Effect of Standardized Nurse Teaching on Patient Experience Using CAHPS®

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Effect of Standardized Nurse Teaching on Patient Experience Using

CAHPS®

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B.S.N., University of Missouri-St. Louis, 2003

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Abstract

Purpose: This quality improvement (QI) project aimed to determine if a standardized nurse teaching approach improved patient understanding of diagnosis and treatment as it relates to women diagnosed with a pelvic floor disorder (PFD) after receiving a standardized nurse education (SNE) session in an urban tertiary care Urogynecology practice.

Methods: Females aged 18 and older with a newly diagnosed PFD and prescribed PFPT for the first time who agreed to receive the SNE and complete the CAHPS® survey were included in the project. Patient perception of PFPT was assessed via phone interview utilizing the Consumer Assessment of Healthcare Providers and Systems (CAHPS®) survey from August 11, 2020 through September 1, 2020.

Results: A purposeful sample of 8 (N = 8) patient surveys were completed. The average Likert scores (1-5) for the questions were: explanations (5/5, 100%), listening (5/5, 100%), additional information (4.75/5, 95%), respect (4.88/5, 98%), and a better understanding (4.88/5, 98%). The average time for the SNE was 11-14 minutes. 75% of participants scheduled an initial PFPT appointment after receiving the SNE.

Implications for Practice: This QI initiative successfully utilized a CAHPS® survey program in a Urogynecological practice demonstrating that nurses can successfully educate the patient in a way that is easy to understand and provide a better understanding of why PFPT was ordered as part of the treatment regimen.
Pelvic floor disorders (PFD) are a common yet challenging condition(s) that healthcare professionals face in clinical practice (Hartmann & Santon, 2014). Pelvic floor disorders include stress urinary incontinence, urgency urinary incontinence, overactive bladder, pelvic organ prolapse, and fecal incontinence. Patients are often referred to specialists such as Urogynecologists to treat PFD after other treatment modalities have failed (i.e. medications). Based on a cross-sectional study of a nationally representative population of women in the United States (U.S.), the prevalence of at least one PFD was 23.7% (Hallock & Handa, 2016), and 30% to 50% suffer from PFD depending on the definition (Jundt, Peschers, & Kentenich, 2015).

Pelvic floor physical therapy (PFPT) is a specialized area of physical therapy that is considered a first line intervention for treating pelvic floor disorders. Despite this, adherence to PFPT is poor. In a study conducted by Shannon et al. (2018) two-thirds (66%) of patients who were prescribed PFPT initiated PFPT, and less than one-third (29%) finished a full course of treatment. Adherence is supported by the understanding that a patient believes the intervention will be effective as well as the belief that they are capable of following the requirements of the intervention (Picorelli, Pereira, Pereira, Felício, & Sherrington, 2014). Thus a patient must understand why PFPT is being prescribed to determine if the treatment is appropriate for them.

A variety of barriers impact patient experience including health literacy (Fenton et al., 2019). More than a third of the U.S. population has a basic or below basic health literacy thus approximately 1 out of every 3 patients walks out after a medical appointment without a full understanding of the plan of care which
may impact adherence to care recommendations (Centers for Disease Control and Prevention, 2009; Center for Healthcare Strategies, 2013; Hersh, Salzman, & Snyderman, 2015). For the purposes of this project, the care recommendation being assessed is PFPT. Health literacy can be improved upon by ensuring the patient receives information that is appropriate to their level of understanding.

Nurses are experts in patient education utilizing a patient centered approach which enhances the nurse’s ability to provide teaching tailored to the individual patient. Utilizing the Consumer Assessment of Healthcare Providers and Systems (CAHPS®), a validated screening tool, the aim of this project is to determine if a standardized nurse teaching approach improves patient understanding of diagnosis and treatment. The primary outcome measure will be results of the CAHPS® questionnaire. The secondary outcome measures are the rate of patients who schedule an initial PFPT appointment after the implementation of a standardized nurse teaching approach; time spent during the SNE; and demographic data, age, and payer status. This project was guided by the following study question: for women diagnosed with one or more pelvic floor disorder(s) and referred for PFPT at an urban Urogynecology specialty office, what is the effect of a standardized nurse teaching approach on patient experience with the care received?

**Review of Literature**

A literature search was performed of Summon, MEDLINE, Google Scholar, and CINAHL databases using Ebscohost. The databases were searched using the following terms: *PFPT and physical therapy, patient adherence or compliance, pelvic floor dysfunction, patient education, nurse teaching, patient centered teaching, CAHPS® and health literacy*. The search
was filtered for articles published in English, journal articles, and scholarly peer-reviewed publications. The literature review included research articles and studies from 2010 through 2020. Articles were excluded if they were not related to PFPT or had an exclusive male cohort. Ultimately, 15 articles were included in the review of literature.

**PFPT Adherence**

PFPT is considered a highly effective first line treatment thus, adherence is considered crucial (Frawley, McClurg, Mahfooza, Hay-Smith, & Dumoulin, 2015; McClurg et al., 2015; Meister et al., 2019; Sacomori, Berghmans, de Bie, Mesters, & Cardoso, 2018; te West, 2017; Venegas, Carfasco, & Casas-Cordero, 2018; Wallace, Miller, & Mishra, 2019). Adherence to PFPT is based on a variety of factors such as motivation, self-efficacy, age, and educational level (Essery, Geraghty, Kirby, & Yardley, 2017).

A secondary analysis of a randomized controlled trial conducted by Sacomori et al. (2018) studied women being treated for urinary incontinence and interventions to improve their self-efficacy in connection with PFPT. Complying with a PFPT regimen was associated with: baseline self-efficacy, age, and educational level. Of note, patients who dropped out of the study were found to have lower frequency of reported urinary incontinence and were less likely to engage in sexual intercourse. It is possible that those that dropped out were not as motivated to attend PFPT sessions because their urinary incontinence was less bothersome and lacked motivation to improve their sexual life. Patients with limited resources, such as health illiteracy, may need a PFPT program that is more comprehensive and supervised as well as weekly appointments for approximately eight weeks and have the patients’ self-efficacy routinely
evaluated (Sacomori et al., 2018). Venegas et al. (2018) also investigated factors influencing adherence to PFPT in women with urinary incontinence utilizing an observational, descriptive, cross-sectional study approach. Their results showed patient related factors such as knowledge, attitudes, beliefs, perceptions, and expectations of the patient had the strongest correlation to adherence and non-adherence. Low treatment adherence was associated with forgetting to do the exercises and boredom with the exercises; however, feeling motivated and faithful to performing the exercises was highly associated with an increase in treatment adherence. These findings should be used as guidance in the planning phase for PFPT (Venegas et al., 2018).

**Importance of Behavioral Changes**

Before adherence can be achieved, a patient needs to make certain behavioral changes (McClurg et al., 2015; Sacomori et al., 2018). A literature review conducted by McClurg et al. (2015) investigated theoretical models to promote PFPT adherence, suggested by the expert panel of the 41st International Continence Society Conference in 2011. Six psychosocial models/theories are identified within the literature to inform PFPT research: Health Belief Model, Theory of Planned Behavior, Social Cognitive Theory, Transtheoretical Model, Self-Regulatory Model, Health Action Process Approach. Additionally, the following theory-driven techniques could be useful, as determined by the expert panel: Information-Motivation-Behavioral Skills model; Behavoior Change Techniques taxonomy; Capability, Opportunity, and Motivation Behavior; Normalization Process Theory; Motivational Interviewing; and Information, Satisfaction, Recall Model (McClurg et al., 2015). McClurg et al. (2015) recommend that educational institutions raise awareness of clinicians’
importance of behavioral changes in relation to PFPT as well as provide appropriate training in behavioral change strategies. Using a psychosocial model provides a predictability of how useful the intervention (i.e. PFPT) will be for the patient and the potential to instill empathy in the provider during patient interactions thus creating a patient-centered environment.

**Barriers to Care**

Understanding the patients barriers may help in developing a plan of care that will improve patient adherence to PFPT. Non-adherence or barriers to PFPT has been associated with factors such as forgetting to do the exercises, access to services (i.e. low socioeconomic status), and low self-efficacy (Frawley et al., 2015; Meister et al., 2019; Sacomori et al., 2018; Venegas et al., 2018). Shannon et al. (2018), found that younger women, women with a greater BMI, and Hispanic women were less likely to attend PFPT. Additionally, Lawson and Sacks (2018) found that conservative treatment of pelvic floor disorders may be lacking in the graduate education curricula for nurse practitioners thus acting as a barrier to PFPT. Perhaps more important; however, is determining if the patient understands why PFPT is being prescribed. Initiation of PFPT has been found to be challenging for women with limited health literacy (Salmon et al., 2020).

**Methods of Patient Teaching**

Identifying the most appropriate method of patient teaching can improve treatment outcomes and adherence to a treatment plan such as PFPT (Friedman, Cosby, Boyko, Hatton-Bauer, & Turnbull, 2010; Marcus, 2014). When developing a patient teaching strategy, it should be: patient-centered, culturally appropriate, understood by the learner, and have specific teaching and educational goals (Marcus, 2014). Additionally, more than one method of
teaching should be utilized (Friedman et al., 2010) such as the use of both verbal communication and written materials. Written materials should be geared to the health literacy level of the community and for added effectiveness the addition of illustrations should be considered. Furthermore, when considering a mode of delivery, it is recommended that health care providers provide a structured teaching that is culturally appropriate and targeted to each patient’s individual situation (Friedman et al., 2010; Marcus, 2014).

**Motivation and Adherence**

Motivation such as severity of pelvic floor symptoms play a key role in adherence. Women with more severe PFD symptoms prior to treatment have been shown to improve adherence (Meister et al., 2019; Saomori et al., 2018; te West et al., 2017). Fifty-three women completed a validated screening tool regarding the severity of their stress urinary incontinence after one visit and after completion of PFPT, and of those surveyed, it was found that pre-treatment severity of incontinence was significantly associated with motivation of treatment (te West et al., 2017). It should be noted that the motivation scores were high overall which is thought to be that there was an aspect that the patients were trying to please their clinicians; however, Venegas et al. (2018) found that motivation and commitment were in fact associated with higher adherence to PFPT. te West et al., (2017) recommends that more attention should be placed on the connection involving incontinence symptoms, a woman’s individual experience with incontinence, and their impetus for treatment as it has been found that women with more severe incontinence encounter an adverse effect on quality of life.

**Consumer Assessment of Healthcare Providers and Systems**
Patient experience is an integral part of patient care and is one of the aims included in triple aim framework developed by the Institute of Healthcare Improvement (IHI, 2020). The CAHPS® survey is a tool used to assess a patient’s experience utilizing a validated questionnaire developed by the Agency for Healthcare Research and Quality (AHRQ) (Agency for Healthcare Research and Quality, 2011). CAHPS® surveys serve to evaluate patient experience, not satisfaction, across multiple domains including provider communication (AHRQ, 2011; Hays, Chawla, Kent, & Arora, 2017; Lehrman & Friedberg, 2015). Questions can be tailored to obtain the desired information.

This project used the Plan-Do-Study-Act (PDSA) continuous improvement model for implementing change. The four step PDSA cycle addressed a process improvement. During the ‘plan’ stage a change aimed at improvement was identified, the ‘do’ stage tested this change, the ‘study’ stage evaluated the success of the change, and the ‘act’ stage acknowledges the modifications and subsequent steps towards a new cycle. The PDSA cycle promotes the use of a small scale approach thus minimizing risk to patients, the organization, and resources while at the same time providing an opportunity to collect data and engage stakeholders (Taylor et al., 2014).

**Methods**

**Design**

This quality improvement project used an observational cohort design to evaluate patient perception of PFPT in relation to their diagnosis after implementing a standardized nurse teaching approach. The PDSA framework was used to guide the project.
Setting

This project took place in an urban tertiary ambulatory care Urogynecology practice that is part of a larger medical facility servicing a diverse metropolitan community with over 1.1 million outpatient visits in 2018. Patients seen in this practice are female and primarily aged 18 or older. The Urogynecology practice has three attending physicians, two Urogynecology fellows, one full time phone triage nurse, two part time procedure nurses, two full time administrative assistants, and one medical assistant.

Sample

A purposeful sample of females aged 18 and older with a newly diagnosed PFD and prescribed PFPT for the first time who agreed to receive the SNE and complete the CAHPS® survey were included in the project. Those excluded from the study were males, those under the age of 18, have been previously diagnosed with a PFD, and those who choose not to receive the SNE and complete the CAHPS® survey.

Approval Processes

Initial approvals were obtained by the doctoral committee and the organizational practice where the study was conducted. In addition, Institutional Review Board (IRB) approval from the University of Missouri-St. Louis (UMSL) was obtained. Final approval from the graduate school at UMSL was also obtained.

Data Collection/Analysis

Patient perception of PFPT was assessed utilizing the CAHPS® survey (Appendix B) via phone interview from August 11, 2020 through September 1, 2020. Due to the COVID-19 pandemic, adherence was determined by patients
who scheduled an initial appointment. Time spent during the SNE was documented for each patient. Demographic data includes age, race/ethnicity, insurance type, and type of pelvic floor disorder. Data analysis was performed utilizing descriptive statistics. All data was de-identified using a letter and a number. Patients who received the education and agreed to the CAHPS® survey were assigned the letter ‘A’ followed by a number (A1, A2, A3, A4, etc.). All information was stored in a password-protected computer. A master list containing the names of the participants and their corresponding identification number was stored in a separate password-protected file in the researchers password-protected computer. The master list was permanently deleted following the conclusion of the study.

**Procedures**

A team of key stakeholders was formed in September 2019, including the primary investigator, practice physicians, nurses, practice manager, medical assistants, and office staff. There was a meeting with the division chief regarding poor patient adherence to PFPT and it was determined that development of a standardized nurse education (Appendix A), at the time of referral, may be beneficial. A decision was made to implement the standardized nurse education session into the practice. Once IRB approval was obtained, a presentation was provided for the practice physicians and staff on the specifics of the SNE plan in preparation for February implementation. The process agreed upon for implementing the SNE included a physician order for PFPT.

**Results**

A total of 10 participants received the SNE. Of those, 8 CAHPS® surveys were completed for a sample size of 8 (N=8) or an 80% completion rate
All patients (n=8, 100%) identified as caucasian female and had a new diagnosis of one or more PFD. The ages of the participants ranged from 44 to 66, with an average age of 56.6. Additional data reveals that all participants (n=8, 100%) were referred to PFPT by a urogynecologist, had private insurance, and received SNE. Furthermore, 6 participants (75%) were diagnosed with two or more types of PFD. Lastly, 6 of the 8 participants (75%) scheduled an initial PFPT session after receiving the SNE (Appendix D).

The survey questions were answered using a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). The following questions were asked: (Q1), did the nurse explain things in a way that was easy to understand, (Q2), the nurse listened carefully to me, (Q3), the nurse gave me easy to understand information about PFPT, (Q4), the nurse answered my questions, and (Q5), the nurse provided me a better understanding of why PFPT was ordered. Lastly, the amount of time spent with the nurse during the SNE was documented.

Question 1 had an average of 5.00 (SD = 0.00), Q2, the average was 5.00 (SD = 0.00). Q3 the mean was 4.75 (SD=0.71), Q4 average of 4.88 (SD=0.35), and Q5 had an average of 4.88 (SD=0.35). The descriptive statistics results are split up for each question (appendix E). Time spent with patients primarily fell in the range of 11-14 minutes (appendix F).

Discussion

This quality improvement project was the first PDSA cycle evaluating patient perception of the SNE and to determine if the patient had a better understanding of why PFPT was ordered utilizing a customized CAHPS® survey at an urban Urogynecological clinic in the Midwest. The primary interest
was communication and patient understanding of the treatment plan. The outcomes examined were patient knowledge and understanding of the treatment plan, and patient perception. The surveys assisted in understanding the patient experience of each of these areas.

The CAHPS® results show that patients felt that the nurse presented the information in a way that was easy to understand and listened carefully to the patient during the teaching session. Most of the patients felt that the written information that was handed out was easy to understand and that the nurse answered their questions adequately. Lastly, the patients felt that they had a better understanding of why PFPT was ordered and the majority of patients scheduled an initial PFPT appointment after receiving the SNE. Overall, the results of the surveys demonstrate the usefulness of implementing nurse education at the time PFPT is ordered for better patient understanding.

The main limitation of this study is the small sample size (N =8). This is in large part due to the COVID-19 pandemic which led to the closing of the Urogynecological clinic shortly after implementation of the SNE. Additional limitations include recall bias as the CAHPS® surveys were completed 5 months after the SNE secondary to the COVID-19 pandemic.

Recommendations for further study would include a larger sample size with comparison of patient perception of PFPT prior to and after receiving the SNE and how this impacts adherence to initiating and completing a full PFPT treatment course. The question with the lowest score ‘the nurse gave me easy to understand information about PFPT’ could help guide future PDSA cycles addressing materials used for patient teaching.

**Conclusion**
This QI initiative successfully utilized a CAHPS® survey program in a Urogynecological practice providing an opportunity to assess patient perception pertaining to their care. Patient-centered care is vital to improving the quality of care. The results of this quality improvement project showed that nurses are able to educate the patient in a way that is easy to understand and more importantly provided a better understanding of why PFPT was ordered.
References


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Meister, M., Sutcliffe, S., Ghetti, C., Chu, C., Spitznagle, T., & Lowder, J. (2019). *Acceptability of and adherence to pelvic floor physical therapy as a treatment strategy for co-existing pelvic floor myofascial pain and pelvic floor symptoms.* Poster session presented at the American Urogynecological Society Meeting, Nashville, TN.


Salmon, V. E., Hay-Smith, E. J. C., Jarvie, R., Dean, S., Terry, R., Frawley, H., . . . Pearson, M. (2020). Implementing pelvic floor muscle training in women’s childbearing years: A critical interpretive synthesis of individual,


Appendix A

Teaching Description

One on one education with the patient in a private exam or consultation room. The beginning of the educational session will assess patients knowledge of PFPT. Time will then be spent explaining the rationale of PFPT and how it is used to treat their diagnosis (i.e. pelvic floor muscles help with incontinence, bladder pressure on muscles can cause urgency). Additionally, education will include what to expect at their appointment(s). Finally, the patient will have the opportunity to ask questions and the nurse educator will assess level of understanding and findings.

Teaching Tools

- PT Folder
  - Information about PFPT
  - Conditions treated by PFPT
  - Picture of pelvic floor highlighting the muscles assessed
  - Locations of associated PFPT sites
- Pelvic Model
- PT Checklist
Appendix B

Figure 1: CAHPS® Questions

**CAHPS® Survey Questions**

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The nurse explained things in a way that was easy to understand.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>The nurse listened carefully to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>The nurse gave me easy to understand information about PFPT.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>The nurse answered my questions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>The nurse provided me a better understanding of why PFPT was ordered.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Time spent with nurse.</td>
<td>Less than 5 min</td>
<td>6-10 minutes</td>
<td>11-14 minutes</td>
<td>15-19 minutes</td>
</tr>
</tbody>
</table>
Table 1

Demographic characteristics of participants

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>%</th>
<th>Mean</th>
<th>SD</th>
<th>min</th>
<th>max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>8</td>
<td>100</td>
<td>56.63</td>
<td>9.19</td>
<td>44</td>
<td>66</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>8</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>8</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Referred to PFPT</td>
<td>8</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Received SNE</td>
<td>8</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of PFDs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>25</td>
<td>2.13</td>
<td>0.83</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>3</td>
<td>37.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>3</td>
<td>37.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type of Insurance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private Insurance</td>
<td>8</td>
<td>100</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Appendix D

*Figure 2. Percentage of patients that scheduled initial PFPT after SNE*

<table>
<thead>
<tr>
<th>Scheduled Initial PFPT Appointment</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>75%</td>
</tr>
<tr>
<td>No</td>
<td>25%</td>
</tr>
</tbody>
</table>
Table 2

*Summary Statistics Table for CAHPS® Survey Scores*

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<tr>
<th>Variable</th>
<th>n</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>8</td>
<td>5</td>
<td>5</td>
<td>5.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Q2</td>
<td>8</td>
<td>5</td>
<td>5</td>
<td>5.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Q3</td>
<td>8</td>
<td>3</td>
<td>5</td>
<td>4.75</td>
<td>0.71</td>
</tr>
<tr>
<td>Q4</td>
<td>8</td>
<td>4</td>
<td>5</td>
<td>4.88</td>
<td>0.35</td>
</tr>
<tr>
<td>Q5</td>
<td>8</td>
<td>4</td>
<td>5</td>
<td>4.88</td>
<td>0.35</td>
</tr>
</tbody>
</table>
Appendix F

Figure 3. Time patient spent with nurse during SNE