Black B, Ingman M, Janes J (2016) Physical therapists' role in health promotion as perceived by the patient: descriptive survey. *Physical Therapy*, 96(10):1588-96. <https://doi.org/10.2522/ptj.20140383>

Abstract

Background

The importance of health professionals discussing health behaviors with patients is emphasized in Healthy People 2020, the national health objectives established by the US Department of Health and Human Services. Many physical therapists do not routinely discuss health behaviors with their patients. One reason may be uncertainty about how these discussions might be perceived by patients.

Objective

The primary purpose of this study was to determine patients' opinions regarding physical therapists discussing the topics of physical activity, smoking, fruit and vegetable consumption, and maintaining a healthy weight during clinical visits. A secondary purpose was to determine whether patients believe that physical therapists should be role models for these behaviors.

Design

This was a descriptive cross-sectional survey.

Methods

Patients were surveyed at 8 outpatient clinics in Michigan and Minnesota. A written questionnaire collected information about the participants' health behaviors, their opinions about physical therapists discussing their health behaviors during clinical visits, and their opinions about physical therapists role-modeling healthy behaviors.

Results

The survey response rate was 45.6%. A total of 230 patients participated. Most participants agreed that physical therapists should speak to them about physical activity (91.3%), maintaining a healthy weight (73%), and abstaining from smoking (51.3%). Fewer participants agreed that physical therapists should advise them about fruit and vegetable consumption (32.1%). The majority of participants agreed that physical therapists should be role models for engaging in regular physical activity (83.4%), maintaining a healthy weight (71.7%), and abstaining from smoking (63.9%).

Limitations

Limitations of this study include the potential for response bias and limited generalizability.

Conclusions

Most participants believed it is appropriate for physical therapists to speak with them about and be role models for the behaviors of physical activity, maintaining a healthy weight, and abstaining from smoking. Physical therapists have the opportunity to support the goals of Healthy People 2020 by discussing health behaviors with their patients.

Issue Section:

[Prevention and Health Promotion](https://academic.oup.com/ptj/search-results?f_TocHeadingTitle=Prevention%20and%20Health%20Promotion)

The personal health behaviors of many adults in the United States may adversely affect their health and longevity.1 Insufficient physical activity and unhealthy diet have been identified as key contributors to the rising obesity levels in the nation,2and cigarette smoking, although becoming less prevalent, is still the leading contributor to premature deaths in the United States.3 Healthy People 2020, a set of national health objectives established to improve the health of Americans, contains a number of objectives that specifically target personal health behaviors.4 Health professionals are being encouraged to support these objectives by incorporating health promotion into their clinical practices.4,5 The American Physical Therapy Association (APTA) has identified a key role for physical therapists in the area of health promotion,6–8 and there is evidence that physical therapists can be effective health counselors.9 Some physical therapists are beginning to incorporate health promotion into their clinical practices by discussing physical activity, nutrition, healthy weight management, and smoking cessation.10–14 Although some physical therapists do engage in health promotion practice, more need to incorporate health promotion interventions into their patient management programs.15,16 However, potential barriers exist for physical therapists who want to engage in health promotion practice. These barriers may include low self-efficacy for health behavior counseling,11,17,18 concern about the effectiveness of health behavior counseling,11,17 lack of reimbursement,19 insufficient time,17,20,21 and concern about the appropriateness of these discussions.17

An additional barrier may be a reluctance to engage in these discussions due to an uncertainty about how such conversations would be received by patients. Patients' opinions with respect to physical therapists having discussions with them about healthy behaviors should be considered. Findings from other health professional groups show discrepancies between the lifestyle counseling patients expected to receive and what they actually received.20,22 Information regarding patients' opinions of the role of the physical therapist in lifestyle counseling is absent in the literature. Also lacking is information on patients' opinions regarding whether physical therapists should role-model the behaviors they are recommending to their patients. According to Social Cognitive Theory,23 role modeling can be effective in supporting behavior change. Patients may be more motivated to change their health behavior when their health practitioner engages in the health behavior that is being recommended.24–26 The purpose of this study was to examine the opinions of physical therapy outpatients regarding the appropriate role of physical therapists in health promotion. This study sought to answer the following questions:

1. Do patients believe it is appropriate for physical therapists to speak with them about the personal health behaviors of engaging in sufficient physical activity, abstaining from smoking, consuming sufficient fruits and vegetables, and maintaining a healthy weight?
2. Do patients believe that physical therapists should serve as role models for these 4 behaviors?
3. What sociodemographic variables are associated with patients' opinions?
4. Are patients' current health behaviors associated with their opinions?

Method

Study Design and Sampling

This research project was a multicenter cross-sectional descriptive survey conducted with a convenience sample of patients from 5 physical therapy outpatient clinics in Michigan and 3 physical therapy outpatient clinics in Minnesota. Managers from the 2 participating health care systems selected the outpatient clinics that they felt best represented the variety of outpatient populations they served.

Participants

Patients were eligible to participate in the study if they were 18 years of age or older, could read English, had completed at least 3 physical therapy sessions, and had completed their physical therapy treatment program for their current problem.

Survey

The paper questionnaire consisted of 34 questions. The first part of the questionnaire consisted of 9 sociodemographic questions ([eAppendix](https://oup.silverchair-cdn.com/oup/backfile/Content_public/Journal/ptj/96/10/10.2522_ptj.20140383/2/ptj1588-eAppendix.pdf?Expires=1560918132&Signature=yft7J918T1mxKF-YAx91ul5Bqt0PiKKfx6Ok3egFHjzFEFapcLpG1lbWBWIItMGmYHf9g7lgJbdSnAgwcYnmq9PqHayQ7UVpDCNrDOp9vKjbEu9oZliBRdZHyN7ldHccZHy3PcyN4Bz1E~URmB3wIUUCJ3M~hTC4HFmEIoPMIVK54SA2zwIMzoiG6stfkHDUVUL5OLsHaJUUvJ324sVsbWkliDtI2NwoCG8uJwM4oW8ga5Xcbs-we6eBzpmptPYCc47UPk75KvoYU46tvpnpVKyhcNkXMXpylCgSVR9sKP9GqJp-~o-EBF2DEPRvlRH67cFUjS~NUKJkYlqw7y3hWw__&Key-Pair-Id=APKAIE5G5CRDK6RD3PGA) available at [ptjournal.apta.org](http://ptjournal.apta.org/)) that asked about: age, sex, education, previous physical therapy experience, referral method, reason for the current referral, length of the most recent physical therapy episode of care, and duration of the current condition.

The second part of the survey asked participants about 4 personal health behaviors, their opinions regarding physical therapists speaking with them about these behaviors, and their opinions regarding the need for physical therapists to be role models for these behaviors. The 4 behaviors were: engaging in regular physical activity, maintaining a healthy weight, eating fruits and vegetables, and abstaining from smoking. These health behaviors are most indicative of a healthy lifestyle27and have been suggested as key behaviors for physical therapists to discuss with their patients.11,28 The survey questions were adapted from the Centers for Disease Control and Prevention's Behavioral Risk Factor Surveillance System (BRFSS)29,30with regard to physical activity, healthy weight, abstaining from smoking, and fruit and vegetable consumption ([eAppendix](https://oup.silverchair-cdn.com/oup/backfile/Content_public/Journal/ptj/96/10/10.2522_ptj.20140383/2/ptj1588-eAppendix.pdf?Expires=1560918132&Signature=yft7J918T1mxKF-YAx91ul5Bqt0PiKKfx6Ok3egFHjzFEFapcLpG1lbWBWIItMGmYHf9g7lgJbdSnAgwcYnmq9PqHayQ7UVpDCNrDOp9vKjbEu9oZliBRdZHyN7ldHccZHy3PcyN4Bz1E~URmB3wIUUCJ3M~hTC4HFmEIoPMIVK54SA2zwIMzoiG6stfkHDUVUL5OLsHaJUUvJ324sVsbWkliDtI2NwoCG8uJwM4oW8ga5Xcbs-we6eBzpmptPYCc47UPk75KvoYU46tvpnpVKyhcNkXMXpylCgSVR9sKP9GqJp-~o-EBF2DEPRvlRH67cFUjS~NUKJkYlqw7y3hWw__&Key-Pair-Id=APKAIE5G5CRDK6RD3PGA)). For each of the 4 health behaviors the participants were asked to report their current stage of change for that behavior using questions based on the Transtheoretical Model (TTM) of behavior change.31The TTM suggests that an individual's behavior is most accurately described along a continuum of 5 stages of change for the behavior. Individuals are in the maintenance stage if they have engaged in the behavior for 6 months or more and in the action stage if they have engaged in the behavior for less than 6 months. Individuals in the preparation stage intend to change the behavior within the next 30 days. In the contemplation stage, individuals are actively considering a behavior change within the next 6 months, whereas individuals in the precontemplation stage are not considering changing the behavior within the next 6 months. Different counseling techniques are used to support an individual's behavior change, depending on the current stage of change for the behavior. The wording for the stage of change questions for these 4 health behaviors was based on wording used in a previous study on personal health behaviors32 and asked whether the participant was in the maintenance, action, preparation, contemplation, or precontemplation stage for each of the behaviors.

Participants also asked whether their physical therapist discussed each of these health behaviors with them during their course of treatment. For this question, participants could select “yes,” “no,” or “I do not recall.” Questions about the participants' opinions regarding the appropriateness of their physical therapist discussing these 4 health behaviors with them and their opinions about whether the therapist should role-model the behavior were structured using a 5-point Likert scale (strongly agree, agree, neutral, disagree, or strongly disagree).

Two faculty members with expertise in health survey research reviewed the initial draft of the survey questionnaire. Wording and format changes were made, and the resulting second draft of the survey was pilot tested with a small convenience sample of health professional colleagues and laypeople not associated with the study. Following additional revisions to wording and format, the third and final draft of the survey was given to 11 patients from one outpatient clinic in Minnesota and tested for reliability for all behavior stage of change questions and opinion questions. Test-retest reliability was found to be strong (Pearson correlation coefficient [*r*]=.897, *P*=.006).

Procedure

The investigators instructed the staff at the 8 clinics on the recruitment process. All physical therapists at the participating clinics determined eligibility of their patients based on the inclusion criteria and notified the designated study staff member at each site when a patient qualified for the study. The designated study staff member described the study to the qualifying patient using a script provided by the investigators, informed the patient that participation was voluntary, and provided the study packet to those patients who expressed a willingness to participate. The study packet included an information sheet, the questionnaire, an addressed and stamped envelope to return the anonymous questionnaire, and a postcard for the participant to fill in and return if he or she wanted to be entered in a drawing for a $100 gift card. Study packets were distributed over a 3-month period in the spring and summer of 2012.

Data Analysis

We used IBM SPSS version 19.0 software (IBM Corp, Armonk, New York) to analyze the results of the survey. Descriptive statistics were used to describe the participants and their stage of change for each of the 4 health behaviors and to report frequency of responses for opinion questions. The Fisher exact test was used to calculate odds ratios (ORs) for whether opinions were associated with sociodemographic characteristics or current health behaviors. For the OR calculations, all opinion answers were dichotomized to “Agree” if the participant had selected “agree” or “strongly agree” on the survey or “Do not agree” if they had selected “neutral,” “disagree,” or “strongly disagree” on the survey. As there were insufficient responses in the neutral category to include in the analyses, it was determined to be more appropriate to combine the neutral responses with the disagree responses in order to be conservative and not overestimate the number of participants who felt it is appropriate for physical therapists to speak with them about these health behaviors. For current health behaviors, participants were dichotomized as either “engagers” or “nonengagers” for each of the 4 health behaviors.29 Engagers were those participants in either the action or maintenance stage of change for engaging in physical activity, maintaining a healthy weight, and consuming fruits and vegetables. Participants who had never smoked or did not currently smoke were classified as engagers for the health behavior of abstaining from smoking. Level of significance for the OR values was set at *P*<.01 rather than *P*<.05 to take into account the multiple testing.

Role of the Funding Source

This study was supported by a grant from the Michigan Physical Therapy Association, an Oakland University Provost Graduate Student Award, and a St. Catherine University Academic Community Development Committee Faculty Scholarship Grant.

Results

A total of 552 survey questionnaires were distributed: 252 in Michigan and 300 in Minnesota (Fig. 1). Two hundred fifty-two questionnaires were returned (127 from Michigan and 125 from Minnesota). for a survey response rate of 45.6%. Data analysis was completed on 230 questionnaires. The sociodemographic characteristics and health behaviors of the participants are reported in Table 1.

Figure 1

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Participant flow during the study. MI=Michigan, MN=Minnesota.

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Table 1

Sociodemographic Characteristics and Health Behaviors of Participants (N=230)*a*

| Variable | Measurements |
| --- | --- |
| Age (y), X̅ (SD) [range] | 60.1 (14.6) [19–93] |
| Sex | |
| Male | 77 (33.5) |
| Female | 153 (66.5) |
| Duration of current physical therapy episode of care | |
| 1–2 wk | 8(3.5) |
| 3–4 wk | 99(43.0) |
| 5–6 wk | 64(27.8) |
| <6 wk | 59(25.7) |
| Physical activity stage of change*a* | |
| Maintenance | 93(40.4) |
| Action | 32(13.9) |
| Preparation | 55(23.9) |
| Contemplation | 28(12.2) |
| Precontemplation | 19(8.3) |
| No response | 3(1.3) |
| Fruit and vegetable consumption stage of change*b* | |
| Maintenance | 111(48.3) |
| Action | 19(8.3) |
| Preparation | 34(14.8) |
| Contemplation | 16(7.0) |
| Precontemplation | 41(17.8) |
| No response | 9(3.9) |
| Smoking stage of change*b* | |
| Never smoked | 127(55.2) |
| Maintenance | 80(34.8) |
| Action | 5(2.2) |
| Preparation | 3(1.3) |
| Contemplation | 3(1.3) |
| Precontemplation | 7(3.0) |
| No response | 5(2.2) |
| Healthy weight stage of change*b* | |
| Maintenance | 90(39.1) |
| Action | 8(3.5) |
| Preparation | 86(37.4) |
| Contemplation | 28(12.2) |
| Precontemplation | 10(4.3) |
| No response | 8(3.5) |

a

Measurements reported as n (%) unless otherwise indicated.

b

Stage of change: precontemplation=not participating in the behavior, with no intention to start within the next 6 months; contemplation=not yet participating in the behavior but intending to do so in the next 6 months; preparation=not yet participating in the behavior but intending to do so in the next 30 days; action=participating in the behavior less than 6 months; maintenance=participating in the behavior for more than 6 months.

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Physical Activity

Only 54.3% of the participants indicated that they engaged in regular physical activity (Tab. 1). However, 74.3% of the participants responded “yes” to the question: “Did your physical therapist talk to you about your physical activity level?” (Fig. 2). A larger majority agreed that their physical therapist should advise them on appropriate levels of physical activity (91.3%), discuss the benefits of physical activity (94.8%), and suggest ways to increase physical activity (91.7%). The majority of participants (83.4%) agreed that physical therapists should serve as role models for physical activity.

Figure 2

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Participants' opinions about physical therapist (PT) discussing the health behavior. PA=physical activity, F/V=fruits and vegetables, BMI=body mass index. \* Yes/no/do not recall.

Fruit and Vegetable Consumption

For the behavior of fruit and vegetable consumption, 56.6% of the respondents reported that they consumed 5 or more cups each day, yet only 5.7% reported that their physical therapist talked to them about fruit and vegetable consumption (Fig. 2). Fewer than half of the participants agreed that their physical therapist should advise them on recommended levels of fruit and vegetable consumption (32.1%), discuss the benefits of fruit and vegetable consumption (47.4%), or suggest ways to increase fruit and vegetable consumption (41.3%). Only 38.7% of the participants agreed that physical therapists should role-model adequate fruit and vegetable consumption.

Healthy Weight

More than half (53.9%) of the participants reported that they were not at a healthy weight, yet only 10.9% of the participants who were overweight (BMI >25 kg/m2) reported that the physical therapist spoke with them about their weight (Fig. 2). The majority of all participants agreed that their physical therapist should advise them on maintaining a healthy weight (73.0%), discuss the benefits of a healthy weight (75.6%), or suggest ways to maintain a healthy weight (67.4%). Most participants (71.7%) believed that their physical therapist should serve as a role model for maintaining a healthy weight.

Abstaining From Smoking

The majority of participants were nonsmokers (90.0%). Only 3 of the 18 smokers in this study responded “yes” to the question: “Did your physical therapist talk to you about your smoking?” (Fig. 2). All participants (smokers and nonsmokers) were asked to respond to the questions regarding the role of physical therapists in addressing smoking with their patients. Slightly more than half of the participants agreed that their physical therapist should advise them to abstain from smoking (51.3%) and discuss the benefits of not smoking (54.3%). A majority of participants felt their physical therapist should be a role model for this behavior (63.9%). Only 46.5% of the participants agreed that their physical therapist should suggest ways to stop or reduce their smoking.

Sociodemographic Characteristics and Health Behaviors Associated With Participant Opinion

No sociodemographic variables were found to be associated with participants' opinions; however, there were differences in opinions between those who did and did not smoke (Tab. 2). Nonsmokers were more likely than smokers to agree that physical therapists should be role models for abstaining from smoking (OR=7.76, *P*<.01).

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Table 2

Relationship Among Sociodemographic Variables, Current Behaviors, and Opinions (Dependent Variable: Agree or Strongly Agree With Statement)

| Independent Predictor Variable | OR*a* | 99% Cl*b* |
| --- | --- | --- |
| Physical therapist should advise on recommended levels of physical activity | | |
| Sex (male vs female) | 2.13 | 0.48, 9.43 |
| Age of patent (61 y or younger vs 62 y or older) | 1.29 | 0.38, 4.39 |
| Duration of current physical therapy episode of care (4 wk or less vs more than 4 wk) | 0.86 | 0.26, 2.87 |
| Engagers vs nonengagers | 2.46 | 0.70, 8.69 |
| Physical therapist should advise on benefits of physical activity | | |
| Sex (male vs female) | 5.89 | 0.39, 88.94 |
| Age of patient (61 y or younger vs 62 y older) | 0.83 | 0.18, 3.83 |
| Duration of current physical therapy episode of care (4 wk or less vs more than 4 wk) | 1.23 | 0.26, 5.79 |
| Engagers vs nonengagers | 2.58 | 0.51, 12.97 |
| Physical therapist should suggest ways to increase physical activity | | |
| Sex (male vs female) | 1.10 | 0.29, 4.14 |
| Age of patient (61 y or younger vs 62 y or older) | 0.39 | 0.10, 1.48 |
| Duration of current physical therapy episode of care (4 wk or less vs more than 4 wk) | 0.77 | 0.22, 2.64 |
| Engagers vs nonengagers | 1.25 | 0.35, 4.42 |
| Physical therapist should serve as role model for physical activity | | |
| Sex (male vs female) | 0.84 | 0.32, 2.17 |
| Age of patient (61 y or younger vs 62 y or older) | 0.81 | 0.32, 2.02 |
| Duration of current physical therapy episode of care (4 wk or less vs more than 4 wk) | 0.96 | 0.38, 2.40 |
| Engagers vs nonengagers | 0.81 | 0.32, 2.07 |
| Physical therapist should advise on daily amount of fruits and vegetables | | |
| Sex (male vs female) | 1.84 | 0.87, 3.94 |
| Age of patient (61 y or younger vs 62 y or older) | 0.80 | 0.38, 1.67 |
| Duration of current physical therapy episode of care (4 wk or less vs more than 4 wk) | 0.94 | 0.45, 1.96 |
| Engagers vs nonengagers | 1.21 | 0.57, 2.56 |
| Physical therapist should advise on benefits of daily amount of fruits and vegetables | | |
| Sex (male vs female) | 1.93 | 0.93, 4.01 |
| Age of patient (61 y or younger vs 62 y older) | 0.84 | 0.42, 1.67 |
| Duration of current physical therapy episode of care (4 wk or less vs more than 4 wk) | 1.08 | 0.54, 2.13 |
| Engagers vs nonengagers | 1.00 | 0.50, 2.03 |
| Physical therapist should suggest ways to increase daily amount of fruits and vegetables | | |
| Sex (male vs female) | 1.76 | 0.85, 3.65 |
| Age of patient (61 y or younger vs 62 y or older) | 0.89 | 0.44, 1.78 |
| Duration of current physical therapy episode of care (4 wk or less vs more than 4 wk) | 0.97 | 0.49, 1.94 |
| Engagers vs nonengagers | 1.28 | 0.63, 2.60 |
| Physical therapist should serve as role model for daily amount of fruits andvegetables | | |
| Sex (male vs female) | 1.09 | 0.52, 2.28 |
| Age of patient (61 y or younger vs 62 y or older) | 1.26 | 0.62, 2.55 |
| Duration of current physical therapy episode of care (4 wk or less vs more than 4 wk) | 1.11 | 0.55, 2.23 |
| Engagers vs nonengagers | 1.78 | 0.85, 3.71 |
| Physical therapist should advise on abstaining from smoking | | |
| Sex (male vs female) | 1.47 | 0.70, 3.09 |
| Age of patient (61 y or younger vs 62 y or older) | 0.59 | 0.29, 1.21 |
| Duration of current physical therapy episode of care (4 wk or less vs more than 4 wk) | 0.75 | 0.37, 1.52 |
| Engagers vs nonengagers | 4.32 | 0.76, 24.47 |
| Physical therapist should advise on benefits of abstaining from smoking | | |
| Sex (male vs female) | 1.31 | 0.62, 2.77 |
| Age of patient (61 y or younger vs 62 y or older) | 0.62 | 0.30, 1.27 |
| Duration of current physical therapy episode of care (4 wk or less vs more than 4 wk) | 0.97 | 0.47, 1.97 |
| Engagers vs nonengagers | 1.61 | 0.37, 7.05 |
| Physical therapist should suggest ways to abstain from smoking | | |
| Sex (male vs female) | 1.21 | 0.58, 2.52 |
| Age of patient (61 y or younger vs 62 y or older) | 0.83 | 0.41, 1.68 |
| Duration of current physical therapy episode of care (4 wk or less vs more than 4 wk) | 0.89 | 0.44, 1.80 |
| Engagers vs nonengagers | 1.62 | 0.36, 7.34 |
| Physical therapist should serve as role model for not smoking | | |
| Sex (male vs female) | 1.20 | 0.55, 2.64 |
| Age of patient (61 y or younger vs 62 y or older) | 0.55 | 0.26, 1.16 |
| Duration of current physical therapy episode of care (4 wk or less vs more than 4 wk) | 1.35 | 0.64, 2.86 |
| Engagers vs nonengagers | 7.76*c* | 1.36, 44.25 |
| Physical therapist should advise on maintaining a healthy weight | | |
| Sex (male vs female) | 1.00 | 0.44, 2.28 |
| Age of patient (61 y or younger vs 62 y or older) | 1.58 | 0.71, 3.52 |
| Duration of current physical therapy episode of care (4 wk or less vs more than 4 wk) | 0.50 | 0.23, 1.11 |
| Engagers vs nonengagers | 2.41 | 1.02, 5.70 |
| Physical therapist should advise on benefits of maintaining a healthy weight | | |
| Sex (male vs female) | 1.18 | 0.49, 2.84 |
| Age of patient (61 y or younger vs 62 y or older) | 1.17 | 0.51, 2.68 |
| Duration of current physical therapy episode of care (4 wk or less vs more than 4 wk) | 0.49 | 0.21, 1.13 |
| Engagers vs nonengagers | 2.40 | 0.97, 5.91 |
| Physical therapist should suggest ways to maintain a healthy weight | | |
| Sex (male vs female) | 1.35 | 0.61, 2.99 |
| Age of patient (61 y or younger vs 62 y or older) | 1.90 | 0.88, 4.07 |
| Duration of current physical therapy episode of care (4 wk or less vs more than 4 wk) | 0.74 | 0.35, 1.55 |
| Engagers vs nonengagers | 1.83 | 0.84, 4.00 |
| Physical therapist should serve as role model for healthy weight | | |
| Sex (male vs female) | 1.23 | 0.54, 2.80 |
| Age of patient (61 y or younger vs 62 y or older) | 0.86 | 0.40, 1.87 |
| Duration of current physical therapy episode of care (4 wk or less vs more than 4 wk) | 1.30 | 0.60, 2.83 |
| Engagers vs nonngagers | 2.30 | 1.00, 5.29 |

a

Odds ratio (OR), Fisher exact test.

b

99% CI=99% confidence interval for the OR based on the coefficient's value.

c

*P*<.01.

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Discussion

The purpose of this study was to determine patients' opinions regarding physical therapists speaking to them about and being role models for healthy behaviors. The majority of participants in this study believed it is appropriate for physical therapists to speak with them about and be role models for physical activity, abstaining from smoking, and maintaining a healthy weight. The professional identity of physical therapists as facilitators of movement, as articulated within the APTA vision statement “Transforming society by optimizing movement to improve the human experience,”33 may support the opinions of patients that discussions about physical activity fall within the scope of practice of physical therapists. The finding that the majority of participants also believed it is appropriate for physical therapists to discuss healthy weight management with them is important information for physical therapists. The need to have these discussions with patients is growing, given the rise in obesity rates across the nation and the association with chronic disability.34 More than half of the participants in this study were classified as overweight or obese, yet only a small percentage of these participants (10.9%) reported that their physical therapist spoke with them about their weight. It may be reassuring for physical therapists to know that the majority of patients believe that discussions about healthy weight are appropriate discussions for physical therapists to have with them. However, although most participants who were overweight felt it was appropriate for physical therapists to discuss weight, a sizeable minority (32.3%) did not agree that it was appropriate for physical therapists to have these discussions. To this end, physical therapists may benefit from training in counseling techniques such as motivational interviewing35 to learn when and how to initiate these challenging discussions.

The findings in this study regarding patients' opinions about physical therapists discussing smoking are surprising, as the harmful effects of smoking are well known. Follow-up studies with larger sample sizes may be warranted to further examine the views of patients with respect to the role of physical therapists in this area. Bodner and Dean28 have strongly advocated for the need for more physical therapists to discuss this behavior with their patients, and Pignataro et al36 have called for more tobacco cessation counseling training in entry-level physical therapist education programs. Only 3 of the 18 smokers in this study reported that the physical therapist spoke with them about their smoking behavior. However, 6 of those 18 agreed that it would be appropriate for physical therapists to advise them to abstain from smoking, and 8 agreed that it would be appropriate for the physical therapist to discuss the benefits of abstaining from smoking and suggest ways to stop smoking. Similar to the healthy weight discussions, it is important for physical therapists to be aware that, as some smokers may not agree that it is appropriate for physical therapists to have these discussions with them, they should proceed in a manner that both respects the patient's autonomy and supports behavior change.

Adequate fruit and vegetable consumption has been found to be associated with better health.37 However, the majority of participants in this small sample were either neutral or disagreed that physical therapists should discuss fruit and vegetable consumption with them. Although it is apparent that the profession's expertise does not lie in the area of nutritional counseling, the need for physical therapists to discuss nutrition with their patients is being promoted within the profession.15,16,38 In 2015, APTA issued a position statement on the role of physical therapists in addressing diet and nutrition with their patients.39 Physical therapists are not the only health professionals who are advocating for an expanded role in health promotion by engaging in nutritional assessment and counseling. The dental profession is encouraging more dentists to discuss health behaviors such as nutrition and diet with their patients, given the relationship between general health and oral health.40

The majority of participants in this study agreed that physical therapists should serve as role models for engaging in regular physical activity, abstaining from smoking, and maintaining a healthy weight. As might be expected, nonsmokers felt more strongly than smokers that physical therapists should not smoke. Researchers have found that patients report a higher level of motivation to change their behavior if their health practitioner engages in that particular health behavior.24–26 Frank et al24 found that when physicians revealed information to their patients about their own personal healthy dietary and exercise practices, their patients reported a higher level of motivation to engage in the healthy behavior after the counseling session. As physical therapists increasingly engage in health promotion practice, an awareness of the importance of role-modeling the healthy behaviors they espouse is imperative. It is reassuring that recent research has shown that many physical therapists do engage in healthy behaviors and do believe that it is a professional responsibility to role-model healthy behaviors.32 The majority of participants did not agree on the need for physical therapists to role-model fruit and vegetable consumption. Given that participants also were less likely to agree that physical therapists should be discussing this behavior with them, it is not a surprising finding. It is possible that patients either do not consider fruit and vegetable consumption an important health behavior or that they consider this behavior outside the scope of physical therapist practice.

This is the first study, to our knowledge, that asked physical therapy patients their opinions about the role of physical therapists in health promotion and whether they believe physical therapists should be role models for healthy behaviors. The anonymity of the surveys and pilot testing of the survey were strengths of the study. Limitations of the study include the potential for response bias and limited generalizability. The patient population in this study may not be representative of the outpatient physical therapy population nationally. Several of the variables in Table 2 had odds ratios that were significant at *P*<.05 but were not significant at *P*<.01; the more stringent *P* value was used due to multiple testing. The small sample size may have precluded the ability to find statistically significant associations due to type 2 error. This limitation could be addressed in future studies with larger sample sizes.

The findings of this study are similar to the findings of other health professional groups in that patients expected or wanted more health behavior counseling than they received, especially in the areas of exercise, weight management, and smoking behaviors.20,22 The opinions of the participants in this study align with calls within our profession for the urgent need for physical therapists to engage in more health promotion practice.41 The majority of participants believed it is appropriate for physical therapists to discuss physical activity, weight management, and abstaining from smoking with them. As the profession moves forward as a key player in the health promotion arena by actively supporting the goals of Healthy People 2020,4physical therapists can be confident that most patients feel that discussions about these behaviors are appropriate. However, as with all physical therapy interventions, the individual patient's perspective and values must be taken into consideration when these discussions are initiated.

Studies that investigate potential counseling techniques that physical therapists could use when initiating and engaging in these health behavior discussions are needed. Interventions such as motivational interviewing35 that are grounded in theories such as the Transtheoretical Model31 and Social Cognitive Theory23 may be beneficial. Investigating the opinions of patients with chronic disease and disability and in other practice settings would further extend the findings of this work.

In conclusion, physical therapists have the opportunity to contribute to the goals of Healthy People 20204 by encouraging their patients to engage in health promoting behaviors. The APTA supports this expansion of physical therapists' scope of practice and is encouraging physical therapists to incorporate health promotion interventions into their clinical practices.6–8 The results of this study suggest that the majority of patients believe it is appropriate for physical therapists to incorporate health promotion into their clinical practice through discussions of patients' personal health behaviors in the areas of physical activity, healthy weight management, and abstaining from smoking.

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