

## METHODS USED BY PHYSICAL THERAPISTS TO LEARN PELVIC FLOOR MUSCLE EXAMINATION

### Hypothesis / aims of study

To investigate current methods by which physical therapists (PTs) in the United States learn how to perform pelvic floor muscle (PFM) examination and the methods they employ in assessing PFM function.

### Study design, materials and methods

One thousand one hundred and seventy five (N=1,175) women's health PTs were invited to participate in a 38 question web-based survey that had been validated using four content experts. Subjects were solicited from the APTA Section on Women's Health, BCIA EMG courses, and personal PT contacts. All students, PTAs and international PTs were excluded from participation. Questions addressed professional (entry-level, post-professional, and continuing) education in PFM dysfunction (hours, types of diagnoses, types of assessments discussed and practiced); and current type of assessments used in physical therapy practice. Descriptive statistics were used to examine the data.

### Results

Two hundred and three (n=203) PTs completed the survey (17.3% response rate). Seven subjects (7.7%) reported practicing the vaginal palpation of the PFM in their entry level education with 42.7% of subjects reporting some discussion of the topic. The most common method of learning PFM examination is post professional continuing education (96.1%). One hundred and twenty eight (62.1%) of subjects reported more than nine days of continuing education in PFM therapy. When learning PFM assessment, most PTs and PT students practice on class mates (84.5%). PT who specialize in PFM dysfunction provided the majority of this education (99%). Respondents reported which PFM examination techniques they received hands-on instruction in and practiced as part of their educational experience (Figure 1).

Figure 1: PFM Examination Techniques Performed in Different Educational Programs

	Entry-Level professional education	Post-professional college education	Post-professional continuing education
None	78 (85.7%)	19 (36.5%)	3 (1.4%)
Examination of the PFM by observation of perineal mobility	7 (7.7%)	30 (57.7%)	193 (95%)
Examination with vaginal and or rectal palpation by the therapist	7 (7.7%)	29 (55.8%)	195 (96.1%)
EMG biofeedback assessment with intra-vaginal sensor	10 (11%)	28 (53.9%)	184 (90.6%)
EMG biofeedback assessment with external sensor	8 (8.8%)	26 (50%)	160 (78.8%)
Assessment with real-time ultrasound	0 (0%)	5 (9.6%)	21 (10.3%)
Pressure biofeedback assessment	5 (5.5%)	18 (34.6%)	79 (38.9%)
Assessment of pelvic floor muscle pain	6 (6.6%)	26 (50%)	174 (85.7%)

In clinical practice, most PTs used vaginal palpation (73.9%) and perineal observation (68.5%) to examine the PFM. Other examination techniques reported included EMG with vaginal sensor (19.7%) and external sensors (21.2%). In contrast assessment techniques rarely used included real-time imaging ultrasound (3%) and pressure biofeedback (3.4%).

### Interpretation of results

Treatment of PFM dysfunction is a growing specialty in physical therapy. There is no scientific evidence that identifies the methods by which PTs learn to perform PFM examination. Compared to reports of previous authors [1,2] there appears to be increasing exposure to PFM dysfunction in entry level professional education. Jacobs has studied nursing education in urology. Based on that research, nurses and physical therapists are similar in their use of continuing education (84% and 99% respectively). However they vary greatly in their usage of on the job training (nurses 97% and physical therapists 47%). [3] Most PTs are receiving instruction in PFM examination in post professional continuing education courses. Most PTs are using vaginal palpation to examine the PFM. Currently US PTs are using very little real-time ultrasound to assess PFM. This may be related to financial and reimbursement constraints. Given a recent surge of interest in real-time ultrasound and evidence to support its use in clinical practice, future studies may reflect increased usage of this assessment technique.

### Concluding message

PTs are participating in increasing hours of formalized education and are using a variety of validated examination techniques and tools to perform PFM assessment. Documentation of current US physical therapy practice allows comparison with other professions in the US and other PTs around the world. In addition, future studies may show changes in practice patterns and educational methods.

<b>Specify source of funding or grant</b>	<b>No funding of grant money was used for this project.</b>
<b>Is this a clinical trial?</b>	<b>No</b>
<b>What were the subjects in the study?</b>	<b>HUMAN</b>
<b>Was this study approved by an ethics committee?</b>	<b>Yes</b>
<b>Specify Name of Ethics Committee</b>	<b>St Ambrose University Davenport IA USA</b>
<b>Was the Declaration of Helsinki followed?</b>	<b>Yes</b>
<b>Was informed consent obtained from the patients?</b>	<b>Yes</b>