

Motivators and Barriers to Exercise in an Older Community-Dwelling Population

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This study aimed to ascertain perceived barriers and motivators to exercise in people age 74–85 and to clarify the meaning of these barriers and motivators by examining participant characteristics that relate to them. 324 community-dwelling participants age 74–85 completed a health questionnaire that included items on barriers and motivators to exercise, as well as questions on demographic variables, health, and exercise. Selected participants then completed a physical-performance battery to measure functional performance. Barriers and motivators were related internally, as well as to many other factors including pain and depressed affect on the Geriatric Depression Scale. The findings suggest a need for individualized and comprehensive approaches to the presentation of exercise programs. Health interventions are needed that will address both physical pain and depressed affect and explain the importance of exercise even in the presence of health problems. An understanding of the context of reported barriers and motivators is necessary for correct interpretation and program development.

Key Words: physical activity, facilitators to exercise, perceived incentives

Exercise has been shown to be an effective tool for improving fitness and overall health (Blair et al., 1996). However, more than 40% of those over age 65 do not participate in any leisure-time physical activity, with 42.1% of women over 65 being inactive (Scharff, Homan, Krueter, & Brennan, 1999). Fewer than 10% of older adults participate in any form of vigorous physical activity (U.S. Department of Health and Human Services, 1991). With the increasing number of elderly adults and the high rates of sedentary individuals, there is a need to better understand the reasons for not exercising in this population. The importance of perceived barriers is illustrated by the significant relationships of perceived barriers with both level of exercise activity and change in exercise behavior (Sallis et al., 1989; Sallis, Hovell, Hofstetter, & Barrington, 1992; Slenker, Price, Roberts, & Jurs, 1986). Clarifying barriers and motivators for exercise is a first step in developing a strategy to promote exercise in this population.

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Perceived barriers to exercise have been investigated through direct questioning, which can be in the form of open-ended questions (e.g., Connell, Davies, Rosenberg, & Fisher, 1988), a check of the most to least important on a list of barriers (Booth, Bauman, Owen, & Gore, 1997), rating agreement with statements (e.g., O'Neill & Reid, 1991), focus groups (e.g., Clark, 1999a), or using a rating scale to rate the degree to which a barrier would hinder a person from exercising (e.g., Godin et al., 1994). The methodology employed in investigations of exercise barriers is an important consideration because some items presented on a checklist might introduce bias, resulting in people checking items that are not so important to them. Moreover, if a questionnaire is not sufficiently comprehensive, important items will not be adequately represented, as was the case in a study of older women in which health problems seem to have been omitted as one of the items and were only mentioned under "other" (Jones & Nies, 1996). The disadvantage of open-ended questions is, however, that they rely on memory and awareness.

Most investigations of perceived barriers have studied heterogeneous age groups. For example, Yoshida, Allison, and Osborn (1988) investigated a sample of 233 women age 18 and over and found that the most commonly perceived barriers were lack of time, health reasons, and lack of energy, motivation, or need. Lack of time has been repeatedly shown to be the most common perceived barrier, as was the case in a sample of 349 adults with an average age of 38 years (Godin et al., 1994) and in a sample of 226 women with a mean age of 33 years (Johnson, Corrigan, Dubbert, & Gramling, 1990). Other reported barriers are lack of money, facilities, or partner; exercise being boring; and lack of interest (Johnson et al.; Myers & Roth, 1997). These results are unfortunately of limited use with older adults, because barriers and motivators differ among age groups (Booth et al., 1997; Owen & Bauman, 1992), but our literature search revealed only three studies that had investigated perceived barriers in older adults.

The most common motivators and barriers to exercise in the elderly appear to be health problems (Booth et al., 1997; O'Neill & Reid, 1991). In a study of retirees living in public apartment residences, O'Neill and Reid found that in addition to health problems, barriers included lack of knowledge, as well as psychological and environmental barriers. Lack of knowledge refers to items such as "There are many risks to my health if I get too active at my age," endorsed by close to one fifth of the participants. Psychological barriers include "I'm not disciplined enough," endorsed by 23% of participants, and environmental barriers include "transportation is difficult," which was checked by 15% of the sample. Despite all participants being over 55 years of age (range 55–90), thus representing an older sample than most other studies, the number of barriers identified was related to age, as well as to acknowledgment of illness or handicap; the number of barriers did not differ by gender, educational level, or income level. Booth et al. (1997) found that 20% of those age 60–78 in their study believed they were too old to exercise. Other barriers to exercise found in the literature include lack of time, interest, or social support; no one to exercise with; type and setting of exercise; and accessibility to and knowledge of facilities and classes (Ebrahim & Rowland, 1996). Barriers reported in a study of retired people interested in participating in a health-promotion activity (Connell et al., 1988) were similar, with one major exception. Close to half of the participants reported good health as a barrier to exercise, saying that good health gave them no reason to exercise, and another quarter reported ill health as a

barrier. Participants voiced many other reservations such as convenience, which was an issue with over half of the sample wanting a program within close driving distance and a knowledgeable instructor to facilitate exercises at no cost to participants. Other issues included being too old, too busy, or lacking transportation or the physical mobility to accomplish the exercise.

Several motivators have been discussed for this population. A doctor's advice, class instruction, peer support, convenience of exercise facilities, and type of exercise might be important motivators for the elderly (Dishman, 1994). Motivators were investigated in O'Neill and Reid's (1991) study by asking participants to endorse factors that would increase their interest in becoming more physically active in the future. Attaining a better physical condition was the most often-rated motivator. Other motivators included social factors (e.g., friends joining), environmental factors (e.g., facilities being closer to home), personal factors (e.g., having more time), knowledge factors (e.g., more information on the benefits), and other factors (e.g., physician suggesting activities).

Although motivators and barriers have been identified in the literature, few studies have investigated specific factors associated with perceived barriers and motivators. Barrier differences between genders were reported in a study of four focus groups of low-income adults age 55–70 years; pain and social discomfort were primary barriers for women and lack of motivation was a primary barrier for men (Clark, 1999b). After analysis of a heterogeneous sample with a mean age of 31 years, Myers, Weigel, and Holliday (1989) found that those who are inactive endorsed all perceived barriers more often than did those attempting to maintain an exercise program. These findings call for further exploration in order to clarify which factors are important for an older population.

The purpose of this study was to investigate perceived barriers and motivators to exercise in an older community-dwelling population and examine what factors are associated with these barriers and motivators. Examining correlates of reported barriers might clarify the reasons that some people have certain barriers whereas others do not. Furthermore, in addition to demographic and health-related characteristics, this study starts to explore mental-health issues by including depressed affect as a possible predictor of barriers and motivators.

Methods

This study was sponsored by the Laboratory of Epidemiology, Demography, and Biometry of the National Institute on Aging and conducted by the Research Institute on Aging at the Hebrew Home of Greater Washington. These data are part of the Hebrew Home Study of Impairments and Exercise data set.

PARTICIPANTS

Participants included 324 community-dwelling adults age 74–85 years (Table 1). Of these, 58% were women, 52.6% were married, 95.7% were White, and 96.3% had at least a high school education. For a more detailed description of the recruitment procedures, see the article preceding this one by Marx, Cohen-Mansfield, and Guralnik (2003).

Table 1 Demographics of the Sample of 324 Community-Dwelling Older Adults

Variable	%
Gender	
male	42
female	58
Marital Status	
married	52.6
widowed	36.2
divorced or separated	8.9
never married	2.2
Education (<i>n</i> = 320)	
graduate school	35.6
college graduate	22.2
some college	24.4
high school graduate	14.1
Age	<i>M</i> = 79, range = 74–85
Self-reported health	
excellent/very good	43
good	40
fair/poor	17
Race	
White	95.7
Black	2.2
other	2.1
Income (<i>n</i> = 284)	
\$45,000 and over	47.9
\$35,000–44,999	16.5
\$25,000–34,999	10.2
\$15,000–24,999	14.8
<\$15,000	10.6
Performance battery, <i>n</i> = 227	<i>M</i> = 9.27, range 0–12 ^a
Geriatric Depression Scale	<i>M</i> = 2.49, range 0–15 ^b

^aHigher scores indicate better performance. ^bHigher scores indicate more depressed affect.

PROCEDURES

Participants were asked to complete a health questionnaire that included questions about demographic variables, health, and exercise. The questionnaire also included the Geriatric Depression Scale (Leshner & Berryhill, 1994; Yesavage et al., 1983), pain questions modified from the Women's Health and Aging Study (National Institutes of Health, 1995), exercise questions from the Physical Activity Scale for

the Elderly (Washburn, McAuley, Katula, Mihalko, & Boileau, 1999), and other questions developed for this study (see Assessments section). The health questionnaire was mailed to the participants to fill out on their own. Participants who reported via telephone interview that they were not involved in vigorous exercise and that they were not too debilitated to walk either a few blocks or up stairs were asked to take a physical-performance battery. A trained research assistant administered the battery to 227 participants.

ASSESSMENTS

Barriers to exercise were coded from the responses to the open-ended question, What circumstances or problems keep you from walking or exercising more than you do? Barriers to walking and barriers to exercising were combined, so if a barrier was mentioned for either of these, it is included in Table 2. Similarly, motivators were coded from the responses to the open-ended question, What would motivate you to exercise more than you do now?

Health was assessed via the global self-rated-health item on the SF-36 (Samani, Willett, & Ware, 1988). Participants rated their general health as *excellent*, *very good*, *good*, *fair*, or *poor*.

Pain was a mean score of pain reported in the back, hips, knees, and feet on a scale of 0–10 on which 10 is *severe/excruciating pain* (National Institutes of Health, 1995).

Depressed affect was assessed with the Geriatric Depression Scale (GDS; Leshner & Berryhill, 1994; Yesavage et al., 1983), a 15-item scale of yes/no questions dealing with positive and negative affect. A depression score with a possible range of 0–15 was computed for each participant. Higher scores indicate higher levels of depressed affect.

Table 2 Barriers to Exercise/Walking ($n = 232$)^a

Open-ended responses	Combined %
Health problems/Pain	53.4
Lazy/Not motivated	29.3
Too busy/No time	25.0
Fatigue	11.6
Bad weather	10.9
Don't like it	8.3
Other ^b	16.8

^aDoes not include the 89 people who said they had no barriers or already exercise.

^bIncludes responses that were given by <1% of the participants: family problems, no practice, don't like to exercise alone, many excuses, poor instructors, lack of plan, don't want to lose weight, doctor says I need a monitor, don't know, work in garden, limits on activities, environment, no companionship, no interest, no experience, and fear.

The physical-performance battery is a measure of lower body functioning containing items that test walking, balance, and rising from a chair (Guralnik, Ferrucci, Simonsick, Salive, & Wallace, 1995). A summary score of 0–12 was given for each subject, with higher scores indicating better lower body function.

Exercise level was measured by the answers to questions concerning leisure-time activities during the preceding 7 days (Washburn et al., 1999). Participants who reported doing any light, moderate, or strenuous sport at least once in the preceding week were considered to be currently exercising. Those who said no to all three were considered not active.

Past enjoyment of exercise was measured by a yes or no response to the question, Have you enjoyed exercises or physical activity in the past as an adult?

Results

BARRIERS

Eighty-nine of the respondents reported that they had no barriers to exercising or were exercising already. The most often-reported barrier to exercise was pain/health problems, given by 53% of the participants (Table 2). Other common barriers included lazy/not motivated, too busy/no time, fatigue, and the weather.

RELATIONSHIP BETWEEN BARRIERS AND PARTICIPANT CHARACTERISTICS

Poor health was mentioned significantly more often by women than by men, with 52% reporting health problems as a barrier versus 33% of the men, $\chi^2(1) = 11.8, p < .001$. As would be expected, reporting health as a barrier was related to poorer ratings of health on the SF-36 item ($M = 3.01$ for those reporting the barrier vs. $M = 2.43$ for those not reporting it as a barrier), $t(319) = 6.19, p < .001$; more pain ($M = 1.79$ for those reporting the barrier vs. $M = 0.76$ for those not reporting it as a barrier), $t(267) = 6.44, p < .001$; and lower summary performance scores ($M = 8.56$ for those reporting the barrier vs. $M = 9.89$ for those not reporting it as a barrier), $t(225) = 4.99, p < .001$. Thirty-six percent of current exercisers reported health as a barrier, versus 50% of nonexercisers, $\chi^2(1) = 5.96, p < .01$. Furthermore, those who reported health to be a barrier also scored as more depressed on the GDS-15 than those who did not report health as a barrier (means 3.04 and 2.09, respectively), $t(273) = 3.29, p = .001$.

Reporting no motivation to exercise was related to higher levels of depressed affect ($M = 3.17$ for those reporting the barrier vs. $M = 2.31$ for those not reporting it), $t(320) = 2.60, p = .01$. Also, 34% of those who did not enjoy exercise in the past reported this as a barrier, versus 21% of those who did enjoy exercise in the past, $\chi^2(1) = 4.20, p = .05$. Seventeen percent of current exercisers reported no motivation as a barrier, versus 27% of those not currently exercising, $\chi^2(1) = 3.92, p < .05$.

Those who reported that they were too busy or had no time for exercise had general health scores indicating that they were in better health ($M = 2.40$) than those who did not report that reason ($M = 2.76$), $t(319) = 2.91, p < .01$.

Participants who reported fatigue as a barrier to exercise tended to be more depressed ($M = 3.52$) than those who did not mention it as a reason ($M = 2.41$), $t(319) = 2.33, p < .05$; tended to be at greater risk for physical disability, as measured

by the performance battery ($M = 8.20$) than those not mentioning it ($M = 9.37$), $t(225) = 2.39, p < .02$; and rated their general health as worse ($M = 3.03$) than those not reporting the barrier ($M = 2.64$), $t(318) = 2.30, p < .05$.

Reporting bad weather as a barrier to exercise was related to lower levels of depressed affect ($M = 1.48$), versus those not reporting the barrier ($M = 2.61$), $t(46) = 3.43, p = .001$, and lower levels of pain ($M = 0.72$) than those not reporting the barrier ($M = 1.26$), $t(42) = 2.74, p < .01$. Those who said they did not exercise because they did not like it tended to have lower levels of education ($M = 5.35$ vs. $M = 4.67$ for those not reporting the barrier), $t(310) = 2.45, p < .02$, and reported less enjoyment of past exercise (17% of those who did not enjoy exercise in the past versus 5% of those who did enjoy it), $\chi^2(1) = 11.2, p < .01$. Three percent of current exercisers reported not liking exercise versus 9% of those not currently exercising, $\chi^2(1) = 5.21, p < .05$.

Women reported a greater number of barriers ($M = 1.21$) than did men ($M = 0.94$), $t(293) = 3.51, p = .001$; with two or more barriers being reported by 32% of the women and only 18% of the men. The total number of reported barriers correlated significantly with scores indicating poor health on the general health rating ($r = .208, p < .001$); pain ($r = .165, p < .01$); depression ($r = .168, p < .01$); whether or not the participant currently exercised ($M = 1.21$ barriers for those not currently exercising vs. $M = 0.97$ barriers for those currently exercising), $t(318) = 2.96, p < .01$; and to lower performance on the summary performance score ($r = -.192, p < .01$). A stepwise regression analysis of the total number of barriers revealed that it was best predicted by health problems ($\beta = .22, p < .001$) and gender ($\beta = .12, p = .002$).

MOTIVATORS

Fifty-six of the participants were satisfied with their current exercise program or felt that nothing would motivate them. Similar to barriers, the most often-reported motivator to exercise was improved health or feeling better physically (Table 3). Other motivators included someone to exercise with, more time, better weather, and having an organized program. About 7% did not know what would motivate them.

RELATIONSHIP BETWEEN MOTIVATORS AND PARTICIPANT CHARACTERISTICS

The motivator of better health was related to current level of health, $t(296) = 3.63, p < .01$, as well as pain, $t(109) = 3.88, p < .001$, with those in poorer physical condition ($M = 3.00$ vs. $M = 2.59$ for those not reporting the motivator) and more pain ($M = 1.84$ vs. $M = 1.01$ for those not reporting the motivator) reporting this motivator more often. Participants motivated by better health had higher GDS scores ($M = 2.96$ vs. $M = 2.30$ for those not reporting the motivator), $t(296) = 1.98, p < .05$, and received lower scores on the performance battery ($M = 8.38$ vs. $M = 9.56$ for those not reporting the motivator), $t(78) = 3.08, p < .01$.

Participants reporting the motivator of someone to exercise with had lower levels of pain than did those not reporting the motivator ($M = 0.70$ vs. $M = 1.30$),

Table 3 Motivators for Exercise ($n = 242$)^a

Open-ended responses	%
Feeling better/Improved health	32.2
Someone to exercise with	14.0
Organized program	12.4
More time	9.1
Don't know	6.6
Good weather	5.0
Other ^b	24.0

^aDoes not include the 56 people who said nothing would motivate them or that they were satisfied with their current program. ^bIncludes convenience, motivated to lose weight, treat fear, doctor recommendation, encouragement/motivation, being at a resort, swimming, shopping, and free program

$t(52) = 2.87, p < .01$, and tended to be not married (7% of married vs. 17% of unmarried), $\chi^2(1) = 6.51, p < .01$. Those currently married (11% of married vs. 4% of unmarried), $\chi^2(1) = 4.93, p < .05$, and those currently exercising (13% of exercisers vs. 4% of nonexercisers), $\chi^2(1) = 7.00, p < .01$, were more likely to say that they would be motivated to exercise more often if they had more time. Married participants more often said they wanted good weather in order to exercise (7% of married vs. 1% of unmarried), $\chi^2(1) = 5.02, p < .05$. The motivator of good weather was also related to depression, with those who had lower scores of depressed affect desiring better weather to exercise ($M = 0.67$ vs. $M = 2.55$ for those not reporting the motivator), $t(29) = 7.80, p < .001$. Those who said they would be motivated by an organized program were more highly educated than those who did not mention this as a motivator, $t(43) = 2.05, p < .05$. Women reported a mean of 0.61 motivators, and men reported a mean of 0.45, $t(322) = 2.65, p < .01$.

RELATIONSHIP BETWEEN BARRIERS AND MOTIVATORS

Barriers were highly related to motivators. For example, 38% of those who mentioned health as a barrier to exercise also felt that feeling physically better would motivate them to exercise, in comparison with 17.5% who did not mention health as a barrier but felt that feeling better physically would motivate them, $\chi^2(1) = 15.7, p < .001$. Similarly, 23% of those reporting no time as a barrier mentioned having more time as a motivator, as compared with only 4% of those who did not mention it as a barrier, $\chi^2(1) = 24.6, p < .001$. Of those reporting fatigue, 52% said feeling physically better would motivate them, in comparison with 24% of those who did not report fatigue as a barrier, $\chi^2(1) = 9.9, p < .01$.

COLLINEARITY AMONG PREDICTOR VARIABLES

In order to clarify the interdependence among the relationships described above, we examined the relationships among participant characteristics. Higher scores on the GDS were related to older age ($r = .112, p < .05$); not being married, $t(315) = 2.50, p < .05$; poorer health ($r = .450, p < .001$); more pain ($r = .291, p < .001$); less exercise activity, $t(314) = 4.41, p < .001$; and poorer ability as measured by the performance battery ($r = .251, p < .000$). Higher scores on the summary performance score related to younger participants ($r = -.165, p < .05$), being in better health ($r = -.335, p < .001$), reporting less pain ($r = -.263, p < .001$), a higher education level ($r = .157, p < .05$), and greater enjoyment of exercise in the past, $t(226) = 2.32, p < .05$. Those currently exercising were more often married, $\chi^2(1) = 4.94, p < .05$; reported better health, $t(324) = 6.33, p < .001$; reported less pain, $t(309) = 2.66, p < .01$; and had had more enjoyment of exercise in the past, $\chi^2(1) = 20.3, p < .001$, than those not currently exercising. Better health was also related to higher levels of education ($r = .158, p < .005$) and lower levels of pain ($r = .369, p < .001$). Married participants also had more education ($M = 4.93$) than did those not married ($M = 4.44$), $t(307) = 3.64, p < .001$. Men were more likely to be married (79% vs. 34% of women), $\chi^2(1) = 64.3, p < .001$; were more highly educated ($M = 5.17$ vs. $M = 4.36$ for women), $t(322) = 6.24, p < .001$; and scored better on the performance battery ($M = 9.77$ vs. $M = 8.99$ for women), $t(226) = 2.74, p < .01$.

Discussion

Health problems and pain emerged as the most commonly perceived barriers to exercise, endorsed by more than half the participants. Although we are unable to directly compare our findings with those of earlier studies because of differences in methodology, it is clear that our sample had a much higher level of health problems than those reported for the other elderly samples. For example, in O'Neill and Reid's (1991) study, in which participants were asked to check items provided in a list of barriers, 29.5% endorsed "my state of health" as a barrier. In the Booth et al. (1997) study, which used a similar methodology, fewer than 30% of those over the age of 60 reported poor health as a reason for not exercising. Pain was not included as an item in the lists of barriers in either of the two studies. Painful joints were reported as a barrier to exercise by 33% of the respondents in Ebrahim and Rowland's (1996) study of 704 women with a mean age of 66 years, although the method of questioning was not specified. It is reasonable to suggest that the higher rate of reported health problems as barriers in our study than in other studies is a result of the fact that our participants were markedly older (age range 74–85 years).

The high rate of health problems and pain as the main barriers to exercising is surprising in view of the fact that in characterizing their health, 43.2% of the participants reported it as excellent/very good, 39.8% reported it as good, and only 17.1% reported fair/poor health (Table 1). Poor health is validated as a barrier, however, by a positive and significant correlation between health as a barrier and the rating of general health and pain. The highly significant relationships between general health, pain, lower physical ability as measured by the performance summary score, depressed affect, and health problems and fatigue as barriers suggest that there is a subgroup of this population in which a combination of these factors might have introduced a vicious cycle in which health problems are asso-

ciated with physical health, causing depression and relative inactivity, which might then exacerbate the health condition. The implication is that these people might best be approached via the medical establishment through intervention for pain and depressed affect, which could then put them in a state in which they could contemplate exercising. Given that levels of depressed affect were not high in this non-clinical sample, it follows that moderate levels of depressed affect could be considered as a target for intervention in this population because of the ripple effect on other aspects of life. These results highlight the importance of attending to mental-health issues in understanding barriers to exercise. We found no prior study examining the impact of depressed affect on perceived barriers to exercise, nor did participants mention depressed affect as a barrier. Depressed affect was, however, highly correlated with reporting the most common barriers.

Other barriers reported were similar to those cited previously, with lazy or being unmotivated reported by close to 30% of our participants and being too busy or having no time by a quarter of them. These numbers compare well with lack of interest reported for 27% and lack of time for 21% in Ebrahim and Rowland's (1996) study and with 23% reporting "I'm not disciplined enough" and 13% checking "I don't have enough time" in O'Neill and Reid's (1991) study.

The findings of this study have extended those of previous studies by demonstrating that reporting no motivation to exercise is significantly related to higher scores of depressed affect, as well as to lack of enjoyment of exercise in the past. Not having enjoyed exercise in the past is also related to a general dislike of exercise.

Barriers and motivators to exercise can be conceptualized as those that are internal, such as poor health, low motivation, pain, fatigue, and not enjoying exercise, and those that are external, such as lack of time because of other obligations and bad weather. Those who were in relatively good physical and mental health mentioned external barriers. Those who reported either lack of time as a barrier or having more free time as a motivator represent a subset of the population that is healthier and tends to be married and is therefore more occupied than the rest of this cohort. Some of these people already exercise but would like to exercise more. Similarly, those desiring better weather to exercise had lower levels of pain and depressed affect than those of other participants.

Motivators generally reflected barriers, with the exception of those who were looking for social reinforcement as a condition for exercising. Those who were not married, and probably more in need of social contacts, were most interested in finding someone to exercise with.

Connell et al. (1988) identified four categories of barriers: health reasons, personal reasons, attitudinal barriers, and logistical barriers. Whereas this population described all four types of reasons, findings suggest that they can be interrelated. Attitudinal barriers such as depressed affect or attitude toward exercise affect the weight ascribed to health reasons and logistical barriers.

The findings suggest that even in this relatively homogeneous group of suburban community-dwelling elderly, differing life experiences are reflected in their barriers to exercise. It is therefore implied that an array of interventions and options is needed to increase the levels of exercise participation in older adults who, as an age group, are most at risk for decline. Such an array of options includes a comprehensive medical component that will address health issues both in the form of relieving pain and depressed affect and in explaining the importance of exercise

even in the presence of pain and health problems (Panush & Holtz, 1994). For the more socially isolated, social forms of exercise should be offered, because some participants said that finding an organized program would motivate them to exercise. The concept of using an individualized approach to motivate people to improve their health habits has found some support in the current literature (e.g., van der Bij, Laurant, & Wensing, 2002). A study concerning weight loss lends more support to this concept. In that study, Kreuter, Bull, Clark, and Oswald (1999) found that information tailored to individual questions and concerns proved to be more effective in promoting healthy behaviors than did generic information. It is just as important to help people find an enjoyable form of exercise at a younger age, because those who did not were less likely to exercise when older and were more likely to report no motivation and not liking exercise as barriers.

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