%), good lighting (2%), controlled water temperature through a faucet scald guard (2%) and non-skid flooring were also mentioned as safety features. Refer to Table 5.

When asked "what safety features are part of your kitchen," respondents often mentioned devices for the stove.

Table 5. Safety Features [percentages]

Feature	Full Sample of all Sites
Stove (hidden switch, automatic shut off)	43%
Locked Cabinets/Drawers	23
Restrict Access (locked doors, monitoring)	15
Protective Devices for Other Appliances	6
Hidden Knives	4
Fire Protection (smoke detector, sprinkler, fire extinguisher)	4
Good Lighting	2
Controlled Water Temperature	2
Non-Skid Flooring	1

Best and Worst Features

Respondents generally provided two or three word answers and brief phrases when asked to identify the best and worst features of their kitchen design. Several items were identified as best features. The most common included accessibility of the kitchen (18%) in terms of the relationship of the kitchen to resident rooms and universal design features. Respondents often commented that it is important to include counter areas that are wheelchair accessible and cabinets that are low enough to be reached by residents in and out of wheelchairs. The openness of the space (without clutter) (15%), standard appliances (refrigerator, oven, microwave, sink) (15%), windows that provide views to the outdoors (10%), a homelike appearance and feeling (9%), long counters or islands (9%) for residents to sit around or cook, and cabinets that provide adequate storage space (8%) were also mentioned as desirable design features. Refer to Table 6 for a complete listing of the features.

Table 6. Best Features of Kitchen Space [percentages]

Feature	Full Sample of all Sites
Accessibility (location, counters, cabinets)	18%
Openness of Space	15
Standard Appliances	15
Windows (views to outside)	10
Homelike	9
Counters (to sit around or cook)	9
Cabinet Storage	8
Other	8
Safety Features	6
Lighting	2

In contrast, respondents indicated that a small size kitchen space (33%) was one of the worst design features. Other undesirable features included inaccessibility (16%) both in terms of universal design and the location of the kitchen in relationship to resident rooms, missing appliances (dishwasher, garbage disposal, stove, bread machine) (9%), little counter or work space (8%), refrigerator noise (8%), the location of the kitchen in another room such as the activities room or along a circulation route (8%), an institutional appearance (5%), lack of safety features (5%), and lack of cabinet storage space (5%). Refer to Table 7.

When asked how respondents would "suggest improving or increasing use of the kitchen," a number suggested a larger space (19%) and including more activities in the kitchen besides baking (19%). As Table 8 shows, more appliances such as a dishwasher, bread machine, and larger stove (11%), a more homelike appearance (10%) through items such as curtains, tables, and knickknacks, wheelchair accessible cabinets and counters (10%), and more counter space (7%) were also noted. In addition, respondents

indicated that staffing concerns (10%) were important. More staffing is needed to provide closer supervision of residents, and more training is needed to involve residents more effectively in kitchen-related activities.

Table 7. Worst Features of Kitchen Space [percentages]

Feature	Full Sample of all Sites
Small Size Kitchen Space	33%
Inaccessibility (relationship to resident rooms, universal design)	16
Missing Appliances (dishwasher, garbage disposal, stove, bread machine, etc.)	9
Part of Other Room (activities, dining, circulation)	8
Little Counter/Work Space	8
Refrigerator Noise	8
Institutional Appearance	5
Lack of Safety Features	5
Not Enough Cabinet Storage	5
Other	3

Table 8. Suggested Improvements [percentages]

Feature	Full Sample of all Sites
Larger Space	19%
More Activities (besides baking)	19
More Appliances (bigger stove, dishwasher, bread machine, steam tables)	11
More Homelike Appearance	10
More Staffing (supervision of residents, in-services, encourage resident participation)	10
Wheelchair Accessible (counters and cabinets)	10
Other	8
More Counter Space	7
Better Lighting	3
L-shape	3

Activities Programming

With respect to activities programming, the percentage of facilities that actually participate in different types of activities in the therapeutic kitchen was analyzed for all respondents. For those who indicated that the facility participated in a certain activity, average utilization rates were calculated for the various activities. These included the average number of residents and staff that participate in a given activity and the frequency with which the activity occurs.

The percentage of facilities that actually participate in the different types of activities listed on the questionnaire

ranged from 22% (ethnic meals) to 92% (baking). Baking (92%), arts and crafts (68%), socializing and sitting (64%), meal set-up (59%) and meal clean-up (59%) occurred in more than half of the therapeutic kitchens surveyed. Refer to Table 9 for a complete listing.

Table 9. Facilities Participating in Activities [percentage]

Activity	% of Facilities Participating
Baking	92%
Arts and Crafts	68
Socializing/Sitting	64
Meal set-up (setting tables)	59
Meal Clean up	59
Housekeeping (e.g. sweeping floors)	47
Meal preparation	40
Holiday Dinners	32
Ethnic Meals	22

However, the number of residents that actually participated in the activity and the frequency with which the activity occurred varied considerably. As indicated in Table 10, a higher number of residents are involved in more recreational activities including socializing and sitting (11.29), arts and crafts (10.30), baking (9.18), holiday dinners (13.62), and ethnic meals (10.67). A rather low number participate, on average, in household activities such as meal set-up (4.04), meal preparation (6.53), meal clean-up (2.83), and housekeeping (2.59). Socializing and sitting occur approximately seven times a week, and arts and crafts and baking are offered on average about one and a half times a week. Household activities including meal-related tasks and housekeeping are offered anywhere from about 6 to 12 times a week. With the exception of ethnic meals (2.58) and holiday dinners (2.94), an average of close to two staff members are typically involved in meal-related activities, and 1.5 staff participate in baking.

A higher number of residents are involved in more recreational activities such as socializing and baking, and a lower number participate, on average, in household activities such as meal clean-up and housekeeping.

Table 10. Average Utilization Rates Per Category For Facilities Participating In Activities [Mean Scores (N)]

Activity	# Residents	# Staff	# Times/ Week
Baking	9.18 (66)	1.57 (67)	1.44 (67)
Arts and Crafts	10.30 (52)	1.82 (54)	1.85 (52)
Socializing/Sitting	11.29 (42)	2.65 (44)	7.46 (47)
Meal set-up (setting tables)	4.04 (31)	1.92 (46)	11.78 (42)
Meal Clean up	2.83 (30)	1.71 (45)	10.11 (40)
Housekeeping (sweeping floors)	2.59 (27)	1.32 (37)	6.74 (37)
Meal preparation	6.53 (20)	1.85 (31)	5.81 (27)
Holiday Dinners	13.62 (17)	2.94 (24)	0.44 (7)
Ethnic Meals	10.67 (12)	2.58 (18)	2.19 (12)

Food Service

Questions related to food service addressed where meals are prepared, how food is served, the availability of snacks and beverages, and the extent to which residents help themselves to snacks and beverages. Comparisons are also made between kitchens that were identified as residential and kitchens identified as institutional in relation to meal service and the extent to which residents help themselves to snacks and beverages in the kitchen.

Meal Preparation and Service

The majority of the respondents indicated that all meals (breakfast, lunch, and dinner) are prepared in the commercial kitchen of the facility. Only three respondents (4%) noted that breakfast and dinner are prepared in the therapeutic or activity kitchen while four (5%) indicated that lunch is prepared in the activity kitchen. With respect to food service, respondents were given the opportunity to check more than one method of food distribution. As a result, percentages will not add up to 100% across the different types of food service. The use of trays in food service is prevalent. Thirty seven percent of the facilities surveyed serve meals (breakfast, lunch, and dinner) from trays, and 36% serve meals on dishes from trays (i.e. take the dishes off the tray). In other cases, 26% of the facilities surveyed serve meals from steam tables, and 19% serve meals family style. Refer to Table 11.

The majority of respondents indicated that all meals are prepared in the commercial kitchen of the facility. In addition, the use of trays in food service is prevalent.

Table 11. Food Service by Kitchen Image [percentages]

Food Service Distribution	All Sites	Residential Kitchens	Institutional Kitchens
On Tray	37%	32%	33%
Dishes off Tray	36	28	33
Steam Tables	26	28	33
Family Style	19	28	7

The different types of food distribution were also analyzed in relation to the kitchens that were identified as either residential or institutional. (Responses from the residential and country kitchens were grouped together and compared with the responses from those that indicated their kitchens are institutional in appearance). As with the responses from all participants, almost a third of the respondents from the residential kitchens (32%) and the institutional kitchens (33%) indicated that food is served on trays. Similarly, nearly a third of the residential kitchens (28%) and the institutional kitchens (33%) serve food on dishes off of trays or from steam tables. A difference is evident with respect to family style food service. Twenty-three percent of the facilities with residential kitchens use family style food service while only 7% of the facilities with institutional kitchens used that style. Refer to Table 11.

Snacks and Beverages

When asked "which items are kept in your kitchen and are available to residents (check all that apply), 70% noted that snacks are available, 42% of the respondents indicated that fruit is available, and 2% indicated that sandwiches are available. Cold beverages are available to residents in 77% of the facilities, and hot beverages are available in 45% of the facilities. In contrast, snacks and beverages are not available for residents in 19% of the facilities that were surveyed. Refer to Table 12 for a listing of the percentages.

Table 12. Items Available to Residents [percentages]

Food Item	All Facilities
Cold Beverages	77%
Snacks	70
Hot Beverages	45
Fruit	42
No Snacks or Beverages	19
Sandwiches	2

In general, a third of the respondents indicated that residents help themselves to snacks and beverages in the kitchen with staff assistance (33%) or prefer staff to help or wait on them (33%). Fifteen percent of the respondents noted that residents are not allowed to help themselves in the kitchen and 15% also indicated that residents are unable to help themselves. Only a few respondents (3%) indicated that residents help themselves to these items in the kitchen on their own. Refer to Table 13.

Table 13. Kitchen Type: Residents Helping Themselves to Snacks and Beverages [percentages (N)]

Do residents help themselves to these items?	All Sites	Residential Kitchen N=54 (7 missing)	Institutional Kitchen N=15 (5 missing)
Yes, mostly with staff help	33%	38 (18)	30% (3)
No, residents mostly prefer staff to help	33%	34 (16)	20 (2)
No, residents are not able	15%	15 (7)	10 (1)
No, residents are not allowed	15%	9 (4)	40 (4)
Yes, mostly on their own	3%	4% (2)	--

The extent to which residents help themselves to food items in the kitchen was also analyzed in relation to the kitchens that were identified as either residential or institutional. As with the responses from all participants, about a third (34%) indicated that residents mostly prefer staff to wait on them or help with snacks and beverages in the residential kitchens. Similarly, about a third also indicated that residents help themselves to snacks and beverages with staff assistance in the residential kitchens (38%) and in the institutional kitchens (30%). In contrast, residents of facilities identified by respondents as having institutional kitchens were not allowed to serve themselves in a greater proportion of cases (40%), and preferred staff to help or wait on them in only 20% of the facilities surveyed. Refer to Table 13.

Importance

The therapeutic kitchen was considered quite important for residents, staff, and families but declined in importance for facilities with residents in the later stages of the disease.

Using a five point rating scale, respondents were asked to evaluate the importance of the therapeutic kitchen from the perspective of the residents, staff, and family members. Specifically, they were asked: "Regarding the kitchen, would you say most residents/staff/families/ feel that it is..." (1=not at all important to 5=very important). Across all participants, the importance ratings ranged from 3.6 to 3.8 for the three groups (residents, staff, families) suggesting that the therapeutic kitchen is considered quite important. Refer to Table 14.

Table 14. By Kitchen Type, Responses to "Regarding the kitchen, would you say the staff/ residents/ families feel that it is..." (1=not at all important to 5=very important)

	All Sites	Residential (n=54)	Institutional (n=15)
Staff	3.8	4.06	3.00***
Residents	3.6	3.78	3.00*
Families	3.7	4.02	3.20**

*p<.05, **p<.01, ***p<.001
(significance between kitchen types per category of staff, residents, and families)

An analysis of variance was completed to compare the mean differences in importance ratings for the residential and institutional kitchen types that were identified by respondents. As expected, sites with institutional kitchens indicated lower levels of importance for the kitchen for staff (p<.001), residents (p<.05), and families (p<.01). Although not statistically significant, the importance rating for residents in the residential kitchen was lower than the staff or family member ratings. Refer to Table 14 for these findings.

The level of importance was also analyzed in relation to the cognitive status of residents. For respondents who indicated

that the majority of their residents had early stage dementia, the importance level remained fairly constant across the three groups (staff, residents, families) ranging from 3.62 to 3.85. There was much greater variation for facilities with residents in the middle (3.38 to 3.90) and late stages (2.67 to 3.17) of the disease. Refer to Table 15. In facilities with middle stage dementia residents, the importance level for residents was lower than it was for staff and families. The importance level was also lower for residents as well as staff in facilities with late stage dementia residents than it was for families. From early to late stages of the disease, the importance level of the kitchen decreased for residents and staff considerably (a whole point on a five point rating scale) but only decreased approximately a half point for families.

Table 15. Level of Importance of Kitchen by Cognitive Status Of Residents (for only those who answered once, for the "Majority" of residents using the kitchen)

	Early Dementia N=13	Mid-Stage Dementia N=29	Late Stage Dementia N=6
Staff	3.77	3.90	2.67
Residents	3.85	3.38	2.83
Family	3.62	3.72	3.17

In addition, the level of importance of kitchens for staff, residents, and families was analyzed in relation to assisted living facilities and nursing homes and in relation to the setting of the site (urban, suburban, rural). Statistical differences were not found in either case. There is some indication that the level of importance of kitchens is higher in facilities that prepare and cook one or more meals in the therapeutic kitchen. In all instances, respondents provided a 4 or 5 importance level rating (on the five point rating scale) for staff, residents, and families. However, there was an insufficient number of cases (five respondents indicated that at least one meal is cooked in the therapeutic kitchen) to draw definitive conclusions.

Background of Facilities

As Table 16 shows, the majority of therapeutic kitchens (78%) included in this study are located on the unit as opposed to off the unit (22%). Ninety-three percent of the kitchens that respondents identified as institutional are located on the unit while 77% of the kitchens that were designated as residential are on the unit. On average, the kitchens were constructed or updated in 1993, although construction and remodeling dates ranged from 1942 to 1999. Fifty-seven percent of the respondents were nursing homes while 43% were assisted living facilities. The majority of the sample (60%) identified themselves as non-profit as opposed to for-profit (40%) facilities. In addition, the majority (61%) of the sites are located in a suburban

setting as opposed to 34% in urban locales and 15% in rural areas.

Table 16. Sample Demographics

Descriptives of Demographic Variables	
Year Kitchen was Constructed or Updated:	
Average: 1993	
Cognitive Status of the Majority of Residents Who Use Kitchen:	
Early Stage Dementia	27%
Middle Stage Dementia	60%
Late Stage Dementia	13%
The Kitchen is	
On the Unit	78%
Off the Unit	22%
At full capacity, number of residents who can use kitchen:	
Average:	17
Facilities:	
Assisted Living	43%
Nursing Home	57%
Facilities status:	
Non-Profit	60%
Profit	40%
Facility Setting:	
Urban	24%
Suburban	61%
Rural	15%

Respondents were also asked to describe the cognitive status of the majority of the residents who use their kitchen. For those who indicated that their residents were primarily early-stage, middle-stage or late-stage, 60% of the sites had residents with middle-stage dementia, 27% had early stage dementia, and 13% had late stage dementia residents. At full capacity, 17 residents on average can use the therapeutic kitchen for activities.

Chapter 6 Implications

Analyses of the case studies and the mailed-out questionnaires have provided a greater understanding of the physical features that typically comprise therapeutic kitchens and the ways in which kitchens are used to support the daily program for residents with dementia. The study was exploratory in nature without intentions of drawing definitive conclusions from causal relationships. In addition, the sample size was relatively low. The identification of kitchens as residential or institutional by the respondents was a subjective, self-selected process, but contributed to the analysis by providing another layer of interpretation. Despite these limitations, the results have direct implications for design, activities programming and food service and can serve as a foundation for future research.

Design Suggestions

Several design suggestions are discussed in this section with respect to universal design principles, common physical features, residential or homelike imagery, and safety.

Universal Design

Based on the analyses, it appears that universal design features should be incorporated to a greater extent within therapeutic kitchens. When asked about specific physical features in the kitchen, standard height counters were checked by 77% of the respondents while only 8% indicated that low counters were present. In the open-ended responses, accessibility was noted as the best feature of the respondents' therapeutic kitchens. Respondents often commented that it is important to include counter areas that are wheelchair accessible and cabinets that are low enough to be reached by residents in and out of wheelchairs. Significantly, kitchen inaccessibility was also noted as an undesirable feature, and respondents often suggested a larger space to facilitate wheelchair maneuverability in the kitchen as well as accessible counters and cabinets to improve their therapeutic kitchens. (See Figure 15).

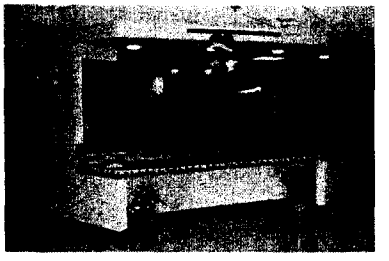


Figure 15. Based on the analyses, it appears that universal design features, such as this low counter, should be incorporated to a greater extent within therapeutic kitchens.

Universal design in therapeutic kitchens for residents with dementia has been addressed in the literature. Specifically, Calkins (1988) indicated that counters should be 2-3 inches below standard height, not just for wheelchair users, but also for older women who tend to be shorter and to stoop more than the able-bodied, six-foot person for whom standard height counters were set. Cohen and Weisman (1991) suggested minimizing shelving units over and under work areas such as counters to minimize bending and potential accidents that are more likely to happen if residents are reaching for items overhead. Instead, they recommended shallow shelving units between 1'-11" and 3'-8" high for residents in wheelchairs and units between 1'-11" and 4'-7" high for those out of wheelchairs.

Many of the other universal design features that have been documented in the housing literature (e.g. sinks and cooktops without fronts for easier wheelchair access, side-by-side refrigerator doors, counters at varying heights to accommodate workers who are standing and seated, and a five-foot turning radius to facilitate wheelchair accessibility) should be incorporated in therapeutic kitchens for residents with dementia. It is unclear why designers are not incorporating universal design principles in these spaces, despite the fact that the topic has received widespread attention in recent years with respect to the elderly and the disabled.

Common Physical Features

Based on items that were checked by the respondents, the most common appliances that are used in therapeutic kitchens include sinks, full refrigerators, ovens, cooktops, and microwaves. Other appliances such as coffeemakers and toasters were present to a lesser degree in the facilities, but were more prevalent in assisted living kitchens. Appliances that were not particularly common included mini refrigerators, dishwashers, washers, and dryers. Respondents indicated in their open-ended responses, however, that some of the less common appliances, such as dishwashers and bread machines, should be incorporated to improve kitchen designs. Standard appliances that one would normally have in a home were also noted as desirable features. This may be because these features are not only familiar and reminiscent of home, they help to facilitate activities programming. If the therapeutic kitchen is also used to prepare and cook meals for the residents (to be discussed in a later section), a full service kitchen with all of these appliances would be necessary to minimize the transportation of food and clean/dirty dishes back and forth from the commercial kitchen to the therapeutic kitchen.

Other common features included windows with views to the outdoors (particularly in the kitchens of facilities that were identified as residential), and a counter against one wall or an L-shape configuration. Respondents also indicated, in their open-ended responses, that long counters or islands which provide sufficient space to work at or sit around and socialize, as well as cabinets with adequate storage space, are desirable features.

Residential/Homelike Imagery

The majority of respondents described their kitchens as residential. In the open-ended responses, respondents also indicated that a homelike appearance is a "best" feature or one that would help to improve kitchen designs. Certain features were associated with that image type based on items that were checked by the respondents. These included a full refrigerator, sink, cooktop, oven, microwave, toaster, bread machine, kitchen table, some locked cabinets and drawers, and windows. Although these features can be

incorporated in kitchens, respondents identified specific features that contribute to a residential imagery. These included the decor (window dressings such as curtains, wall paper, bright colors) wood cabinetry and furnishings (particularly a wood table), greenery (plants and live flowers), countertops, knickknacks (dish towels, aprons, potholders, pictures, crafts), and a window with views to the outdoors. These are features that should be incorporated by designers as well, since a homelike image appears to be important in therapeutic kitchen design.

Features including curtains, wall paper, wood cabinetry, plants, live flowers, knickknacks, and windows with views to the outdoors should be incorporated in therapeutic kitchens to reinforce homelike imagery.

Safety

Some sort of protective device for a stove, oven or cooktop was mentioned by a large number of respondents as a safety feature in therapeutic kitchens. These included an inaccessible or hidden switch, circuit breaker, automatic shut-off, and knobs that could be removed from stoves. Brawley (1997) recommended induction cooktops, manufactured by General Electric, as a safety feature. These cooktops do not have an exposed coil, open flame or heated surface. According to Brawley, a high frequency induction coil beneath the cooktop heats the cookware by magnetic friction without heating the cooktop surface. When the cookware is removed, the cooktop automatically shuts off. Depending on budgetary constraints, the induction cooktop may be worth considering.

Locked cabinets or drawers for the storage of chemicals, medications, and certain utensils were also mentioned as safety features in therapeutic kitchens. Since the security of certain items is a concern when caring for residents with dementia, staff might consider locking only one or two cabinets. This way the rest of the kitchen can remain accessible to residents. Another option might be to place dangerous supplies in cabinets that are difficult for residents to reach.

Instead of locking all cabinets, potentially dangerous supplies could be stored in cabinets that are difficult for residents to reach.

Restricting access to the kitchen through gates, locked doors, or closer staff supervision was also noted by the respondents. During one of the site visits (Facility A), it was apparent that the kitchen can be closed off with a half height door when staff are cleaning the area. The door is made of the same material and color as the counter and blends in with the kitchen decor. If facilities feel that access should be restricted at times, perhaps a half height door or gate-like extension of the counter can be used at the end of the kitchen counters. (Respondents were asked to note which safety features are used in their kitchens, but they were not asked to indicate whether these features are desirable. Thus, it is uncertain whether restricted access should be recommended at all). In addition, a number of staff at two of the facilities that were visited (Facility B and Facility D) indicated that accessing the kitchen from two sides (a counter against one wall with an island separating the kitchen from a dining area and access between the two counters) is preferable. In this case, a half height door may be appropriate at both ends of the kitchen.

Activities Programming

Results suggest that different types of activities for therapeutic kitchens may be more appropriate than others for residents. In addition, confusion surrounding the definition of therapeutic kitchens and varying importance ratings suggest that staff education regarding the value of kitchens is also advisable.

Types of Activities

Common activities that occurred in the surveyed kitchens included baking, arts and crafts, socializing and sitting, meal set-up, and meal clean-up. However, a higher number of residents are involved in more recreational activities such as socializing and sitting, arts and crafts, baking, holiday dinners, and ethnic meals. A rather low number participate, on average, in household activities such as meal set-up, meal clean-up, and housekeeping. It is not surprising to find that more residents participate in "fun," group activities than mundane household chores. Although meal set-up and clean-up may be particularly beneficial for some residents with dementia (those who wish to continue to participate in domestic activities and to remain helpful or those who believe they must get dinner ready for their children or a spouse), the findings suggest that household chores may be a less successful aspect of the therapeutic program. (See Figure 16). There is also some indication that residents like to be waited on (as suggested by the results pertaining to access to snacks and beverages). Some residents may prefer a hospitality model of care in that they have aspired to be waited on while others may believe they are entitled to this service because they are paying for it. Thus, activity coordinators might consider incorporating other recreational, familiar activities besides baking and arts and crafts in the kitchen. These might include a morning coffee hour, newspaper reading and current events discussion, ice cream social, and flower arranging. It is important for staff to obtain this type of information when collecting social histories of residents in order to develop activities that are consistent with the interests and past activities of their residents.

Figure 16. More residents appear to participate in "fun" group activities than household chores.

Staff Education

Of the 45 surveys returned from facilities that were contacted by telephone ahead of time in order to determine whether therapeutic kitchens were present, 12 respondents indicated that they did not have kitchens when filling out the questionnaires. Although the terminology that was used over the telephone with the receptionists (or whomever answered the telephone) was also used in the cover letters accompanying the mailed-out questionnaires, it appears that there was some confusion over the definition of the kitchen. This clearly suggests that there is a need for staff education regarding what a therapeutic kitchen is and how it can be

used.

In addition, importance ratings for the kitchen for residents, staff, and families, as reported by the respondents, were highest for facilities with residents in the early stages of the disease and lowest for facilities with late stage dementia residents. This suggests that as residents become less functional, it becomes more difficult to make the kitchen an active part of the therapeutic program and to realize its value. Thus, it is important to keep staff educated about the value of therapeutic kitchens and to encourage their commitment to the program through education. The fact that importance levels decreased less for families in facilities with later stage dementia residents suggests that the kitchen remains important as a marketing tool and a familiar feature, even if the space can not be actively used by residents. In this sense, staff may need to be educated not only about ways to use the kitchen effectively depending on the cognitive status of residents, but also about how to present the kitchen to families.

Food Service Suggestions

Cooking meals in a therapeutic kitchen may help to make the kitchen more integral to the meal service and the facility's program.

As reported in the results, there is some indication that the level of importance of kitchens for residents, staff, and families is higher in facilities that prepare and cook one or more meals in the therapeutic kitchen. A low number of cases (five respondents indicated that at least one meal is cooked in the therapeutic kitchen) makes it difficult to draw definitive conclusions. However, during a site visit (Facility C), it appeared that cooking a meal in the therapeutic kitchen helped to make the kitchen a more integral part of the program. For example, aromas filled the space, some residents helped to season the food, food was plated in the kitchen, and staff were able to monitor residents at the same time. In general, it appeared that the kitchen was the center of activity, creating a truly homelike feeling. Cooking meals in a therapeutic kitchen may be a foreign concept to many, but it may be worth considering. If the therapeutic kitchen is integral to the food service, there will be less of a need for institutional carts and trays that were used to a great extent in the facilities surveyed. In addition, it may also make more sense to provide a large, eat-in kitchen or to have the kitchen adjacent to a dining area.

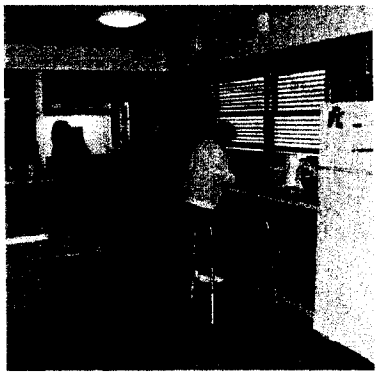
Future Research Directions

The study identified physical features that are typically included in therapeutic kitchen design and explored how those features support daily use for residents and staff in relation to food service systems and activities programming. The descriptive results serve as a foundation for additional research. In the future, it would be advantageous to examine correlations between physical features identified in this research and quality of life outcomes. For example, how do therapeutic kitchen activities impact the health and attitude of residents? What is the effect on staff? Is there a

benefit when families are more involved in kitchen activities?

It would also be beneficial to study satisfaction more directly. In this work, satisfaction was indirectly examined by asking respondents to document the best and worst features of their kitchen design and to provide suggestions for improving the design. A set of features were compiled based on responses. Effects of the recommended features on satisfaction and quality of life measures could be examined. In addition, it may be worth including the perspective of family members, as opposed to asking staff to report what they believe family members value.

Despite the exploratory nature of the research, the results have provided an enriched understanding of a constellation of features that support levels of use in therapeutic kitchens and contribute to the perceived importance of the space. The design suggestions and recommendations for activities programming and food service will ideally help to educate staff and designers about ways in which therapeutic kitchens can be supportive spaces for residents with dementia.



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Appendices

Appendix A: Physical Features Checklist

1) **Name of Facility** _____

2) **Year Kitchen was Built** _____

3) **Size of Kitchen** _____ sf

4) **Number of Residents on Unit**
_____ Male _____ Female

5) **Location of Kitchen**
_____ Off the unit _____ On the unit

6) **List Adjacent Rooms** (or annotate plan)
_____ _____
_____ _____

7) **Accessibility**
_____ Door routinely locked _____ Unlocked door, monitored by staff
_____ Unlocked door all times _____ No door, monitored by staff
_____ Other _____

8) **Signage**
_____ No _____ Yes (Describe _____)

9) **Type of Appliances**
_____ Sink _____ Washer
_____ Full refrigerator _____ Dryer
_____ Mini refrigerator _____ Coffee maker
_____ Cooktop _____ Toaster
_____ Oven _____ Bread machine
_____ Microwave _____ Other _____

10) **Safety Features**
_____ Automatic shut-off stove _____ Hidden switches for appliances (specify _____)
_____ Fire extinguisher _____ Sprinkler system
_____ Smoke alarm _____ Covered electrical outlets
_____ Locked cabinets _____ Other _____

11) **Storage**
_____ Pantry _____ Cabinets below counter
_____ Closet _____ Cabinets above counter
_____ Display cabinets _____ Display shelves

12) **Type of Work Space**
_____ Kitchen table _____ Counter - standard height
_____ Island - standard height _____ Low counter
_____ No workspace

If kitchen is part of a space used for dining, complete # 13-17. Otherwise, skip to #18.

13) **Type of Furniture** (Specify number of each).
_____ Dining tables _____ Server
_____ Chairs _____ Baker's rack
_____ China cabinet _____ Other _____

14) **Type of Dining Tables**
_____ Metal legs, laminate top _____ Laminate legs and top
_____ Wood legs, laminate top _____ Wood legs and top

15) **Shape of Dining Tables**

_____ Square
_____ Round
_____ Other _____
_____ Rectangle
_____ U-shaped

16) **Type of Dining Chairs**

_____ Low back, arm supports
_____ High back, arm supports
_____ Low back, no arm supports
_____ High back, no arm supports

17) **Style of Dining Chairs**

Frame Type
_____ Metal
_____ Plastic
_____ Wood

Covering Type
_____ Vinyl
_____ Fabric
_____ Laminated Fabric

18) **Flooring Material**

_____ Carpet
_____ Other _____
_____ Hard floor (vinyl, terrazzo, ceramic tiles)

19) **Walls**

_____ Concrete block or brick
_____ Drywall with wallpaper
_____ Other _____
_____ Drywall, painted
_____ Acoustical panels
_____ Combination of materials lower/upper walls

20) **Ceiling**

_____ Drop-in acoustical tiles, dark or contrasting metal framing visible
_____ Drop-in tiles, metal framing not very visible
_____ Sprayed surface (usually pebbled)
_____ Drywall without molding
_____ Drywall with molding
_____ Other _____

21) **Lighting**

_____ Ceiling fluorescent (within acoustical ceiling grid)
_____ Surface-mounted fluorescent lights on ceiling
_____ Surface-mounted incandescent lights on ceiling
_____ Cove lighting (fluorescent along walls, pointing up or down)
_____ Chandelier or hanging fixture (including fans with lights)
_____ "Can" lighting (small round fixtures recessed in ceiling)
_____ Lamps (floor and table)
_____ Wall sconce
_____ Track lighting
_____ Other _____

22) **Glare**

_____ Little or no glare
_____ Glare in many areas

23) **Type of Window** (specify number)

_____ Casement
_____ Slider
_____ Bay
_____ No window
_____ Double hung
_____ Picture
_____ Clerestory
_____ Other _____

24) **Window Treatments**

_____ Horizontal blinds
_____ Curtains/drapes
_____ Shades
_____ Vertical blinds
_____ Valance or decorative fabric around window
_____ No treatment

25) **Decoration on Walls**

_____ Artwork
_____ Activities Calendar
_____ Quilt
_____ Other

Appendix B: Staff Interview Questions

Staff position _____ Facility Name _____

Activities Programming

1) Please describe how the kitchen is used in terms of types of activities. How many residents are involved in each activity? How often does each activity occur? To what extent do residents participate in each activity?

2) Which activity, held in the therapeutic kitchen, is most successful for residents with dementia? Why?

3) Which activity, held in the therapeutic kitchen, is least successful for residents with dementia? Why?

4) Are there any male-specific activities in the kitchen area?

5) Are there any activities that are specific to different ethnic or religious groups?

6) Who develops and organizes the activities?

Food Service

7) Are any meals prepared in the kitchen? Which meals? If meals are not prepared in the kitchen, how are they brought to the unit? Are any meals heated in the kitchen? Which meals? How are they heated?

8) If the kitchen includes a space for dining, to what extent are tables pre-set before a meal begins? (bibs, silverware, napkins, placemats, glasses, salt/pepper, table cloths)

9) To what extent do residents participate in meal set-up?

10) How are meals served?

11) To what extent do residents participate in meal preparation?

12) To what extent do residents participate in meal clean-up?

13) Are necessary supplies for set-up and clean-up readily available?

14) To what extent are residents given potentially hazardous supplies? (knives)

15) Do residents have access to beverages between meals? How often? Do residents have access to hot drinks between meals (coffee, tea)? Do residents have access to fruits and snacks between meals? How often?

Staff Use

16) To what extent do staff use the kitchen for work-related activities? (paperwork)

17) To what extent do staff use the kitchen as a break space? (lunch, coffee)

Satisfaction

18) How satisfied are you with the kitchen as it is now?

19) If you could redesign the kitchen, what changes would you make?

20) How satisfied do you think residents are with the kitchen?

Appendix C: Questionnaire

1. **Does your facility have a kitchen for activities (e.g. baking) for residents with dementia?**

❑ yes, 1 kitchen ❑ yes, more than 1 kitchen ❑ no (please return survey)

2. **Which best describes your kitchen?** (Check all that apply). (If your facility has more than 1 kitchen, select one that residents with dementia can use).

❑ part of activities room ❑ separate room with a door ❑ open space that can not be closed off
❑ part of dining area ❑ hallway near kitchen ❑ open space that can be closed off

3. **Which best describes the configuration of your kitchen?**

❑ counter against one wall ❑ L-shaped ❑ other _____
❑ counter against one wall and island ❑ U-shaped

4. **What features are part of your kitchen?** (Check all that apply).

❑ full refrigerator ❑ toaster ❑ kitchen table
❑ mini refrigerator ❑ bread machine ❑ desk or work area
❑ sink ❑ coffee maker ❑ all cabinets/drawers locked
❑ hand washing sink ❑ washer ❑ some cabinets/drawers locked
❑ cooktop ❑ dryer ❑ all cabinets/drawers labeled
❑ oven ❑ standard height counter ❑ some cabinets/drawers labeled
❑ dishwasher ❑ low counter ❑ window(s)
❑ microwave ❑ island ❑ other _____

5a. **Do you think your kitchen looks most like**

❑ an old-fashioned country kitchen ❑ a residential kitchen that could be in someone's home
❑ an institutional kitchen ❑ other _____

b. **List 1-2 features (e.g. decor) that contribute to this image.** _____

6. **For all activities that take place in your kitchen, please indicate how many residents and staff on average participate and how often the activity is offered.**

Activity	# Residents	# Staff	# Times/Week
Meal set-up (e.g. setting tables)			
Meal preparation (e.g.seasoning soup)			
Meal clean-up (e.g. wiping tables)			
Baking			
Ethnic meals			
Holiday dinners			
Arts and Crafts			
Socializing/sitting			
Housekeeping (e.g. sweeping floors)			
Other _____			

7a. **Where are meals prepared?** (Check the appropriate column).

Meal	Commercial Kitchen	Activity Kitchen	Other_____
Breakfast			
Lunch			
Dinner			

b. **How is food served?** (Check the appropriate column).

Meal	On Trays	Dishes Off Tray	From Steam Tables	Family Style
Breakfast				
Lunch				
Dinner				

8a. **Which items are kept in your kitchen and are available to residents?** (Check all that apply).

❑ fruit ❑ snacks ❑ none
❑ cold beverages ❑ hot beverages ❑ other _____

b. **Do residents help themselves to these items?** (Check one).

❑ Yes mostly on their own ❑ No residents are not able ❑ No residents mostly prefer staff to he help
❑ Yes mostly with staff help ❑ No residents are not allowed ❑ other _____

9. **What safety features are part of your kitchen?** _____

10a. **Regarding the kitchen, would you say most *staff* feel that it is** (Circle one)

1 2 3 4 5
not at all important very important

b. **Regarding the kitchen, would you say most *residents* feel that it is** (Circle one)

1 2 3 4 5
not at all important very important

c. **Regarding the kitchen, would you say most *families* feel that it is** (Circle one)

1 2 3 4 5
not at all important very important

11a. **Regarding your kitchen design, what are the best features?** _____

b. **What are the worst features?** _____

c. **How would you suggest improving or increasing use of the kitchen?** _____

12. **Approximately what year was your kitchen constructed or updated?** _____

13. **How would you describe the cognitive status of the majority of residents who use your kitchen?**

❑ early stage dementia ❑ late stage dementia
❑ middle stage dementia ❑ no dementia

14. **Is your kitchen** ❑ on the unit ❑ off the unit

15a. **At full capacity, how many residents can use your kitchen for activities?** _____

b. **Of those residents, how many have dementia?** _____

16. **Would you say your kitchen is part of** (Check one).

❑ assisted living, SCU ❑ assisted living ❑ other _____
❑ nursing home, SCU ❑ nursing home

17. **Would you say your facility is** (Check all that apply).

❑ a chain ❑ non-profit ❑ other _____
❑ an independent operator ❑ for-profit

18. **What type of setting is your facility located in?**

❑ urban ❑ suburban ❑ rural

Thank you for your time. Please return this survey in the enclosed self addressed stamped envelope to: IDEAS Inc., 8055 Chardon Road, Kirtland, OH 44094.

Appendix D: Cover Letter

May 5, 1999

Dear Administrator or Activities Director:

I.D.E.A.S., Inc. (Innovative Designs in Environments for an Aging Society) is a research, education, and consulting firm that specializes in improving environments for people with dementia. We are requesting your assistance with a study, funded by the Extendicare Foundation, Inc., that is entitled "Therapeutic Kitchen Design: An Exploration of How This Space Can Benefit Residents with Dementia."

Currently, we are collecting information about kitchens that are used for activities for residents with dementia from a wide range of units in the United States. This type of kitchen may, for example, include a sink, microwave, and refrigerator in an activities room or may be part of a dining area and linked to food service. Our ultimate goal for this project is to improve the design and use of activity-based kitchens in nursing homes and assisted living facilities by exploring different types of kitchens and providing guidelines based on research findings. For the purposes of this study, we will not be considering group homes or board and care homes. You will greatly help us by providing your insights about the kitchen in your facility. To assist us with this research, please complete the enclosed, brief survey form and forward it in the self-addressed, stamped envelope by **May 20, 1999.**

Thank you in advance for participating and helping us to create guidelines that will enhance the design and use of activity-based kitchens for residents with dementia. If you have any questions about this research project, please do not hesitate to call me toll-free at 1-888-414-3327 or to contact me via email at IDEASjpm@aol.com. If you would like us to forward an electronic summary of the research findings at a later date, please provide us with your email address.

Sincerely

John P. Marsden, Ph.D.