Recruiting Older Adults Into a Physical Activity Promotion Program: *Active Living Every Day* Offered in a Naturally Occurring Retirement Community

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**Purpose:** This article explores recruitment strategies based on the transtheoretical model (TTM) with older adults living in a naturally occurring retirement community (NORC) to encourage enrollment in a physical activity promotion program, *Active Living Every Day* (ALED). Reasons for participation or nonparticipation are identified. **Design and Methods:** Recruitment strategies were designed to move older adults through the TTM stages of change to enroll in ALED and were built on meetings and resources established by St. Louis NORC’s supportive service program. NORC residents (25 ALED participants and 25 nonparticipants) were interviewed about reasons for enrollment or nonenrollment. **Results:** A significant difference was found between the two groups on their responses to a physical activity stage-of-change question, although no significant differences were found in their demographics, social resources, and mood/depression. ALED participants’ motivation to enroll primarily came from TTM proactive recruitment methods (88%) and less (12%) from reactive methods. Themes for ALED participants’ choices to enroll included motivation to exercise, physical activity ideas from peers, social engagement, and trust in sponsoring organizations’ staff and programs. Analysis of interview data identified that scheduling and cost were primary reasons for nonenrollment in ALED. **Implications:** Using theoretically based recruitment methods for older adults and a neighborhood approach through organizations such as a NORC may result in greater numbers of older adults participating in health promotion programs. **Key Words:** Naturally occurring retirement community, Transtheoretical model, Recruitment, Physical activity

Physical activity can prevent disability and support older adults to continue living in their own homes. However, the U.S. Department of Health and Human Services, Administration on Aging (2004) reports that only one third of well older adults meet recommended exercise levels. Health promoters find it challenging to recruit older adults into exercise and physical activity programs and typically do not describe the theory that grounds their recruitment methods. These concerns indicate the need for additional research on recruitment of older adults into health promotion practices.
Two approaches to meeting the challenge of promoting physical activity in older adults include providing evidenced-based behavior change programs and using neighborhood programs. An approach demonstrating evidence in promoting physical activity in adults older than 50 years is Active Living Every Day (ALED; Dunn et al., 1999). ALED was developed by The Cooper Institute and Human Kinetics, Inc. to promote behavior change for increased physical activity and was evaluated by the Active for Life initiative of the Robert Wood Johnson Foundation (Wilcox et al., 2008). Another approach with potential to increase physical activity is to offer such programs through a naturally occurring retirement community (NORC) with supportive services (Callahan & Lanspery, 1997). A NORC is defined as a neighborhood with a large percentage of independently living residents aged 60 or 65 years and older, although the area was not designed for older adults (Hunt & Ross, 1990). There are many NORCs in the country but not all have established supportive services designed to enable seniors to continue living in their own homes as long as they wish. NORC supportive services are a community-level intervention that may offer choices of educational, socialization, fitness, and home assistance opportunities to promote healthy aging and neighborhood connections.

This article describes a study of methods used in recruiting older adults to enroll in an ALED program offered in a NORC. As a companion to the Active for Life national research (Wilcox et al., 2006, 2008), this study explores reasons for participation or enrollment and nonparticipation in ALED. Practical suggestions are offered for successfully recruiting older adults into health promotion programs.

**ALED—Applying the Transtheoretical Model**

ALED is a 20-week program (shortened for experimental purposes to 12 weeks; Wilcox et al., 2008) of small group sessions that applies the transtheoretical model (TTM) to promote behavior change for physical activity. The TTM was developed to address the complexity of health behavior change by integrating numerous theories (Prochaska, Redding, & Evers, 2002). Unlike previous theories, the TTM states that behavior change does not occur at one moment in time but describes it as a process over time through a sequence of stages (Prochaska & Velicer, 1997; see Table 1). The TTM also outlines processes to move a person engaging in a high-risk behavior through the stages of change and asserts that the processes must be tailored to his or her stage of readiness to change (see Table 1). The TTM has been successfully implemented in many intervention studies, with the most frequent behaviors addressed being smoking, diet, and physical activity and in a variety of settings including community-based programs (Prochaska et al.). ALED uses the TTM processes to move individuals at different stages of readiness to perform physical activity (Blair, Dunn, Marcus, Carpenter, & Jaret, 2001).

Although the ALED program clearly uses theoretically based TTM strategies to increase participants’ physical activity, it has not demonstrated application of TTM in the critical step of recruiting potential participants. The TTM describes two methods of recruiting persons into health behavior programs: proactive and reactive (see Table 1). Proactive recruitment methods can be tailored to persons in the earliest stages of change, whereas reactive methods appeal to potential participants who are in the preparation stage of change. Based on Prochaska’s survey research with people at risk for 15 high-risk health behaviors, individuals’ stage distribution was approximately at 40% in precontemplation, 40% in contemplation, and 20% in preparation. Therefore, Prochaska and colleagues (2002) contend that reactive recruitment methods for potential participants who are in the preparation stage will not successfully reach 80% of persons at risk. Participating agencies in the Active for Life study reported that frequently employed ALED recruitment strategies were combinations of proactive and reactive methods such as presentations, special events, networking, newsletters, and brochures (Wilcox et al., 2006). This study was designed to assess the effectiveness of TTM proactive methods, particularly with older adults.

**Recruitment Study for ALED in the St. Louis NORC**

This companion study to the Active for Life research on ALED took place within the St. Louis NORC (Jewish Federation of St. Louis, 2008), which initially began as a demonstration project in 2002 by the Jewish Federation of St. Louis with funding by the U.S. Administration on Aging and in alliance with the Washington University Center for Aging. The St. Louis NORC is currently a 3-mile area with 33% of residents aged 65 years and older, which is substantially more than the usual 12% in U.S. communities (U.S. Census Bureau, 2002). After the 2004 needs
assessment, a NORC team of professionals established supportive services by/for older adults (Neufeld, 2005). The NORC services included a variety of opportunities for free or low-cost physical activities, but few NORC residents engaged in them. Therefore, the St. Louis NORC partnered with a grantee in the Active for Life research on ALED to offer the program. The grantee, the OASIS Institute (formerly the Older Adult Service and Information System) is a national nonprofit educational organization that offers programs for mature adults in arts, technology, volunteer service, humanities, and wellness (The OASIS Institute, 2008).

In contrast with other studies on physical activity promotion programs, this study focused on using the TTM as a theoretical basis to design recruitment activities to move older adults through the early stages of behavior change for physical activity to the preparation stage and enroll in ALED. Also, recruitment implemented methods using the programming, staff, and facilities of the St. Louis NORC supportive services. The central questions were, “What recruitment activities did ALED participants identify as facilitating their enrollment?” “What other factors did they identify as motivation for enrolling?” and “What did non-ALED participants identify as reasons they did not enroll?”

Study Design

This descriptive study on recruitment with NORC residents supplemented the Active for Life efficacy studies on ALED (Wilcox et al., 2006, 2008). It was approved by the Washington University School of Medicine Internal Review Board and informed consent was obtained from all study participants. Qualitative and quantitative data were collected through audiotaped and transcribed semi-structured interviews. To ease participant burden, interviews were conducted 2 weeks after the program began and after completion of the Active for Life study assessments.

The study used a convenience sample of 50 self-selected NORC residents aged 65 years and older: ALED participants (n = 25) and non-ALED participants (n = 25). All participants met ALED eligibility requirements: 50 years or older, underactive (performed ≤2 days and <120 min of physical activity per week), and free of serious medical conditions or disabilities requiring high levels of supervision. The NORC/ALED was a 12-week program (once a week at 9:30 a.m. for 1.5 hr) with a fee of $15 (remaining tuition was subsidized by the NORC). All study participants received a $20 grocery store gift certificate as an incentive to complete the interviews.

Findings from the interviews of ALED participants were compared with those of the non-ALED

| Stages of behavior change for physical activity | Precontemplation | Not thinking about taking action (increasing physical activity) within the next 6 months |
| Contemplation | Intends to make changes (increase physical activity) in the next 6 months |
| Preparation | Plans to take action (increase physical activity) within the next month |
| Action | Makes specific modifications in lifestyle (is performing physical activity 5 times per week, 30 min each time) |
| Maintenance | Performs modifications and works to prevent relapse (performs physical activity 5 times per week, 30 min each time, and has for 6+ months) |
| Termination | No temptation to return to former behaviors, has 100% self-efficacy |

| Processes of change for precontemplation and contemplation stages for physical activity | Consciousness raising | Increasing awareness of benefits of physical activity |
| Dramatic relief | Personal testimonies of others committed to exercise that move one emotionally |
| Environmental reevaluation | Increasing awareness of negative or positive effects of physical activity participation on one’s environment |
| Self-reevaluation | Seeing one’s self as a physically active person |

| Recruitment strategies | Proactive | Outreach to all potential participants in precontemplation, contemplation, and preparation stages with stage-matched programs |
| Reactive | Traditional methods of advertising or announcing “action-oriented” programs and reacting only when potential participants respond |
participants. The qualitative data from the interviews were examined through an iterative process of constant comparison for themes related to the study questions (Bogdon & Biklen, 2007). Quantitative data were obtained with a brief demographic survey and standardized assessments on depression, perceived social resources, and stage of change. Assessments included the social resources section of the Older Americans Resources and Services (OARS) Multidimensional Functional Assessment Questionnaire (OMFAQ; George & Fillenbaum, 1985), a modified version of the Center for Epidemiological Studies-Depression scale (CES-D; Radloff, 1977), and a TTM stage-of-behavior-change question adapted from the original measurement for smoking cessation (Laforge et al., 1999). Descriptive statistical analyses on quantitative measures compared the profiles of ALED participants with the non-ALED group, using SPSS version 13.0 for Windows, with an a priori significance level set at .05 (SPSS, Inc., Chicago, IL).

**Recruitment Methods Created for ALED**

Strategies to recruit and enroll older adults were created to include proactive and reactive methods as defined by TTM (see Table 1). All study participants had the opportunity to experience the same recruitment methods.

Proactive recruitment strategies were specifically designed for precontemplators and contemplators using educational empowerment-based process-of-change techniques with NORC residents. Strategies created included Mary’s Medical Minute, balance/falls prevention presentation, role model posters, and a NORC rally announcement (see Table 2).

In addition, the St. Louis Regional OASIS staff offered their standard 1-hr informational session one month prior to the beginning of the program to recruit participants. However, all attendees at this session had already been recruited and enrolled in ALED. Unplanned proactive strategies also occurred when NORC staff members and some enrollees personally invited residents or friends to participate in ALED.

This study employed typical reactive methods. The ALED program was announced in six monthly calendars and fliers, which were mailed to residents registered to receive the quarterly St. Louis NORC Newsletter (about 1,600). Fliers were posted at sites where community programs were offered to NORC residents. A descriptive article was also placed in the newsletter.

To recruit participants for the non-ALED group, individuals who attended proactive recruitment activities and did not enroll in ALED were personally invited by the lead author to be in the non-ALED group. In addition, fliers advertising the option to be in the non-ALED group were posted in the NORC common room and distributed at NORC meetings.

**Comparing Profiles of ALED Participants and Non-ALED Participants**

The demographic characteristics of the study sample reveal no significant differences between the groups. The average age for the two groups was 77 and 79 years. The majority of the participants were White, women, retired, volunteering, still driving, living alone, reporting good health although with a mean of three chronic conditions, and had attended more than five NORC programs. The mean scores on the CES-D (depression scale) and the OMFAQ (OARS social resource scale) also indicate no significant differences between the groups (see Table 3).

To determine the amount and intention to engage in physical activity, participants were asked the TTM stage-of-change question, “Do you consistently get regular physical activity, that is, five times a week, for 30 minutes each time?” Options for responses were the descriptions of the stages of change (see Table 1). Residents’ responses were placed in TTM categories by the lead author and responses in the study groups were found to be significantly different. ALED participants largely responded that they were in the contemplation and preparation stages of change, whereas non-ALED participants responded that they were in the precontemplation or maintenance stages of change (see Table 4). ALED participants were aware of the definition of “moderate physical activity” through their attendance at the initial two sessions. In contrast, non-ALED participants were not aware of this definition. Of note was that most non-ALED participants identified themselves as in the maintenance stage, although their physical activity descriptions could not be classified as “moderate.” Some examples included “stretching” and “walking on a treadmill at 1.8 miles per hour.” Therefore, the ALED and non-ALED participants appeared to describe their level of physical activity differently.
Recruitment Strategies and Factors Motivating Enrollment or Nonenrollment in ALED

Analysis of interviews revealed key recruitment activities motivating enrollment in ALED and reasons for nonenrollment. In addition, four themes emerged when ALED participants were asked, “Were there other reasons you enrolled?”

Of the 25 ALED participants, 22 (88%) credited proactive recruitment strategies and 3 (12%) credited reactive recruitment strategies as the motivating factor (see Table 5). Mary’s Medical Minute was the strategy most often cited by ALED participants as having mobilized them to enroll in ALED. One participant said, “Because when you came to our meeting, you talked about exercise for balance. I said, “BINGO!” I signed up because you were here and we talked about it. I think that if I had gotten bulletins in the mail I may not have signed up.”

Other participants identified being motivated to enroll in ALED by different proactive strategies. Some credited their enrollment to the endorsement by the OASIS Institute founder, Marylen Mann, at the NORC rally. A representative comment was, “Marylen Mann mentioned that she took the course and that’s what gave me the first incentive.” Forty NORC residents attended the falls prevention program. One ALED participant who enrolled after the presentation stated, “I took ALED so that I could find ways of moving my body a little bit more even with my handicap.” In addition to planned recruitment, NORC residents who enrolled in the class invited friends. “I’m taking ALED because I have two friends who have joined the class.” Two participants cited personal invitation from NORC staff members. “She really wanted me to take this program and it sounded very interesting.” The posters of physical activity role models received mixed reviews. One participant said they affected her negatively, “Looking at some of them, I thought I couldn’t do what all those people do!” The St. Louis Regional OASIS informational recruitment session garnered only residents who had been previously recruited with other strategies.

Reactive recruitment methods of fliers, monthly calendars, and a newsletter story resulted in both positive and negative comments. One ALED participant who enrolled because of the flier said, “They send me bulletins every month, so I was always aware that there were programs going on.”

The non-ALED participants also received reactive methods (fliers, calendars, and newsletters) and had the option to attend proactive activities.
Almost half of the 25 non-ALED participants (12% or 48%) did not attend a proactive recruitment activity and did not recall reactive methods. Those who attended a proactive method (13% or 52%) were asked the reasons for not enrolling. Responses indicated that scheduling and cost were the greatest barriers to participation in ALED (see Table 6). One person who takes care of 90-year-old parents said, “I wanted to do it, but I just knew that I couldn’t be in a set pattern.” One couple cited the early morning time of the class as a barrier, “Because of the increased time we need to get ready in the morning with foot care, diabetes routine, and compression hose, it takes 2 to 2½ hours to get anywhere.” Although the cost was only $15 (since subsidized by NORC), others stated that the cost was too much on a fixed income. “Some months it’s pretty tight when you’re just on social security and your insurance.”

To ascertain other motivating factors for enrollment, ALED participants were asked, “Are there any other reasons that you signed up for the program?” Four themes emerged from their responses.
Motivation for engaging in physical activity was indicated by participants as a reason for enrolling. Representative comments included, “A group does help. It gives you more incentive to go and do it.”

Physical activity ideas from peers was a second theme cited by participants. Comments included, “It shows you that seniors can do it if they try—comparing notes with other seniors.”

 Desire for social engagement was a reason for signing up for the ALED course. Representative comments included, “I thought it would be a chance to make some friends.”

 Trust in St. Louis NORC and the OASIS Institute staff and programs was another theme for enrollment. This was evident from statements by ALED participants. “I think belonging to NORC was the motivator. You suspect they have worthwhile activities,” and “I enrolled because Marylen Mann recommended it at the rally.”

Practice Applications

In this study, proactive recruitment methods were credited with enrollment of greater numbers of ALED participants than with reactive methods, thus providing support for the success of the TTM key concept of proactive recruitment. Older adults benefited by having face-to-face contact to discuss physical activity, ask questions, and observe peers’ reactions. These methods made a lasting impression on attendees as most study participants remembered the proactive strategies they attended but did not remember receiving the reactive recruitment methods.

This study also highlights several areas that may require modification when targeting adults who are in the oldest age groups. Recruitment of older adults will be enhanced if it includes information about realistic types of physical activity that provide health benefits to them. This is evident from the significant differences between groups on the results of the TTM stage-of-change question. If older adults believe that they are participating in moderate physical activity or that participation in it is risky, they will be less likely to enroll in programs that promote physical activity. Therefore, the term “moderate physical activity” must be clarified and examples given that are relevant for older adults.

Because the participants in this study were older than those in the national ALED study (Wilcox et al., 2006), they were more likely to be retired, live alone, and have multiple chronic conditions. With these characteristics, they may have a greater

Table 4. Comparison of Stage of Change

<table>
<thead>
<tr>
<th>Stage of change</th>
<th>ALED (n=24), n</th>
<th>%</th>
<th>Non-ALED (n=22), n</th>
<th>%</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Precontemplation</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>36</td>
<td>.000*</td>
</tr>
<tr>
<td>2. Contemplation</td>
<td>9</td>
<td>38</td>
<td>3</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>3. Preparation</td>
<td>11</td>
<td>46</td>
<td>2</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>4. Action</td>
<td>2</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>5. Maintenance</td>
<td>2</td>
<td>8</td>
<td>9</td>
<td>41</td>
<td></td>
</tr>
</tbody>
</table>

Notes: ALED = Active Living Every Day.
*Statistically significant (data missing for 1 ALED and 3 non-ALED participants).

Table 5. Recruitment Activities Identified as Motivating by Active Living Every Day Participants (n = 25)

<table>
<thead>
<tr>
<th>Recruitment strategy</th>
<th>No. recruited (n=25)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proactive method</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mary’s Medical Minute</td>
<td>8</td>
<td>32</td>
</tr>
<tr>
<td>NORC rally</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>Keeping Your Balance: Preventing Falls</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Combined Mary’s Medical Minute and Keeping Your Balance: Preventing Falls</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Invitation from friend already enrolled</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Personal invitation from NORC staff member</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Role model posters</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>St. Louis Regional OASIS informational session</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Reactive method</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flier, newsletter, calendar</td>
<td>3</td>
<td>12</td>
</tr>
</tbody>
</table>

Notes: NORC = naturally occurring retirement community.
need for physical activity ideas from peers and for social activities than do adults 50 years and older who are targeted for general ALED recruitment. Accordingly, recruitment should emphasize sharing of exercise ideas from peers and social engagement. Using successful peer coleaders to recruit and help with group facilitation may give confidence to older adults that they will receive appropriate physical activity suggestions. In addition, asking older adults to recruit their friends or neighbors provides a bonus proactive recruitment strategy and increases opportunities for social interaction both during and outside program hours.

Scheduling and cost were barriers for enrollment in ALED by those in the non-ALED participant group. Not every schedule can be accommodated, but older adults have busy schedules with self-care, volunteer work, and family obligations. Cost is also an issue for those on fixed incomes and may be offset by subsidizing fees, providing scholarships, or incentive gifts.

With the demographic trend of a growing population of older adults and further identification of NORCs (Masotti, Fick, Johnson-Masotti, & MacLeod, 2005), partnerships with neighborhood organizations that specialize in providing services to adults older than 65 years have many benefits for recruitment. Utilization of the NORC’s resources more efficiently reached greater numbers of older adults and enhanced the ALED program credibility. As indicated in this study, trust in St. Louis NORC and the OASIS Institute programming was an important element of recruitment, which concurs with other studies’ conclusions that partnering with another agency helps recruitment by making potential participants more receptive to decisions to enroll in ALED.

The results of this study cannot be generalized to all NORCs or older adults because it used a small, less diverse, self-selected sample from the St. Louis NORC neighborhood. Study participants reported they had attended five or more NORC-sponsored programs; therefore, other methods to reach residents who do not participate in NORC programming must be explored.

Caution should be used when applying the findings of this study to design recruitment activities. Because some participants were familiar with the researchers, they may have withheld negative comments about recruitment strategies. In addition, there was an overlap of some ALED participants attending more than one type of proactive recruitment strategy, which made it difficult to discern the primary motivating method for decisions to enroll in ALED.

In conclusion, interviews of participants show support for using the TTM concepts in planning proactive recruitment methods for engaging older adults in physical activity promotion programs such as ALED. This study also shows the importance of tailoring recruitment activities to the characteristics of an older adult audience. A “one-size-fits-all” recruitment approach designed for the younger set of adults 50 and older may not move older adults through the TTM stages of change.

Partnering with a senior-centered organization gave health professionals an invaluable resource for promoting healthy aging, thereby supporting older adults to continue living independently in their own homes. Neighborhood organizations with supportive services such as NORCs can create a rich environment for recruiting older adults to participate in physical activity programs.

Acknowledgments

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References


community-based health promotion intervention: Which strategies are effective? American Journal of Preventive Medicine, 13 (Suppl. 6), 51–56.


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