Gender Differences in Barriers to Lifestyle Change for Cardiovascular Disease Prevention

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ABSTRACT

Achieving and maintaining a healthy lifestyle are important aspects of a cardiovascular disease prevention program. Few data have evaluated barriers to lifestyle change by gender. We studied self-reported barriers to lifestyle change and evaluated support systems to make positive changes in 293 patients (186 men, 107 women) enrolled in a multidisciplinary preventive cardiology clinic. Subjects were asked to rate barriers and support systems on a scale of 1 to 5, with 1 being very important and 5 not important. Women ranked self-esteem as the most important barrier and rated it significantly higher than did men ($p = 0.0003$). Women also rated money, knowledge, skills, and stress significantly higher than did men ($p < 0.05$). Physicians were rated as the most important source of support for both genders. Women, compared with men, rated dietitians, exercise physiologists, nurses, counselors, family members, and social/religious groups as more important sources of support. These data suggest that gender differences exist in barriers to lifestyle change. Psychosocial factors should be considered important elements of programs designed to help patients make positive lifestyle changes.

INTRODUCTION

Cardiovascular disease (CVD) is the leading cause of death in men and women in the United States. The importance of a healthy lifestyle in the primary and secondary prevention of CVD in both men and women has been well documented. Women have been shown to have a similar level of risk reduction to men when lifestyles are modified. Despite the known association between lifestyle and CVD risk, many people find it difficult to modify behavior to lower risk. Several barriers to the implementation of preventive services have been described. These may include patient, physician, healthcare setting, and societal barriers. Few data have examined patient-specific barriers to prevention.

Previous studies have reported that low self-efficacy, the degree to which a person is confident of his or her ability to successfully make a behavior change, predicts the person’s ability to make that change. Low self-efficacy and self-esteem may be significant barriers to successfully implementing lifestyle change, but little is known about how these or other barriers are affected by gender. The physician may also be a barrier to patients’ enrolling in and participating in risk reduction programs. Many clinicians report feeling ineffective in counsel-
**TABLE 1. Barriers to Making Positive Lifestyle Change, by Gender**

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Male</th>
<th>Female</th>
<th>t score</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>2.20 ± 1.64</td>
<td>1.95 ± 1.49</td>
<td>1.27</td>
<td>0.205</td>
</tr>
<tr>
<td>Money</td>
<td>3.14 ± 1.81</td>
<td>2.59 ± 1.73</td>
<td>2.43</td>
<td>0.016</td>
</tr>
<tr>
<td>Knowledge</td>
<td>2.57 ± 1.68</td>
<td>2.15 ± 1.56</td>
<td>2.03</td>
<td>0.044</td>
</tr>
<tr>
<td>Skills</td>
<td>2.83 ± 1.72</td>
<td>2.15 ± 1.61</td>
<td>3.13</td>
<td>0.002</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>2.55 ± 1.68</td>
<td>1.80 ± 1.43</td>
<td>3.64</td>
<td>0.0003</td>
</tr>
<tr>
<td>Stress</td>
<td>2.29 ± 1.62</td>
<td>1.86 ± 1.42</td>
<td>2.12</td>
<td>0.035</td>
</tr>
<tr>
<td>Other</td>
<td>3.60 ± 1.90</td>
<td>2.00 ± 1.73</td>
<td>1.81</td>
<td>0.138</td>
</tr>
</tbody>
</table>

Female gender still predicted a greater reliance on exercise physiologists and counselors in multiple regression models adjusting for age and marital status \((p = 0.0, R^2 = 0.036; p = 0.042, R^2 = 0.034)\). Of note is that age was a predictor of increased dependence on physician support to make lifestyle change \((p = 0.015, R^2 = 0.043)\). Gender was no longer a predictor of the importance of physicians as support for lifestyle change in models adjusting for age and marital status. Older patients rated nursing support higher in multiple regression models, but this did not reach statistical significance \((p = 0.064, R^2 = 0.054)\).

**DISCUSSION**

The results of this study suggest that significant gender differences exist in barriers to lifestyle change. Specifically, self-esteem, stress, and time were rated as the most important barriers for women, with the first two rated significantly more important by women than by men. This is consistent with the observations of Lappelainen et al., who studied 1000 adults in a multicountry study in Europe to determine barriers to healthy eating. The authors reported the most common barrier in women was self-control, followed by lack of time, and in men, lack of time and self-control were rated the number 1 and 2 barriers. The authors also found that lack of time was a more frequent barrier in the young. We did not show an age gradient relative to barriers, but this may reflect a more narrow age range in our population.

Biddle et al. studied the social/psychologic predictors of self-reported physical activity in 131 full-time employees on a university campus in southwest England and determined that self-efficacy was strongly associated with intention to exercise in women but not in men. They concluded that strategies to increase physical activity in women need to focus on enhancing their self-confidence. In a study to assess the barriers to participation in a worksite health screening program, Wilson et al. determined that individuals who participated in the health screening program scored significantly


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