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Patient Satisfaction of Physical Therapy Treatment of Pelvic Floor Dysfunctions

Jennifer Norberg
University of North Dakota

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PATIENT SATISFACTION OF PHYSICAL THERAPY TREATMENT OF PELVIC FLOOR DYSFUNCTIONS

By

Jennifer Ellen Norberg
Bachelor of Science in Physical Therapy
University of North Dakota, 1999

An Independent Study
Submitted to the Graduate Faculty of the
Department of Physical Therapy
School of Medicine
University of North Dakota
in partial fulfillment of the requirements
for the degree of
Master of Physical Therapy

Grand Forks, North Dakota
May
2000
This Independent Study, submitted by Jennifer E. Norberg in partial fulfillment of the requirements for the Degree of Master of Physical Therapy from the University of North Dakota, has been read by the Faculty Preceptor, Advisor, and Chairperson of Physical Therapy under whom the work has been done and is hereby approved.

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(Chairperson, Physical Therapy)
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ABSTRACT

Urinary incontinence has been categorized as a pelvic floor dysfunction. There are four main types of incontinence: stress, urge, overflow, and mixed. Pelvic floor dysfunctions have had success with non-surgical treatments. Treatments include biofeedback, electrical stimulation, and pelvic floor muscle exercises.

This study was designed to analyze patient satisfaction with the treatment of pelvic floor dysfunctions by a physical therapist. Surveys were mailed out to discharged participants from a participating facility. The participants were asked to complete and return the survey by mail. The surveys were anonymous, and the responses were kept confidential. Thirty-four surveys were returned out of fifty-five surveys that were mailed out. The responses were complied and analyzed and showed positive results. Many of the participants were satisfied with their improvement after the program and with the care that they received from the physical therapist.
CHAPTER I
INTRODUCTION

Introduction

"Incontinence is not a disease, but a quality of life issue." \(^1\) Ten to twenty million Americans suffer from some form of incontinence, and 80% of the cases can be improved or cured. \(^2\,^3\) Many of these cases can be effectively treated with non-surgical intervention. However, only 10% or less of women seek medical assistance even though 80% of the cases can be improved or cured. \(^2\)

Problem Statement

Because of the nature of the condition, many women are embarrassed to report signs of incontinence or assume that it is a natural part of aging. Treatment of pelvic floor dysfunctions has become a new aspect of physical therapy treatment.

Purpose Statement

The purpose of this study is to determine the patient’s satisfaction with physical therapy treatment of pelvic floor dysfunctions.

Significance of Study

With the results of the study, one can see how patients are reacting to treatment of their pelvic floor dysfunctions. The benefits of this study will be directed at patient care. With the results, the effectiveness of the treatment for
pelvic floor dysfunctions can be improved. It will benefit the physical therapy profession by helping to increase patient satisfaction with the received treatments. The results will be beneficial to the cooperating institute to see if their program is effective and if the patients are satisfied with the care that they received.
CHAPTER II

LITERATURE REVIEW

"Urinary incontinence remains a hidden and inadequately treated problem in a high proportion of women."\(^4\) There is only a small percentage of individuals that seek help which may be due to the embarrassment of their condition and fear of surgical intervention.\(^3\) Urinary incontinence is a common condition that becomes more prevalent as one ages, but is not a natural part of aging.\(^1,5\)

"Urinary incontinence is a highly treatable condition."\(^3\) There are effective treatments for urinary incontinence that do not include surgery or medications.\(^2\) Physicians should view surgery as a last resort after conservative treatment and patient education.\(^6\) The 1996 AHCPR Clinical Practice Guidelines on *Urinary Incontinence in Adults* endorses pelvic floor rehabilitation and bladder retraining as "effective, low-risk intervention that can reduce incontinence significantly in varied populations."\(^7\) There are a number of factors that lead to incontinence, such as excessive weight, frequent constipation, chronic cough, childbirth, decreased estrogen with menopause, urinary infections, and high fluid intake. All of these can cause stress or weaken the pelvic floor muscles. Some medications may cause an increase in chances of incontinence.\(^1,8\)
A decrease in social activities outside the home and a restriction or avoidance of sexual activity is prevalent in many individuals with incontinence. Incontinence causes reduced mental well being and embarrassment.

The term incontinence has been used interchangeable with the term pelvic floor dysfunction. A pelvic floor dysfunction is defined by the International Continence Society (ICS) as a dysfunction with functional symptoms in the areas of urinary incontinence and also bowel or sexual symptoms.

**Basic Urination Mechanism**

It is important to understand the normal mechanism for urination in order to treat its dysfunctions. Urine is stored in the bladder, which is compromised of smooth muscle. The bladder can hold up to 600 to 800 mL of fluid. While the bladder is filling, the smooth muscle is in a relaxed state. The urethra is connected to the bladder, which empties the urine into the exterior during urination. There is a section of striated muscle that surrounds the external opening of the urethra (external sphincter) and is contracted during bladder filling and relaxed during urination. The pelvic floor muscles have two primary functions, “being supportive and sphincteric.” The pelvic floor muscles “contribute to the maintenance of continence by increasing intra-urethral pressure and stabilizing the supportive endopelvic fascia during contraction.” Strong sphincter and pelvic floor muscles keep the urethra closed until the body is ready to urinate. The strength of the levator ani muscle is important. If this muscle is too lax, the urethra is displaced and the intra-urethral pressure is decreased. With the decrease in intra-urethral pressure, there is an increase in
intra-abdominal pressure, which causes relaxation of the pelvic floor muscles and leakage of urine.\textsuperscript{3}

**Anatomy of Pelvic Floor**

Knowledge of the pelvic floor anatomy is important to the treatment and understanding of pelvic floor dysfunctions. The pelvic floor lies at the bottom of the abdominopelvic cavity and is a group of funnel-shaped muscles that separate the pelvis and perineum.\textsuperscript{11,12} The pelvic floor is made up of three supporting layers: endopelvic fascia, the pelvic diaphragm, and the urogential diaphragm. These three supporting layers include fascia, connective tissue, ligaments, and muscles.\textsuperscript{11}

The endopelvic fascia is a continuation of the abdominal transversalis fascia. Beneath the peritoneum, the endopelvic fascia attaches and joins various pelvic organs. The cardinal and uterosacral ligaments support the cervix and upper vagina above the levator plate. Another part of the endopelvic fascia is the urethropelvic ligaments. These ligaments are intertwined with the fibers of the pubococcygeus muscles and travel to the anterior vaginal wall, bladder neck, and proximal urethra. This forms the main musculofascial support of the bladder neck and proximal urethra. Pubourethral ligaments join the pubic bone with the mid urethra on the undersurface. Weakness of these ligaments causes a posterior and inferior movement of mid urethra. The pubourethral ligaments do not offer a significant amount of support, but weakness of the ligaments has been noted in cases of incontinence.\textsuperscript{11}
The second layer of the pelvic floor is the pelvic diaphragm. It is made up of striated muscles that close the pelvic outlet. The main muscles include the levator ani and coccygeus muscles. The levator ani is considered the true muscular floor of the pelvis and consists of the pubococcygeus, ischiococcygeus, and puborectalis muscles.³,¹¹ The levator ani consists of two broad, thin symmetrical muscular sheets that originate around the pelvic sidewall and in the sacrospinous ligament. The puborectalis muscle originates in the posterior aspect of the pubis, forming a sling around the rectum and back to the posterior aspect of the pubis. Fibers of the puborectalis are adjacent to and below the innermost component of levator ani where they are intimately associated with the upper posterolateral fibers of the deep external anal sphincter. The puborectalis serves as a bridge between the broad sheet-like levator ani and the narrow functional external sphincter.¹² The urethra and vagina anteriorly and the rectum posteriorly pass from the pelvis to the perineum through the levator ani.¹³ Muscle fibers of the levator ani are composed of both Type I (slow twitch, endurance fibers) and Type II (fast twitch, rapid contraction fibers). There is approximately 70% Type I and 30% Type II muscle fibers.¹⁰ The levator ani can maintain tone over a long period of time and can also produce strong and quick contractions as needed.³ Muscles of the pelvic floor maintain a constant contraction by spinal reflex to support the pelvic floor. The rectus abdominis and the pelvic floor contract simultaneously. With the contraction of the abdominal muscles, such as with a cough or sneeze, the pubococcygeus also contracts and causes an equalization of pressure within the abdominal cavity and proximal urethra to
maintain continence. The pelvic diaphragm can be divided into an anterior muscle group (the pubovisceral portion) and the posterior muscles group (the base plate). The anterior muscle group attaches to the bladder, urethra, vagina, uterus, and rectum and serves an active role in pelvic visceral control. The anterior pubococcygeus muscle helps to support the visceral structures at rest, acts as the support during increased intra-abdominal pressure, and serves as backup for the endopelvic fascia. The posterior muscle group consists of the posterior levators and the coccygeus muscle. These muscles provide a base support for the pelvic organs and a firm closure of the pelvic outlet. The posterior pelvic floor muscles are active at rest, along with the anterior muscles.\textsuperscript{11}

The urethra is a part of the anterior muscle group of the pelvic diaphragm. The urethra is divided into segments: bladder neck, proximal urethra, mid urethra, and distal urethra. The bladder neck and proximal urethra are considered the initial segment. The initial segment makes up a small portion of the urethra, but it has the most influence on continence. At the proximal urethra, the pubococcygeus muscles and ligaments support the lateral portion of the continence mechanism so as to equalize the pressure of the body and bladder outlet. At the mid urethra and distal urethra, there is the greatest increase in intraurethral pressure, and is an important part of the continence mechanism. Location of the mid urethra is where the extrinsic continence mechanism lies. The extrinsic muscles, the compressor urethra, the urethrovaginal sphincter, and the sphincter urethrae are striated and surround the smooth muscle of the urethra and contribute to the resting urethral pressure.\textsuperscript{11}
Another part of the anterior muscle group is the vagina. The vagina consists of three layers: inner mucous coat, muscular layer in the middle and an outer fibrous sheath. The inner mucous coat is under autonomic and hormonal control for the excretion of fluids during sexual arousal. The muscular layer is made up of smooth muscle fibers arranged in spiral bundles. Use of the spiral bundles allows for the distention of the vagina. The connective tissue of the outer layer is a dense sheath of collagen and elastic fibers that joins the vagina to the surrounding endopelvic fascia. The outer fibrous layer joins strong bands of connective tissue, which suspends the vagina and maintains the normal orientation in the pelvis.\textsuperscript{11}

The other part of the pelvic floor is the urogenital diaphragm. The urogenital diaphragm consists of the deep transversus peronei muscles, and the intrinsic muscles of the bulbocavernosus muscle, superficial transverse peronei, and external and internal sphincters. The urogenital diaphragm adds additional support to the anterior pelvic outlet support when the levator ani is deficient and is where the muscles contract voluntarily. The muscles aid in controlling the perineum during coughing, sneezing, etc.\textsuperscript{11}

**Types of Incontinence**

Incontinence is defined by the International Continence Society (ICS) as "an involuntary loss of urine which is objectively demonstrable and a social or hygienic problem."\textsuperscript{4,14} There are four general categories of urinary incontinence: stress, urge, overflow and mixed.\textsuperscript{15} The most common type is stress incontinence.\textsuperscript{3,8} Stress incontinence is common in women that are pregnant or
after recent childbirth due to weakening of the pelvic floor. It is defined by the ICS as "involuntary loss of urine occurring when, in the absence of detrusor contraction, the intravesical pressure exceeds the maximum urethral pressure." Physical activity or a rise in intra-abdominal pressure, such as in coughing, sneezing, or straining, tends to cause leakage. The amount of leakage is small due to the intravesical pressure overcoming the urethral sphincter mechanism. Urge incontinence is defined by ICS by "involuntary loss of urine associated with a strong desire to void (urgency)." This can be divided into sensory and motor urgency. Motor urgency results from improper contraction of the detrusor and relaxation of the urethral sphincter for a time. This usually causes the bladder to empty entirely. Sensory urgency is described by a "strong desire to void that is associated with intense emotional excitation and nervousness." Individuals with urge incontinence are unable to control the voiding, even though they are conscious of the need to void. Urge incontinence is often found in patients with neurological conditions such as a stroke, dementia, Parkinson's disease, and multiple sclerosis. Overflow incontinence is defined by the ICS as "any involuntary loss of urine associated with overdistention of the bladder." There is an increase in bladder pressure over the urethral pressure, which causes leakage to occur. The patient may also be have an inability to properly empty the bladder, causing a chance for frequent leakage of urine. In this type of incontinence, there is either an obstruction of the urethra or inability of the detrusor to contract. The final category is mixed. This is a combination of
the other types of incontinence. The most common combination is stress and urge. Mixed incontinence usually occurs in older patients.

**Psychological Effects of Incontinence on Patients**

It is well known that incontinence can have a negative impact on a patient’s psychological and social well being. One study showed that 57% of the patients surveyed who had incontinence thought their condition was “very embarrassing,” and another 31% thought it was “somewhat embarrassing.” Patients with incontinence have a feeling of embarrassment because of their condition, appearance, and possibility of odor. It has been shown that patients with incontinence have a decrease in social and physical activities and a fear of sexual activity. A survey of life satisfaction showed that patients without incontinence scored the highest with the life satisfaction and as being the least depressed, whereas the patients with incontinence scored the lowest in life satisfaction and as being the most depressed.

**Treatment for Pelvic Floor Dysfunctions**

“There is help available. Incontinence is not ‘normal.’ And education is power.” These are the words of an individual who had suffered from incontinence for many years before seeking out medical advice. One study showed that patients with untreated incontinence did not show improvement spontaneously and that some form of treatment would be needed. There are many different ways to treat pelvic floor dysfunctions. The most widely known way is by surgical means. Because of this, many individuals that suffer from incontinence go untreated. There is a rise in treatment of pelvic floor
dysfunctions because the idea of non-surgical treatment is becoming more known, and patients are being more educated.17 Pelvic floor dysfunction treatment by physical therapists is a noninvasive and low-risk option for patients that should be tried before surgery.10 There have been a number of studies about the success and benefits to individuals with the use of non-surgical treatment methods. One study showed that patients in the age of fifty to seventy-four-year olds were able to make considerable improvement with the conservative treatment by the physical therapist. Conservative treatment is often effective in higher-age groups with the goals of decreased leakage and return to normal urination.4 Most bladder problems occur because of weak or inactive muscles and with the re-education of the pelvic floor muscles, the number of patients with incontinence will decrease.10,16

In the late 1940's, a gynecologist named Arnold Kegel became one of the first people to recommend pelvic floor exercises. He believed that the use of pelvic floor exercises would tone the pelvic floor and decrease the chances of developing stress incontinence. The exercises were first thought to be used by women following childbirth but are now used more readily. The Kegel exercises represented the ability of the pelvic floor to voluntarily contract and relax.18 The Kegel exercises were used to decrease incontinence and to increase the strength and endurance of the muscles for certain conditions, such as an increase in abdominal pressure with coughing.7,18 Due to a number of reasons, such as improper instruction, society’s view of incontinence, and muscle lesions, the exercises were not done correctly and viewed as ineffective.7 Many women
were unable to contract properly without substitution of the gluteals and hip adductors with just written instructions of the exercises. With this problem, Kegel developed a perineometer to help indicate to the patient when the correct muscles were being used.\textsuperscript{18} Nowadays, with the use of biofeedback and proper patient education, the effectiveness of Kegel exercises has increased.\textsuperscript{19}

"Pelvic floor rehabilitation aims at enabling the patient to perform pelvic floor exercises properly and to make functional use of the muscle contractions for maximum closure and support."\textsuperscript{8} Pelvic floor rehabilitation is increasing in popularity. Many of the health professionals that treat individuals with pelvic floor dysfunctions are physical therapists. Many of the physical therapists look at pelvic floor rehabilitation in the same way as treatment of any other skeletal muscles. The recruitment and strength of the muscles are very important for optimal results.\textsuperscript{7}

As with any physical therapy treatment, the therapist starts with an initial evaluation. A detailed patient history is taken with special attention to urinary systems history, as well as sexual and bowel functions. The history is followed by an evaluation of the pelvic floor. Palpation of the pelvic floor may be done vaginally or anally. This is done to show the elasticity and tone of the muscles.\textsuperscript{7} Evaluation and measurements of the pelvic floor muscle function includes an assessment of the patient's ability to contract and relax the pelvic floor selectively and the force of the contraction.\textsuperscript{9} Inspection is used to help with the evaluation of the pelvic floor contraction. There should be an inward movement of the perineum, whereas straining or a Valsalva maneuver will cause a downward
movement. The evaluation should include reflexes, proprioception, sensitivity, and pain. Pain or hypersensitivity may cause muscle guarding or a decrease in contractility of the pelvic floor muscles. With hyposensitivity, there may be a denervation or an inhibition of the area that causes a decrease in contractility. Posture, abdominals, lumbar spine, and the pelvis should also be evaluated because of the abdomino-pelvic mechanism.

Manual techniques can be used for the pelvic floor. Perineal massage, either internally or externally, may be performed to decrease pain, inflammation, relaxation of muscles, or proprioception. The increase in proprioception can improve the patient's ability to contract the pelvic floor properly. As it has been noted, a decrease in proprioception causes the improper contraction of the pelvic floor. Myofascial release can be used to improve mobility and function of the tissues. Gentle pressure in the direction of the impairment and the use of trigger point therapy relieves pain. Mobilizations of the coccyx may be done to decrease pain and increase mobility and function of the pelvic floor muscles. Soft tissue mobilizations may be used with patients who have scarring or edema following childbirth.

Gain of continence occurs when women practice pelvic floor exercises consistently and correctly. The patient needs to learn to contract the muscles correctly. This may be done with the use of a perineometer or a mirror, or digitally. With the use of a mirror, the patient should notice the downward movement of the clitoris and the inward pulling and elevating of the pelvic floor. Patients are instructed to “tighten” and “lift and hold” the contraction.
Activities that cause an increase in intra-abdominal pressure such as straining, should be avoided as it reverses the gains that the patient had made with her exercises.\textsuperscript{20} There are a variety of protocols concerning the frequency of exercises. Some recommend daily exercises with two to three sessions a day, whereas another recommends doing the exercises throughout the day in a variety of positions like sitting, standing, and reclining. Women should be taught to perform thirty-five to forty repetitions with a ten-second contraction throughout the day. With the ten-second contraction, it is thought to recruit the Type II muscle fibers and then to activate the Type I muscle fibers. The Type II fibers will fatigue quickly, and the Type I fibers will be relied on to maintain the tone for the rest of the contraction. There should be a ten-second-relaxation phase. With the relaxation phase, the Type II fibers have a chance to revive themselves, the patient has a chance to recognize the use of any additional muscle groups, and to allow for the proprioceptive sense to be used with each contraction.\textsuperscript{21}

An advancement of the pelvic floor rehabilitation includes the use of vaginal cones during the Kegel exercises.\textsuperscript{14} The weights, vaginal cones, are shaped like a small tampon and come in a set of five, but the weight ranges from 20 grams to 65 grams.\textsuperscript{3,17} A cone is placed in the vagina and held in place by the levator muscles. The patient is instructed to start by placing a cone in the vagina and to walk around for a minute while holding the cone in place. If the patient can do this, a heavier weight is needed. The patient should work up to fifteen minutes two times a day with the weight and increase the weight as needed.\textsuperscript{3} There is a tendency for the cone to fall out, which causes a response
for the contraction of the muscles to retain the cone. The use of the cones helps to ensure that the correct muscles are being used.\textsuperscript{14} Substitution of muscles is not efficient with this exercise, so it is an excellent tool for teaching and training of the pelvic floor muscles.\textsuperscript{3} One preliminary study shows a 70\% objective improvement with the use of cones, and also included the patient’s acceptance of this form of treatment.\textsuperscript{14}

The pelvic floor muscles can be voluntarily controlled, but selective contraction and relaxation of these muscles is important for the patient to learn in order to have success with the treatment.\textsuperscript{9} Pelvic floor exercises help a patient to focus on isolation of a specific muscle or group of muscles. Since many of these muscles are not knowingly contracted voluntary with activities, most women are unable to perform them correctly with just verbal instructions. Biofeedback has become an important tool in the instruction of pelvic floor exercises and with the treatment of stress and urge incontinence.\textsuperscript{10} “Biofeedback is the capability to recognize, by a sense, a particular variation or characteristic of a physiological milieu and to modify it by a voluntary action.”\textsuperscript{22} Biofeedback is a learning technique that is used to identify the contraction of specific muscles. With the use of electrodes or probes and visual or audio feedback, a patient is able to see what muscles are being contracted. The contraction of the muscles is measured by the electrical energy that is given off by the nerves that stimulate the contraction. The electrodes are placed in specific spots, either externally or internally, and the probes are inserted vaginally, in order to record the contractions of the muscles. Many patients want to substitute the pelvic floor
muscles with their abdominals, gluteals, and hip adductors. By substituting muscles, the pelvic floor is not being used as needed and adds to the weakness of it. As the patient becomes more aware of what muscles are and are not being used, the patient is able to correct the contraction. With the use of the visual feedback, the patient is able to visualize the muscle contraction on a light bar or screen. There are certain parameters that the patient needs to keep the contractions of the pelvic floor muscles in and relaxation of the substituting muscles. There cannot be an increase in accessory muscle action or a decrease in pelvic floor activity. As the patient improves with the isolation of the pelvic floor muscles, the contractions are held for longer periods of time and in more functional situations, such as coughing and laughing. Studies that have been done with the use of biofeedback show a 76% decrease in incontinence, whereas there was only a 51% decrease in incontinence with just verbal cues.

Another form of pelvic floor dysfunction treatment is functional electrical stimulation. It is used to increase the proprioceptive awareness of the pelvic floor muscles and to facilitate recruitment of muscle fibers. The electrical stimulation induces a contraction of the pelvic floor muscles and can help to transform Type II fibers into Type I for increased endurance. In order for electrical stimulation to be beneficial, there needs to be at least partial innervation of the pelvic floor muscles. Stimulation can be done either rectally or vaginally. With the use of the vaginal probe, there is more of a chance for movement during stimulation; the anal probe is held in place better with use of the anal sphincter. There are a variety of vaginal probes that are available for patients due to the individuality of
all patients. Electrical stimulation therapy can be an outpatient procedure or a home program. Stimulation of the levator ani causes the proper muscular contraction. With the increase in muscle contraction, the strength of the levator ani increases. As the levator ani increases in strength, the overall strength of the pelvic floor increases.\textsuperscript{10} With an increase in strength, there is a decrease in incontinence.\textsuperscript{3} Studies have shown 70% of patients with stress incontinence that received electrical stimulation reported improvement.\textsuperscript{10}

Treatment of pelvic floor dysfunctions involves a number of techniques. One of the most important parts of the treatment involves the proper contraction of the pelvic floor muscles without the addition of the gluteals, hip adductors or abdominal. Biofeedback and electrical stimulation have shown to be effective in educating the patient on the contraction of the proper muscles and the increase in strength.
CHAPTER III
METHODOLOGY

Subjects

The subjects consist of patients who were treated by two physical therapists at Altru Health Institute for pelvic floor dysfunctions. All of the subjects had been treated and discharged from care. The ages of the patients ranged from thirty-two years old to eighty-nine years old.

Instrumentation – Survey

The survey consisted of questions based on the patient’s perception of their incontinence and satisfaction of the physical therapy services (Appendix A). Many of the questions that were related to incontinence are questions that the patients had been asked before, such as: How often do you worry about wetting yourself? and How many times do you need to change clothes due to leakage? These questions should not have been surprising to the patient, as they are a part of routine patient care for pelvic floor dysfunctions. The questions were taken from previously conducted surveys. Completion of the survey was entirely voluntarily.

Procedure

The surveys, cover letters, and stamped return envelopes were provided by the investigator to the physical therapists so as the names and addresses of the patients would be kept confidential. The cover letter included information to
the patient on what the study was designed for and that it was completely voluntarily and the return of the surveys would be considered as their informed consent. The cover letters, surveys, and return envelopes were mailed to the patient following discharge from treatment for pelvic floor dysfunctions by the physical therapists during the summer of 1999. The participants were asked to voluntarily complete the survey and return it by mail to the investigator with use of the stamped, return envelope by September 1, 1999. The surveys will be kept in the University of North Dakota Department of Physical Therapy for three years following the completion of the study and then will be destroyed.

Data Analysis

The investigator will compile the responses to the survey. Results will be compared as a whole and by divisions according to age. The results will be determined by the use of traditional descriptive and analytical statistics with use of the computer program Microsoft® Works.
CHAPTER IV

RESULTS

Completed surveys were collected and offered very encouraging results. Of the fifty-five surveys that were mailed out to patients following discharge, thirty-four were returned for an excellent return rate of 61.8%. With the thirty-four returned surveys, the responses were complied and analyzed.

All of the responses were based on a subjective answer from the patients on a one to four scale. There were two sections of questions included in the survey. The first section included questions about the patient's quality of life in relation to the pelvic floor dysfunction. The second section was included to survey the patient's satisfaction of their physical therapist and the treatment that they received. The mean score and standard deviation for each question are included in Table 1 along with each question. A majority of the questions in the first section had a score of two or greater with the mean score and many had a score of 3 or greater on the individual questions and responses.

In the second section, there was a majority of scores of four on the individual questions and a majority of three or greater with the mean scores. There was one patient that responded with scores of one, three, and four.

Another comparison of patient responses was by age. The range of ages was from thirty-two to eighty-nine. The patients were put into four different groups. The division of the patients was based on the number of patients in each
category and a general division. The categories are closely equal with the number of patients in each with exception of the youngest group, as there was not a clear division between this category. Of the thirty-four surveys returned, only thirty-three were used as one survey did not include an age. Again, the survey was divided into two sections, with the first section relating to the quality of life and the second section on patient satisfaction with treatment. As one looks at the mean scores in Table 2a with the various categories, there is a noticeable decrease in mean score. The highest scores were noted in Categories A and B, which has the youngest patients, and the lowest mean scores were in Category D, which has the oldest patients. In the second section, there was not a large change in means between the different categories.

There were three additional questions that were included at the end of the survey. The first question referred to the overall satisfaction with the treatment program. The median score for this question was 3.076 with a standard deviation of 0.871. The score of three represents a satisfied response to the program. The results are shown in Table 3.

The second question asked whether or not the patient would recommend this treatment program to others. Thirty-two of thirty-four responses said yes, one response said no, and one response was left blank.

The last question was in reference to how the patient had heard of the program. Many of the patients were referred to the program by their physician, whereas others had heard of it through family and friends or advertisements and brochures. There were a couple of responses that included both their physician
and through advertisements that they heard of the program. One patient saw an article on the treatment program in the newspaper and brought it to the attention of her physician to give it a try. The responses for this question are shown in Table 4.
Table 1a. – Quality of Life Related to Incontinence Results

1 = Very much  2 = Moderately  3 = A little  4 = Not at all

<table>
<thead>
<tr>
<th>Questions</th>
<th>Median</th>
<th>STD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I worry about wetting myself.</td>
<td>2.235</td>
<td>0.876</td>
</tr>
<tr>
<td>2. I worry about coughing or sneezing because of my incontinence.</td>
<td>2.471</td>
<td>0.882</td>
</tr>
<tr>
<td>3. I have to be careful standing up after I've been sitting down because of my incontinence.</td>
<td>3.206</td>
<td>0.993</td>
</tr>
<tr>
<td>4. I worry about where toilets are in new places.</td>
<td>2.618</td>
<td>1.237</td>
</tr>
<tr>
<td>5. I feel depressed because of my incontinence.</td>
<td>3.206</td>
<td>0.963</td>
</tr>
<tr>
<td>6. I feel frustrated because my incontinence prevents me from doing what I want.</td>
<td>2.971</td>
<td>1.043</td>
</tr>
<tr>
<td>7. I worry about others smelling urine on me.</td>
<td>2.559</td>
<td>1.062</td>
</tr>
<tr>
<td>8. Incontinence is always on my mind.</td>
<td>2.735</td>
<td>1.009</td>
</tr>
<tr>
<td>9. It's important for me to make frequent trips to the toilet.</td>
<td>2.471</td>
<td>0.977</td>
</tr>
<tr>
<td>10. I worry about my incontinence getting worse as I grow older.</td>
<td>2.147</td>
<td>0.879</td>
</tr>
<tr>
<td>11. I have a hard time getting a good night sleep because of my incontinence.</td>
<td>3.294</td>
<td>1.099</td>
</tr>
<tr>
<td>12. I worry about being embarrassed or humiliated because of my incontinence.</td>
<td>2.559</td>
<td>1.006</td>
</tr>
<tr>
<td>13. My incontinence makes me feel like I'm not a healthy person.</td>
<td>3.206</td>
<td>0.932</td>
</tr>
<tr>
<td>14. My incontinence makes me feel helpless.</td>
<td>3.235</td>
<td>1.031</td>
</tr>
<tr>
<td>15. I get less enjoyment out of life because of my incontinence.</td>
<td>3.118</td>
<td>0.993</td>
</tr>
</tbody>
</table>
Table 1a. continued

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>16.</td>
<td>I worry about not being able to get to the toilet on time.</td>
<td>2.676</td>
<td>0.898</td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>I feel like I have no control over my bladder.</td>
<td>2.882</td>
<td>0.932</td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>I have to watch what I drink because of my incontinence.</td>
<td>2.618</td>
<td>1.164</td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>My incontinence limits my choice of clothing.</td>
<td>3.353</td>
<td>0.836</td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>I worry about having sex because of my incontinence.</td>
<td>3.645</td>
<td>0.65</td>
<td></td>
</tr>
</tbody>
</table>

Table 1b. Patient's Satisfaction of the Physical Therapist and Services Provided

<table>
<thead>
<tr>
<th>Question</th>
<th>Median</th>
<th>STD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. My physical therapist treated me in a professional and friendly manner.</td>
<td>3.912</td>
<td>0.284</td>
</tr>
<tr>
<td>2. My physical therapist seemed competent and well trained in this treatment.</td>
<td>3.941</td>
<td>0.235</td>
</tr>
<tr>
<td>3. I felt free to ask my physical therapist questions.</td>
<td>3.794</td>
<td>0.583</td>
</tr>
<tr>
<td>4. My physical therapist answered my questions satisfactorily.</td>
<td>3.794</td>
<td>0.404</td>
</tr>
<tr>
<td>5. I have no doubts about the treatment that the physical therapist presented to me.</td>
<td>3.618</td>
<td>0.595</td>
</tr>
<tr>
<td>6. I am very satisfied with my results following my treatment sessions.</td>
<td>3.333</td>
<td>0.725</td>
</tr>
<tr>
<td>7. I have made significant improvements in control of my incontinence since the end of treatment.</td>
<td>3.156</td>
<td>0.667</td>
</tr>
</tbody>
</table>
Table 2a. – Quality of Life Related to Incontinence Results with Age Group Comparisons

1 = Very much  2 = Moderately  3 = A little  4 = Not at all

<table>
<thead>
<tr>
<th>Questions*</th>
<th>A Mean</th>
<th>STD</th>
<th>B Mean</th>
<th>STD</th>
<th>C Mean</th>
<th>STD</th>
<th>D Mean</th>
<th>STD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>2.417</td>
<td>0.954</td>
<td>2.857</td>
<td>0.349</td>
<td>2.125</td>
<td>0.806</td>
<td>1.333</td>
<td>0.471</td>
</tr>
<tr>
<td>2.</td>
<td>2.5</td>
<td>0.764</td>
<td>2.714</td>
<td>0.699</td>
<td>2.375</td>
<td>0.699</td>
<td>2.5</td>
<td>1.258</td>
</tr>
<tr>
<td>3.</td>
<td>3.833</td>
<td>0.553</td>
<td>3.286</td>
<td>0.699</td>
<td>2.875</td>
<td>0.806</td>
<td>2.167</td>
<td>1.213</td>
</tr>
<tr>
<td>4.</td>
<td>3.25</td>
<td>1.164</td>
<td>3.429</td>
<td>0.499</td>
<td>1.75</td>
<td>0.789</td>
<td>1.333</td>
<td>0.471</td>
</tr>
<tr>
<td>5.</td>
<td>3.583</td>
<td>0.64</td>
<td>3.858</td>
<td>0.349</td>
<td>3.25</td>
<td>0.679</td>
<td>1.667</td>
<td>0.745</td>
</tr>
<tr>
<td>6.</td>
<td>2.917</td>
<td>1.115</td>
<td>3.858</td>
<td>0.349</td>
<td>3.125</td>
<td>0.749</td>
<td>1.857</td>
<td>0.687</td>
</tr>
<tr>
<td>7.</td>
<td>2.75</td>
<td>1.01</td>
<td>3.143</td>
<td>0.833</td>
<td>2</td>
<td>0.894</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>8.</td>
<td>3.167</td>
<td>0.898</td>
<td>3.429</td>
<td>0.495</td>
<td>2.5</td>
<td>0.884</td>
<td>1.5</td>
<td>0.5</td>
</tr>
<tr>
<td>9.</td>
<td>3</td>
<td>0.707</td>
<td>3.143</td>
<td>0.639</td>
<td>1.75</td>
<td>0.854</td>
<td>1.5</td>
<td>0.5</td>
</tr>
<tr>
<td>10.</td>
<td>2</td>
<td>0.816</td>
<td>2.714</td>
<td>0.881</td>
<td>2</td>
<td>0.854</td>
<td>1.833</td>
<td>0.687</td>
</tr>
</tbody>
</table>

*The questions are listed in Table 1a.
Age Categories: A 32-49 y/o; B 51-67 y/o; C 70-77 y/o; D 80-89 y/o

25
<table>
<thead>
<tr>
<th>Questions*</th>
<th>A Mean</th>
<th>STD</th>
<th>B Mean</th>
<th>STD</th>
<th>C Mean</th>
<th>STD</th>
<th>D Mean</th>
<th>STD</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.</td>
<td>3.917</td>
<td>0.276</td>
<td>3.714</td>
<td>0.452</td>
<td>3.125</td>
<td>1.087</td>
<td>1.667</td>
<td>1.106</td>
</tr>
<tr>
<td>12.</td>
<td>2.83</td>
<td>0.799</td>
<td>3.429</td>
<td>0.495</td>
<td>2.375</td>
<td>1.011</td>
<td>1.333</td>
<td>0.471</td>
</tr>
<tr>
<td>13.</td>
<td>3.417</td>
<td>0.759</td>
<td>4</td>
<td>0</td>
<td>3</td>
<td>0.679</td>
<td>2.167</td>
<td>1.067</td>
</tr>
<tr>
<td>14.</td>
<td>3.5</td>
<td>0.645</td>
<td>3.857</td>
<td>0.349</td>
<td>3.857</td>
<td>1.019</td>
<td>1.667</td>
<td>0.745</td>
</tr>
<tr>
<td>15.</td>
<td>3.25</td>
<td>0.722</td>
<td>3.714</td>
<td>0.452</td>
<td>3.714</td>
<td>0.998</td>
<td>1.833</td>
<td>0.898</td>
</tr>
<tr>
<td>16.</td>
<td>3.083</td>
<td>0.759</td>
<td>3.143</td>
<td>0.349</td>
<td>3.143</td>
<td>0.712</td>
<td>1.333</td>
<td>0.471</td>
</tr>
<tr>
<td>17.</td>
<td>3.417</td>
<td>0.493</td>
<td>3.571</td>
<td>0.495</td>
<td>3.571</td>
<td>0.718</td>
<td>1.667</td>
<td>0.745</td>
</tr>
<tr>
<td>18.</td>
<td>2.833</td>
<td>1.143</td>
<td>3.571</td>
<td>0.495</td>
<td>3.571</td>
<td>1.011</td>
<td>1.333</td>
<td>0.745</td>
</tr>
<tr>
<td>19.</td>
<td>3.75</td>
<td>0.595</td>
<td>3.857</td>
<td>0.349</td>
<td>3.857</td>
<td>0.772</td>
<td>2.667</td>
<td>0.943</td>
</tr>
<tr>
<td>20.</td>
<td>3.417</td>
<td>0.759</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>0.718</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

*The questions are listed in Table 1a.
Age Categories: A 32-49 y/o; B 51-67 y/o; C 70-77 y/o; D 80-89 y/o
Table 2b. —Patient's Satisfaction of the Physical Therapist and Services Provided According to Age Categories

1 = Strongly Disagree  2 = Disagree  3 = Agree  4 = Strongly Agree

<table>
<thead>
<tr>
<th>Questions*</th>
<th>A Mean</th>
<th>A STD</th>
<th>B Mean</th>
<th>B STD</th>
<th>C Mean</th>
<th>C STD</th>
<th>D Mean</th>
<th>D STD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>4</td>
<td>0</td>
<td>3.857</td>
<td>0.349</td>
<td>4</td>
<td>0</td>
<td>3.833</td>
<td>0.372</td>
</tr>
<tr>
<td>2.</td>
<td>4</td>
<td>0</td>
<td>3.857</td>
<td>0.349</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>3.</td>
<td>4</td>
<td>0</td>
<td>3.857</td>
<td>0.349</td>
<td>3.75</td>
<td>0.433</td>
<td>3.333</td>
<td>1.106</td>
</tr>
<tr>
<td>4.</td>
<td>3.912</td>
<td>0.276</td>
<td>3.857</td>
<td>0.349</td>
<td>3.75</td>
<td>0.433</td>
<td>3.667</td>
<td>0.471</td>
</tr>
<tr>
<td>5.</td>
<td>3.5</td>
<td>0.763</td>
<td>3.714</td>
<td>0.452</td>
<td>3.75</td>
<td>0.433</td>
<td>3.667</td>
<td>0.471</td>
</tr>
<tr>
<td>6.</td>
<td>3.25</td>
<td>0.829</td>
<td>3.25</td>
<td>0.495</td>
<td>3.5</td>
<td>0.707</td>
<td>3</td>
<td>0.632</td>
</tr>
<tr>
<td>7.</td>
<td>3.25</td>
<td>0.433</td>
<td>3.25</td>
<td>0.699</td>
<td>3.286</td>
<td>0.699</td>
<td>2.6</td>
<td>0.8</td>
</tr>
</tbody>
</table>

* The questions are listed in Table 1b.
Age Categories:  A 32-49 y/o;  B 51-67 y/o;  C 70-77 y/o;  D 80-89 y/o
Table 3. --Overall Satisfaction with Treatment Program

<table>
<thead>
<tr>
<th>Satisfaction Level</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Satisfied (4)</td>
<td>13</td>
</tr>
<tr>
<td>Satisfied (3)</td>
<td>11</td>
</tr>
<tr>
<td>Somewhat Satisfied (2)</td>
<td>9</td>
</tr>
<tr>
<td>Unsatisfied (1)</td>
<td>1</td>
</tr>
</tbody>
</table>

Mean score = 3.076  Standard Deviation = 0.871

Table 4. --How Patients Heard of Program

<table>
<thead>
<tr>
<th>Source</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physician</td>
<td>28*</td>
</tr>
<tr>
<td>Brochure/Advertisement</td>
<td>6*</td>
</tr>
<tr>
<td>Family/Friends</td>
<td>2*</td>
</tr>
<tr>
<td>Other**</td>
<td>1</td>
</tr>
</tbody>
</table>

*Two of the surveys included two answers – physician and brochure/advertisement, and two more surveys had physician and family/friend
**An article printed in the Grand Forks Herald
CHAPTER V
DISCUSSION

The return rate of the surveys was a very positive part of this study. By having such an excellent return rate, it adds to the strength of the results.

Because of the differences in mean scores of the questions, it shows the variety in the individual questions and the two sections. The question that received the lowest score in the first section was referring to worsening of the incontinence with age. This may be do to the fact that many people believe incontinence is a result of aging and that they can manage the symptoms on their own.\textsuperscript{3,5}

In the second section, the questions that received the highest scores were the questions that related to the physical therapist's competency and training of pelvic floor dysfunctions and the professional and friendly manner that was used by the therapists. This is very encouraging to see that patients were able to feel comfortable and satisfied with the treatment that they received by their therapist. The question that received the lowest score in the second section was in regards to significant improvements since the end of treatment. This may have been lower due to the fact that many patients included in the additional comments about the difficulty with compliance of the program following discharge.
With the comparisons of the first section of the survey within age groups, there was an overall decrease in mean score as the patients got older. This may be due to the fact that even though incontinence is not a natural part of aging, it is more common as one ages.\textsuperscript{1,5} There was a large number of individual scores of one in Category D as compared to the other categories. The largest change in means from Category A (3.917) to Category D (1.667) was with Question 11. This question referred to being able to get a good night's sleep because of the incontinence. Other questions that had a large change in mean were Questions 3 and 5, which referred to being careful when standing after sitting because of the incontinence and the feeling of depression, respectively. The last question on Table 2a showed the opposite in change of mean as compared to the other questions. In Question 20, which referred to incontinence and sexual activity, Category A scored the lowest with a mean score of 3.417, while the Categories B, C, and D had a mean of 4.

In the second section of the survey, the majority of responses were either three or four, which shows that the patients believed that they received satisfactory treatment from their physical therapist, regardless of their age. This is a positive result, as patients need to be treated as individuals whether they are younger or older. The largest change in mean score was in the last question (Question 7) which referred to the patient's idea of improvement since the end of treatment. The mean scores were 3.25, 3.25, 3.286, and 2.6 for each category. This showed that the older patients did not think that they had as much of an improvement as opposed to the younger patients. The mean of Category D was
decreased significantly with three individual scores of two, whereas the other three categories had only two individual scores of two combined.

There was an overwhelming response in the question that referred to whether or not the patient would recommend this program to others. There was a 94.1% response in favor of recommending the program. This response shows that the patients were happy with the results that they had received and were able to endorse it for others.

The responses as to how the patients heard of the program were in favor of referrals from physicians. A number of the patients indicated that either their family physician or gynecologist had referred them to the program. A number of patients heard of the program through family or friends, which may be related to the number of patients who were recommending the program.

Of the thirty-four surveys that were returned, sixteen patients included additional comments (Appendix B). A number of the comments were about the diagnosis that led to the referral. A couple of diagnoses included prolapsed uterus, feeling to urinate/urge, and following childbirth.

There were many positive comments for both the treatment program and for the physical therapists. A couple of patients said, “thank you” to their physical therapist. One patient’s comments included, “I really appreciated her talking to me, as I didn’t want to be a quitter. She made me feel good about myself.” This is an important and encouraging response from a patient as this treatment program is more personal than others. Many patients commented on the success of the program. “I have let my doctor know that the therapy works and
she should feel confident.” “It was my OB-GYN that referred me and I must let her know how successful it was.” Some of the other comments were: “Strongly recommend therapy to others; it’s a good program; the treatment was very beneficial; I feel I’m getting help.”

A majority of the comments were in regards to compliance issues with the exercises. There were nine patients who responded to this. Many of the patients said that the exercises were helpful, but they found it difficult to continue them on their own. One patient responded, “I think that the treatment did help, however...once the sessions are completed and I’m left to do this on my own with no one to be accountable to - it’s very hard to keep doing them daily – to find the time.” Another patient said, “I know that I need to, but...it was much easier to remember to do them when I knew I had an appointment in 2-3 weeks to check the progress.” “A person has to be committed to doing the exercises to see results, they are ongoing forever.” “Too bad I can’t put a bell in my head to remind me to do the exercises.” “Putting it bluntly...I hate the exercises, but continue to do them.” Some of the other comments were in reference to the difficulty in doing the exercises. “It’s a hard area to “supervise” and I need to make certain that the exercises are being done properly due to that.” “It’s hard for me to tell whether the exercises I’m doing are getting at the problem.” One patient noted that it was “much better than having to take pills or surgery.”
CHAPTER VI

CONCLUSION

This is the first time that a survey has been done at Altru Health Institute to look at the patient’s satisfaction with their program and treatment for pelvic floor dysfunctions. If this survey was to be conducted again, there are a few changes that might be made. Some additions that could be added to the survey would include: number of treatment sessions, diagnosis that lead to the referral, medications that one is taking, patient’s compliance with the home exercises program, number of pregnancies and vaginal deliveries, etc. Another change may be the way that the patients are divided up into age-category for comparison and one may want to look at what the patient’s incontinence level was at in the beginning of treatment as compared to the end results.

Compliance with the home exercise program, both during treatment period and after discharge, is an area that could use some retooling. A lot of the compliance issues are up to the patient, but the physical therapist needs to encourage and motivate his/her patients to stay consistent and with the program. The patient needs to realize that in order for the treatment to be successful, the patient needs to stay with it. Ways to increase performance may be to have exercise journals for the patients, written and audiotaped instructions, or self-examination either digitally or with a mirror, and this may lead to an increase in compliance. One of the most important tools for motivation seems to be the
scheduled visits with the physical therapist, as the patient does not want to
disappoint them with their lack of progress.\textsuperscript{21}

The main goal of this study was to see if the patients were satisfied with
their physical therapy treatment sessions and results. The responses that were
received reflected a positive experience for many of the patients. With the
results of this study, there can be positive changes made in the pelvic floor
dysfunction program.
Dear Participant:

My name is Jennifer Norberg and I am currently working towards my Masters' of Physical Therapy degree at the University of North Dakota. As part of my graduation requirements, I am to complete an independent study and have chosen to look at the patient satisfaction of physical therapy treatment for pelvic floor dysfunctions.

Treatment of pelvic floor dysfunction is a growing part of physical therapy. With the use of this survey and its results, improvements can be made with treatments in order to increase patient satisfaction and quality of care.

This survey is completely voluntarily. Megan Boyd, MPT and Holly Bommersbach, MPT, from Altru Health Institute, have mailed out this letter and survey, so as to keep your name and address confidential. I will score the surveys personally and the answers will be kept confidential in the physical therapy department at UND for three years after the completion of the study and then destroyed. The completion and return of this survey will be regarded as your informed consent.

Enclosed, along with the survey, is a self-addressed, stamped envelope. Please return the survey by September 1, 1999. Results of the survey will be available at the conclusion of the study. If you have any questions regarding this survey, please feel free to contact me at (612) 689-3375 or my preceptor, Cindy Flom-Meland, at the Physical Therapy Department at the University of North Dakota at (701) 777-4130.

Thank you for your time and cooperation. Your participation is greatly appreciated.

Sincerely,

Jennifer Norberg, SPT
Patient Satisfaction Survey—Pelvic Floor Dysfunctions

Please take a moment to complete the following survey. Circle the 1, 2, 3, or 4 as indicated by the key. The first section pertains to incontinence.

Age _______________ Date of last treatment session _______________

1 = Very much
2 = Moderately
3 = A little
4 = Not at all

I worry about wetting myself. 1 2 3 4
I worry about coughing or sneezing because of my incontinence. 1 2 3 4
I have to be careful standing up after I’ve been sitting down because of my incontinence. 1 2 3 4
I worry about where toilets are in new places. 1 2 3 4
I feel depressed because of my incontinence. 1 2 3 4
I feel frustrated because my incontinence prevents me from doing what I want. 1 2 3 4
I worry about others smelling urine on me. 1 2 3 4
Incontinence is always on my mind. 1 2 3 4
It’s important for me to make frequent trips to the toilet. 1 2 3 4
I worry about my incontinence getting worse as I grow older. 1 2 3 4
I have a hard time getting a good night sleep because of my incontinence. 1 2 3 4
I worry about being embarrassed or humiliated because of my incontinence. 1 2 3 4
My incontinence makes me feel like I’m not a healthy person. 1 2 3 4
My incontinence makes me feel helpless. 1 2 3 4
I get less enjoyment out of life because of my incontinence. 1 2 3 4
I worry about not being able to get to the toilet on time. 1 2 3 4
I feel like I have no control over my bladder. 1 2 3 4
I have to watch what I drink because of my incontinence. 1 2 3 4
My incontinence limits my choice of clothing. 1 2 3 4
I worry about having sex because of my incontinence. 1 2 3 4

The second section has questions that pertain to the satisfaction of the physical therapist and the treatment received. Please circle the 1, 2, 3, or 4 as indicated by key.

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>My physical therapist treated me in a professional and friendly manner.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>My physical therapist seemed competent and well trained in this treatment.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I felt free to ask my physical therapist questions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>My physical therapist answered my questions satisfactorily.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I have no doubts about the treatment that the physical therapist presented for me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I am very satisfied with my results following my treatment sessions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I have made significant improvements in control my incontinence since the end of treatment.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
How would you rate your overall satisfaction with your treatment results? ________
( 1 = unsatisfied, 2 = somewhat satisfied, 3 = satisfied, 4 = very satisfied)

Would you recommend this program to others for treatment of incontinence? Y N

How did you hear of this program?
Physician    Brochure/Advertisement    Family/Friends
Other__________________________

Any additional comments about your treatment?

Thank you for your cooperation with this survey.

Incontinence Quality of Life
Todd Wagner et al., Urology 7:67, 1996

APPENDIX B
Additional Comments that were written in on the survey

- PT 1 is my therapist.
- She was outstanding.
- The therapy works for me because I am willing to do the work required to strengthen my pelvic floor.
- I have let my doctor know that the therapy works and she should feel confident.
- It was my OBGYN that referred me and I must let her know how successful it was.
- I was the one who showed her the article in the Herald and said that I wanted to try PT because the medications are harsh, expensive, and don’t work well.
- I did not “graduate” from the program, but have opted to finish treating myself.
- The education and exercise program has helped me to the point that I am comfortable with, within reason.
- It’s hard to gain confidence after a wetting episode.
- Staying with the exercise program is another area.
- I find it difficult.
- Putting it bluntly...I hate the exercises, but continue to do them.
- My treatment was not primarily for incontinence.
- I didn’t have much trouble with that except for a short time after the birth of my 3rd child.
- The treatment I received was for pelvic floor support-basically because I have a prolapsed uterus and after delivery of #3 felt a lot of bulging out in the pelvic floor.
- There was no muscle tone left and since my MD felt I was too young for a hysterectomy – he thought these exercises might help.
- I think that the treatment did help, however...once the sessions are completed and I’m left to do this on my own with no one to be accountable to-it’s very hard to keep doing the exercises daily- to find the time.
- I know that I need to, but...it was much easier to remember to do them when I knew I had an appointment in 2-3 weeks to check the progress.
- Very much satisfied with the results of the treatments.
- Much better than having to take pills or surgery
- Strongly recommend therapy to anyone
- I didn’t suffer from incontinence, but rather the feeling/urge to urinate all of the time.
- I felt like I had a bladder infection, when in fact I didn’t.
- PT 2 led me to the discovery that it was caused from all the pop I was drinking.
- An urologist had told me that caffeine would not make a difference, how wrong he was.
- A big thank you to PT 2.
- It’s a good program.
- Too bad I can’t put a bell in my head to remind me to do the exercises.
- I work mostly nights and such a busy schedule and life.
• Seems like the only time I think of them is when I go to bed and am flat on my back.
• Only because I'm not consistent enough with my exercises.
• The treatment was very beneficial.
• However, as I am taking care of my handicapped husband, I was constantly straining the very muscles that I was trying to strengthen – one of those "win-lose" battles.
• A person has to be committed to doing the exercises to see results,
• They are ongoing forever.
• Due to complications with the health of my family (mother) I failed to follow-up as recommended and then was too embarrassed to set up another appointment since I became non-compliant with her treatment program.
• I am trying to re-motivate myself to restart the weights.
• This is due to my non-compliance.
• I was given exercises for my lower back but was unable to continue with it as the pain got bad.
• I called PT 1 and she said not to do anything that hurts and will keep working on the simple bladder exercises.
• I really appreciated her talking to me, as I didn't want to be a quitter.
• She made me feel good about myself.
• I feel I'm getting help.
• I think that PT 1 is great.
• I regret I did not continue the treatments as was instructed to me.
• Some days I did not feel well enough.
• However, I will try again when I feel that I can.
• Thanks.
• I wore a pad for 29 years and after treatment and doing the program I am able to go without a pad.
• I do these exercises many times a day.
• I feel there are many like me who could benefit if they would do the program.
• Just showing up for the sessions won't do it if you don't do the work.
• It's a hard area to "supervise" and I need to make certain that the exercises are being done properly due to that.
• I want to do big amounts and they (the exercises) seem to get at much smaller problems.
• It's hard for me to tell whether the exercises I'm doing are getting at the problem.
• Hoping to get better
• It's up to me to do my exercises.
UNIVERSITY OF NORTH DAKOTA HUMAN SUBJECTS REVIEW FORM
FOR NEW PROJECTS OR PROCEDURAL REVISIONS TO APPROVED
PROJECTS INVOLVING HUMAN SUBJECTS

PRINCIPAL INVESTIGATOR: Jennifer Norberg, Cindy Flam-Meland, Megan Boyd, and Holly Bommersbach
TELEPHONE: 701.777.2831 DATE: 5-12-99

ADDRESS TO WHICH NOTICE OF APPROVAL SHOULD BE SENT:

PROPOSED SCHOOL/COLLEGE: School of Medicine and Health Sciences DEPARTMENT: Physical Therapy PROJECT DATES: May 1999-June 2000
PROJECT TITLE: Patient Satisfaction of Physical Therapy Treatment of Pelvic Floor Dysfunctions

FUNDING AGENCIES (IF APPLICABLE): N/A

TYPE OF PROJECT (Check ALL that apply):
__ NEW PROJECT __ CONTINUATION __ RENEWAL __ THESIS RESEARCH __ STUDENT RESEARCH PROJECT
__ CHANGE IN PROCEDURE FOR A PREVIOUSLY APPROVED PROJECT

DISSERTATION/Thesis Adviser, or Student Adviser: Cindy Flam-Meland

PROPOSED PROJECT: __ INVOLVES NEW DRUGS (IND) __ USE OF DRUG __ INVOLVES NON-APPROVED
__ INVOLVES A X COOPERATING INSTITUTION

IF ANY OF YOUR SUBJECTS FALL IN ANY OF THE FOLLOWING CLASSIFICATIONS, PLEASE INDICATE THE CLASSIFICATION(S):
__ MINORS (<18 YEARS) __ PREGNANT WOMEN __ MENTALLY DISABLED __ FETUSES __ MENTALLY RETARDED
__ PRISONERS __ ABORTUSES __ UND STUDENTS (>18 YEARS)

IF YOUR PROJECT INVOLVES ANY HUMAN TISSUE, BODY FLUIDS, PATHOLOGICAL SPECIMENS, DONATED ORGANS, FETAL MATERIAL, OR PLACENTAL MATERIALS, CHECK HERE

IF YOUR PROJECT HAS BEEN/WILL BE SUBMITTED TO ANOTHER INSTITUTIONAL REVIEW BOARD(S), PLEASE LIST NAME OF BOARD(S): Altru Health Systems
Status: X Submitted; Date 5-12-99 __ Approved; Date__________ ______ Pending

1. ABSTRACT: (LIMIT TO 200 WORDS OR LESS AND INCLUDE JUSTIFICATION OR NECESSITY FOR USING HUMAN SUBJECTS.

This study has been designed to analyze patient satisfaction with the treatment of pelvic floor dysfunctions. Urinary incontinence has been categorized as a pelvic floor dysfunction. There are four types of incontinence: stress, urge, overflow, and mixed. Pelvic floor dysfunctions have had success with non-surgical treatments. Treatments include intake/output diaries, biofeedback, and pelvic floor exercises. Pelvic floor rehabilitation has an emphasis on increasing muscle tone and strength to decrease the instability that causes incontinence.

The purpose of this study is to determine the amount of patient satisfaction with physical therapy treatments of pelvic floor dysfunctions. With the use of a survey, participants from Altru Health Institute will be evaluated. The survey will be anonymous and the answers will be kept confidential. Participants need only to fill out the survey and mail it back. With the results of this survey, improvements can be made in treatments and the quality of care for patients.
PLEASE NOTE: Only information pertinent to your request to utilize human subjects in your project or activity should be included on this form. Where appropriate attach sections from your proposal (if seeking outside funding).

2. PROTOCOL: (Describe procedures to which humans will be subjected. Use additional pages if necessary.)

Subjects: The subjects will consist of patients from Altru Health Institute that have been treated by Megan Boyd, MPT and Holly Bommersbach, MPT for pelvic floor dysfunctions.

Survey: The survey will consist of questions based on the patient’s perception of their incontinence and their satisfaction of physical therapy services. Many of the questions that are related to incontinence are questions that have been asked before, such as: How often do you worry about wetting yourself?, and How many times do you need to change clothes due to leakage? These questions should not be surprising to the patients for they are a part of routine patient care. The questions are from previously conducted surveys. Completion of the survey is completely voluntarily.

Procedures: The investigator will provide the cover letters, surveys, and stamped, return envelopes that are to be used to Megan Boyd MPT and Holly Bommersbach MPT, of Altru Health Institute. They will mail the subjects a cover letter, survey, and a stamped, return envelope to their patients following discharge from the treatment for pelvic floor dysfunctions. The names and addresses of these patients will be kept confidential from the investigator. Participants are asked to voluntarily complete the survey and return it by mail to the investigator with the use of the stamped, return envelope. The surveys will be kept in the University of North Dakota Department of Physical Therapy for three years following the completion of the study and will then be destroyed. A copy of the cover letter and survey are included at the end of this form.

Data Analysis: The investigator will compile the responses. The results will be determined by the use of traditional descriptive and analytical statistics with use of the computer program SPSS. An alpha level of .05 will be set for all tests.

Data Reported: The results of the study will be reported to Altru Health Institute and the University of North Dakota Department of Physical Therapy. The results of the independent study will also be available to the public.

References for Survey
Incontinence Quality of Life
Todd Wagner et al., Urology 7:67, 1996.


3. BENEFITS: (Describe the benefits to the individual or society.)

The benefits from this study will be directed at patient care. With the results of the study, the effectiveness of the treatment of pelvic floor dysfunctions can be improved. It will benefit the physical therapy profession by helping to increase patient satisfaction with the received treatments. The results will be beneficial to Altru Health Institute to see if their program is working well and if their patients are satisfied with the treatment.
4. RISKS: (Describe the risks to the subject and precautions that will be taken to minimize them. The concept of risk goes beyond physical risk and includes risks to the subject's dignity and self-respect, as well as psychological, emotional or behavioral risk. If data are collected which could prove harmful or embarrassing to the subject if associated with him or her, then describe the methods to be used to insure the confidentiality of data obtained, including plans for final disposition or destruction, debriefing procedures, etc.)

There are minimal risks involved in this study. There is a possible risk of embarrassment for the patient while reading the survey. The participant may feel embarrassed about having been treated for a pelvic floor dysfunction. The questions that are included are questions that the subject has answered before and should not be surprising. Participation of the subjects is voluntary. All surveys will remain anonymous and confidentiality can be assumed as there are no personal identification items used. All surveys will be kept in the physical therapy department for three years and then destroyed.

5. CONSENT FORM: A copy of the CONSENT FORM to be signed by the subject (if applicable) and/or any statement to be read to the subject should be attached to this form. If no CONSENT FORM is to be used, document the procedures to be used to assure that infringement upon the subject's rights will not occur.

Describe where signed consent forms will be kept and for what period of time.

No consent form will be utilized in this study. Each participant will receive a cover letter explaining the study, a survey, and a self-addressed, stamped envelope. Participation in this study is completely voluntary. Completion and return of the survey will be regarded as the participant’s informed consent. The surveys will be kept for three years and then destroyed.

6. For FULL IRB REVIEW forward a signed original and thirteen (13) copies of this completed form, and where applicable, thirteen (13) copies of the proposed consent form, questionnaires, etc. and any supporting documentation to:

Office of Research & Program Development
University of North Dakota
Grand Forks, North Dakota 58202-7134

On campus, mail to: Office of Research & Program Development, Box 7134, or drop it off at Room 105 Twamley Hall.

For EXEMPT or EXPEDITED REVIEW forward a signed original and a copy of the consent form, questionnaires, etc. and any supporting documentation to one of the addresses above.

The policies and procedures on Use of Human Subjects of the University of North Dakota apply to all activities involving use of Human Subjects performed by personnel conducting such activities under the auspices of the University. No activities are to be initiated without prior review and approval as prescribed by the University's policies and procedures governing the use of human subjects.

SIGNATURES:

[Signature]

Principal Investigator

Date 5/12/99

[Signature]

Project Director or Student Adviser

Date 5/12/99

[Signature]

Training or Center Grant Director

Date 5/12/99

(Revised 3/1996)
STUDENT RESEARCHERS: As of June 4, 1997 (based on the recommendation of UND Legal Counsel) the University of North Dakota IRB is unable to approve your project unless the following "Student Consent to Release of Educational Record" is signed and included with your "Human Subjects Review Form."

STUDENT CONSENT TO RELEASE OF EDUCATIONAL RECORD

Pursuant to the Family Educational Rights and Privacy Act of 1974, I hereby consent to the Institutional Review Board’s access to those portions of my educational record which involve research that I wish to conduct under the Board’s auspices. I understand that the Board may need to review my study data based on a question from a participant or under a random audit. The study to which this release pertains is Patient Satisfaction of Physical Therapy Treatment of Pelvic Floor Dysfunctions.

I understand that such information concerning my educational record will not be released except on the condition that the Institutional Review Board will not permit any other party to have access to such information without my written consent. I also understand that this policy will be explained to those persons requesting any educational information and that this release will be kept with the study documentation.

Signature of Student Researcher

Date

1 Consent required by 20 U.S.C. 1232g.
PATIENT SATISFACTION SURVEY

Patients with a diagnosis of pelvic floor dysfunction with incontinence symptoms will be asked to fill out a satisfaction survey following discharge. The survey will be completed by those individuals who have received education in the rehabilitation of the pelvic floor and bladder training.

Data compiled with the satisfaction survey will be kept within the Altru Health Institute as well as original copies of specific assessments/evaluations during the treatment period.

Individuals who complete the survey will be reassured that their comments will be confidentially maintained.

The two physical therapists who treat pelvic floor dysfunctions are Megan Boyd MPT, and Holly Bommersbach MPT. They can be contacted at 701-780-2315. Steve Rood MPT, Director of Physical Therapy also can be contacted at 701-780-2315.

Megan Boyd, MPT
Holly Bommersbach, MPT

Steve Rood, MPT
Director of Physical Therapy
Altru Health System
Institutional Review Board
Research Project Action Report

Date: May 25, 1999

Principal Investigator: Jennifer Norberg, Cindy Flom-Meland, Megan Boyd, and Holly Bommersbach

Department: Physical Therapy

Address to which notice of approval should be sent: University of North Dakota Physical Therapy Department

Research Coordinator:

Project Title: Patient Satisfaction of Physical Therapy Treatment of Pelvic Floor Dysfunctions

The above referenced project protocol and informed consent was reviewed by the Altru Health System Institutional Review Board on and the following action was taken:

☐ Project approved. Next Scheduled review is on _________________________
   If no date is given, then review will be required in 12 months. (See REMARKS SECTION for any special condition.)

☐ Project approved. EXPEDITED REVIEW NO. _________________________
   Next scheduled review is on _________________________

☐ Project approved. EXEMPT CATEGORY NO. 2
   No periodic review scheduled unless so stated in REMARKS SECTION.

☐ Project approval deferred. (See REMARKS SECTION for further information.)

☐ Project denied. (See REMARKS SECTION for further information.)

☐ Amendment approved
☐ Administrative change approved
☐ Protocol revision approved
☐ Revised consent form approved
☐ Adverse event reviewed - Date of event _________________________
☐ Other _________________________

REMARKS:
Any changes in protocol, adverse occurrences or deaths in the course of the research project must be reported immediately to the IRB chairperson or the IRB office (780-6161).

Signature of Chairperson or Designated IRB Member
Altru Health System Institutional Review Board

Date 5/28/99

If the proposed project is to be part of a research activity funded by a federal agency, a special assurance statement or a completed 596 Form may be required. Contact IRB office to obtain the required documents.
MEMORANDUM

To: Jennifer Norberg  
University of North Dakota  
Physical Therapy Department  
Grand Forks, ND  58202

From: Kevin J. Tveter, MD  
Chair  
Altru Health System IRB

Date: June 1, 1999

Re: Patient Satisfaction of Physical Therapy Treatment of Pelvic Floor Dysfunctions

The above project was approved by me on May 28, 1999, and enclosed is a copy of the Research Project Action Report. Please complete the enclosed Research Project Completion/Termination Report when you have completed your project and return to:

Eleanor Tveit  
Administration  
Altru Clinic  
P. O. Box 6003  
Grand Forks, ND  58206-6003

Thank you.

KJT/ert  
Enc.
ALTRU HEALTH SYSTEM

APPROVAL TO CONDUCT RESEARCH STUDY
AT ALTRU HEALTH SYSTEM

Name: Jennifer Norberg, Cindy Flom-Meland, Megan Boyd, & Holly Bommersbach Date: 5/27/99

Address: School of Medicine & Health Sciences

Telephone Numbers: Work _____________ Home _____________

Department/College: School of Medicine & Health Sciences, UND

Project Title: Patient Satisfaction of Physical Therapy Treatment of Pelvic Floor Dysfunctions

Your request to conduct the above named study at an Altru Health System facility involving employees or patients as participants, and/or requiring facility resources has been reviewed. The following action has been taken:

T / Permission to conduct the study is granted

____ Permission to conduct the study will be granted upon completion of the following:

____ Permission to conduct the study is denied for the following reason(s):

RECOMMENDATIONS/REMARKS:

Virginia Essinger Manager, Research May 27, 1999

Signature Title Date
REFERENCES CITED


