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Facilitators and Barriers to Health Promotion Perceived by Minnesota Physical Therapists Working in Outpatient Settings

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Doctor of Physical Therapy Program

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Abstract

BACKGROUND AND PURPOSE: One of the priority goals of the American Physical Therapy Association (APTA) is for physical therapists to be "recognized and promoted as providers of health promotion, wellness, and risk reduction programs to enhance the quality of life for persons across the lifespan." Limited research has been done on the factors that facilitate or hinder the practice of health promotion in physical therapy. The purpose of this study was to examine the barriers and facilitators that physical therapists face while incorporating health promotion into their clinical practice, specifically focusing on physical activity, healthy weight/BMI, and smoking cessation. **METHODS:** A phenomenologic qualitative approach was chosen for this study. Purposeful sampling was utilized to recruit eight physical therapists working in orthopedic outpatient physical therapy clinics in the metropolitan region of Minneapolis, MN. Semi-structured interviews were conducted with each participant to explore the physical therapists' perceptions of their role in health promotion, the facilitators and barriers of performing health promotion, and their views on future opportunities for physical therapy in health promotion. Audiotapes were transcribed and data were initially analyzed and coded independently by each investigator. Recurrent codes were identified and categorized into themes and subthemes. **RESULTS:** Three themes were identified as either a facilitator or a barrier to health promotion dependent on the context: the relationship between the physical therapist and patient, physical therapist attributes, and patient attributes. In addition, the theme of patient education was identified as a facilitator and the practice environment theme as a barrier. The themes identified as opportunities for health

promotion in physical therapy included: a clinical environment fostering a culture of health promotion, community health promotion, and continuing education opportunities. **CONCLUSION:** Creating a trusting relationship, therapist self-efficacy and experience in promoting healthy behaviors, and patients' readiness for change all positively affect therapists' success when incorporating health promotion into their clinical practice. However, factors such as the need to address the primary diagnosis of the patient and a limited interdisciplinary approach inhibit health promotion in the physical therapy setting. It is the interrelatedness of the facilitators and barriers that determine the success of promoting healthy behaviors with patients.

The undersigned certify that they have read, and recommended approval of the research project entitled…

FACILITATORS AND BARRIERS TO HEALTH PROMOTION PERCEIVED BY MINNESOTA PHYSICAL THERAPISTS WORKING IN OUTPATIENT SETTINGS

submitted by
Ashley Fisher
Marit Otterson
Sarah Pitzen

in partial fulfillment of the requirements for the Doctor of Physical Therapy Program

Primary Advisor _____ Date 4/28/14

Co-Advisor Debra Seelheim, PT, PhD Date 4/28/14

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INTRODUCTION

Healthy People 2020[1] is a science-based 10-year nationwide movement by the US Department of Health and Human Services to improve the health of all Americans. Healthy People 2020 strives to identify health improvement priorities, increase public awareness and understanding of the determinants of health, disease, disability, and the opportunity for progress. It also identifies critical research, evaluation, and data collection needs related to these priorities. The objectives of Healthy People 2020 include a range of health and wellness topics such as physical activity, smoking cessation and healthy weight.[1] Physical therapists can play an important role in achieving these objectives by promoting overall health with their patients.

One of the priority goals of the American Physical Therapy Association (APTA) is for physical therapists to be recognized and promoted as "providers of health promotion, wellness, and risk reduction programs to enhance the quality of life for persons across the lifespan."[2] In 2008, Minnesota physical therapists enacted legislation to achieve a change in physical therapist licensure status resulting in unrestricted direct access for wellness, prevention, exercise, or education. The APTA *Guide to Physical Therapist Practice*[3] describes health promotion as "promoting health, wellness, and fitness initiatives including education and service provisions that stimulate the public to engage in healthy behaviors." Further, the APTA Board of Directors defines health as "a state of being associated with freedom from disease, injury, and illness that also includes a wellness component that is associated with a quality of life and positive wellbeing."[2] Therefore, health promotion, as a part of physical therapy practice, could be

described as any patient interaction that encourages being free of disease, injury, and illness to improve quality of life and wellbeing.

The Patient Protection and Affordable Care Act (PL 111-148) and the Health Care and Education Reconciliation Act of 2010 (PL 111-152) also provide health care quality recommendations that apply to the physical therapy profession. As described by Jette et al[4] the Institute of Medicine (IOM) published a report pertaining to the U.S. health care system benefits, expansion, and complexity. The Institute identified domains and criteria necessary for a redesign of the health care system.[4] Many organizations, including the APTA, have been changing their delivery of services to better meet the IOM's criteria. One expectation of the APTA is that physical therapists should promote health and wellness through the ability to identify and address risk factors for disease and disability.[2]

There is limited and conflicting evidence as to the role and frequency of health promotion interventions in physical therapy practice. Verhagen and Engbers[5] argue that physical therapists are in an ideal position to promote health and wellbeing due to their educational background and experience. Despite evidence that physical therapists can promote healthy behaviors, this role often remains unrecognized by the public, other health care providers, and even some physical therapists. In contrast, other literature reports that physical therapists believe they are addressing health promotion topics with patients, although in varying degrees and in lower than desirable percentages.[6]

According to the World Health Organization's[7] International Classification of Function, a health-focused strategy of health care should be used in physical therapy

practice for the 21st century. A health-focused strategy suggests using non-invasive interventions, health education, and exercise to raise awareness and knowledge about health behavior changes, risk factors, and health care priorities. Physical therapy needs to be included in this strategy in order to decrease cost, decrease risk, and increase long-term effectiveness. Dean et al[8] stated "It has been shown that lifestyle modification is the single most powerful strategy a clinician can use to maximize health."[8(p355)]

Lifestyle modification instruction by health professionals, however, can be facilitated or hindered by numerous factors. Geense et al[9] conducted a qualitative study consisting of interviews with 16 general practitioners (GPs) and 9 nurse practitioners (NPs). Each participant stated they discussed lifestyle with their patients, counseled them on lifestyle modifications, or referred them to different disciplines. Study results found barriers to health promotion included a lack of patient motivation, reimbursement, proven intervention effectiveness, and health promotion programs in the community. Facilitators of health promotion included: nurse availability, collaboration with other disciplines, and availability of health promotion interventions in their own practice.[9]

While it is clear that health promotion can be valuable in physical therapy practice, it is unclear if physical therapists are regularly promoting healthy behaviors with their patients and if so how they are completing these tasks. Limited research has been done on the factors that facilitate or hinder health promotion in physical therapy practice. The purpose of this study was to examine the barriers and facilitators that physical therapists face while incorporating health promotion into their clinical practice. Due to the limited amount of evidence in the field of physical therapy, the

facilitators and barriers of other healthcare professionals were also explored in the literature review. This study focused on the health behaviors of physical activity, healthy weight/BMI, and smoking cessation.

REVIEW OF RELEVANT LITERATURE

Physical Activity

Background

Physical activity is an essential aspect to living a full healthy life. The World Health Organization[7] defines physical activity as "any bodily movement produced by skeletal muscles that requires energy expenditure."[7] Regular physical activity can improve the health and quality of life of individuals of all ages. In adults, physical activity can lower the risk of early death, coronary heart disease, stroke, hypertension, type II diabetes, various forms of cancer, depression, and falls.[1] The current recommendations for adults aged 16-84 is to engage in at least 150 minutes of moderate, or 75 minutes of vigorous intensity aerobic exercise per week, and muscle strengthening activities two or more days per week.[7] Yet, more than 80% of the adult population in the United States does not meet the guidelines for aerobic and muscle strengthening related activities.[7] Physical inactivity is estimated to be the primary cause for approximately 21-25% of breast and colon cancers, 27% of diabetes, and 30% of ischemic heart disease.[2] It is crucial for physical therapy to be a part of the interprofessional approach to increasing the levels of physical activity for all individuals.[1]

The American Physical Therapy Association's (APTA) official vision statement for the future of physical therapy is to transform society by optimizing movement to improve the human experience.[2] When individuals incorporate regular physical activity into their daily life, their overall quality of life should be improved. Physical therapists are ideal practitioners to promote the health and well-being of individuals and the general public through physical activity and exercise prescription because of their education and

experience.[5] In order to do this health promotion effectively, physical therapists must understand the facilitators and barriers that they will face while promoting physical activity to their patients.

Barriers and Facilitators

Physical therapy practice generally focuses on restoration and maintenance of optimal function and quality of life in individuals with loss and disorders of movement. This focus on secondary and tertiary prevention may be driven to a large extent by payment structures. Many health insurers do not typically pay for primary prevention or exercise prescription. This reality is a problem for physical therapists because it narrows the scope to promote physical activity for general health reasons.[5] It is difficult for physical therapists to promote physical activity to their patients when they cannot bill the insurance companies for their services. Another barrier that prevents physical activity promotion is the time restriction imposed by many health care payers for physical therapists to treat a medical problem. Most health care insurances cover a limited number of treatments for specific disorders, and this restriction gives physical therapists less freedom to promote physical activity.[5] If time spent promoting physical activity is uncompensated, the organization employing the physical therapists can face financial risk.

Shirley et al[6] provided an in depth look at physical activity promotion in the physical therapy setting. A random sample of 321 Australian physical therapists responded to a survey on their knowledge, confidence, role perception, barriers, feasibility, and counseling practices in regard to promoting a physically active lifestyle to their patients. Physical therapist students also completed the survey but without the questions on barriers or counseling practices. Shirley and colleagues found that physical therapists consider it a part

of their role to provide the patients non-treatment physical activity advice. Ninety-six percent of respondents said that they felt confident giving general advice to patients on physical activity, with 87% reporting they would feel confident suggesting specific physical activity programs for their patients. Ninety-four percent of the respondents also believed that discussing the benefits of a physically active lifestyle with patients is part of the physical therapist's role. Even though a majority of physical therapists in this study felt that they had the confidence and that it is part of their professional role to promote physical activity with their patients, there were barriers that prevented them from taking action on the issue. The most common barrier, reported by 34% of the physical therapists was lack of time. Other reported barriers included: feeling that health promotion would not change the patient's behavior (20%), remuneration for promoting physical activity (9%), lack of counseling skills (8%), feeling it would not be beneficial for the patient (2%), and lack of interest in promoting physical activity (1%). This study clearly demonstrates the discrepancy between what physical therapists are confident in, what they feel their role is in regard to promoting physical activity, and what is actually being done to promote physical activity in their patients. These barriers could also be reasons that are preventing physical therapists from promoting physical activity to their patients in the United States.

A study conducted by McKenna and colleagues[10] involving general practitioners and nurse practitioners provided insight into the barriers of physical activity promotion. A questionnaire was distributed to 846 subjects that examined types of health promotion barriers and the level of their influence, as well as stage of change for activity promotion and personal behavior of the healthcare providers. The survey return rate was approximately 70%. Results included 69% of general practitioners and nurse practitioners reporting that

they regularly promoted physical activity with their patients. Two significant barriers were found with general practitioners in the promotion of regular physical activity: lack of time and lack of incentives. Lack of incentives may be connected to not getting any recognition for activity promotion efforts, as well as financial incentives. McKenna et al[10] also discovered that both general practitioners and nurse practitioners were more likely to promote physical activity if they themselves were regular exercisers. Nurse practitioners were found to have more consultation time with their patients, which created a significantly higher likelihood of promoting regular physical activity as compared to general practitioners. Overall, this study found that general practitioners in the action or maintenance stage of changing their own physical activity level were three times more likely to regularly promote the same behavior change with their patients. The correlation between the practitioner reporting being physically active and promoting physical activity to their patients was significant and is informative to other professions helping to promote physical activity with patients. The same results were found for the nurse practitioners, but the likelihood of the nurse practitioners promoting physical activity quadrupled as compared to the general practitioners.[10]

Both Shirley et al[6] and McKenna et al[10] found that the most apparent and significant barrier to promoting physical activity was the lack of time with patients. The lack of time healthcare providers have with patients could be due to health insurance restrictions, lack of adequate staffing in clinics, and lack of funding for health care in general. These factors were not explored in these studies.

Rea et al[11] examined the role of health promotion in physical therapy in California, New York, and Tennessee. They specifically focused on four areas of Healthy People 2010:

physical activity and fitness, disability and secondary conditions by assessing psychological well-being, nutrition and overweight, and tobacco use. The researchers related the practices of physical therapists in these three states to their self-efficacy and outcome expectation within the health promotion areas. The first part of the study involved qualitative phone interviews with 23 randomly selected physical therapists. The purpose of this interview was to create a quantitative survey by gaining insight into physical therapists' practice, self-efficacy, and outcome expectations for the four health promotion areas. Results from the study showed that physical activity was the promotion behavior that was most often practiced by the 417 physical therapist respondents (54%). This study also found that a physical therapist's confidence level or self-efficacy in being able to perform a behavior was the best predictor of promotion. Adequate training and knowledge of healthy behaviors clearly facilitated the physical therapists promotion of physical activity.[2]

Johnson[12] conducted an in depth look at physical therapists' and physical therapist students' knowledge, beliefs, and practices surrounding health promotion, as well as determining the main facilitators and barriers present in health promotion. A survey was distributed to 216 APTA physical therapists and physical therapist student members. The study examined the barriers and facilitators to incorporating health promotion into clinical practice, the extent to which physical therapists and physical therapist students addressed health promotion, fitness and wellness in clinical practice, and the relationships between personal beliefs and the extent to which participants incorporated health promotion into their clinical practice. Survey respondents unanimously agreed that it is a physical therapist's responsibility to address physical activity with their patients. Although all therapists agreed that it is their responsibility to promote physical activity, there was not strong evidence that

respondents were engaged in this aspect of care. Although many of the respondents indicated that a high percentage of their patients were either overweight or hypertensive, they did not consistently include health promotion, fitness, and wellness components in their home exercise programs or discharge plans for their patients. The top five barriers to incorporating health promotion, fitness and wellness found in this study were time commitment, not feeling sure of where to start, lack of reimbursement, liability issues, and lack of community contacts. The top five facilitators to incorporating health promotion, fitness and wellness were community and client interest, personal commitment, educational background, a supportive employment setting, and APTA resources. Johnson[12] also found that a significant number of participants had inadequate knowledge of health and wellness and 40% of physical therapists and physical therapist students were not familiar with Healthy People 2010. Respondents indicated the need for ongoing continuing education or refresher courses in the area of health promotion. This study supports previous findings[13] of discrepancies between what physical therapists believe about health promotion and their actual clinical practice as well as findings related to the facilitators and barriers to incorporating health promotion into clinical practice.

Maintaining Healthy Weight/BMI

Background

Obesity has become a global epidemic, affecting an estimated 300 million people.[14] Obesity is illustrated by excess adipose tissue and contributes to several chronic diseases and early mortality. The unfavorable health consequences associated with obesity include cardiovascular disease; stroke; type 2 diabetes mellitus; hypertension;

dyslipidemia; cancers of the breast, endometrium, prostate, and colon; gallbladder disease; osteoarthritis; respiratory problems; and depression. In addition, aerobic capacity and the ability to participate in physical activity are hampered. These adverse effects occur along a continuum of increasing adipose tissue.[14]

The most common method for diagnosing an individual as overweight or obese is body mass index (BMI). [14] An individual's BMI value is determined by dividing body weight (in kilograms) by the square of height (in meters). Being overweight is defined by a BMI of ≥25.0 kg/m2, and obesity is defined by a BMI of ≥30.0 kg/m2. BMI is simple to calculate and the values used to compute BMI can be from measurements or self-report.

The prevalence of obesity in the United States has dramatically increased during the past two decades. Based on the National Health and Nutrition Examination Surveys (NHANES) 2009-2010[15], 68.8% of the adult population is considered overweight, compared to 46% from NHANES II (1976-1980). This increase can be contributed to the rise of obesity from 15% during NHANES II to 35.7% during NHANES 2009-2010. Each year, obesity is responsible for approximately 325,000 deaths in the United States among nonsmokers.[14]

The increasing obesity trend in the United States conflicts with the Healthy People 2020 objectives of reducing the amount of those classified as overweight and obese. The objectives sought to achieve by 2020 include: increasing the proportion of adults who are at a healthy weight to 33.9%, reducing the proportion of adults who are

obese to 30.5%, and reducing the proportion of children and adolescents who are considered obese.[1]

Physical therapists are professionals who promote health, wellness, and fitness while managing conditions that affect movement and function.[16] Physical therapists are in an ideal position to remind patients of the importance of maintaining a healthy weight/BMI and the effects it has on their health.[14] Those who exhibit a healthy weight are less likely to develop disease risk factors and chronic diseases. Individuals at a healthy weight are also less likely to experience pregnancy complications or die at an early age.[1]

Barriers and Facilitators

As described previously, Rea et al[11] explored the role of health promotion in physical therapy related to physical activity and fitness, disability and secondary conditions, nutrition and overweight, and tobacco use. Results from the study revealed physical therapists assisted patients with nutrition and overweight issues 19% of the time. This behavior ranked third out of the four behaviors addressed by physical therapists. The study also reported that self-efficacy strongly predicted beliefs about the health promotion behaviors of physical therapists in each of the four behaviors. This finding implies the more confidence a physical therapist has regarding health promotion, the more likely he or she is to address it with a patient. Therefore, low self-efficacy could be a barrier to health promotion.

Sack and colleagues[16] conducted a study of physical therapists' attitudes, knowledge, and practice approaches regarding obesity via a survey sent to randomly

selected APTA members. The majority of respondents (87.2%) provided care to obese patients with a mean of 27.7% of their total patients being obese. These physical therapists indicated that they recommended weight loss to 52.3% of their patients who were obese. Physical therapists stated physical inactivity and overeating are the two leading causes of obesity and diet adjustments and exercise are the most effective treatments. Physical therapists who treated obese patients often recommended exercise (87.4%) yet never described meal plans, 81% never referred clients to diet books, and 75.1% never referred clients to a physician specializing in obesity surgery. Over 61% of therapists strongly agreed with feeling obligated to educate patients who are obese on the health risks of obesity. Yet, only 20.4% felt competent in providing weight loss interventions to patients who are obese. Older physical therapists had less knowledge about obesity than younger therapists who had been practicing for a shorter period of time. This difference reflects a change in physical therapy education with more emphasis on wellness and prevention. Still, over half of physical therapists incorrectly defined the BMI cutoff for obesity and 46% did not know the BMI requirement for gastric bypass. Physical therapists need the proper knowledge in order to identify obesity and interpret obesity measures, such as BMI and waist circumference. Therefore, lack of knowledge on obesity can serve as a barrier to the health promotion of a healthy weight/BMI. If physical therapists are not accurately identifying obesity, they will not address the health risks that go along with it.

Other health care providers also promote healthy weight/BMI to their patients and face similar health promotion barriers. A qualitative study conducted by Alexander et

al[17] examined physicians' beliefs, outcome expectations, and strategies for addressing weight. Physicians described time, limited resources, low outcome expectations, and deficient training as the main barriers to addressing obesity. In addition, physicians did not believe their patients would attempt or succeed at weight loss as a result of their recommendations.

Steele and colleagues[18] analyzed the perceived barriers school nurses face while discussing weight-related health issues with children and families. Twenty-two school nurses from urban and rural areas participated in seven focus groups. The nurses reported a lack of knowledge, resources, institutional support, and time as barriers to weight-related communication. Additional barriers to addressing weight-related health included personal weight, family characteristics, child motivation, fear of reactions, negative past experiences, societal norms, and difficulty building relationships with children that would allow for productive conversations about weight.

SMOKING CESSATION

Background

Smoking cessation is another health behavior that has an influential relationship with health promotion. According to Healthy People 2020[1] the number of Americans who die from tobacco related illnesses each year is approximately 443,000. The annual costs to Americans in direct medical expenses and lost productivity reaches approximately $193 billion. Healthy People 2020 provides a framework to help reduce tobacco use. The current framework in health care is to enable changes in order to

encourage and assist tobacco users to quit. According to the Centers for Disease Control[19] 70% of smokers want to quit. Between 2000-2011 cigarette consumption decreased by 32.8%, however, even with the decreasing numbers of tobacco users, tobacco use is still the leading cause of preventable death in the United States.

A systematic review done by Bodner and Dean[20] found that increased personal involvement and advice from smoking cessation advisors increased the chance of smoking cessation attempts by smokers. They also found that physical therapists have an advantage in promoting behavioral change compared to other health care professionals. Physical therapists are often able to build a relationship, build trust, and develop an understanding of each patient's unique learning style. This advantage is due to the nature of physical therapy visits that are often longer and more frequent over an extended period of time as compared to other providers. Thus the relationship of patient and physical therapist allows ongoing patient support throughout cessation efforts.

A study done by Pignataro et al[21] helps illustrate the importance of physical therapists screening for smoking cessation and incorporating strategies for smoking cessation. It has been shown when comparing years of healthy life between patients who smoke to those who do not, smokers have approximately 44% fewer years of healthy life. Tobacco use has also been shown to have a negative physiological effect on the body and on many body systems. Many of these body systems are within a physical therapist's scope of practice and are included in a physical therapy examination. The physical therapist is one important member of a large health care team and can play a role in

promoting function of patients in relation to quality of life. They share a responsibility to provide quality care to each patient.

A study done by Eckstrom et al[22] surveyed Minnesota physical therapists' knowledge, beliefs, and practices related to health behaviors and fitness testing. This study found that 86% of respondents believed abstaining from tobacco use should be addressed with patients. When therapists were questioned on whether they addressed the health behavior of abstaining from tobacco 74% reported they addressed it. There are many interventions physical therapists can use to address tobacco abstinence use with patients. Eckstrom et al[22] found that physical therapists use education the most to promote abstaining from tobacco with their patients. Other interventions consisted of listening to and discussing smoking with patients, referring to a physician or other healthcare professional, referring to an appropriate website, developing and setting goals, and referring to a non-health care professional. The results of the study done by Rea et al[11] revealed that smoking cessation was addressed the least by physical therapists when compared to other areas of health promotion. Physical therapists surveyed reported discussing smoking cessation with their patients 17% of the time.

Barriers and Facilitators

The perceived facilitators and barriers to discussing smoking cessation with patients may be similar among healthcare professionals. Vogt et al[23] investigated beliefs of general practice physicians related to the discussion of smoking cessation with their patients. The researchers conducted two studies in order to determine the qualitative and quantitative beliefs of general practitioners. The qualitative study found that general

practitioners believed behavioral support for smoking cessation should be provided by other healthcare professionals. They indicated other professionals have more expertise and experience to support patients with smoking cessation. The quantitative study was designed to estimate the prevalence of beliefs found in the qualitative aspect of the study and to determine the strength of the relationship between beliefs and intentions. This aspect of the study found that the intentions of general practitioners to discuss cessation services with smokers were based on two predictors, the practitioner's beliefs about the services effectiveness and the services cost effectiveness. When general practitioners perceived smoking cessation programs as ineffective they were less likely to recommend them. This study demonstrates the role of bias in health care professionals. Vogt et al[24] also conducted a systematic review that looked at general practice and family physicians. The objective of the review was to estimate the percentage of general practitioners and family physicians that had a negative attitude about discussing smoking cessation with patients. Out of 19 studies that were reviewed, eight negative beliefs and attitudes were identified. The most common belief was that discussions were too time consuming and ineffective. Other negative beliefs and attitudes identified included the general practitioners lack of confidence in their ability and knowledge to discuss cessation with patients and their beliefs that the discussions were unpleasant, inappropriate, and intruded on patient privacy. Very few practitioners believed discussing smoking cessation was outside their duty.

Physical therapists also perceive barriers to discussing or counseling patients about smoking cessation. According to Bodner et al[25] one possible barrier is the lack of

skills and training of the therapist. Over 70% of Canadian physical therapists in this study reported they did not feel prepared and had low self-efficacy when counseling patients about smoking cessation. Other identified barriers were lack of time and resources. Physical therapists are responsible for the treatment of each patient's primary condition. The time the therapist spends with a patient is often spent on that primary condition, which may result in health promotion discussion being a second priority.

The purpose of this study was to examine the barriers and facilitators that Minnesota outpatient physical therapists face while incorporating health promotion into their clinical practice. This study focused on the health behaviors of physical activity, healthy weight/BMI, and smoking cessation.

METHODS

Research Design

For this descriptive study, qualitative methods were utilized to examine the barriers and facilitators that physical therapists face while incorporating health promotion into their clinical practice. Qualitative methods were selected as they allow researchers to learn how people interpret their experiences and the meaning they attribute to those experiences.[26] Data are collected through words, images, and observations to deliver holistic descriptions of complex human behaviors, processes, relationships, environments, and systems.[27,28]

A phenomenologic qualitative approach was chosen for this study. The intent of phenomenology is to understand the meaning of one's "lived experience" and to depict the essence or structure of the experience.[26,28] This process involves studying a small sample through meaningful interaction to create detailed descriptions of the phenomena being studied.[27] The researchers must bracket, or block out, their own experiences and beliefs in order to understand those of the participants.[26,27]

For this study, semi-structured interviews were utilized. Interviews are discussions guided by the investigators to learn more about the feelings, beliefs, and experiences of the participant.[28] Semi-structured interviews are a mix between structured and unstructured formats.[26] In this type of interview, the questions can be flexibly worded and their order may vary as the process unfolds.

Participants

Purposeful sampling was conducted to recruit physical therapists working in orthopedic outpatient physical therapy clinics in the metropolitan region of Minneapolis, MN. Qualitative research uses purposeful sampling to select participants that will accomplish a particular purpose and to provide rich information about the research question at hand.[26,28,29] Orthopedic outpatient clinics were chosen for recruitment to be consistent with previous research completed by one of the study's investigators (MSI).[30]

Procedures

The Institutional Review Board of St. Catherine University approved this study as exempt from review. A copy of the letter of approval appears in Appendix A. To recruit participants, flyers were sent via electronic mail to clinic supervisors who then shared the study recruitment information with their staff. Ten physical therapists contacted the researchers and expressed willingness to participate in the interview process. Only the first eight volunteers to contact the researchers were included in this study due to time constraints.

Prior to beginning data collection, the student researchers were trained in basic interview techniques by the faculty advisors. A pilot interview with a volunteer physical therapy faculty member with an orthopedic clinical background was completed to provide the student researchers with an opportunity to practice their interview skills. The pilot interview also allowed the researchers to assess if the interview questions elicited relevant information and make question modifications as necessary.

The participants provided written informed consent on the day of the interview. Demographic information was also obtained at this time, prior to performing the interview. Collected demographic information included: age, gender, highest earned degree, entry-level physical therapy degree, year of becoming a licensed physical therapist, any specialized certifications, and employment status. Participants were also asked to estimate what percent of their patient population is overweight, smoke, or do not meet the physical activity recommendations of at least 150 minutes per week of moderately or vigorously intense activity.

Semi-structured interviews were conducted with each participant to explore the physical therapists' perceptions of their role in health promotion, the facilitators and barriers of performing health promotion, and their views on health promotion in the future. A list of ten guiding questions was developed to ensure all relevant topics were consistently discussed, as recommended by Hanson.[28] Interviewers utilized follow-up probes to collect further information or clarifications when appropriate. A list of the interview questions and probes used in this study are located in Appendix B. The participants were asked to review the APTA's definition of health promotion before beginning the interviews.

Three physical therapist graduate students and two faculty research advisors conducted the interviews. The student researchers led the interview sessions, with the faculty advisors assisting with additional probing questions as needed. One 60-90 minute interview was conducted with each study participant. The interviews were conducted in a conference room of the participant's choosing, at either the participating clinic site or at

the Minneapolis campus of St. Catherine University. All interview sessions were audio recorded and transcribed verbatim to provide rich data for analysis. Field notes were also taken by the researchers during the interviews and were reviewed after each session.

Data Analysis

Qualitative data analysis is a process of engrossing oneself with the data and making sense of it.[26,28] The first step in data analysis involved all researchers independently open coding the eight interview transcripts. Open coding is the practice of reading transcripts and writing comments or codes next to data that is relevant to the research question. Codes are descriptive words that label critical thoughts that come forth in the data.[28] Involving all researchers in the coding process ensured the codes were derived from the data and not a result of one researcher's bias. The researchers then met together to compare their coding of the data. Recurrent codes were clustered together into categories or themes, which were named according to their features. Themes express main ideas and larger concepts from the grouping of several codes.[28] A final list of core themes and subthemes was confirmed and the relationships among them were analyzed.

Throughout this study attention was paid to issues of reliability and validity, which is referred to as trustworthiness in qualitative research. Trustworthiness components include: credibility, transferability, dependability, and confirmability.[26,28,29] Methods used to establish credibility included triangulation (using several participants and several researchers to yield multiple perspectives of the same event), gathering detailed evidence (collecting rich descriptions to form a good understanding of the topic), and using a skillful interview technique (using questions that produce descriptions,

following-up with probing questions, and asking questions in an systematic manner).[26,28,29] Methods to strengthen dependability included involving all of the researchers in open coding and data analysis, peer debriefing (researchers examining themes that appear during data collection and analysis), and member checks (asking research participants if the interview transcriptions were accurate).[26,28,29] All participants had an opportunity to review, confirm, and revise completed transcripts. One participant made minor edits to her interview transcript to ensure clarity. All other participants agreed the transcriptions were accurate and correctly captured their intended message. To establish transferability, a comprehensive description of the sample, methods, procedures, setting, and research results are provided to allow readers to determine if the results of this study are applicable to different clinical settings or clientele.[26,28,29]

RESULTS

Demographics

The study participants included seven females and one male with an age range of 28 to 71 years, generating an average age of 48.6 years. Participants entered the physical therapy profession between the years of 1973 to 2010, yielding professional experience between 3 to 40 years. The majority of participants (62.5%) were working full-time, with 37.5% working part-time. One-fourth of participants (25%) had earned a Doctor of Physical Therapy or transitional Doctor of Physical Therapy degree, with the remaining 75% obtaining a baccalaureate or Master of Physical Therapy degree. None of the participants reported any additional certification in health promotion or fitness testing. Table 1 summarizes the characteristics of the physical therapists that participated in the study. Table 2 describes the participants' estimations of their patient population's healthy behaviors.

Facilitators

Physical therapist participants were asked several questions that explored their experience with facilitators of health promotion in outpatient orthopedic physical therapy practice. This section describes the themes resulting from participant responses to what facilitates the utilization of health promotion screens and interventions in their practice.

Relationships between physical therapist and patient

One of the themes that emerged was the importance of the relationship between the patient and the physical therapist in facilitating health promotion during physical

therapy sessions. When patients had trust in their physical therapist, the physical therapists believed they were better able to promote healthy behaviors. Rapport building with patients was also found to facilitate health promotion practices. A majority of the respondents commented on the importance of building rapport and a trusting relationship from the initial meeting and getting to know the patients in order to successfully promote healthy behaviors. The following statements illustrate the sub-theme of trust and rapport:

> I think her trust with me and the rapport that I've built with her. She's had some negative experiences with health care providers in the past regarding her weight and she is the patient that will talk about, "You've never been overweight." But I think just getting to know me and us building that relationship that she's realized that she could do that [exercise/lose weight].

> I think every time they are there [in PT clinic] a conversation can happen that you can be influential with them about encouraging them to be active. That is probably our biggest advantage is that we get to know them and that we build a rapport with them, and then I think, there are more opportunities.

> So, yeah, I think their attitude has a lot to do about it…. their trust in me, how much they believe in me, or how much change they've seen from what I've taught them, and if they believe they can get better.

> I think the most important thing is building that rapport from day one. I think there's been a study on physical therapy success. It has more to do with your relationship with the person; less to do on, "Did my skills help them?" With everybody I try and make that positive impact the first day.

Therapists who explored their patient's beliefs, interests, and goals reported greater ability to promote healthy behaviors. This exploration helped physical therapists create positive relationships with their patients that led to successful promotion of healthy behaviors:

> …if they [patients] have something that they think is really important to them – if I make sure that I'm trying to make a connection with making that be better for them. I think that can be important as well. So I think that's a real key thing – getting that buy in factor.

> ...find out more about them, what they like to do, what kind of person they are, I think the better that I get to know them, the more I can kind of help them find things that they can do.
> So I'll kind of play that out a little bit – get a little feel for what their history has been, what kind of things they've done in the past, what they've enjoyed, and what they'd like to get back to doing, and then use that as a springboard to talk about it [physical activity].

Respondents also talked about the role of advocating for the patient and how this played in their success in promoting healthy behaviors:

> You gotta break down the barriers and you have to be a sales person….. You can show them the research, you can talk to them, but you just gotta be their facilitator. And that's what you tell them...I can't fix you but I can help you on the path.

> So I think we could be better advocates to our patients. I think they sometimes hear it just from the doctor or from the nurse, they don't realize, "Wow, everybody involved in my care really is saying the same thing."

> So I did a little in-service about that [smoking cessation] to my own staff, 'cause so many of our patients are smoking and don't realize [sic] the effect. So I think we could be better advocates to our patients.

Adequate time and multiple therapy visits with patients were also found to facilitate health promotion. The more time the physical therapists were able to spend with a patient, the more opportunities they had to bring up health promotion. Three of the eight participants mentioned time as a facilitator, noting that therapists were often able to spend more time with patients than physicians:

> However, I think one of the things that sets us apart and makes us arguably a better educator, or coach, or partner in that process, is the fact that we spend way more time with the patients than the physicians do.
>
> And I think we have the luxury as PTs to spend more time with our patients. I just feel for the doctor's – I think they're struggling to try get as much done in the limited amount of time they have.
>
> But I think just being able to see them [patients] multiple times, I just get a good picture of how much they're going to do, how much they're going to push themselves, how motivated they are, and how much they're going to change.

Patient and Physical Therapist Attributes

A second theme identified as facilitating health promotion was the attributes that make up the patient and the physical therapist. Both individuals have a myriad of factors that contribute to their characterizations. These factors are detailed below.

Patient Attributes. A majority of the physical therapists in the study commented on the "readiness" of the patients to change and the various intrinsic motivating factors for patients. It was clear to the participants that if the patient was not ready to change, facilitating healthy behaviors was very difficult. The importance of readiness to change is illustrated in the following quotes:

> She's in the right place at the right time and ready to hear and ready to do the stuff she's been told repeatedly over years and she was just finally ready to take action.

> And I think another important thing; they have to be ready for it [the healthy behavior]. If they're not ready for it then it's a headache and a waste of my time and their time.

Internal motivators included the patient's attitude, desire to change, goals, and response to changes/improvements. Mentioned by approximately half of the participants was how patients who are internally motivated facilitated the therapists ability to successfully promote healthy behaviors It appears that once patients start to feel better and see improvement there is a stronger "buy in" to overall physical therapy and the desire to make lifestyle modifications:

> But then I think also, just the fact that as he saw his knee getting better in tolerating his day-to-day activities that he developed a better confidence to say, "I can continue that process and move into more challenging kinds of things." – that it wasn't about just getting to being able to do stairs. "You know, I can do stairs really well. What else can I do?" So create a little bit of enthusiasm and a confidence – of him being able to kind of stretch his boundaries on what he had been doing in the past.

> People are making more time and they're just generally more active. And I know we've got the whole epidemic with obesity and all that kind of stuff, but for me with my patient population, almost all of them are doing something.... When they tell me what they're doing every week and they've got kids at home and teenagers running here and running there. It's like, "When do you find time to do this?" But they're getting up earlier...going later at night.

Respondents also described how patient resources impacted the health promotion they were advocating. Physical therapists found that the more resources available to their patients, both financial and social support, the more successful they were at promoting healthy behaviors:

> And even with the exercise programs, people that have somebody else at home…I think it makes a big difference when they actually have somebody come with them, from their family, and they can help push them to continue to do what they need to do.
>
> …and if people have the money and are willing to do that [personal trainer] I think it keeps them more fit and it keeps them motivated. I think it's about accountability you know. If they can have an exercise partner of any type, that makes a big difference.

> But on occasion, we've had somebody come back in [to the clinic] who said, "That's OK. I'll pay for it out of pocket," largely because they've been really happy with the care they've received and they're willing to do a – kind of a one and done. Limited liability payment kind of thing to come back in to get some more information.

Mentioned less frequently were the roles education level and increased public awareness played in facilitating healthy behaviors. It appeared that patients with higher education levels had a better understanding of healthy behaviors and were more accepting of the ideas [health promotion], and that advertisements, media, and community programs appear to be influencing patients' knowledge of healthy behaviors:

> I see a lot of academics and so I think educational level and socio- economic level makes a huge difference in how fit the people are that are coming in and their motivation toward things.

> I think public awareness in general is a lot better than it was twenty years ago. Just in terms of healthy lifestyles and the importance of exercise and long-term disease and that kind of stuff....that's why they come in. Because they want an exercise program. And want some guidance, what to do, how often...

Therapist Attributes. A majority of the study respondents mentioned at least one personal characteristic that they felt promoted their success with patient treatment and

facilitating patients to live a healthy lifestyle. The therapist characteristics included: communication style, personal experiences/interests, education/preparation, personal values, role modeling, and confidence/self-efficacy. Therapists who felt that they communicated with their patients with honesty and being forthright reported that they had better success with promoting healthy behaviors:

> I said, "I'll just be upfront with you." I said, "Two exercises a day is not going to cut it." I said, "You're not going to lose weight that way. You're not going to improve your strength and balance and you're not going to get your guide dog. So, you know, you've got to make a choice."

> But I try to be realistic with them I guess, you know, on how I really see their progress, where they're at, not feed them a story.

Some of the participants described how they utilized experiences from their own lifestyle to motivate and promote healthy behaviors:

> Largely it was educational just because I do a lot of cycling myself. We had a lot of talk about the fit of his bike relative to his knee mechanics specifically, but then also training issues about how he should structure length of rides, or pacing of rides, and things like that to kind of optimize his comfort in getting back to doing something more active.

> I am a living walking breathing person. I get up 30-40 minutes ahead of time so that I can go on a walk every morning outside. And so I use myself as an example. And I usually tell them the days that I work out I feel better than the days that I don't work out.

> I think in my clinic in particular, we have a fairly young staff, and a lot of my staff are former collegiate athletes or still involved in doing a lot of triathlons or marathons. So that comes up fairly routinely when we're talking with patients about, what are their interests? What do they like to do? What have they not been able to? What are we looking to get you back at?

Participants also recognized their level of preparation in health promotion was influenced by their entry-level degree. One of the participants returned to school get her transitional DPT degree and she described how this additional education improved her self-efficacy when addressing healthy behaviors with her patients. Other participants who had their entry-level DPT degree also reported that they felt well prepared to address healthy behaviors. The quotes below illustrate these findings:

> I got my transitional DPT a year and a half to almost two years ago and I really changed when I went through that program. There was a health wellness class that I took and talked a lot about it, and that is when I really started to change and kind of realized I need to talk to my patients more about this…[health promotion]

> I definitely think that what we learned in my undergrad and what we learned in grad school definitely promotes good physical fitness.

Another important factor was how the personal values and beliefs of the therapist impacted promoting healthy behaviors. It appeared that several of the participants went into the field of physical therapy because they believed in a healthy and active lifestyle and felt that the profession of physical therapy aligned well with these values:

> I mean, I think that's one of the reasons why I wanted to get into physical therapy- is just wanting to live a healthy life – lead a healthy lifestyle. And I think that's part of what brought me into physical therapy, so I think incorporating that into what I do with my patients has been pretty easy and goes along with what I believe.

Another important factor in the promotion of healthy behaviors was that of role modeling by the therapist. Many of the participants mentioned that they wanted to be a role model for their patients, family, and students. These participants wanted to practice what they preach:

> And saying, you know, "I have my own kids. I want them to see me moving and doing things so that I can be there for them." So giving them that kind of encouragement.

> I think that I practice what I preach so it's easy for me to encourage others and I know that when I am not physically active I don't have the energy level and my little aches and pains come back. So I think it's easy for me to recommend things to people when I actually do it.

> And so I use myself as an example. And I usually tell them the days that I work out [walking program] I feel better than the days that I don't work. And the reason is I have to move and I am using my body.

Patient Education

A third theme identified as a facilitator of healthy behaviors was patient education, particularly education focusing on referrals and external motivators. Components of this theme included interprofessional communication, consistency of patient education, and access to external community and professional resources.

Every participant in the study mentioned the importance of interprofessional communication and referral. This communication is clearly crucial to quality patient care. The following quotes illustrate this factor:

> We just have such a close relationship with the clinic upstairs, the family practice clinic, and then we have the orthopedic clinic upstairs. And we see so many patients from there, so we talk quite a bit with the doctors. And the patient knowing that we've talked to your doctor, and we're in good communication with

them makes a big difference for the patients, too, feeling comfortable with what we're doing – so, I think that that helps.

...with being part of a larger healthcare complex or campus, if they have some special needs issued, then through some of the [name of facility], I can make referrals or recommendations for work on smoking cessation, you know, lifestyle changes, those kinds of things.

…seeing some of the education pieces that she [nutritionist] would use help me know what she's going to do and I just felt really comfortable, like sending anyone to her that I felt like she would do a good job and…she's non- judgmental, she's not in your face…. I just knew she would make everyone feel at ease and comfortable coming to them, so that made me feel really fine sending anyone to her.

Another important factor in facilitating health promotion with patients was the reinforcement of other providers' messages. It was apparent from many participants that the more their patients heard the message the more likely they were to follow the healthy behaviors. This message for some patients was heard from many of their healthcare providers, and this consistency of message clearly facilitated health promotion in physical therapy:

> I'll look at the doctor's note and see what the doctor has said. If they've given them the "quick plan" thing, I'll give them a hand out on "quick plan."

> …every clinician involved who sees these patients needs to believe that this is important because the more often the patient hears it, the more that its finally going sink into them.

> Saying, you know, "This is what your doctor said." I think being consistent across all healthcare providers [facilitates change].

External community and professional resources were also described as facilitators of health promotion in physical therapy. Many of the participants relied on resources that are available to their patients in the community. Some therapists provided pamphlets, literature, or APTA resources to their patients:

> And if anybody is really interested and said, "Well how do I do this or how do this?" I can refer them to some information that I've read or websites, or books or things like that.

> ...having information available [for clients]...like some of the pamphlets and stuff that you can get, we have pamphlets in our lobby for example that are different. Like the golf program, but also for just some general health issues.

Additional external motivators that were found to facilitate healthy behaviors in physical therapy patients were incorporating practicality into patient education and motivation and encouragement by the physical therapist. Respondents reported that the more practical the activities and the more motivation given by the therapists, the more likely it was that their patients would comply:

> I think just helping them understand what they need to do, what exercises are good.... just the importance of movement in their daily lives and even using things at home, you know, vacuuming – it doesn't necessarily have to be standing there, doing an exercise, but things that they can incorporate into their lives.... So I think it's a lot of education and awareness for them, what they can do and what they do have access to.

> You can make it happen. Put them [children] in the stroller. Go for a walk. Go walk with your friends. And you don't have to do it every day. But when the weather's nice, do it. Go to the mall. You don't have to buy anything. So giving them ideas of how to make it reasonable....making it practical. And I think we assume that patients can do that on their own...

> I feel like I spend a lot of time encouraging people to move, and that they'll feel better if they move, and that their pain will improve if they move. So I think it's

> really trying to find ways that people can incorporate what we're doing in therapy into their daily lives and ways that they can continue with it when we're done.

> I've helped motivate them to change their lifestyle to, you know, live healthier, move more, incorporate more exercise activity into their daily lives.

Barriers

Participants were asked to discuss barriers in health promotion as a health care provider and within the physical therapy profession. Four themes were identified from the participants' responses: therapist characteristics, patient characteristics, patient and therapist relationship, and the practice environment.

Relationship between physical therapist and patient

Two aspects of the physical therapist and patient relationship were identified as potential barriers to health promotion (patient receptivity and potential for patient to not return). The most commonly mentioned area of this relationship was patient receptivity to what the therapist had to say about healthy behaviors. Five of the eight physical therapists talked about this factor. The following quotes illustrate how decreased patient receptivity may act as a barrier:

> I probably brought it up once and then if I felt like they weren't receptive I probably then didn't bring it up again.

> Well I think that I could be more consistent, I think I sort of mentally try to pick and choose if this person seems like they might be receptive to it.

> I do think that I filter it on some patients if I think they're just going to be annoyed with me or mad that I even brought it up.

A related barrier discussed by the participants was the fear of a patient discontinuing therapy if they pushed too hard about behavior change. The quotes below illustrate how therapists may avoid conversations to help ensure patients will return for physical therapy appointments:

> I think if patients hear it too much, they don't come back and see you. Patients are very quick to drop you and not come back if you're too hardcore in it. You got to figure out a way to get them in the door, keep coming to the door, but be consistent with your message.

> They are going to be mad and not even want to do physical therapy if they think that I am blaming it [their condition] on their weight.

Patient and Physical Therapist Attributes

Patient Attributes. Several patient characteristics were identified as barriers to health promotion. The patient characteristics that were discussed the most were the

patient's readiness for change and personal interests. Five of the eight participants discussed how not being open and ready for change may act as a barrier to change. The following quotes illustrate the importance of patient readiness:

> They have to be ready for it [change]. If they're not ready for it then it's a headache and a waste of my time and their time.

> So I think it's just an attitude…She's just not ready to change. And that, you can't make somebody change. They have to want to do it.

> I think it's where she is on the stages of behavioral change. She's was in the pre-contemplation. Now she's in contemplation and she's not into those later stages where she can make a behavioral change.

Additional patient characteristics that were reported by several participants as barriers to health promotion were access to patient resources and patients wanting an easy fix. The resources that were discussed included: financial, social support, transportation, and access to physical activity programs in the community. Four of the eight therapists discussed the lack of patient resources as a barrier:

> We have quite a few people who come to our clinic who transportation is an issue and for them to get all the way to [name of city] which that's where I live, it's not that far away, but by bus that's just not going to happen.

> ...most of them [patients] don't have enough money to go to health clubs. But a lot of time, people, especially during the winter, have a hard time because they can't afford a gym membership or don't want to go out in the cold, especially the older population.

> I do always wish that there was a program where they could come in for an aftercare type of a program to help do some cardio and even use the equipment when they're done. But I think that's definitely a barrier.

Half of the participants discussed the patient characteristic of wanting an easy fix, often through medication:

> I think the other thing is people want, today everything to be easy. Medicine, insurance companies want us to give them one exercise or exercise program and make it all magically happen. It doesn't happen that way. And we, we want a pill to make ourselves better. There is no pill that makes us better.

> And, I think it's hard, because I think as a society we're so go, go, go, and we want quick results. We want easy solutions. You see commercials on TV. I mean,

there's a pill for everything you dream of these days. So I think everyone's waiting for the magic pill that's – we're all going to suddenly lose 150 pounds.

Barriers to health promotion that were mentioned with less frequency included patients' beliefs about the physical therapy profession, the patient's own beliefs about their condition, and the patient's cultural background. These topics are best illustrated by the following quotes:

I think another barrier is the general public's perception too, about what a physical therapist is, what we do.

What their ideas – their preconceived notions about physical therapy are. If they come in thinking I'm going to hurt them then they may not want to do what I tell them to do.

Some patients still have that mentality that my back hurts, I should lie in bed. Rather than my back hurts, I need to be active.

...especially with my immigrant population… Either they're working twelve, fourteen hours a day and shift work in various jobs. Or my ones who just don't realize the value of exercising.... They're staying in their houses, they're

> cloistered, they don't want to go outside, or they're a little bit afraid. They don't know what resources there are.

> I actually have a lot of those [complex patients] and I think the difficulty with that is those tertiary complex patients that I see –as an example, somebody who is fused from T3 to L3 and the remaining lumbar segments which have pathology – has SI pathology – not sure if we're going to fuse her SI joints. Somebody who has over the course of time of going through any number of surgeries and periods of disability has really developed a very disabled mindset.

Therapist attributes. As with patients, there were several physical therapist characteristics identified as barriers to health promotion. The characteristic that was mentioned most frequently as a barrier was the therapists' education in health promotion. The need for education through entry-level preparatory work or continuing education and the need for lifelong learning were discussed by four of the eight participants. The following quotes illustrate how education was discussed as a barrier:

> My PT education was thirty plus years ago, so you know, we didn't do that kind of stuff back then. There's a lot of stuff that I do now that we didn't do back then. So, I think we and the traditional heath care providers could do a better job and have better education. We get a crappy education, I think, on it [health

promotion]. You know? We get some in school, but it's all about, diagnoses and pathological conditions in school.

…It's huge that the APTA is coming out as supportive of it [health promotion], and is recognizing it as something is something we should be doing to help the whole well-being of the person. The fact that it was a class that I had through the transitional DPT program certainly was new for me to see that.

And I think that a lot of our courses – the CEU courses – I very rarely see any CEU courses that come in my mailer about health promotion.

Another therapist characteristic that participants discussed as a barrier was their self-image. Three of the eight participants discussed how they view themselves as a negative role model to their patients, students and other colleagues:

I don't do much with weight. I will be very honest…first of all I am overweight"

Other than the fact I don't exercise enough myself because I don't have any time.

…and I readily admit I don't get as much activity and exercise as I should and I pay for it in some ways….Because I think an attitude that doesn't go over is 'do as I say and not as I do'.

The majority of participants also discussed they typically did not address smoking with patients. Reasons given for this choice included feeling it was addressed by other health professionals and believing their current patient population includes fewer smokers:

> Well mainly because I don't see a lot of smokers anymore, I don't bring it up.

> I'm really bad about addressing smoking. I just don't even do it, and I can't even say why, I think I just feel like it's getting addressed and I don't really do it.

Often the participants discussed the reason for referral to physical therapy is the initial and primary focus of their intervention with patients. Health promotion with patients often comes secondary to the primary impairments and reason for referral.

> We see patients for how long…30 minutes maybe…hour for evals. And what we're really doing is trying to get our musculoskeletal treatment or exercise taken care of in a certain amount of time. And so if they're not going anywhere and we need to have time to talk about general health and fitness, that's great.

> I would say that in a day-to-day client interaction that-those things [health promotion] tend to be more secondary in their perspective about what they're coming to see me for.

Mentioned less frequently were concerns about staying current on information and a lack of education on how to have difficult conversations with patients.

> I feel like I'm struggling to get the right information. There's so much - you could Google and then I'm overwhelmed…so, I try to keep it pretty general, 'cause it's hard to stay on top of all of that.

> I think a nice class would be to have, the art of conversation with your patients about difficult subjects.

Other physical therapist characteristics that were mentioned as a barrier were the confidence and self-efficacy of the therapist in promoting healthy behaviors and the therapist's lack of recognition of their role as a health promoter:

> If you are nervous going into it, about doing it - I think now that I'm not nervous about it I think that makes it so much easier for me, but when I first started doing it [health promotion conversations] I was so nervous about it. It just felt like it would be so personal and wrong to bring up the word obesity or bring up the word weight, and I'm sure the patient can tell, she's nervous talking about this.

> When we talked about [health promotion]... I thought I don't do any of that. But as I'm talking about it….that is where I try to get everybody because unless they have good firing patterns of their muscles and they can control and be strong, they

> are going to have symptoms so therefore get them into weight lifting, get them into some aerobic stuff to be able to manage their symptoms…so I guess I am a health promoter.

Practice Environment

Participants described several aspects of the health care practice environment that they viewed as barriers to health promotion. Participant responses indicated fear and confusion around direct access laws and the physical therapist state practice act resulting in barriers to health promotion practice. The following quotes illustrate this confusion:

> I mean, I think as therapists we're so afraid of doing anything outside of our practice [act] – some days we tie ourselves up in knots about it.

> I think we're so terrified of doing anything outside [the practice act] that we limit our ability to do more for our patients and to do more for our profession.

> I think we're so afraid of sort of branching out what we do in our profession. And again I think it's because we're so afraid of practicing outside of our [scope of] practice.

Another aspect of the health care practice environment that participants discussed was time with patients. Five out of the eight participants discussed the lack of time with patients as a barrier to health promotion:

> I think the difficulty for me, or in the role of PT, is with just all of the time management issues of – we've got to treat the patient, we've got to document, I've got to make the phone call to the physician, I've got to get an authorization from work comp. I think that it does become a little bit of that prioritization of, what are we here to do? What are your goals? What are our objectives? What do we think we can make the most impact on that I can document – that I can demonstrate? So I think the disconnect is just in some of the pace and the flow of the day, rather than in being something that we just don't get.

> I think there's so many things that we could incorporate that we don't. Obviously, we only have a limited amount of time with people, too, when they come.

The third aspect of the practice environment discussed by three of the eight therapists as a barrier to health promotion was the lack of an interprofessional approach and communication. The following quotes illustrate the importance of communication with other professionals:

> Education. And by education I mean how the physician set them up for coming to see me. What their ideas-their perceived notions about physical therapy are. If they come in thinking I'm going to hurt them then they may not want to do what I tell them to do**.**

> …if you have someone that's really obese and your thinking, oh man they have to get on this weight loss program, well yeah, but is that why they were sent to you and…you don't know what else the physician is doing so I think you have to just be communicative when you're doing all those things.

Aspects of the health care practice environment that were mentioned as barriers with less frequency were reimbursement for health promotion intervention, relying on other providers to address health promotion, and a lack of public awareness of the physical therapy scope of practice and educational background.

Opportunities

Participants were asked to describe ideas and opportunities on how the physical therapy profession can improve health promotion currently and in the future. This section summarizes the themes from the participants' responses on how health promotion can be advanced.

Ideal Clinical Practice

Participants were asked to image an ideal clinical practice where health and wellness are consistently promoted to all patients. When describing how this clinical model would function, six out of eight participants mentioned this ideal practice would offer fitness assessments, screens, and classes to their patients and to the public:

> …we could do classes [health and wellness] kind of like you can do pregnancy classes and low back pain classes. I think that's a potential.

> ...injury screening and prevention screening for young athletes.... I treat a lot of pelvic patients, with incontinence and things like that...having information for seniors for general health promotion, things for prevention of incontinence....With the mind body stuff... mindfulness...and just being able to expose people to more of that kind of stuff to have little classes…I think if we could have more classes to be able to teach people that would be great....just open it up to the public.

> ...measures their BMI, does a treadmill test with them, and does a strength test - it gets a good picture of where they're at. So, I think if there was some way to incorporate those kind of assessments into more of our therapy – you know, people that are coming in specifically for therapy, that would be helpful.

> I think, probably in terms of the PT clinic that would be something as well to have those kinds of post-rehab classes and stuff available for patients. You know, we used to do the stabilization classes when we were over in [name of facility] and we just don't have room anymore. So be it Pilates or stabilization or weight training or spin classes or – you know. Some of those same kinds of things.

The majority of participants described an ideal health and wellness model as one with an interprofessional team approach in one central location:

> ...definitely being in one location is so beneficial…we don't have everybody here, but having the doctor and the therapist and even just having a gym connected, or access to our equipment after therapy's done, I think, is a big piece. So there's more of a continuation of care.... So, having everybody in one location, and a plan for them to follow through and be able to have access to the different areas that they need…even people that do more homeopathic medicine and stuff – you know, other options.

> We'd have a masseuse there, if people needed just to have that. We'd have a chiropractor if somebody needed that. I think PTs could be right there too, as well I think that we'd have, like, a little kitchen area or nutrition [area].

> The ideal world – it would be very much a kind of a team care concept – you know, as much as we can do with the patients with the exercise and the physical activity. I do think that for a lot of them, again, that kind of addressing emotional behavioral components or fear avoidance issues. I think a behavioral therapist to be on staff.
>
> I would also think that a – a nutritionist or dietician would be a key concept to have on board – to be able to give patients better information about nutritional information, menu planning, those kinds of things.

Participants also portrayed the ideal clinical practice setting as a place where therapists have sufficient time with each patient, health and wellness interventions are reimbursed, clients have the opportunity to role model to other clients at the facility, and the facility is open to the public through a membership option:

> My ideal clinic would be only active people and our clinic would not only just be a physical therapy clinic, it would be a gym at the same time…like a fitness center, so those that were injured can be motivated by other people or the people coming in to work out can say, "Hey. I had that problem and now look at me" and they can be good role models in trying to get that population back to their activity level. It's a lot more successful and rewarding when they do want to do the things and they do it.

I do always wish that there was a program where they could come in, like, for an aftercare type of program, to help do some cardio and even use the equipment when they're done [with physical therapy].

Just having a gym connected, or access to our equipment after therapy's done, I think, is a big piece. So there's more of a continuation of care.

Community Health Promotion

Community health promotion was identified as another opportunity for the physical therapy profession to promote healthy behaviors. Participants discussed how physical therapists must get involved with the community in order to make an impact on health promotion:

Yeah, I think we need to promote ourselves more out in the community. We need to be at fairs. We need to be at Twin Cities, at the marathons...they're [patients] finding it from other people or they're going to other people to get it. So we just need to be more out there.

Why the heck are we not in Life Time Fitness?

But could we be out at a senior community center?

Other suggested ideas to promote community health were the use of technology, internet resources, and the assembling of community resources for patients. Participants believed physical therapists must know the available resources in their community and be able to direct their patients to those resources. One therapist suggested the physical therapy profession create a central health promotion website for all therapists to quickly reference. The quotes below illustrate these findings:

> ...when I worked in home care, we actually had a pretty good list of – here's a social worker that you can talk to if you need this. Or here's a list of transportation so you can get out. And I almost wish that everybody had access to those resources...if we even had a list of programs where you could continue, like the Silver Sneaker type things and locations...so, I just think that's such a good transition for people from coming out of the hospital or rehab…
> And, you know, you have a contact, this person you can go to and people want, "Where can I go for a good massage therapist?" I don't know…so yeah, just a good collaboration of people in close quarters and names of who can help you next, where do you go from here.

> I'll go to Mayo, go to this website that's reputable. Can I go to one health promotion website? Not really. I think – could we do a better job?

> So I'd like to see the information be consolidated, 'cause I struggle with that. I'll be like, "Where can I find some quick tips for somebody?

Practice Environment

Participants also identified health promotion opportunities related to the physical therapy practice environment. Participants recognized direct access to physical therapy has been changing over the years, but it still needs to be more widely accepted and reimbursed by insurance companies in order to make an impact on health promotion:

> You know someone can come and another insurance can't come, there are just too many discrepancies in that whole direct access thing too, and that could actually be a factor for us in the right direction when we get more widely accepted direct access, and we have it legally but there's still too many insurance companies who have their own funny rules about it that cause too many problems, at least in our big system for us to just generally lay a blanket statement that anyone can come. So direct access is a barrier.

> And I think it's – not a lot of the insurances right now, from what I understand, are allowing that [direct access]. I think it's, like, one or two, so I think the insurance is a big barrier for that.

Participants believed the physical therapy practice setting is evolving to include conditions that are not orthopedic or typically thought of as a physical therapy diagnosis in order to promote healthy behaviors. Physical therapists can play a role in preventing and managing lifelong diseases, such as diabetes and obesity. Participants stated:

> And then also from a profession and a business standpoint that we're looking for other ways to create revenue streams, create relationships with referrals – issues like diabetic management program which is something that we have as a program in our clinic. So we see patients that don't have any orthopedic issues. They just are, you know, adolescent, overweight, type two diabetic kinds of things. And we have some objective relative to changing their activity level scores – doing some of those kinds of things.

> But I think in general as a profession, we're looking for other avenues to be able to influence abilities and health and wellness and lifestyles in something beyond what traditionally has been PT. So it definitely is something that's – those are emerging topics and subjects and things that I think we arguably can lend some authority and some credibility to care strategies.

Continuing Education Opportunities

The final opportunity theme identified by participants is the need for continuing education on health promotion. Providing education on health promotion will increase

physical therapists' knowledge on healthy behaviors and increase their confidence in discussing these topics with their patients. The following statements indicate this need:

> And I think that a lot of our courses – the CEU courses – I very rarely see any CEU courses that come in my mailer about health promotion.... We're so focused on low back pain, and this and that and manipulations – which is all wonderful, and evidence-based practice, but I think we're forgetting that overall health, and we know what the systems are saying about the United States population.

> And I think if there were more emphasis on that, more seminars on that, and for the doctors, for the PTs – even us clinics, bringing in someone to talk about healthy eating – ideas for patients– it would be helpful.

> I think a nice class would be to have the art of conversation with your patients about difficult subjects, you know?

DISCUSSION

The purpose of this study was to examine the barriers and facilitators that physical therapists face while incorporating health promotion into their clinical practice, including physical activity, healthy weight/BMI, and smoking cessation. Qualitative methods were used to examine these facilitators and barriers as well as determine opportunities associated with health promotion in physical therapy. The ideas and opportunities discovered in the data serve as possible recommendations for current physical therapists and the future of physical therapy practice. The physical therapists interviewed in this study clearly had an interest in promoting healthy behaviors in their patients and believed it was part of the therapist's role. Yet, the results of this study found both internal and external factors preventing this promotion of healthy behaviors in patients as well as factors facilitating it. The factors found to facilitate health promotion include: the therapist-patient relationship, therapist characteristics, patient characteristics and patient education. Factors identified as barriers include: the therapist-patient relationship, therapist characteristics, patient characteristics, and the practice environment. In some cases the theme functioned as both a facilitator and barrier depending on the context. Suggested opportunities to advance health promotion in physical therapy practice included: creating an ideal clinical practice, community health promotion, alterations in the practice environment, and increased health promotion education for therapists. Figure 1 provides a graphic representation of these findings.

Facilitators and Barriers

An important theme that was found to be a barrier and a facilitator, depending on the situation, was patient readiness. Patient readiness is used to describe whether a patient is ready or not to make a change towards a healthy behavior. A study by Croghan[31] concluded that allowing patients to determine if they were ready to make a lifestyle change was the biggest predictor of success. Even if the patient failed, they were more likely to remain engaged with behavior change. This finding demonstrates how important it is for patients to be ready for change. It is also consistent with Shirley and colleagues[6] who found that 20% of the therapists in their study would not bring up the topic of health promotion if they believed the patient was not ready or willing to hear about behavior change. Similarly, it was clear to the therapists interviewed in this study that if their patient was not ready or willing to hear about behavior change, then bringing up the topic of health promotion was not going to be received well by the patient.

Assessing if a patient is ready to make a change towards a healthy behavior is something that physical therapists should include as part of their examination. An objective measurement tool should be utilized, such as Prochaska's stages of change. According to Prochaska and Norcross[32] a therapist's role and relationship with a patient changes at different stages in order to increase the likelihood they will progress through each stage. Prochaska and Norcross use the examples of a "nurturing parent" for patients in the precontemplation stage, a "Socratic teacher" in the contemplation stage, an "experienced coach" in the preparation stage, and a "consultant" in the action and maintenance stages. Another study by Prochaska et al[33] found that when programs focus

on helping patients progress from one stage to another within a one month timeframe it may double the chances of that patient taking action to change in the future.

Motivational interviewing may also be a crucial component to include in initial physical therapy evaluations, as it can be used to assess patient readiness. A systematic review done by Rubak et al[34] showed motivational interviewing had a positive effect in influencing behavioral change in 74% of randomized controlled trials. Studies using motivational interviewing for 20 minutes or less showed a beneficial effect 64% of the time.

It is apparent in the culture of the United States, that people are often looking for a quick fix for their complaints, and this mindset may be due to the influence of media. For example, while watching a 30-minute television show there can be many commercials describing the next "best" pill to fix a certain ailment. It appears there is a pill to remedy anything, and this culture could possibly contribute to the disabled mindset that many patients come to physical therapy with, thus making it more difficult to promote healthy behaviors. Half of the participants in this study spoke of this phenomenon of their patients desiring a quick fix for their impairments. Physical therapists must find ways to overcome this barrier in order to facilitate healthy behaviors.

Another key finding of this study was the therapist's self-efficacy or confidence level in promoting healthy behaviors. Consistent with the current literature, therapists in this study who felt more comfortable or who had appropriate education in the area of health promotion were much more likely to promote healthy behaviors. Rea et al[11] concluded that therapists' confidence level or self-efficacy in being able to perform a

behavior was the best predictor of addressing health promotion with their patients. One participant in this study spoke of the importance of obtaining her transitional DPT degree and how this education caused her to begin thinking about the importance of health promotion in her current clinical practice. Therapists who obtained their DPT or transitional DPT degree stated that they felt more comfortable addressing these behaviors, as compared to participants with entry-level bachelor or master's degrees. This trend shows the difference in student preparation for health promotion between degree levels and supports how DPT education can positively impact a therapist's confidence in promoting healthy behaviors in their careers.

A study completed by Black et al[35] found that role modeling is a powerful teaching tool in health promotion and recommended that physical therapy professionals should "practice what they preach." Similarly, in this study, role modeling was found to facilitate the success of health promotion. Many of the participants described wanting to be a role model for their patients, family, and students. These participants indeed put their words into practice. One participant explained to her patient how physical activity makes her feel more energized and improves her morale, while another participant served as a positive role model of activity for her family. These findings are consistent with those of McKenna et al[10], who found that both general practitioners and nurse practitioners were more likely to promote physical activity if they themselves were physically active.

Self-image emerged as an influential component of role modeling and may contribute to the success of a physical therapist's promotion of healthy behaviors. It is

noteworthy that three participants mentioned that they were not promoting healthy weight or physical activity because they themselves were overweight or physically inactive. They felt their patients would not take them seriously or felt embarrassed to bring up the topic. It is important how the therapist sees him or herself since it may affect whether he or she addresses healthy weight or physical activity. One of our participants expressed concern about being seen as someone conveying the idea of, "do as I say, not as I do." Even though the impact of self-image was a trend in this study, it needs further investigation due to the small number of participants in this study and the lack of existing research in this area.

Patient readiness, therapist self-efficacy, therapist acting as a role model, and self-image all are important characteristics affecting the relationship between the physical therapist and patient. These factors influence the level of connection and comfort between the therapist and patient. It was apparent in this study that this relationship is crucial to successful promotion of healthy behaviors in physical therapy. Many of the participants mentioned the importance of creating a trusting relationship with their patient when they first meet. This finding is consistent with Bodner et al[20], who found that physical therapists have an advantage in promoting behavior change through forming relationships, building trust, and developing an understanding of patient learning styles.

Taking into consideration the patients' environmental and personal factors can heavily contribute to getting to know each patient and creating a successful relationship. The International Classification of Functioning, Disability, and Health (ICF)[7] model provides a framework for considering how patients' environmental and personal factors

contribute to their body function and structures, activity limitations, and participation restrictions. This model can help shape a plan of care and contribute to the successful promotion of healthy behaviors. For example, if a patient is a single parent, the therapist is going to want to find ways to promote healthy behaviors in a practical way that fits into the patient's busy lifestyle. The ICF model is detailed in Figure 2.

The importance of the practice environment was another theme that emerged in this study. Some participants expressed confusion with the Minnesota practice act and scope of physical therapist practice pertaining to interventions for the promotion of healthy behaviors. Participants expressed concern about practicing outside of professional boundaries when addressing healthy behaviors. This finding demonstrates the need for education in this area.

Another aspect of the practice environment influencing health promotion identified in this study was the amount of time therapists have with their patients. Time was found to be a barrier or a facilitator depending on the context of the situation. Many therapists noted that they have more visits and more time per visit as compared to physicians, which can facilitate the promotion of healthy behaviors. However, they also stated the time they did have needed to be focused on the patient's primary diagnosis, leaving little time for health promotion. This finding indicates therapists must think of creative ways to integrate health promotion into the patient's current plan of care for their primary diagnosis. For example, patients with a primary diagnosis of low back pain may receive manual therapy, strengthening, and mobility exercises. However, a walking program, smoking cessation intervention, and a referral to a dietician may also be

included in their plan of care. These activities would incorporate wellness and health promotion as well as potentially help in treating their primary diagnosis.

Of further interest regarding the practice environment is the impact of the impending health care changes in this country, particularly the focus on preventative and patient-centered care. Nelson[36] discussed the evolution of health care change and how physical therapists can adapt to these approaching changes. Healthcare is currently shifting to focus on overall well-being, prevention of disease, and the quality of care being provided. Nelson[36] states a "patient focused" mindset and positive "patient-therapist interaction" are important for providing quality care in physical therapy practice. These health care changes will further encourage physical therapists to consistently discuss healthy behaviors in order to improve patient well-being, instead of simply focusing on their primary diagnosis.

The practice environment contributes to the overall culture of the clinic. It appears that a clinic setting with a supportive staff and other colleagues who also promote healthy behaviors facilitates health promotion. One of the main barriers that Johnson et al[12] found that prevented health promotion was a lack of contact with other health care professionals in the community. Having multiple health care providers in one setting, such as physical therapists, physicians, nutritionists, and exercise physiologists who all share the same vision of promoting healthy behaviors, was an idea described by several participants that should lead to a more cohesive atmosphere. Additionally, having a consistent message by all healthcare providers involved with a patient is important to health promotion. The literature supports the notion that the more often a patient hears a

consistent message, the more likely he or she is to change a behavior. For example, An et al[37] found individuals are three times more likely to make a smoking cessation attempt when they are given cessation advice from two or more health professionals. Patient confusion would also be decreased if inconsistent messages from healthcare providers were eliminated. The need for consistency highlights the importance of a "team" or interprofessional approach in patient care.

Recommendations

Recommendations for advancing health promotion in the physical therapy profession were identified in this study. Participants described an interprofessional approach with multiple health care providers in the same building as an ideal model for promoting healthy behaviors. We recommend having physicians, physical therapists, nutritionists, chiropractors, psychologists, and related professionals in a health and wellness facility with workout equipment available. Patients would then have access to different areas of health promotion throughout the course of their care. Once patients have completed their care, they could come to this same facility to carry out their active lifestyle on the workout equipment and seek diet advice from the nutritionists.

We also suggest physical therapists assemble a list of community health promotion resources for patients. Therapists should know the available health resources in their community and be able to direct patients to those resources. These resources may include information on the local fitness facilities, transportation routes, recommended dietitians or psychologists, walking and running clubs, open swim or skate times at local pools or ice rinks, and annual health fairs.

Finally, we recommend continuing education courses be offered on the topic of health promotion. Continuing education on health promotion will increase physical therapists' knowledge about healthy behaviors and increase their confidence level when initiating these challenging conversations.

Limitations

This study had several limitations. The non-random selection and small sample size of physical therapists practicing in orthopedic settings may not be representative of physical therapists throughout the United States or in other practice settings. This factor limits the generalizability of the findings. Comparable studies with comparable samples from other regions of the country need to be done and analyzed for similarities. The fact that the physical therapists that participated in the study were essentially self-selected was an additional limitation. It is not known whether the beliefs, opinions, and experiences of physical therapists that chose not to participate or could not participate due to sample size restrictions would be similar to the eight therapists who participated in the study. Lastly, our study did not reach data saturation. New themes continued to emerge throughout the interview process, therefore more themes may have been identified with additional interviews.

Directions for Future Research

Although this work provides important information about factors that facilitate and prevent health promotion in orthopedic physical therapy practice the results are preliminary in nature. Further study of health promotion is needed, including expanding outside of the outpatient orthopedic setting and including other states to increase

generalizability. The role of therapist self-image in health promotion should be explored to more clearly understand if poor self-image acts as a barrier to health promotion. In addition, objective tools to determine the likelihood of patient change need to be established. Having objective measures would allow for a consistent screen to discover patient readiness and facilitate appropriate physical therapist communication. Further research may allow for additional barriers and facilitators of health promotion as well as continued opportunities for the physical therapy profession in the area of health promotion to be identified.

CONCLUSION

One of the priority goals of the American Physical Therapy Association (APTA) is for physical therapists to be recognized and promoted as "providers of health promotion, wellness, and risk reduction programs to enhance the quality of life for persons across the lifespan."[2] This research has identified current and future possibilities to enhance the promotion of healthy behaviors with patients.

We conclude that a trusting relationship, therapist self-efficacy and experience in promoting healthy behaviors, and patients' readiness for change all positively affect therapists' success when incorporating health promotion into their clinical practice. However, factors such as the need to address the primary diagnosis of the patient and a limited interprofessional approach inhibit health promotion in the physical therapy setting. It is the interrelatedness of the facilitators and barriers that determine the success of promoting healthy behaviors with patients in physical therapy.

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TABLE 1. Participant Demographics (N=8)

	Percent	Minimum	Maximum	Mean
Age (in years)		28	71	48.6
Gender				
Female	87.5			
Male	12.5			
Highest Earned Degree (In any area of study)				
Baccalaureate	50.0			
Masters	25.0			
tDPT	12.5			
DPT	12.5			
Entry-Level PT Degree (Prior to Licensure Exam)				
Baccalaureate	62.5			
Masters	25.0			
DPT	12.5			
Years Practicing PT		3	40	22.1
APTA Board Certified Specialist				
Yes	25.0			
No	75.0			
Health Promotion or Fitness Testing Certification				
Yes	0.0			
No	100.0			
Other Certifications	0.0			
Employment Status				
Full-time	62.5			
Part-time	37.5			

TABLE 2. Participant Estimations of Their Patient Population (N=8)

	Percent
% of Patients who are Overweight	
0%	0
1-20%	0
21-40%	25.0
41-60%	37.5
61-80%	37.5
81-100%	0
Unsure	0
% of Patients who Smoke	
0%	0
1-20%	50.0
21-40%	37.5
41-60%	12.5
61-80%	0
81-100%	0
Unsure	0
% of Patients who do NOT Meet the Recommended 150 Minutes of Moderate to Vigorous Physical Activity per Week	
0%	0
1-20%	0
21-40%	12.5
41-60%	25.0
61-80%	50.0
81-100%	12.5
Unsure	0

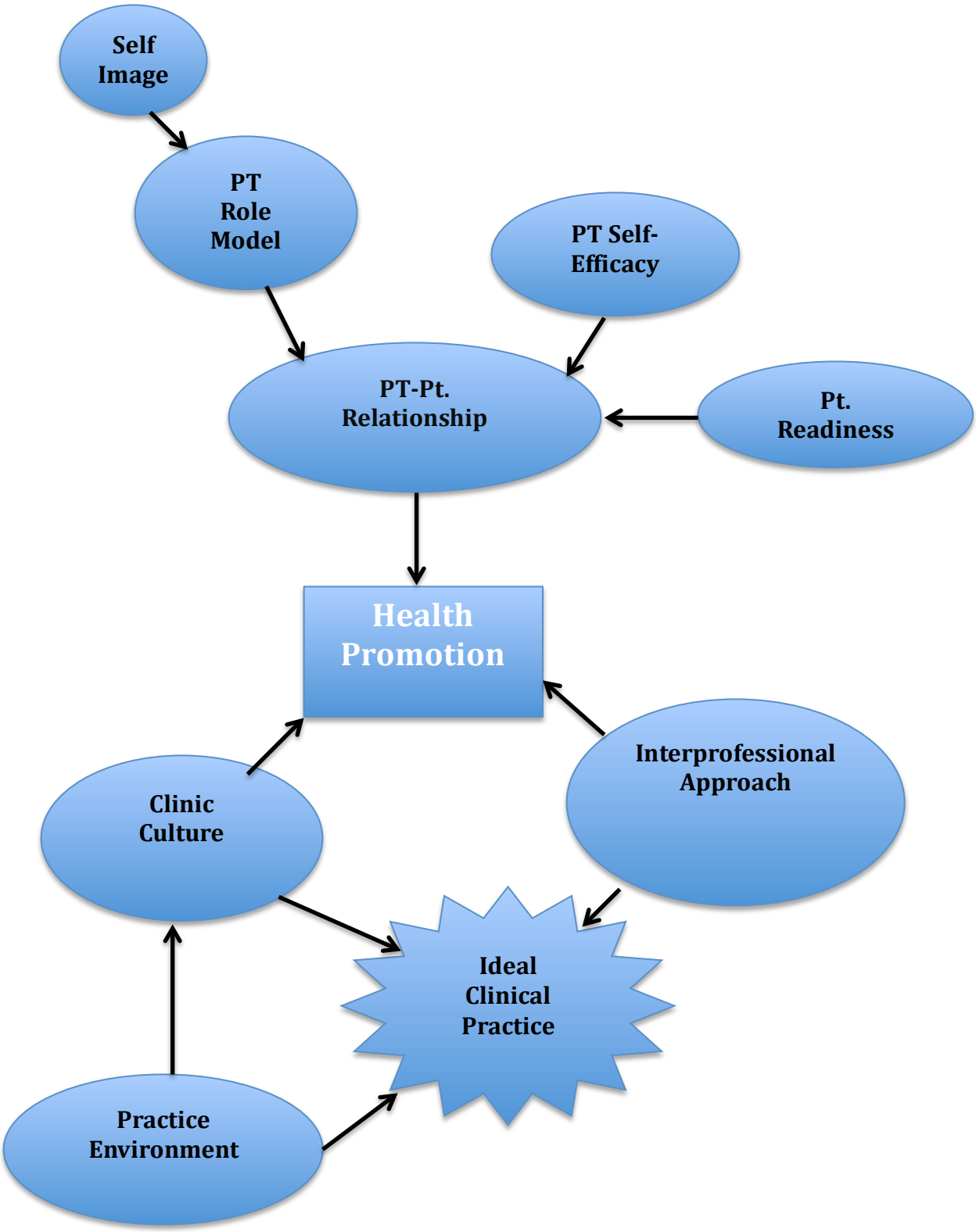


Figure 1. Summary of Results

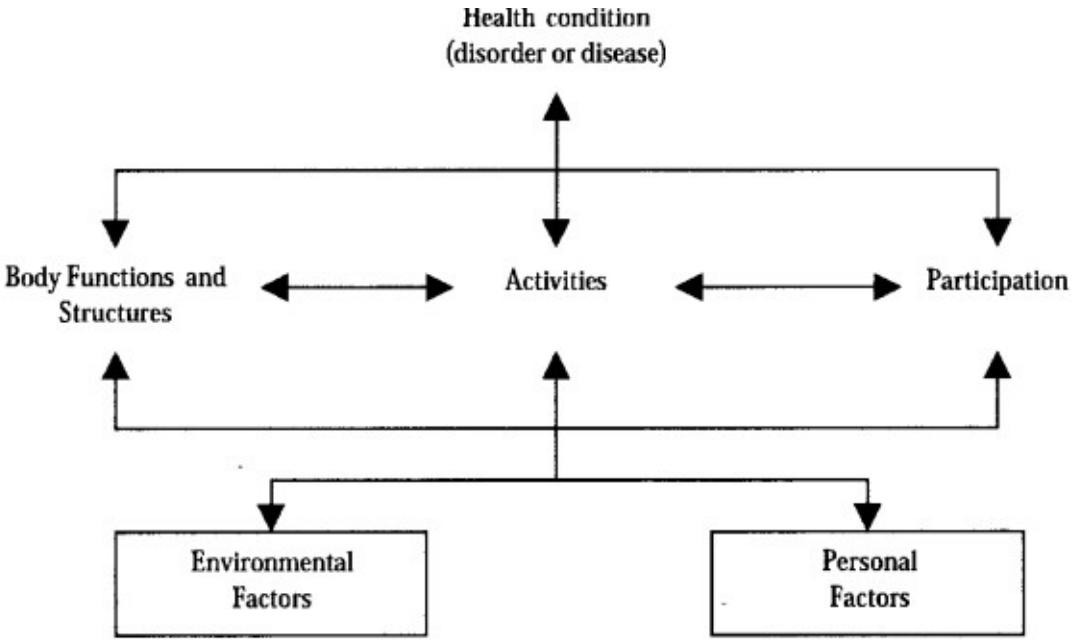


Figure 2. International Classification of Functioning, Disability and Health[7]

Appendix A
IRB Letter of Approval



January 11, 2013

MarySue Ingman, PT, DSc
Doctor of Physical Therapy Program
St. Catherine University
601 25th Avenue S.
Minneapolis, MN 55454

Re: IRB#12-N-68 The Role of Physical Therapists in Health Promotion: A Qualitative Study

Dear Dr. Ingman:

Thank you for submitting your research proposal to the St. Catherine University Institutional Review Board (IRB). The primary purpose of the IRB is to safeguard and respect the rights and welfare of human subjects in scientific research. In addition, IRB review serves to promote quality research and to protect the researcher, the advisor, and the university.

On behalf of the IRB, I am responding to your request for Exempt level approval to use human subjects in your research. A member of the St. Kate's IRB has reviewed your application. As a result, the project is approved as submitted.

If you have any questions, feel free to contact me by phone (X 7739) or email (jsschmitt@stkate.edu). Also, please note that all research projects are subject to continuing review and approval. You must notify our IRB of any research changes that will affect the risk to your subjects. You should not initiate these changes until you receive written IRB approval. Also, you should report any adverse events to the IRB. **Please use the reference number listed above in any contact with the IRB.** When the project is complete, please submit a project completion form.

We appreciate your attention to the appropriate treatment of research subjects. Thank you for working cooperatively with the IRB; best wishes in your research!

Sincerely,

John Schmitt

John Schmitt, PT, PhD
Chair, Institutional Review Board
Cc: Deb Sellheim, Ashley Fisher, Sarah Pitzen, Marit Otterson

Appendix B
Interview Questions

1. What types of patients/diagnoses do you see in your practice?
    - What types of demographics?

2. For the purposes of this study we are using the *Guide to Physical Therapist Practice*[1] description of health promotion which states (refer to the consent form for the definition): *PTs are involved in promoting health, wellness, and fitness initiatives including education and service provision that stimulate the public to engage in healthy behaviors.* Specifically in this study we will be focusing on the promotion of physical activity, healthy weight/BMI, and smoking cessation. Describe your role as a physical therapist in health promotion, specifically physical activity, healthy weight/BMI, and smoking cessation.

3. Do you feel you have any discrepancy between what you believe about health promotion and your actual clinical practice? If yes, please describe the factors contributing to this discrepancy.

4. Describe a time you felt you were successful in facilitating a change in a patient's behavior in physical activity level, weight/BMI, or smoking in a patient.
    - What did success look like or how do you define successful change?
    - What were the factors that led to the success?
    - What was your role in the success?
    - What was the patient's role in the success?
    - Is what you described a typical occurrence (i.e., have you seen similar change in other patients?)

5. Describe a time you were *not* successful in facilitating a change in a patient's behavior in physical activity level, weight/BMI, or smoking in a patient.
    - What factors do you think were involved in the lack of change?
    - How do you navigate these factors/barriers?
    - What can be done about these barriers?

6. What factors do you think are involved in successfully facilitating change of healthy behaviors?
    - What factors are involved in the lack of success?
    - Do you feel you are most often successful or unsuccessful in facilitating change in any of these behaviors in your patients?

7. Think back through the years you have been in practice. Describe any professional changes in general physical therapy practice you have witnessed in the area of health promotion.

- Describe any changes that have occurred in your individual practice or approach to health promotion.

8. Patients can receive information about changing health behaviors from numerous professions. What ideas or opportunities do you see physical therapists having with regard to health promotion/behavior change strategies with our patients?
    - How do you see how yourself implementing those strategies into your practice?

9. Do you feel you were well prepared to address health promotion in your PT education?
    - If yes, describe how you were prepared.
    - If no, describe what was missing.

10. Imagine an ideal clinical practice where health and wellness are consistently promoted to all patients. What do you think this clinical model would look like?

11. Anything else you would like to tell us?