Objectives: The purpose of the study was to determine the impact of the Eden Alternative on family satisfaction.

Design: The study was a one-group pre-post design. Families were surveyed prior to the beginning of implementation of the Eden Alternative and again 2 years later.

Setting: The study was conducted at a 150-bed nursing home in the Midwest.

Participants: Thirty-seven family members completed the survey at both time points.

Intervention: More than 80 in-services on the 10 principles of the Eden Alternative were provided to the staff on all shifts over the first year. Implementation of the Eden Alternative began during the second year.

Measurements: The Family Questionnaire, which measures perception of skill and caring nature of caregivers, quality of activities, the environment, contentment of elders, and relationships with administration, was mailed to a family member of each elder living in the nursing home in March of 2002 and again in March of 2004.

Results: There was a significant improvement in family satisfaction, as measured by the Family Questionnaire ($P < .0001$) after implementation of the Eden Alternative.

Conclusion: The Eden Alternative provided many opportunities for family involvement. The improved satisfaction scores reflected greater communication and interaction among families, staff, and residents. (J Am Med Dir Assoc 2005; 6: 189–193)

Keywords: Nursing homes; culture change; family satisfaction

Satisfaction with care provided to a loved one is a common goal for family members, nursing home staff, and primary care providers alike. Each family has its own unique blend of relationships developed over generations that will impact how the family views nursing home care. What satisfies one family may not satisfy another. Although families differ in many ways, shared history creates moral obligations to one another. Regardless of the particular culture or family pattern, most families feel an obligation to help the elder to some degree.1,2

The desire for involvement and the response of the nursing home are strongly tied to family satisfaction. Research has shown that homes that welcome high family involvement also have high family satisfaction ratings. These homes view the family as integral rather than peripheral to the care system.3–6

Because of the variation in family patterns, families need opportunities to participate in a variety of ways. Tornatore and Grant7 found that family satisfaction was best achieved by giving families opportunities to focus on “preservative care.” This was defined as emotional care that maintains the family member’s identity and personal dignity. Ryan and Scullion8 reported that family members felt their role should include personalizing the elder’s room to reflect the elder’s history and that they should serve as a link to the outside world. Families value individualized care, meaningful activities for their elders, and opportunities to help problem solve.9 They enjoy close relationships with staff members. Some families would like to know staff on a personal basis. Many families want to be part of the team where trust and mutual affection develop between families and staff.10,11

Contrary to the ideal of high family involvement, neither the philosophy nor the structure of many nursing homes promotes this. Unfortunately, staff may suspect that families who become highly involved are distrustful of the staff’s ability to care for their loved one. Staff may feel that the family is interfering with the work of an established institution. Nursing homes originally were patterned after hospitals and continue to be dominated by the medical model that values efficiency, consistency, and hierarchy for decision-making. When an elder enters a nursing home, staff take control, assuming they know what is best for the elder. Elders are expected to adapt to the rules, schedules, and protocols of the nursing home.1,2

Currently, a culture change movement is driving nursing homes to move away from the medical model toward a social model of care. New models encourage family and community involvement and transform nursing homes into homes.13,14 The Eden Alternative is one of the social models of care.
Although the Eden Alternative is noted for the inclusion of animals, plants, and children to combat loneliness, helplessness, and boredom, its core philosophy is resident-centered care and the elder’s right to choice and decision making. This model promotes heavy family involvement. Families know the elder’s history, likes and dislikes, and daily pleasures that will enhance quality of life. These pleasures may include caring for pets, gardening, or being with children. Neighborhoods are created so that decisions are made by those closest to the elders. Families are encouraged to become involved in the neighborhood activities.15–19

In 2002, a school of medicine partnered with a large nursing home in the Midwest as the home began its journey toward an Eden Alternative. Faculty at the school of medicine provided education and evaluated the Eden Alternative. A grant was received from The Retirement Research Foundation to support the project. This article focuses on one purpose of the study: to determine the impact of the Eden Alternative on family satisfaction over a 2-year implementation period.

METHODS

Setting and Sample

Approval of the study was obtained from the local university institutional review board. The study was conducted at a 150-bed nursing home in the Midwest. The nursing home has many levels of care, including short-term posthospitalization rehabilitation, long-term intermediate care, long-term dementia care, and long-term skilled care. The home receives payment through Medicare, Medicaid, and private pay. Family members of all residents living in the home in 2002 and 2004 were invited to participate. Informed consent was obtained from family members wishing to participate.

Data Collection

Data were collected in March of 2002 prior to beginning the education of the staff on the Eden Alternative and then again in March of 2004 after implementation of the Eden Alternative had begun. The Family Questionnaire developed by Ransom20 was mailed to the same family member at both time points. The Family Questionnaire has high reliability (Cronbach’s alpha of 0.94). It has 21 items rated on a Likert scale as follows: 1 = not at all, 2 = poor, 3 = neutral, 4 = good, and 5 = excellent. Items address family satisfaction regarding the care and skill of caregivers, quality of activities, the environment and semblance of home, contentment of elders, and relationship with administration.20 The last section of the survey was labeled “comments,” and family members were invited to share their feelings about the Eden Alternative.

Procedure/Implementation of the Eden Alternative

The first phase was intensive education. During the first year, faculty conducted 80 educational gatherings on the 10 principles of the Eden Alternative on all shifts. Most staff received 10 hours of education. The leadership team of the nursing home attended a 1-day workshop on culture change. Two staff members took the 3-day Eden Associate Training and became Certified Eden Associates.

The second phase, implementation, began during the second year and was facilitated by the Eden Associates. Neighborhoods were formed and elders or their family members were interviewed regarding their life’s daily pleasures. The most common desires were more food choices, dogs as pets, and more time outside. In response, buffet dining began. Two wonderful collies became permanent residents along with birds, bunnies, chickens, geese, and fish. The number and variety of indoor plants was increased. An outdoor area was created. Elders helped to plant and tend a vegetable garden. A summer program for school-age children of employees was begun, and elders and children alike enjoyed the interaction.

Families were involved in many ways. Prior to beginning the staff education, faculty provided a presentation on the Eden Alternative to the family council. Each month, as staff studied one principle of the Eden Alternative, a printed summary was mailed to families. Near the end of the sessions, families were invited to attend a 3-hour training. Families have assisted by walking dogs, building a bunny hutch, and participating in neighborhood activities.

Analysis

Seventy-eight family members of elders agreed to participate and completed the survey in 2002. After 2 years, 41 of the elders had either been discharged or had died. Thirty-seven family members completed the survey again in March of 2004. Their data were analyzed using a repeated measures analysis of variance of total score data to determine the impact of change over time. Additionally, an item analysis was conducted using a repeated measures analysis of variance in which items (21) were nested within the 2 time intervals (pre- and post-Eden intervention). Bonferroni adjustments were made to ensure that the experimentwise alpha level did not exceed 0.05.21

RESULTS

Analysis of total score data revealed a significant (P < .0001) increase in posttest scores (mean = 83.78, SD = 10.49) relative to pretest scores (mean = 77.08, SD = 10.96). The item analysis revealed a significant item × time interaction (P < .001) necessitating a subsequent pre-post comparison for each item. Only 4 of the 21 items failed to show an increase between preintervention and postintervention. After Bonferroni corrections were applied, items 4, 9, and 10 were statistically more positive after implementation of the Eden Alternative (Table 1). Those items reflected a more respectful staff, an opportunity for elders to interact with animals, and the welcoming of children into the nursing home to visit.

For the initial survey, the remaining items were rated 2.8 to 4.3 and remained statistically unchanged with the second survey. Most of the initial ratings had a mean rating of “good.” The lowest rated items focused on the environment being homelike. At the time of the second data collection, no changes had been made to the overall structure or furnishings of the building.
Family members wrote comments at the bottom of their surveys that provided insight and further results of the study. Examples of comments that indicated increased respect of staff for elders included the following: “I have seen staff trained in Eden spend time talking to my Dad about his past”; “I see staff giving Mom more choices about bathing times”; “The buffet dining gives Mom some control over what she eats”; and “Recently my Mom has been invited to help in the office adding labels to envelopes. It made her feel needed and respected, for she used to be a secretary.”

Many comments were related to the animals. Out of the 21 comments, 19 were positive. Examples included the following: “Love the animals; it encourages conversations with the residents, staff, and visitors”; “My brothers and sisters are pleased with the animals and plants”; and “I do think that your use of pets is VERY GOOD. Pets always make people feel better.” The two negative comments were: “Couldn’t the dogs carry germs to residents?” and “I disapprove of dogs. They’re too big and could cause someone to fall, and cockatiels are too noisy.”

### Table 1. Family Questionnaire: Pre-Eden and Post-Eden

<table>
<thead>
<tr>
<th>Item</th>
<th>March 2002, Mean (SD)</th>
<th>March 2004, Mean (SD)</th>
<th>Difference Between Repeated Measures, Mean (SD)</th>
<th>95% Confidence Interval</th>
<th>T Value</th>
<th>Probability Level*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The staff caring for my relative is skilled.</td>
<td>4.11 (0.74)</td>
<td>4.08 (0.55)</td>
<td>0.03 (0.64)</td>
<td>–0.19 to 0.24</td>
<td>0.25</td>
<td>0.999</td>
</tr>
<tr>
<td>2. The staff caring for my relative is caring.</td>
<td>4.05 (0.66)</td>
<td>4.05 (0.52)</td>
<td>0.00 (0.78)</td>
<td>–0.26 to 0.26</td>
<td>0.00</td>
<td>0.999</td>
</tr>
<tr>
<td>3. The staff who work in this nursing home enjoy working with the elderly.</td>
<td>3.4 (0.69)</td>
<td>3.81 (0.81)</td>
<td>–0.41 (0.96)</td>
<td>–0.72 to –0.86</td>
<td>–2.58</td>
<td>0.139</td>
</tr>
<tr>
<td>4. The staff caring for my relative are respectful.</td>
<td>3.73 (0.77)</td>
<td>4.16 (0.73)</td>
<td>–0.43 (0.83)</td>
<td>–0.71 to –0.15</td>
<td>–3.15</td>
<td>0.033</td>
</tr>
<tr>
<td>5. The residents are clean and comfortable.</td>
<td>3.97 (0.80)</td>
<td>3.97 (0.69)</td>
<td>0 (0.82)</td>
<td>–0.27 to 0.27</td>
<td>0.00</td>
<td>0.999</td>
</tr>
<tr>
<td>6. The residents who want to are able to participate in a variety of activities.</td>
<td>4.05 (0.88)</td>
<td>4.32 (0.67)</td>
<td>–0.27 (1.07)</td>
<td>–0.63 to 0.09</td>
<td>–1.53</td>
<td>0.766</td>
</tr>
<tr>
<td>7. The activities for the residents are enjoyable and meaningful</td>
<td>3.75 (0.69)</td>
<td>4.03 (0.77)</td>
<td>–0.28 (0.94)</td>
<td>–0.60 to .04</td>
<td>–1.76</td>
<td>0.576</td>
</tr>
<tr>
<td>8. People from the community are involved in the nursing home every day.</td>
<td>3.62 (0.98)</td>
<td>4.14 (0.79)</td>
<td>–0.51 (1.09)</td>
<td>–0.88 to –0.001</td>
<td>–2.85</td>
<td>0.081</td>
</tr>
<tr>
<td>9. My relative has opportunities to interact with animals.</td>
<td>1.84 (1.04)</td>
<td>4.24 (0.80)</td>
<td>–2.41 (1.28)</td>
<td>–2.83 to –1.98</td>
<td>–11.44</td>
<td>&lt;0.002</td>
</tr>
<tr>
<td>10. Children are welcome and encouraged to visit the facility often.</td>
<td>3.49 (.99)</td>
<td>4.22 (0.75)</td>
<td>–0.73 (1.22)</td>
<td>–1.14 to –0.32</td>
<td>–3.65</td>
<td>0.008</td>
</tr>
<tr>
<td>11. I see children in the nursing home frequently.</td>
<td>2.84 (1.11)</td>
<td>3.38 (1.09)</td>
<td>–0.54 (1.39)</td>
<td>–1.00 to –0.78</td>
<td>–2.37</td>
<td>0.224</td>
</tr>
<tr>
<td>12. The nursing home is clean.</td>
<td>3.97 (0.76)</td>
<td>3.92 (0.95)</td>
<td>0.05 (1.10)</td>
<td>–0.31 to 0.42</td>
<td>0.30</td>
<td>0.999</td>
</tr>
<tr>
<td>13. The surroundings are homelike.</td>
<td>3.78 (0.75)</td>
<td>3.84 (0.90)</td>
<td>–0.06 (0.88)</td>
<td>–0.35 to 0.24</td>
<td>–0.37</td>
<td>0.999</td>
</tr>
<tr>
<td>14. Residents’ rooms look much like a room in someone’s home.</td>
<td>3.24 (1.04)</td>
<td>3.38 (1.06)</td>
<td>–0.14 (1.23)</td>
<td>–0.54 to 0.27</td>
<td>–0.67</td>
<td>0.998</td>
</tr>
<tr>
<td>15. Staff members involve my relative (if able) and me in decisions about care.</td>
<td>4.05 (0.88)</td>
<td>4.19 (0.81)</td>
<td>–0.14 (1.08)</td>
<td>–0.50 to 0.23</td>
<td>–0.76</td>
<td>0.995</td>
</tr>
<tr>
<td>16. Most residents are content.</td>
<td>3.43 (0.93)</td>
<td>3.76 (0.68)</td>
<td>–0.32 (1.06)</td>
<td>–0.68 to .03</td>
<td>–1.87</td>
<td>0.527</td>
</tr>
<tr>
<td>17. My family member is content.</td>
<td>3.73 (1.07)</td>
<td>3.89 (0.81)</td>
<td>–0.16 (1.32)</td>
<td>–0.60 to 0.28</td>
<td>–0.75</td>
<td>0.996</td>
</tr>
<tr>
<td>18. Staff members take time to talk and listen to residents.</td>
<td>3.68 (0.75)</td>
<td>3.86 (0.79)</td>
<td>–0.19 (0.78)</td>
<td>–0.45 to 0.07</td>
<td>–1.48</td>
<td>0.798</td>
</tr>
<tr>
<td>19. Staff communicates openly with residents, guests, and family.</td>
<td>3.97 (0.80)</td>
<td>4.14 (0.63)</td>
<td>–0.16 (0.80)</td>
<td>–0.43 to 0.10</td>
<td>–1.23</td>
<td>0.919</td>
</tr>
<tr>
<td>20. I am comfortable bringing my concerns to aides, nurse, or administration.</td>
<td>4.27 (0.73)</td>
<td>4.30 (0.81)</td>
<td>–0.03 (0.96)</td>
<td>–0.35 to 0.29</td>
<td>–0.17</td>
<td>0.999</td>
</tr>
<tr>
<td>21. In general, I am satisfied with the home.</td>
<td>4.05 (0.66)</td>
<td>4.22 (0.63)</td>
<td>–0.16 (0.73)</td>
<td>–0.40 to 0.08</td>
<td>–1.36</td>
<td>0.867</td>
</tr>
<tr>
<td>Total score</td>
<td>77.08 (10.96)</td>
<td>83.78 (10.49)</td>
<td>–6.70 (9.77)</td>
<td>–9.96 to –3.45</td>
<td>–4.17</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

* After Bonferroni adjustments.
Family members were asked the frequency of their visits. For the 37 family members who completed the survey at both times, the number who visited daily increased from 16 (43%) in 2002 to 21 (57%) in 2004. None of those who visited daily, at the time of the initial survey, decreased their frequency of visitation. Using McNenar’s test for the equality of correlated proportions, the increase was found to be significant ($P = .3125$). The data were further analyzed to determine if the frequency of visitation, at pre- or postintervention time, was related to overall satisfaction at either interval or to the change in satisfaction between the intervals. There was no significant relationship between frequency of visitation and satisfaction (all $P$ values > .50). Comments on the surveys indicated that families have found the Eden Alternative more conducive to visiting. A family member provided some insight, “Before, I didn’t like to come here. My grandmother has dementia and can’t carry on a conversation. My visits were all one-sided. I dreaded my weekly visit that I felt obligated to make. Now, I visit my grandmother often and bring my 4-year-old daughter and my 2-year-old son. They love the animals. My grandmother loves watching the birds. Her eyes light up when she sees her great-grandchildren. It warms my heart to see that something is bringing her pleasure.”

**DISCUSSION**

The most encouraging finding of the study was an improvement in families’ perception of respect given to elders by the staff. This finding was supported by both the survey results and the comments from family. The philosophy of the Eden Alternative teaches that elders who enter a nursing home should continue to grow and find some meaning in life. Intertwined within the content and learning activities for each of the 10 gatherings on the 10 principles is the concept of valuing elders for their wisdom. Getting staff to respect elders as mature adults regardless of their cognitive or physical state is a goal of the Eden education. In the language of Eden, residents are referred to as elders, and staff are encouraged to see elders as wise.$^{19}$

Giving elders choices is a means of showing respect.$^{19}$ Elders should be able to choose when to get up, when and how to take a bath, and what they are going to eat. During the implementation of Eden, buffet dining was begun, which enabled staff to give elders’ choices about food. Also, through the life’s daily pleasure survey conducted prior to implementation, staff gave elders choices about their preferences for pets, gardening, and other activities.

The survey, as well as most comments, was positive in relation to the presence of animals. The pets provided companionship for some elders and stimulation through hearing, sight, and touch for many very ill elders. The animals enlivened the environment and attracted families and other visitors. There were, however, several families who did not like the presence of dogs. They had concerns about falls, infections, and allergic reactions to animals. In a study of one nursing home, Thomas$^{18}$ actually found a decrease in infection rates. He attributed the decline to improved patient well-being, as well as the purifying effect of plants on the nursing home air. In a study of 6 nursing homes, Ransom$^{20}$ found no increase in falls and observed an improvement in mobility as elders became more involved. There is always a risk that an elder may trip over an animal. Thomas recommends larger dogs that are easily seen. Regarding families’ concerns about allergies, aging results in changes in the immune system. Sensitivity to allergens decreases. Most elders experience a decline in sensitivity to animals.$^{18}$ Families should be encouraged to look at the impact on the elders and weigh the benefits of the Eden Alternative against the risks.

Because of these logical concerns, it is critical for families to be educated prior to and during the transformation to an Eden Alternative. Administration should address the concerns with families. There will always be those who do not feel that animals should live inside a nursing home. For those elders, efforts should be made to identify their daily pleasures and provide elements and activities that individually will enhance their quality of life.

An observable change in the nursing home was the presence of more visitors. Increased visiting was reflected on the survey. The Eden Associates also commented on this on numerous occasions. Families volunteered to assist in activities such as tilling the garden, walking the dogs, or helping with the root beer float night. At least 75% of elders in nursing homes suffer from some degree of dementia. To visit an elder with dementia and have a conversation with him or her is nearly impossible. Many family members find these visits depressing and very difficult. The introduction of the human habitat with plants and animals provided a meaningful activity for the family member and the elder with dementia that brought pleasure to both. Also, the presence of the collies, birds, bunnies, fish, and geese attracted visits from children. The presence of children brought smiles to many elders regardless of their cognitive status. A limitation of the study is that no questions were asked to determine reasons for the visits. It is possible that patient condition changes and the aging of the elders accounted for some of the change.

An unanticipated benefit was to Medicare patients who came to the nursing home for short-stay rehabilitation. The nursing home seemed to be a welcome surprise over what they had anticipated: “My mother has been on the Medicare wing for 1 1/2 weeks. She didn’t want to come, but the presence of the dogs has made it so much better for her. She loves going outside.”

Families of several elders who died during the last 2 years have started an Eden fund for the nursing home. They have requested that donations be made in memory of their loved ones. This action in itself reflects family satisfaction with Eden.

Items that did not improve significantly suggest areas that can be addressed to further improve family satisfaction. The administration has set a goal of changing the surroundings to make the rooms more homelike. Additionally, the difficult challenge of flattening the organizational structure of the nursing home has been targeted. This should enhance communication, decision-making, and relationships among elders, staff, administration, and families.

There are a number of limitations to the study. First, loss of subjects in longitudinal studies is common in long-term
care by virtue of the age of the elders. Participation began at 50% and decreased to 37% two years later. Second, staff turnover is a threat to the validity of any longitudinal study in nursing homes. Turnover rates for nursing assistants are reported to be as high as 150% and turnover rates for nurses as high as 60%. In the specific nursing home in this study, about 53% of the original staff who received the original intensive Eden training were employed at the second survey. Third, the ability to generalize the findings is limited because the study was completed at only one nursing home and was a pre-post design. An experimental design using 2 similar nursing homes, one implementing the Eden Alternative and the other serving as the control, would help determine if the changes could be attributed to the Eden Alternative. The culture of each nursing home can vary based on the functional status of the residents and the payer source. However, this home is typical of many nursing homes located in the United States. A fourth limitation of the study is that although the questionnaire was mailed to the same family member, it is possible that different persons in the household completed the survey at the 2 time points.

Other areas for investigation might include the impact of culture change on staff including attitudes, roles, absenteeism, and turnover. With the change in decision-making that accompanies the Eden Alternative, investigators could examine the change in role for the administrator and department leaders as well as the incidence of complaints and conflicts between and among staff and families. Studies on the impact of the Eden Alternative on the elders themselves are crucial. Qualitative approaches will be needed to gain insight into the effects on elders who cannot be interviewed, such as those suffering from dementia. Research on all the models of culture change is necessary for elders, staff, administration, families, regulators, and all stakeholders to understand the value of culture change.

CONCLUSION

In conclusion, family satisfaction improved with implementation of the Eden Alternative in one nursing home studied. As stated earlier, family satisfaction is tied to positive family involvement. Families look for ways to be involved and to continue to function as a family. The Eden Alternative at this specific nursing home has provided many opportunities for increased involvement. Families have been included in more activities and events. The development of neighborhoods has provided an avenue for increased communication and interactions among elders, staff, and families. Perhaps the following comment from a family member best summarizes how involvement relates to satisfaction: “Before Eden, Mother seemed so unhappy and depressed. I felt so guilty. But Eden has changed that. I wheel her around, and we stop to see each bird, each aquarium, and the bunnies. She and I feed her favorite bird each evening. One evening last week, there was root beer float night in her neighborhood. Mom and I decorated the tables. She loved putting flowers in the vases. There was big band music. I saw my mother smiling and dancing in her chair. I no longer feel guilty about her living in a nursing home. She is happy!”

REFERENCES