

Factors Affecting Women's Motivation for Physical Activity

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Introduction

New reports are released frequently detailing the benefits of a physically active lifestyle. Yet many people remain inactive. To understand what prevents people from incorporating physical activity into their lives, the attention of Melpomene researchers is increasingly turning toward the question of motivation: What motivates people, especially women, to be active? What discourages them?

This paper reports on a study of 2,993 female respondents to a questionnaire published in the April 1996 issue of *SELF* magazine. Respondents to the questionnaire provided information about their age, level of activity, perceptions of their health and what motivates and discourages them in relation to physical activity.

One of our main findings was that the older participants were more likely than the younger participants to be motivated toward physical activity by expectations of benefits to their health and longevity. A second was that inactive women tended not to have the self-confidence, skill and experience with physical activity that active women had. In other words, women who had been previously active were more likely to be more confident about their abilities.

Review of the Literature

Models for Determining Motivation for Physical Activity

Researchers are employing several models to determine what motivates individuals to be active.

Bess Marcus and colleagues have been applying the Transtheoretical or Stages of Change model to physical activity. This model hypothesizes that people move through stages in deciding to adopt and adopting a health behavior such as physical activity.

Marcus's model defines five stages:

precontemplation (not intending to make changes), contemplation (considering a change), preparation (making small changes), action (actively engaging in a new behavior) and maintenance (sustaining the change over time).

Marcus has found that the stages of change model of behavior is able to explain exercise behavior and that identifying where an individual is in the process of deciding to be physically active can help fitness and health care professionals know how to encourage them to be regularly active (13).

The self-efficacy model predicts that one's confidence, or self-efficacy, is strongly related to one's ability to actually perform a given behavior. Marcus et al. (12) reported that the women who maintain regular activity also score highest for self-efficacy.

Marcus and colleagues also found that women who had more reasons than not to exercise were more likely to be physically active (12). The researchers employed a decisional balance model to discover that those women who were regularly active scored highest on a scale listing the benefits of physical activity and lowest on a scale listing the costs of physical activity.

Jaffee et al. (6) also found that inactive women listed more barriers to physical activity than active women. She also found that active and inactive women often cited the same barriers, such as lack of time, but inactive women cited more psychological barriers, such as lack of motivation, lack of discipline and self-consciousness in a physical activity setting.

O'Neill and Reid showed that older individuals cited more barriers to physical activity than younger individuals (15).

Several researchers report that people who exercise regularly believe themselves to be in better health than those who do not (6, 10, 11).

Older Women and Physical Activity

A primary reason older adults participate in physical activity is to feel better (7, 15). Wilcox found that age is negatively associated with self-efficacy and that the belief that exercise will be enjoyable and beneficial decreases with age (20). Other researchers have found that lack of confidence in one's ability to perform a given activity discourages initiation of that activity (14) and decreases the likelihood that even if begun the activity will be continued (3). Thus, if an older woman does not believe that exercise is enjoyable and beneficial and is not confident in her ability to perform an exercise, she is unlikely to adopt a physically active lifestyle.

O'Neill and Reid (15) surveyed 199 healthy older adults to find that societal attitudes toward aging often do not encourage physical activity. Many of the subjects believed that we have less need for physical activity as we age. Many thought they got enough physical activity in their daily routine, when actually they did not. Other obstacles included being too tired, not believing they're healthy enough to begin a physical activity, lack of discipline, deserved relaxation and doctor's hesitation (16).

Older women prefer activities that are convenient and enjoyable and for which they have feelings of competence, personal control and choice (5, 19). Programs of low-intensity activities such as walking are more likely to be initiated and adhered to (4, 12).

Many studies show that doctors' recommendations would encourage more people to be active and that encouragement becomes more important with age. Yet, doctors don't often recommend physical activity, or they caution older women to restrict their activities (5, 7, 15).

Suggested strategies for building self-efficacy in older women include

Factors Affecting Women's Motivation for Physical Activity

developing a program of consistent physical activity to build experience and skill and providing active older women to act as role models (14, 17, 20).

Method

A two-page questionnaire was devised by Melpomene researchers and editors of *SELF* magazine. The questionnaire incorporated questions on incentives and barriers to physical activity. We also included a question that allowed us to analyze our data based on Marcus's stages of change model (12). Participants were asked to best describe their current physical activity using the following categories:

- I am not physically active and I do not intend to become active.
- I am not physically active, but I am thinking about starting.
- I am somewhat physically active, although not on a regular basis.
- I am regularly physically active but have only been so within the past six months.
- I am regularly physically active and have been for longer than six months.

The questionnaire was published in the April 1996 issue of *SELF* magazine. Respondents were asked either to send questionnaires to Melpomene or fax them to *SELF*. More than 6,800 questionnaires were received, and 3,000 were randomly selected for analysis. Seven questionnaires were subsequently eliminated because of incomplete or inconsistent information.

Responses to open-ended items on the questionnaires were analyzed for content and coded. Using JMP statistics program from SAS Institute, Inc., simple frequency distributions for each variable were examined. Statistical relationships between variables were calculated using chi-square tests for significance.

For the purpose of further analysis, the women in the sample were divided into groups according to their levels of physical activity and their age. Those women who described themselves as not physically active and not intending to start, and those who described them-

selves as not physically active but thinking about starting were categorized as "inactive." Those women who described themselves as physically active on a regular basis and who had been so for longer than six months were categorized as "active."

Due to the difference in size between the regularly active and the inactive groups, chi-square calculations were performed within each group. Stronger statistical relationships between variables for active women are partially explained by the large size of the group.

In instances where participants did not answer questions or provided ambiguous answers, their responses could not be tallied.

Description of the Sample

The sample consisted of 2,993 women who responded to the questionnaire. Using the above designations, 1,855 of the women were categorized as active, and 163 were categorized as inactive. The majority of respondents were regularly active, providing the best picture of physically active women.

The nature of a questionnaire inviting women to comment on physical activity is most likely to elicit a response from physically active women, which accounts for the proportionately large size of the active group. However, women in all stages of physical activity responded, allowing us to make comparisons between them.

Due to the nature of data collection, this sample is more likely to represent *SELF's* demographic, which is largely young, educated, affluent and employed. In instances where participants did not answer questions or provided ambiguous answers, their responses could not be tallied.

Results

Physical Activity Level

More women age 45 and older reported engaging in a physically active lifestyle than women in any other age group.

TABLE 1
Level of Physical Activity

Physical Level	under 24 N=698	25-44 N=1748	45+ N=533
<i>Not active and not thinking about starting</i>	.1%	.3%	.6%
<i>Not active but thinking about starting</i>	6.2	5.0	4.3
<i>Somewhat active but not regularly</i>	22.0	14.5	12.2
<i>Regularly active, but less than 6 mos.</i>	23.6	15.0	11.2
<i>Regularly active but more than 6 mos.</i>	48.1	65.2	71.7

$p \leq .001$

Table 1 shows that 71.7% of the women 45 and older were regularly active and had been so for more than six months. In contrast, 65.2% of women age 25 to 44 and 48.1% of women less than 24 were active at that level. While Table 1 shows similar numbers of inactive women in each age group, greater numbers of young women (under 24) were either somewhat active, but not regularly, or regularly active, but for less than six months.

TABLE 2
Perceptions of Current Health

Active Women	under 24 N=335	25-44 N=1137	45+ N=383
<i>Better than most people my age</i>	71.3%	81.2%	87.0%
<i>About the same as most people my age</i>	25.4	16.9	9.7
<i>Worse than most people my age</i>	2.1	1.1	2.1
Inactive Women	under 24 N=44	25-44 N=92	45+ N=24
<i>Better than most people my age</i>	2.3%	15.2%	37.5%
<i>About the same as most people my age</i>	34.1	43.5	41.7
<i>Worse than most people my age</i>	63.6	41.3	20.8

Health and Physical Activity

Regular physical activity was strongly associated with perceptions of good health. Table 2 illustrates that the majority of women in all age groups who were active said that they were in better health than other women their age. The percentage of active women reporting they thought their health was better than that of their peers was lowest among the youngest group and highest among the oldest: 71.3% of women under 24, 81.2% of women 25 to 44 and 87% of women 45 and older.

Inactivity had the opposite effect. Almost two-thirds (63.6%) of the inactive women under age 24, 41.3% of women 25 to 44, and 20.8% of women 45 and over reported they regarded their health as worse than other women their age.

Older women who were inactive tended to perceive themselves in better health than younger inactive women. Thirty-seven percent (37.5%) of the older women reported they regarded their health as better than most, compared with 15.2% of women 25 to 44 and 2.3% of women under age 24.

Although the perception of being in better health increased with age among inactive women, so did the presence of a health condition or illness as a barrier to activity. Eleven percent (11.4%) of women under 24 and 12.9% of women 25 to 44

TABLE 3

Expected Positive Outcomes of Physical Activity by Active Women

Active Women Outcome	under 24 N=336	25-44 N=1137	45+ N=383	Sig.
Enhanced psychological well-being	82.4%	86.7%	89.8%	p<.05
Fun or enjoyment	79.1	70.5	66.8	p<.001
Improved body image	94.3	91.7	84.3	p<.001
Improved fitness/tone	94.3	94.9	97.1	NS
Increased resistance to illness	45.4	59.9	74.7	p<.001
Weight loss	63.6	52.1	48.0	p<.001
Improved self-esteem	77.3	71.3	61.1	p<.001
Ongoing good health	40.3	49.2	58.5	p<.001
Looking or feeling younger	14.6	44.7	72.1	p<.001
Increased longevity	36.1	51.5	67.4	p<.001

reported a health condition or illness as a barrier to being physically active. In contrast, 26.9% of women 45 and over reported that a health condition or illness was a barrier to regular activity.

Expected Benefits of Physical Activity

Expectations of the benefits of regular physical activity differed in the three age groups. There were also differences between women who were and were not regularly active.

Table 3 shows the positive outcomes expected from activity among women who had been regularly active six months or more. Improved body image, enhanced psychological well-being and improved fitness and tone were expectations of the majority of active women in all age groups.

Expectations related to health and longevity were more common among the active older women than among active younger women. For example, older women were more likely than younger women to expect regular physical activity to help them look and feel younger and live longer.

Among inactive women, improved body image was a primary expectation of regular physical activity. Other expectations cited by the majority of inactive women were enhanced psychological well-being, improved fitness and muscle tone, weight loss and improved self-esteem. The expectations that physical activity would be fun or enjoyable and would improve body image and self-esteem were more common among younger than older inactive women.

The expectation that activity would affect health or longevity was more common among the older inactive women. Examples of this kind of expectation were listed as improved fitness and muscle tone, ongoing good health, increased resistance to illness, looking and feeling younger and increased longevity. Table 4 illustrates the expected positive outcomes of physical activity for inactive women.

Barriers to Physical Activity

Barriers to physical activity differed according to age and activity level. Barriers to activity decreased with age for active women, as shown in Table 5.

TABLE 4
Expected Positive Outcomes of Physical Activity by Inactive Women

Inactive Women Outcome	under 24 N=44	25-44 N=93	45+ N=26	Sig.
Enhanced psychological well-being	61.4%	83.9%	88.5%	p<.01
Fun or enjoyment	47.7	36.6	34.6	NS
Improved body image	93.2	89.3	84.6	NS
Improved fitness/tone	79.6	89.3	96.2	NS
Increased resistance to illness	36.4	58.1	57.7	p<.05
Weight loss	90.9	79.6	84.6	NS
Improved self-esteem	86.4	77.4	73.1	NS
Ongoing good health	18.2	39.8	50.0	p<.05
Looking or feeling younger	13.6	39.8	57.7	p<.001
Increased longevity	27.3	38.7	46.2	NS

Additionally, the percentage of active women who cited no barriers to regular activity is 31.3% for women 24 and under and 33.2% for women 25-44 and 48.3% for women 45 and older. Lack of time due

TABLE 5

Barriers to Regular Physical Activity Reported by Active Women

Active Women Barriers	under 24 N=330	25-44 N=1114	45+ N=369	Sig.
None	31.3%	33.2%	48.3%	p<.001
Lack of confidence in abilities	3.3	1.9	.8	NS
Lack of discipline	20.3	17.7	12.3	p<.05
Lack of sport experience or skill	3.6	1.3	1.6	
Lack of a physical activity partner	7.6	5.8	4.6	NS
Lack of money	7.6	7.5	4.1	p<.05
Lack of time due to family responsibilities	11.6	22.0	9.9	p<.001
Lack of time due to work	33.7	32.7	21.7	p<.001
Teasing/negative comments	2.1	.8	.8	NS
Boredom	14.6	12.1	4.2	p<.001
Not seeing expected benefits	12.2	8.2	5.0	p<.005
Self-conscious in a physical activity setting	5.8	3.2	2.2	p<.05
Tired, low energy	38.2	29.4	16.2	p<.001
Health condition, illness	10.6	10.6	11.1	NS

Factors Affecting Women's Motivation for Physical Activity

to family obligations was a barrier to activity for more women in the 25-44 age group than in either of the other two age groups.

As shown in Table 6, barriers to regular physical activity for inactive women were dramatically different from barriers for active women. Overall, higher percentages of inactive women reported barriers to regular activity. Less than five percent of inactive women in any age group said they encountered no barriers to physical activity. The greatest barrier, cited most frequently by inactive women in all age groups, was lack of discipline. The next most frequently cited barrier by women in all age groups was a lack of energy, or being too tired for physical activity. Among inactive participants, more younger than older women reported barriers. Those barriers that decreased most dramatically with increased age were lack of confidence in abilities, lack of physical activity experience or skill, lack of a physical activity partner, lack of money, teasing or negative comments and not seeing expected benefits.

TABLE 6
Barriers to Regular Physical Activity Reported by Inactive Women

Active Women Barriers	under 24 N=44	25-44 N=93	45+ N=26	Sig.
None	0%	4.3%	3.9%	NS
Lack of confidence in abilities	38.6	32.3	19.2	NS
Lack of discipline	84.1	78.5	69.2	NS
Lack of sport experience or skill	25.0	23.7	7.7	NS
Lack of a physical activity partner	45.5	35.5	15.4	p≤.05
Lack of money	34.1	25.8	11.5	NS
Lack of time due to family responsibilities	27.3	33.3	11.5	NS
Lack of time due to work	56.8	35.5	34.6	p≤.05
Teasing/negative comments	22.7	9.7	0	p≤.05
Boredom	45.5	29.0	34.6	NS
Not seeing expected benefits	43.2	16.1	7.7	p≤.001
Self-conscious in a physical activity setting	47.7	38.7	34.6	NS
Tired, low energy	77.3	73.1	53.9	NS
Health condition, illness	11.4	12.9	26.9	NS

Differences Among Older Women

When the older group of women was categorized into groups aged 45 to 54 and 55 and over, very few differences were found. The one obstacle that did change was related to time. This was true for both active and inactive women. Obstacles related to time cited by women in these age categories (both active and inactive) are shown in Table 7. Having less time due to family responsibilities and less time due to work decreased for women 55 and older.

Many of the women reported a change in their physical activity patterns in the prior year. Almost half (45% of women 45 to 54 and 47.5% of women 55 and over) reported increasing their level of physical activity over the prior year. Reasons given for this increase for women 45 to 54 were to improve their health (38.8%) and to improve their appearance, through weight loss, improved muscle tone, etc. (32.8%). For women 55 and over, health reasons tended to be a greater motivator for the increase, with 45.2% reporting improved health as the reason for increased activity. In contrast, 21% of women 55 and over said they increased their activity for reasons of appearance.

A smaller number of older women reported a decrease in physical activity during the prior year. Of the women aged 45 to 54, 16.4% reported a decrease, and 23.1% of the women 55 and older reported decreasing physical activity. Reasons for decreasing activity for women 45 to 54 included injury or illness (27.11%), being busy with work (23.7%), and lack of energy (15.3%). For women 55 and older, reasons for decreasing activity included injury or illness (37.5%), followed by lack of energy, boredom, and being busy with work commitments (all 12.5%).

Discussion

Changes Related to Aging Regardless of Activity Level

The greatest difference between younger and older women, regardless of activity level, was the importance of health-related and longevity factors among the older

TABLE 7
Obstacles to Regular Physical Activity Reported by Women 45 and Older

Obstacles	45-54 N=369	55+ N=154	Sig.
Less time due to family responsibilities	15.2%	7.1%	p≤.05
Less time due to work	31.7	18.2	p≤.005

women. It seems likely that whether active or not, the older women in this sample were more likely than the younger women to be aware of the health benefits of physical activity.

The expectation that physical activity would be fun or enjoyable was more common among older than younger women, regardless of activity level. Wilcox and Storandt (21) also found this to be true, but only for nonexercisers. Many active women in our study incorporated physical activity into their lives to improve their health as they grew older, rather than to have fun. Inactive women understood the benefits of physical activity, but neither the benefits nor enjoyment of activity seemed enough to motivate them to be active.

Differences Between Active and Inactive Women

Several differences existed between active and inactive women. Our results, like those of Marcus (11), indicated that physically active women perceived themselves to be in better health than their peers. In contrast, few inactive women described themselves as being in better health than their peers. Instead, inactive women were more likely to describe their health as the same as or worse than others their age.

Additionally, younger women tended to have the most pessimistic view of their health — 63.6% reported regarding their health as worse than others their age. With constant messages from all forms of the media on the benefits of physical activity, it is possible that young, inactive women were likely to feel that their health was missing a component if they weren't exercising.

In general, inactive women were more likely than active women to report barriers to physical activity. This finding is consistent with the decisional balance theory that those people who have more reasons not to exercise than reasons to exercise are likely not to engage in regular physical activity (12). It is interesting to note, however, the number of women, both active and inactive, who reported barriers decreased with age.

While lack of discipline and being too tired were primary barriers reported by both inactive and active women, inactive women also reported barriers that were uncommon among regularly active women. Many of the inactive women reported barriers associated with lack of confidence: self-consciousness, lack of confidence in their abilities, being teased and lack of experience in a sports setting. These barriers indicate low levels of self-efficacy (confidence in one's ability to perform a specific behavior) for the inactive women. These findings are supported by McAuley (14) and Garcia (3), who documented a relationship between self-efficacy and physical activity participation.

Self-efficacy barriers may be symptomatic of a larger problem: many inactive women have never been active before and may not know how to begin an exercise program. Attempts to be active may leave them feeling uncertain, self-conscious and in need of a great deal of support. Additionally, the lack of a physical activity partner, cited as a barrier by many inactive women, suggests that women beginning a program may need help and encouragement to maintain that program. While this kind of support is necessary for women who are beginning to be active, lack of a partner was reported as a barrier for few active women.

Not realizing the expected benefits of physical activity was reported by many more young, inactive women than women in the other two age groups. It seems that young women have high hopes for the benefits of physical activity, whether those expected benefits are weight loss (expected by 90% of women in the 24 and under age group) or other benefits. When expectations are not

quickly met, frustration and discouragement may win out. To encourage young women to begin physical activity, programs or individuals promoting physical activity need to address such achievable benefits as cardiovascular fitness, improved muscle tone and stress reduction. Rewards other than improved appearance or weight loss need to be in place early on in a new program, until a physical activity habit is developed and other benefits are realized.

Active women were most likely to report having no barriers to physical activity. However, the barriers they did report reflected a busy lifestyle. Lack of time due to work responsibilities; family responsibilities, especially for women 25 to 44; and low energy were barriers that plagued some active women. Few active women in the 45 and older age group, however, reported barriers to physical activity. This may reflect the fact that women in this age group have more time as their children get older and demand less care. Additionally some of these women may have fewer work responsibilities as they begin to retire or cut back on work. It is also possible that these women have eliminated some obstacles because they have developed a strong commitment to physical activity and value the benefits that result from regular exercise. That the older active women are in good health is supported by the fact that only about 10% (similar to the other age groups) reported ill health as a barrier to activity.

Conclusion

Based on data gathered from questionnaires appearing in *SELF* magazine, the following conclusions can be drawn:

- Benefits of physical activity related to health and aging well were more important to older than younger women.
- More active than inactive women reported perceiving themselves to be in better health than their peers.
- Proportionately more inactive than active women reported barriers to being physically active.

- Many inactive women reported barriers related to poor self-efficacy, such as lack of confidence in their abilities, lack of sport experience or skill, teasing or negative comments and being self-conscious in a physical activity setting.
- Inactive women reported lack of discipline, tired/low energy and time constraints as barriers to being physically active.
- Active women were most likely to report having no barriers to physical activity. If they cited barriers, they were most likely to be related to time constraints, being tired or having low energy. ●

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