

Recruitment of Community-Dwelling Older Adults for Nursing Research: A Challenging Process

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Compte tenu de l'évolution des données démographiques, la recherche dans le domaine des soins infirmiers gériatriques est devenue un élément essentiel dans l'élaboration, en matière de santé et de services sociaux, de politiques et de ressources pertinentes pour les personnes âgées. Le recrutement de personnes âgées résidant dans la communauté présente de multiples obstacles pour l'infirmière chercheuse qui désire mener des recherches concluantes. Cette préoccupation est relevée fréquemment dans la documentation, notamment en ce qui a trait au nombre de participants. Le recrutement des personnes âgées de 65 ans et plus dépend de facteurs tels que le sexe et le plan de recherche, ainsi que des changements d'ordre physique, social ou psychologique liés à l'âge. Le présent article décrit ces facteurs, propose des stratégies de recrutement efficaces, présente un modèle de recrutement en trois étapes et résume les points essentiels dont doit tenir compte l'infirmière chercheuse en la matière.

In the face of changing demographics, the need for gerontological nursing research has become central to the development of relevant health and social policies and resources for older adults. The recruitment of community-dwelling older adults presents multiple challenges for the nurse researcher wishing to conduct meaningful research. A common concern cited in the literature is the recruitment of sufficient numbers of older participants. The recruitment of persons 65 years of age and older is influenced by factors such as gender and study design as well as physical, social, psychological, and age-related changes. This paper describes these factors, as well as effective strategies for recruiting older adults, the authors' conceptualization of a 3-phase recruitment process, and key points for the nurse researcher to consider when recruiting subjects.

The proportion of older adults is increasing due to the current demographic shift in society (Chappell & Reid, 2000). Scientifically sound gerontological nursing research is important for the development of not only relevant health and social policies but also evidence-based practice. A critical factor in this research is the recruitment of sufficient numbers of participants.

A review of the literature reveals that the recruitment of older adults presents a unique challenge (Cartmel & Moon, 1992; Herzog,

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Rodgers, & Kulka, 1983; Martin, 1995). In addition, few researchers have examined community-based recruitment efforts involving older adults. One study has found that for every nine to 12 older adults contacted, one will meet the eligibility criteria and enrol in the study (Williams, Vitiello, Ries, Bokan, & Prinz, 1988).

The purpose of this paper is to discuss factors affecting the recruitment of community-dwelling older adults, the integration of various recruitment strategies into a three-phase recruitment process, and recommendations for successful recruitment.

Factors Affecting Recruitment

Physical, social, and psychological changes pose important recruitment challenges for the researcher. However, other factors such as age, gender, and study design should also be considered.

Physical Factors

The health of older adults can affect both their participation in research and the findings of that research (Laird & Conn, 1996; Preski & Burnside, 1992). According to Norton and colleagues (1994), a sample of older adults drawn from a community setting will most likely include a large proportion of individuals with chronic illness. Findings from the General Social Survey (Desjardins, 1993) indicate that 80% of Canadians aged 65 and over report one or more chronic conditions such as joint problems, heart disease, respiratory problems, diabetes, or hypertension. Sensory deficits such as visual or hearing impairment may affect the person's ability to complete questionnaires and follow complex instructions (Eliopoulos, 2001). Chronic illness and impaired sensory function can affect not only the everyday activities of older adults but also their ability to participate in research.

Social Factors

When recruiting, the researcher should consider older adults' informal and formal support systems. These can play an important role in determining whether or not the person participates in the study.

The informal support system may include family members or networks of friends. The spouse and adult children of elderly individuals have been found to adopt a guarded attitude towards any procedure that involves their family member. Many adult children advise their elderly parents not to sign forms without consulting them (Laird &

Conn, 1996; Williams, 1992). Such protective behaviour can either facilitate or hinder the participation of older adults in research. The informal support system may also include individuals or groups whose approval must be sought in order to gain access to the older adult, such as the manager of a seniors' housing complex or the board of directors or administrator of a seniors' centre.

The formal system consists of health professionals such as nurses and physicians. The endorsement and support of health professionals can be key in establishing a study's credibility among potential participants (Diekmann & Smith, 1989). If the sample is to be drawn from a nurse's caseload, factors such as the nurse's workload and degree of interest may influence the likelihood that she or he will promote the study among clients. Clients' trust in the opinion of their health professional can be vital in influencing their decision to participate. In addition, older adults tend more than young people to value the knowledge and authority of health professionals and to use their services more frequently. Penman and colleagues (1984) report that 80% of their elderly subjects said they relied on their physician for advice on whether to participate.

Society is rife with stereotypical assumptions about aging and the lifestyle of older adults. One such assumption is that retired persons have abundant leisure time and are not interested in the world around them. In fact, they may be involved in so many activities that they do not have time to be interviewed by a researcher (Laird & Conn, 1996; Preski & Burnside, 1992). Furthermore, older adults may consider participation in research part of "living a full life" (Souder, 1992, p. 315).

Psychological Factors

Psychological and cognitive changes can be influenced by general health status, genetic factors, and lifestyle (Eliopoulos, 2001). Changes in cognitive function do occur with age; however, the form that these changes take, and whether they represent an actual decline in cognitive ability, is the subject of debate (Miller, 1999). Nevertheless, it is essential that the older adult be provided a thorough, clear, and concise description of the study (Boles, Getchell, Feldman, McBride, & Hart, 2000; McNeely & Clements, 1994) as well as ample time to process information and formulate questions. The researcher should evaluate the older adult's understanding of one topic before progressing to another, and should provide written as well as oral information (Eliopoulos).

Laird and Conn (1996) report that an older adult's participation may be related to an interest in scientific research, concern about their own health, or desire to help others. Kaye, Lawton, and Kaye (1990) report that participation rates increase when individuals perceive a personal benefit from their participation. Motivation can be a decisive factor for the older adult. Souder (1992) identifies eight motivators derived from 4 years of aging research with the middle-aged and elderly: opportunity to help others and contribute something meaningful to society (altruism); opportunity for interaction; opportunity to acquire information about their own health; opportunity for a novel experience; an expectation that the study will result in a treatment or cure for their own condition; previous experience with research or interest in the study; a second opinion on a diagnosis or treatment due to dissatisfaction with past medical care; and reassurance concerning their own health.

Age Factors

Non-participation in research has been shown to have a linear relationship with age. Older adults show lower response rates and higher likelihood of refusing to participate than younger people (Dodge, Clark, Janz, Liang, & Schork, 1993; Herzog et al., 1983). Streib (1983) estimates that only half of all potential respondents will decide to participate, even after the researcher has established rapport with them. The "old-old" group of individuals, those 75 and over, are often frail, are considered more difficult to locate and to interview, and may be reluctant to spend what little energy they have on a research project. They therefore have the lowest response rate of all older adults (Laird & Conn, 1996; McNeely & Clements, 1994; Rodgers & Herzog, 1992).

Much of the gerontological research has tended to aggregate all adults over the age of 60 into one group spanning 40 years. Researchers and clinicians acknowledge that this broad age span comprises a number of heterogeneous subgroups. Life events, social and political experiences, and economic conditions have been different for each of these subgroups, resulting in different perceptions and levels of understanding of research (Bowsher, Bramlett, Burnside, & Gueldner, 1993; Laird & Conn, 1996).

Gender Factors

The literature is inconsistent on which gender tends to be more willing to participate in research. A few studies have found that men are more

likely than women to be non-participants (Groves, Miller, & Cannell, 1987). Others report that men are more likely than women to participate (Ganguli, Mendelsohn, Lytle, & Dodge, 1998; Preski & Burnside, 1992; Rosenberg et al., 1996). Because of the larger proportion of women in the older age group, it is important that women's health concerns be addressed and that women be represented appropriately in the sample. Such measures may help to narrow the gender gap in research. The nurse researcher is advised to carefully consider whether the gender representation is commensurate with the aims of the study.

Study Design as a Factor

The researcher should be aware that the sampling frame from the population of interest can influence the representativeness of the sample. For example, participants drawn from medical records may represent only those who have been ill; participants drawn from an agency's program or clinic lists will include only those who have used the services of the agency, whose characteristics may differ from those of non-users (Hawranik, 1998); and participants recruited from a seniors' housing complex will include those older adults who are limited in activities of daily living and exclude those who reside in the community and are independent in terms of such functions as meal preparation and yard maintenance.

Older adults are a heterogeneous population with different experiences and life situations. Some of their characteristics could affect the outcome variable in several ways. Relationships among variables must be considered because of the potential for confounding effects, which could influence the results. For example, the physical health of the older adult could affect the outcome or dependent variable and lead to erroneous conclusions. When the use of health-care services by older adults is being examined, the results might indicate that functional limitations are the critical factor in the use of the services when in fact it may be cognitive impairment that is the influential factor. Another example of a confounding relationship is that of age being considered the major factor restricting socialization when in fact it may be health condition (arthritis, for instance) that is the major factor (Christensen, Armson, Moye, & Kern, 1992; Laird & Conn, 1996; Pangman, 1996).

The type of study being conducted, whether longitudinal, cross-sectional, or a clinical trial, will influence the recruitment of older individuals. Longitudinal studies require a fairly stable sample over time. An older person's reluctance to participate may be related to the long duration of the study (several months or years) and thus the time com-

mitment. The researcher should be aware that respondents' health will gradually change and that the rate of attrition will be higher for this age group than for others. For older adults in particular, the calculation of a representative sample must take into account the high rate of attrition.

For a cross-sectional study, in contrast, a smaller sample may be sufficient because of the one-time contact. The older adult may be more willing to participate in cross-sectional studies because these do not require a long-term commitment.

For randomized clinical trials, older persons have been identified as more difficult to recruit than younger persons (Vogt, Ireland, Black, Camel, & Hughes, 1986). The recruitment and enrolment phase of a clinical trial requires detailed descriptions of the study, assessment of eligibility, and determination of baseline values. A clinical trial may be more likely to attract older participants if it involves a treatment they stand to benefit from personally (Souder, 1992).

Rosenberg and colleagues (1996) examined the factors that influence willingness to participate in clinical gerontologic research. Respondents were presented with seven research protocols and asked to assign a level of intrusiveness to each. Low intrusiveness was described as one clinic visit of less than 3 hours for a physical examination (no internal examination) and blood and urine testing. High intrusiveness was described as more than 14 clinic visits for multiple blood tests and other invasive procedures causing great physical discomfort. An inverse relationship was found between perceived level of intrusiveness and willingness to participate — that is, a protocol rated as having a low level of intrusiveness was predictive of a greater willingness to participate.

In summary, the researcher should take into account the recruitment implications of the study design.

Recruitment Strategies

Researchers frequently underestimate the amount of time needed for recruitment. Investigators must allow sufficient time for the recruitment process and target their recruitment strategies to the type of sample desired, taking into consideration the unique needs of older adults. The literature indicates that investigators do not always use the most appropriate strategies for recruiting older adults (Gitlin, Burgh, Dodson, & Freda, 1995; Leader & Neuwirth, 1978). The recruitment process may require more than one approach. Although the strategies employed in recruiting older adults may be similar to those used in recruiting other

subjects, the researcher should constantly keep the special needs of older people in mind.

We conceptualize recruitment for a research study as a three-phase process: pre-recruitment, recruitment, and follow-up.

Pre-Recruitment Phase

Careful attention to recruitment details at the “front end” of the study can be instrumental in ensuring adequate sample size and representation (Crosby et al., 1991). A number of studies have found the need for an initial phase, prior to recruitment, involving community support and access to the subject pool (Boult, Boult, Morishita, & Pirie, 1998; McNeely & Clements, 1994; Preski & Burnside, 1992). Strategies to build rapport and therapeutic interpersonal skills must be employed early and consistently throughout the study.

Diekmann and Smith (1989) outline four approaches that can be taken prior to the recruitment phase. The first is to enlist the support of health professionals. If health professionals are to play a vital role in recruitment, they must be informed about the study. Exchanging ideas with health professionals concerning the research topic and potential participants will benefit the study. It is also a necessary courtesy to health professionals in that it acknowledges their ability to provide assistance. Boult and colleagues (1998) collaborated with physicians in the pilot phase of their study, not only to ask their permission for access to their patients but also to assure them that their patients would not be redirected to another physician. The authors attribute their high consent rate of 92.4% to their early liaison with physicians.

The second approach is to obtain letters of support from the board of directors of the agency and from religious, social, and educational support groups in the communities from which the participants will be drawn. These groups might also provide assistance in identifying further sources of recruitment. It is important that the researcher take the time to meet with each group individually and prepare a summary of the project (written in layman’s terms) for its newsletter or make a presentation in order to discuss the study with them (MacDougall & Fudge, 2000).

The third approach is to publicize the study. Strategies include writing brief news items for publication in newsletters or newspapers read by older adults and placing posters in locations frequented by seniors. In addition, contacting television or radio stations may result in the researcher being interviewed about the study. The relevance of

the project and its benefits for participants as well as older adults in general should be clearly articulated.

The fourth approach is to consider the use of incentives. These may include payment for participation, payment to cover the cost of transportation to or parking at the interview site, free consultation or treatment, or provision of lunch. Rosenberg and colleagues (1996) found that a stipend served to increase willingness to participate as the level of intrusiveness increased. Boulton and colleagues (1998) found that the largest increase in response rate occurred after a one-dollar bill was included in the follow-up mailing, after the initial questionnaire had been sent. Stipends are not commonly used in nursing research.

Finally, a necessary step in the pre-recruitment phase is obtaining the approval of the agency. Every agency has a policy or standard practice regarding access to its client or administrative data for research purposes. The investigator will have to complete an application form and, most likely, provide a copy of the study proposal and state the agency resources that will be required — staff resources to inform clients about the project as well as physical resources. The researcher must also obtain ethical approval. An information session could be scheduled with the access officer or the chair of the access committee to answer questions or discuss agency concerns. Such a meeting can help expedite the application process.

The time frame for the study must take into account the time needed to promote the project and have it approved.

Recruitment Phase

The recruitment phase can involve a number of strategies, to be determined by the eligibility criteria for the study and the population from which the sample is selected.

Advertisements. Press releases and advertisements in mass-circulation newspapers have been found to be the most successful strategy for identifying large numbers of older adults with diabetes (Anderson, Fogler, & Diedrick, 1995). The ads should be directed to a wide audience and allow potential subjects time to reflect on the study and on their participation (Gueldner & Hamner, 1989; Tell et al., 1993).

Topp and Bawell (1992) compared seven strategies for recruiting older adults from the community for an exercise study. Four strategies involved direct cost, such as ads in suburban and city newspapers and posters and presentations at seniors' centres. Three involved no direct

cost, such as ads in university newsletters, community service ads in city newspapers, and word-of-mouth referrals. Advertising in the Sunday edition of a city newspaper was found to be the most effective strategy of all. A limitation of this strategy is that it will reach only those potential recruits who are literate and subscribe to the newspaper (Laird & Conn, 1996; Topp & Bawell).

Glasgow and Hampson (1995) identify announcements in church and community bulletins and brochures in physicians' offices, drug-stores, or seniors' centres as the most commonly used recruitment strategies. An advantage of these strategies is their low cost and ease of implementation. A disadvantage may be their high response rate, necessitating greater screening resources to determine eligibility.

Personal contact. A number of studies have found personal contact with older adults and their gatekeepers to be the most effective strategy when used as either the sole recruitment strategy or one of several (Bowsher et al., 1993; Crosby, Ventura, Finnick, Lohr, & Feldman, 1991; Laird & Conn, 1996; Leader & Neuwirth, 1978; Norton, Breitner, Welsh, & Wyse, 1994). Recruitment can be enhanced when the researcher is introduced to the potential participants by a familiar and trusted figure (Gueldner & Hamner, 1989; Park & Cherry, 1989).

Crosby and colleagues (1991) compared three recruitment strategies: in-person contact at a medical centre, telephone contact, and mail contact. They found in-person contact to be the most effective strategy, yielding a 95% acceptance rate, compared to 50% and 0% respectively for telephone and mail. Personal contact can be particularly important at the time of recruitment, as "the greatest bonding between study staff and participants tends to occur fairly early during the enrollment process" (Applegate & Curb, 1990, p. 945).

Mail-outs. Recruitment by mail has met with mixed success. Letters/questionnaires printed on university or government letterhead have been found to elicit higher response rates than those printed on another type of letterhead or with no letterhead (Baumgartner & Heberlein, 1984). Several studies have found that the response rate increases when the initial mailing is followed by a second mailing (Baumgartner & Heberlein; Dillman, 1978). Other studies have found mailed questionnaires to be no more effective than telephone contact followed by a scheduled home visit (Cartmel & Moon, 1992; Smith & McKinlay, 1988). Researchers speculate that the questionnaire may go unnoticed in the masses of junk mail and fliers that people receive. Crosby and colleagues (1991) found mail contact to be less effective than both in-person and telephone contact.

Telephone contact. Although it is a personal and interactive approach, telephone recruitment is generally considered less effective than in-person recruitment. This strategy has the advantages of being less expensive than in-person recruitment and allowing for centralized supervision of staff, but it has several disadvantages. First, it excludes people who do not have a telephone. It is also more expensive than mail-out strategies (Taylor-Davis, Smiciklas-Wright, Davis, Jensen, & Mitchell, 1998). It requires additional time in that screening for eligibility must be conducted separately from consent and interview. Older adults appear less willing than younger persons to participate in telephone interviews (Dodge, Clark, Janz, Liang, & Schork, 1993). Further, the older adults who do participate tend to be healthier and better educated than those who are interviewed in-person, and a greater number of "missing" and "don't know" responses have been found to occur in telephone interviews than in in-person interviews (Herzog et al., 1983). Cartmel and Moon (1992) used two methods to contact potential participants, an unscheduled visit to drop off the questionnaire and a telephone call followed by a scheduled visit. They found no difference in response rate.

Multi-method. A number of studies have used a multi-method approach to recruitment. There is evidence that a combination of two or more approaches can be effective. Taylor-Davis and colleagues (1998) and Murphy (1993) found a two-step process consisting of an introductory mailed letter and a telephone interview to be effective. Boulton and colleagues (1998) tested the effectiveness of a two-step process consisting of mail-outs with monetary incentives and telephone follow-up. They conclude that it produced, at reasonable cost, a large sample of community-dwelling older adults. Glasgow and Hampson (1995) conducted a comprehensive multimedia recruitment campaign including notices in a number of settings frequented by older adults. They conclude that the use of multiple strategies is a practical and cost-effective means of recruiting older adults for psychological studies on chronic illness.

It should be kept in mind that whatever strategies are chosen, they must show sensitivity towards and respect for the population being recruited.

Follow-up Phase

At the end of the study, the researcher has an obligation to maintain communication with and disseminate the results to the participants, their proxies and gatekeepers, and health professionals. Such

approaches as letters, thank-you cards, and group presentations can be used to acknowledge the participation and assistance of these people and to inform them of the findings. McNeely and Clements (1994) found that older adults are more likely to participate in future research if they are informed of the current findings. Presentations designed specifically for health-care professionals or the board of directors are an important component of the overall study. Discussion of research findings and issues related to nursing practice and future research can help health-care professionals and community groups to identify strategies they might use in addressing the results.

Conclusion

The factors affecting the recruitment process have led us to propose a three-phase approach. Such an approach may help the researcher to delineate issues encountered at particular points in the recruitment process. In attempting to recall some of the key points in recruitment, the researcher may find it helpful to use the acronym MONITOR:

- Maintain close monitoring and tracking throughout the recruitment period.
- Overestimate the number of available participants in anticipation of high attrition rates.
- Notify the gatekeepers.
- In-person contact is the most effective recruitment strategy.
- Type of respondents needed will determine type of strategy selected.
- Overestimate the time required for advance marketing of the study.
- Rely on multiple approaches.

Recruitment of the older adult participant for research studies presents many challenges for nurse researchers. These challenges can be met through the use of innovative and deliberate approaches to recruitment.

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