

THE DETERMINANTS OF SELF-REPORTED PHYSICAL ACTIVITY OF OLDER FRANCOPHONE ADULTS

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Research indicates that participation in activities has physical, psychological, and social benefits for participants (Driver, 1997) and enhances a person's sense of well being (Edwards, 1990; Kasch, Boyer, Van Camp, Verity, & Wallace, 1990; Moore, 1989; Norris, Carroll, & Cochrane, 1990; Raglin, 1990; Stevenson & Topp, 1990). Studies indicate that participation in activities contributes to favorable outcomes in leisure involvement in the elderly (Marinelli & Plummer, 1999; Unger, Johnson & Mark, 1997). Although the research findings indicate positive benefits of physical activity for older adults, currently the majority of older adults do not participate in physical activity (Resnick, 2001). The factors, which account for physical involvement are not clear (Menec & Chipperfield, 1997). Research results show that older persons age between 65 and 74 participate in more activities (Curtis, White, & McPherson, 2000). However, Easterbrooks and Carron (1998) report that participation decreases with age. Findings have been inconsistent in relation to gender involvement due to methods of analysis (Curtis et al, 2000). Some studies show that men are more active (Blumenthal, Emery, Madden, Schniebolk, Riddle, George, McKee, Higginbotham, Cobb & Coleman, 1991), other studies indicate the contrary (Ross & Bird, 1994). Also, education level has been associated with physical activity involvement (Pomerleau, Perteson, Ostbye, Speechleg, & Speechley, 1997). Often individuals, who indicate a better self-reported health status, participate in more physical activities than those who present a poorer self-reported health status (Parkatti, Deeg, Bosscher, Launer, 1998; Wankel, 1994; Wilson, & Netting, 1987). Persons with less functional limitations participate in more physical activities (Schroeder, Nau, Osness, & Potteiger, 1998). A number of studies indicate that an internal sense of control was positively related to exercising and participation in leisure activities (Bakes, Wahl & Schmid-Furstors, 1990; Clark, 1999; Dishman, 1988; Menec & Chipperfield, 1997). Individuals, who drink more, participate less in physical activities. (Gaziano, Burning, Breslow, Goldhaber, Rosner, VanDenburgh, Willet, & Hennekens, 1993). The negative effects of smoking on health have also been noted (Abbott, Yin, Reed, & Yano, 1986). Glass, Mendes de Leon, Marottoli, and Berkman (1999) have found that social and productive activities may provide the same benefits as physical activity involvement. The preceding findings indicate that variables of smoking, drinking, social activity, and self-control do exert an impact on physical activity. Few studies have explained the combination of these variables on physical activities and their interaction between them (Mirowsky, & Ross, 1998; Speake, Cowart, & Pellet, 1989). The purpose of this study was to examine the determinants (demographic, health, and lifestyle) of physical activity involvement.

Method

The present study is a secondary analysis of a large data set from the *Aging in the Community Study* collected by Beland, Haldemann, Martin, Bourque, Ouellette, and Lavoie (1998). This survey examined the well being of older francophone adults in Eastern Canada. The sample was established from a list of francophone individuals over 65 registered in a provincial drug program. From a total of 2 243 individuals, 8.4% were excluded because they were hospitalized, too ill to answer the questionnaire or repeatedly absent and 24.7% refused to participate. The response rate was 67%. The sample used in this study was 1362 respondents. The investigation is limited to the items used initially in the survey conducted by Beland et al (1998). Data were collected using a standardized survey questionnaire with some items from the *Established Populations for Epidemiologic Studies of the Elderly* (Coroni-Huntley, Brock, Ostfeld, Taylor, & Wallace, 1986). The demographic measures included age, gender, and education. The health measures included self-perceived health and functional limits. Self-perceived health was assessed by the question: How would you rate your health: "Very Good, Good, Fair, Poor, Very Poor"? This question has proven to be a valid measure of general health status (Sherman, Hughes, & Tavakoli, 1995). The functional limits measure was assessed with the Nagi Scale (1976). The items evaluate the person's capability to do the following physical activities: pushing big objects, bending, manipulating small objects, lifting, climbing stairs, and walking one mile. Participants were asked to rate the level of difficulty experienced in performing the activity. Responses to each item ranged from *No difficulty (0) to Cannot perform the task (3)*. Lifestyle measures included control, alcohol and tobacco consumption, and social activities. Control was assessed by the Sense of Mastery index developed by Pearlin and Schooler (1978). Responses to each of the items ranged from *Strongly agree (1) to Strongly disagree (5)*. A higher score indicates a greater sense of mastery. Alcohol and tobacco consumption were measured by the following questions: 1) *Have you smoked more than 100 cigarettes in your lifetime?* 2) *Have you drunk alcohol beverage in the last year?* Social activity was measured by the question *How many times per month do you go shopping, attend recreational and cultural events and church.* The physical involvement variable was composed of three items. The first evaluated the level of physical activity: *For a person of your age, what is your level of physical activities? Light, Moderate or Strenuous.* The second measured the importance of physical exercise in the prevention of illness: *How important for you is physical exercise in the prevention of illnesses in older adults? Very*

important, Quite important, Somewhat important, and Unimportant. The third measured the intent to participate in physical activities: *In the coming year, do you intend to participate more, as much or less in physical activities than now? More, As much, or Less.* The self-reported physical exercise measure pertained to the number of times the participants exercised per week. *In the last year, at what frequency did you exercise during your leisure time? Times per week.* Independent analyses of both self-reported physical involvement and exercise were conducted. Both variables were highly correlated ($r = 0.79, p < .001$). A factor analysis also found that both self-reported physical involvement and exercise loaded on one factor and therefore a composite measure of self-reported physical activity was created by adding the scores of both measures for the purpose of this study. A hierarchical multiple regression was used to determine the contribution of the variables to the question under study.

Results

Comparisons between gender indicated significant differences between men ($M = 73.04$) and women ($M = 74.18$) on age ($t = -3.30, p < .001$). Significant differences were also found between men ($M = 8.88$) and women ($M = 10.27$) on functional limitations ($t = -6.51, p < .001$). Significant differences were also found on smoking ($\chi^2 = 214.30, p < .001$) and drinking ($\chi^2 = 43.70, p < .001$). Eighty percent of the men reported smoking while only 41% of females reported smoking. More men reported drinking 57% than women 42%. No significant differences were found between men and women on self-perceived health and mastery. A hierarchical multiple regression was used to determine the contribution of the variables to the question under study. The demographic variables accounted for 7% of the explained variance whereas the health variables accounted for 12% of the explained variance. The lifestyle variables accounted for 5% of the explained variance. In regards to the demographic variables, the older female adults and those with less education reported less physical activity. Among the health variables, participants who perceive their health as very good also report a greater level of physical activity. However, those who have greater functional limitations report less physical activity. The lifestyle measures show that the participants who smoke report less physical activity involvement. The participants who report more social activities also report a greater level of physical activity involvement.

Discussion

These findings add to studies in leisure that have found that participation in activity has social, physical and emotional benefits (Driver, 1997; Katz, 2000; McAuley, Blissmer, Katula, & Duncan, 2000). Although the findings of this study suggest that age was not related to physical activity involvement, greater physical activity were associated with gender and education. Older female adults report less physical activity involvement than men. Stanley and Freisinger (1995) found that the frequency of leisure activity involvement of women was less likely than that of men to be affected by increasing age and decreasing health. The finding indicates women participated in less self-reported activity. It is possible that the questions used in this survey may not reflect the diversity of activity for women such as walking, gardening, child care, and household activities. A higher level of education was associated with greater physical activity. This finding supports results by Lefrancois, Leclerc and Poulin (1998). Their survey findings show that a low level of education is an impediment to leisure participation. The present findings show as expected that perceived health is a determinant of self-reported physical activity. Heikkinen et al (1993) found that the more physically active show a higher level of self-reported health and low prevalence chronic disease. However as noted by Menec and Chipperfield (1997) people are unlikely to participate in activities for health reasons. People engage in activities for the pleasure these activities produce for them during participation (Menec & Chipperfield, 1997). Also, our results show that the greater the number of functional limitations reduces the level of physical activity. This finding suggests as noted by Clark (1999) that functional limitations may serve as a barrier to physical activity. Our findings did not support previous results that greater control enhances physical activity. Although cigarette consumption is associated with less physical activity, those who reported more social activities such as shopping, attending recreational and cultural events or going to church also reported more physical activities. These social activities as noted by Glass et al (1999) should not be overlooked as adjuncts to exercise programmers. Caution should be taken in the interpretation of these results since interactions between the variables may exist. In summary demographic, health and lifestyle variables contribute to self-reported physical activity of older francophone individuals. Although health variables accounted for the major part of the variance, lifestyle variables do contribute to the explanation of physical activities.

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