

Prevalence and Risk of Inappropriate Sexual Behavior of Patients Toward Physical Therapist Clinicians and Students in the United States

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Background. For health care providers in the United States, the risk for nonfatal violence in the workplace is 16 times greater than that for other workers. Inappropriate patient sexual behavior (IPSB) is directed at clinicians, staff, or other patients and may include leering, sexual remarks, deliberate touching, indecent exposure, and sexual assault. Inappropriate patient sexual behavior may adversely affect clinicians, the organization, or patients themselves. Few IPSB risk factors for physical therapists have been confirmed. The US prevalence was last assessed in the 1990s.

Objective. The objectives of this study were to determine career and 12-month exposure to IPSB among US physical therapists, physical therapist assistants, physical therapist students, and physical therapist assistant students and to identify IPSB risk factors.

Design. This was a retrospective and observational study.

Methods. An electronic survey was developed; content validity and test-retest reliability were established. Participants were recruited through physical therapist and physical therapist assistant academic programs and sections of the American Physical Therapy Association. Inappropriate patient sexual behavior risk models were constructed individually for any, mild, moderate, and severe IPSB events reported over the past 12 months. Open-ended comments were analyzed using qualitative methods.

Results. Eight hundred ninety-two physical therapist professionals and students completed the survey. The career prevalence among respondents was 84%, and the 12-month prevalence was 47%. Statistical risk modeling for any IPSB over the past 12 months indicated the following risks: having fewer years of direct patient care, routinely working with patients with cognitive impairments, being a female practitioner, and treating male patients. Qualitative analysis of 187 open-ended comments revealed patient-related characteristics, provider-related characteristics, and abusive actions.

Limitations. Self-report, clinician memory, and convenience sampling are limitations of this type of survey research.

Conclusions. The extremely high prevalence of IPSB among physical therapist professionals warrants practitioner and student education as well as clear workplace policy and support.



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Workplace violence in the health care sector is a worldwide concern. US health care providers are at 16 times greater risk for nonfatal violence in the workplace than other workers.^{1,2} The most frequent perpetrators are patients, their relatives, caregivers and visitors.²⁻¹²

Four classes of workplace violence have been described: physical, psychological, sexual and racial.² Research on workplace violence conducted over the last decade reports a range of 5% to 70% prevalence of sexual violence and sexual harassment against health care workers. Studies surveyed nurses, physicians, chiropractors, audiologists, paramedics and home care workers in the Middle East, Asia, and English-speaking countries, and covered timeframes from 3 months to a full career.²⁻¹⁵ A recent meta-analysis of nursing-workplace violence analyzed 136 articles from 38 countries. Twelve percent of respondents reported rates of exposure to sexual harassment over the prior 6 months, 17% over the prior year, and 39% over the course of a career.¹⁶ Patients were ranked first or second as most frequent offenders.²⁻¹²

Older research in physical therapy focused entirely on patients as perpetrators of sexual harassment and other inappropriate sexual behavior (ISB).¹⁷⁻¹⁹ Inappropriate sexual behavior is any “verbal or physical act of an explicit, or perceived, sexual nature, which is unacceptable within the social context in which it is carried out.”^{20(p688)} Inappropriate patient sexual behavior (IPSB) is ISB committed by a patient and directed at a clinician, staff or other patient in a health care setting. Inappropriate patient sexual behavior encompasses a range of behaviors from leering and sexual remarks to deliberate touch, indecent exposure, and sexual assault.

In the 1990s, 3 surveys explored the experiences of physical therapists and physical therapist students with sexual harassment and other IPSB in Canada (n = 152), the US (n = 358) and Australia (n = 132) over the course of their careers.¹⁷⁻¹⁹ These surveys re-

vealed a significant problem, with more than 80% of physical therapists and physical therapist students reporting IPSB.¹⁷⁻¹⁹ A 2010 Australian survey also noted that 78% of 4th year bachelor-degree physical therapist students experienced IPSB during their clinical instruction.²¹

Inappropriate patient sexual behavior may have adverse effects on the clinician, the organization and on the patients themselves. Research indicates that one-quarter to one-half of professionals experiencing IPSB demonstrate psychological consequences including anger, guilt, fear, anxiety, self-consciousness and depression.^{5,18,19,22-25} Organizational impacts include decreased productivity, absenteeism, distraction, loss of motivation, and resignations and are reported by 15% to 30% of individuals subjected to IPSB.^{5,18,19,23,24} When IPSB is severe enough to create hostile work environments, facilities may face legal action if they do not protect staff.^{26,27} Inappropriate patient sexual behavior may impact care if patient-therapist trust is damaged or if treatment requiring greater physical contact or a private space is avoided.²⁸⁻³¹ For patients with acquired brain injury, IPSB can negatively impact independent living and integration into the community, and may lead to social isolation and criminal convictions.³²⁻³⁴

An early study in physical therapy by de Mayo used multivariable statistical analysis to identify factors that put clinicians at risk for IPSB. De Mayo noted weak correlations of the total number of incidents of IPSB with a physical therapist's young age and female sex. Marital status, work setting, years of practice and degree earned had no correlation to reported events.¹⁷ Younger age and female sex also placed clinicians at higher risk of violence in 2 of 5 recent studies that used multivariable analysis of workplace violence in several health care settings and among a variety of professions.^{4,12}

Working the night shift and less professional experience were also associated with greater risk of sexual harassment in some studies, as were certain nurses'

work settings, notably, emergency and psychiatric departments.^{9,35} Factors considered in the literature, but not found to significantly affect risk for sexual harassment and violence, were full-time versus part-time status, workload, practitioner isolation, physical location within the facility, private versus public sector, geographical region and urban versus rural settings.^{4,5,7,8,18,28,35}

A paucity of current research, inadequate sample sizes, past exclusion of physical therapist assistants and physical therapist assistant students from IPSB research in physical therapy, and limited data on risk factors associated with IPSB prompted the present study. The purpose of the research was to determine the extent to which physical therapists, physical therapist assistants, physical therapist students and physical therapist assistant students in the United States currently experience IPSB as well as to establish personal, professional, patient and environmental factors that increase risk for IPSB. Personal factors assessed included clinician's age and sex; professional factors included years of clinical experience, educational level, work setting, performance of internal exams, and training in IPSB. Patient sex and cognitive status were considered, as were the environmental factors of working in private versus public spaces, treating alone in a clinic and the use of a chaperone. Open-ended questions were included to collect personal accounting of IPSB experiences that forced-response questions could not capture.

Methods

Survey Development

A draft survey was developed after a thorough literature review. The survey consisted of a demographics section (section 1) and an IPSB experience section (section 2) which collected data on 2 time frames: career events allowed for comparison to previously conducted research and events over a more limited 12-month period provided for better memory capture.³⁶

The IPSB experience section of the survey was primarily based on a questionnaire developed specifically for

the assessment of IPSB in physical therapists by McComas et al and used in studies from 1993 to 2010.^{5,18,19,21,24} Three additional surveys provided input for the behavioral categories.^{15,17,22} Categories of IPSB described in the literature but not reflected in prior instruments were also added. Language was adjusted for clarity and neutrality of terms. For example, “sexual assault” and “fondle” were replaced with descriptions of the behavior, and words such as “offensive” or “crude” were replaced with less judgmental terms such as “overtly sexual.” Behaviors were separated into categories of severity based on level of risk to the clinician and in accordance with categorizations used by McComas et al.¹⁸ The survey questions were forced-response except for 2, which were open-ended to capture detailed IPSB accounts that might better illustrate the impact, emotional toll, and depth of respondents’ experiences.

The survey was assessed for validity and reliability. Statistical analysis of the reliability data demonstrated good test-retest reliability of the tool. Of 97 questions, 90 (92.8%) had kappa values significantly greater than 0. A revised final survey took into consideration results from the validity and reliability testing. The final survey is provided online as eAppendix 1 (available at <https://academic.oup.com/ptj>).

Participants

A sample of convenience was recruited through selected physical therapy ($n = 15$) and physical therapist assistant ($n = 2$) academic programs as well as through American Physical Therapy Association (APTA) sections (Acute Care, Health Policy and Administration, Home Health, Orthopedic, Neurologic, Private Practice, and Women’s Health sections and the Academy of Geriatric Physical Therapy). An e-mail registry of US physical therapist clinicians and students was unavailable so the authors chose to recruit via section membership as these entities expressed willingness to distribute the online survey link. Specific sections were chosen based on size, likelihood of member interest in the topic and to a lesser extent, like-

lihood of exposure to IPSB based on types of patient populations and types of practice settings. Participants were asked to complete an online survey on ‘*sensitive physical therapy patient interactions*.’ The link was open for 10 weeks. Each participating section chose their own method of advertising the study. Physical therapist and physical therapist assistant academic programs notified students by forwarding the authors’ recruitment email. It is not possible to accurately estimate the number of professionals exposed to the survey since many physical therapists, physical therapist assistants and students belong to more than 1 section and because many members were not directly notified of the survey, rather, saw the link when perusing a section website.

The survey’s demographic section (section 1) forced respondent exclusion by requiring students to have completed a final internship, and input on events over the past 12 months required practitioners to have treated patients over that period.

Data Analysis

The study was powered to detect at least 1 significant risk factor for IPSB. It was hypothesized that physical therapist sex would be the strongest risk factor based on data from the reliability pilot survey. Based on the same data, it was assumed that female physical therapists would respond to the survey in a 3:1 ratio over male physical therapists and that the rate of IPSB events for female practitioners over their career would be at least 70%. The study would then have 90% power to detect an odds ratio of 1.7 (odds that a female physical therapist experienced any IPSB compared to odds that a male physical therapist experienced any IPSB) with a logistic regression at 2-sided alpha of .05 with recruitment of 884 respondents.

Demographic and practitioner characteristics were collected. Chi-square and t tests between those with and without an IPSB event for past-12-month data were used to explore possible factors associated with IPSB event rate. Because of the number of comparisons,

P values were adjusted to control for a false discovery rate using a Benjamini-Hochberg adjustment.³⁷

Best-fit models of risk of IPSB were constructed individually for any, mild, moderate, and severe IPSB events reported over the past 12 months, versus over a career, due to improved accuracy of recall over a more recent period. Candidate variables for entry into the best-fit models of risk were based on any variable having univariate Benjamini-Hochberg-adjusted P values of less than .05 for being associated with an IPSB event. The best-fit models of risk were constructed using a forward stepwise logistic regression model with P value of less than .05 as the cutoff for entry into the model. Backward stepwise logistic regression was also conducted and the final models from both methods matched. Once the models were constructed, receiver operating characteristic curve analyses using the Youden index³⁸ for optimizing sensitivity and specificity and pseudo- R^2 values³⁹ were performed to assess goodness of fit.

Responses to open-ended questions were analyzed for patterns and clusters of meaning and coded independently by 2 of the authors (M.M.P. and J.S.B.). Consensus was reached on discrepancies. A third author (Z.C.) then reviewed the coded data and again, discrepancies were addressed, consensus reached, and codes were further refined. Further analysis of codes led to category development. Direct quotes provide evidence of each category.

Role of the Funding Source

The APTA Section on Women’s Health provided grant funding for this work.

Results

Participation and Response Rate

Survey entries numbered 1,027 with 892 meeting inclusion criteria. Forty-three of the 892 had not treated patients over the past 12 months and thus could respond only to queries about their entire career. It was not possible to calculate response rate due to the nature of the online survey methodology.

Table 1.
Respondent Characteristics^a

Characteristic	No. of Respondents	% of Respondents
Sex		
Women	714	80.0
Men	178	20.0
Age (y)		
< 30	223	25.0
30–40	261	29.3
41–50	193	21.6
51–60	159	17.8
>60	56	6.3
Professional status		
Physical therapist	697	78.1
Physical therapist assistant	56	6.3
Physical therapist student	132	14.8
Physical therapist assistant student	7	0.8
No. of years in clinical practice as physical therapist or physical therapist assistant		
0–5	297	33.3
6–10	120	13.5
>10	475	53.2
Highest earned degree in physical therapy		
PTA Associate Degree	52	6.9
BS PT	161	21.4
MPT	133	17.7
DPT or tDPT	406	54.0
Practice setting		
Outpatient	347	46.1
Inpatient	233	31.0
Home care	40	5.3
School system	16	2.1
Academic institution	106	14.1
Other	11	1.5
Full-time vs part-time status		
Full-time	609	80.9
Part-time	136	18.1
Not working/retired	8	1.0
Received training on IPSB	321	36.0
Client sex ^b		
Mostly women	111	13.1
Mostly men	41	4.8
Equal numbers	697	82.1
Worked routinely with clients who were cognitively impaired ^b	501	59.0
Performed internal examinations routinely ^b	87	10.2
Used a chaperone during internal examinations of clients of opposite sex ^b	11	16.7
Worked in the clinic alone ^b		
Mostly/often	152	17.9
Rarely/never	697	82.1
Treated in private spaces ^b		
Mostly/often	569	67.0
Rarely/never	280	33.0

^a Percentages are based on the total number of respondents for the question and not on the total number of participants. BS PT = Baccalaureate of Science in Physical Therapy, DPT = Doctorate of Physical Therapy, IPSB = inappropriate patient sexual behavior, MPT = Master of Physical Therapy, PTA = physical therapist assistant, tDPT = Transitional Doctorate of Physical Therapy.

^b Characteristics of respondents who answered queries about patient care over the past 12 months.

Section 1: Demographic Data

The majority of respondents were women (80%); many commonly worked with patients with cognitive impairments (PWCIs) (59%), defined as dementia, delirium, or acquired brain injury; and the majority treated equal numbers of men and women over the past 12 months (82%). A full description of demographic data is found in Table 1.

Section 2: IPSB Experience and Risk

Table 2 provides an overview of IPSB prevalence stratified by severity. Overall, 84% of respondents indicated exposure to IPSB throughout their career and 47% reported exposure within the past 12 months. Prevalence of IPSB decreased with increasing severity of the IPSB behaviors both over a career and over the past 12 months. *Over their careers*, women reported significantly higher rates of IPSB than men in all severity categories (mild, moderate, and severe) and in 8 of 13 types. These types included: ‘staring’ (F: 63.7%; M: 21.9%; $P < .001$), ‘suggestive remark’ (75.1% vs 43.8%; $P < .001$), ‘date request’ (37.7% vs 22.5%; $P < .001$), ‘overtly sexual remark’ (54.6% vs 41.6%; $P = .003$), ‘request for sexual activity’ (12.3% vs 6.7%; $P = .048$), ‘sexual gesture’ (32.6% vs 23.0%; $P = .017$), ‘masturbation’ (7.6% vs 2.8%; $P = .034$), and ‘inappropriate touch’ (23.0% vs 9.6%; $P < .001$). Similarly, *over the previous 12 months of practice*, women reported significantly higher rates of IPSB in all severity categories when compared to men and in 5 of 13 types as well. These types included: ‘staring’ (29.6% vs 9.9%; $P < .001$), ‘suggestive remark’ (39.1% vs 16.4%; $P < .001$), ‘overtly sexual remark’ (22.9% vs 12.3%; $P = .003$), ‘sexual gesture’ (9.9% vs 4.1%; $P = .025$), and ‘inappropriate touch’ (5.2% vs 1.2%; $P < .001$). The majority of clinicians reported IPSB was perpetrated by patients of the opposite sex (94% of female respondents and 76% of male respondents). Practitioners in pediatric settings ($n = 19$) consistently reported less prevalence of all types of IPSB events; IPSB in the past 12 months was 10.5% versus 49.2% ($P = .001$) in all other settings combined. For unknown reasons, 25% of respondents did not provide their setting and therefore the

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Table 2.

Inappropriate Patient Sexual Behavior (IPSB) Prevalence

Behavior	12-mo Prevalence		Career Prevalence	
	No. of Respondents	% of Respondents	No. of Respondents	% of Respondents
Mild IPSB				
Patient stared at you or your body parts in a way that made you uncomfortable	218	25.7	494	55.4
Patient made a sexually flattering or suggestive remark about you	293	34.5	614	68.8
Patient asked you for a date	51	6.0	309	34.6
Patient gave you a romantic or sexual gift	5	0.6	50	5.6
Any mild IPSB	340	38.1	687	77.0
Moderate IPSB				
Patient made an overtly sexual remark or joke, asked you questions about or commented on your sex life, or shared a sexual fantasy about you	176	20.7	463	52.0
Patient propositioned you for sexual activity	21	2.5	100	11.2
Patient made sexually suggestive gestures	74	8.7	274	30.7
Any moderate IPSB	200	22.4	517	58.0
Severe IPSB				
Patient deliberately exposed his or her genitals or breasts to you	42	4.9	167	18.7
Patient masturbated during a physical therapist session	12	1.4	59	6.6
Patient purposefully touched or grabbed you in a private area (thighs, genitals, breasts) and/or in a clearly sexual manner	37	4.4	181	20.3
Patient repeatedly followed, watched, or harassed you inside or outside the workplace	13	1.5	69	7.7
Patient threatened to force you or attempted to force you to submit to sexual activity	0	0	8	0.9
Patient forced or coerced you to submit to sexual activity	0	0	3	0.3
Any Severe IPSB	87	9.8	332	37.2
Any IPSB	396	46.6	751	84.2

best-fit model building process could not examine this variable.

The data for best-fit models of risk are represented in Table 3. Factors impacting risk included years of direct patient care (DPC), routinely working with PWCIs, practitioner sex, and the sex of the patients with whom the therapist worked.

Odds (95% CI) of encountering *any* IPSB were significantly higher for those with 5 or less years of DPC and for those with 6 to 10 years of DPC compared to the odds for those with more than 10 years of DPC. Those routinely working with PWCIs had a 69% increase in the odds of *any* IPSB, while being a female practitioner increased

the odds more than 2-fold. Treating mostly male patients increased the odds of any IPSB by almost 400% and treating equal numbers of male and female patients more than doubled the odds compared to those that treated mostly female patients. Age was a risk factor only for mild IPSB events, with younger practitioners reporting a greater number of events. The only statistically significant risk factor for severe IPSB was working with PWCIs.

Other variables showed significance in univariate analysis for IPSB, including performance of internal exams in assessing pelvic health (which demonstrated a decreased risk), and having entry-level academic training in

IPSB (which demonstrated an increased risk), however these variables did not remain significant in the multivariable models. Factors, such as isolation of the clinician whether alone in the clinic, or in a treatment room without a chaperone, did not reach significance in the univariate models at any severity level.

Discrimination Ability of Best-Fit Models

Each model described in Table 3 can be used to calculate a predicted probability of event for each practitioner based on the variables in each model. eAppendix 2 (available at <https://academic.oup.com/ptj>), demonstrates how to calculate the predicted probabilities

Table 3. Severity-Stratified Multivariable Analysis of Risk Factors for Inappropriate Patient Sexual Behavior (IPSB) Over the Past 12 Months^a

IPSB Event	Variable	Category	Coefficient	Odds Ratio (95% CI)	P
Any IPSB event over past 12 mo	Intercept		-2.228		
	Years of DPC	10+	Reference		
		6-10	0.617	1.85 (1.21-2.84)	.005
		0-5	0.839	2.31 (1.69-3.17)	< .001
	Works with PWCIs		0.525	1.69 (1.25-2.29)	< .001
	Sex (women)		0.784	2.19 (1.51-3.18)	< .001
	Sex of patients	Mostly women	Reference		
		Equal numbers	0.842	2.32 (1.43-3.78)	< .001
		Mostly men	1.339	3.82 (1.68-8.67)	.001
Any mild IPSB event over past 12 mo	Intercept		-3.583		
	Age group (y)	60+	Reference		
		51-60	0.135	1.14 (0.47-2.79)	.766
		41-50	0.913	2.49 (1.06-5.84)	.036
		30-40	1.401	4.06 (1.78-9.28)	< .001
		< 30	1.855	6.39 (2.78-14.7)	< .001
	Sex (women)		1.040	2.83 (1.88-4.26)	< .001
	Sex of patients	Mostly women	Reference		
		Equal numbers	0.925	2.52 (1.48-4.31)	< .001
Mostly men		1.380	3.97 (1.69-9.34)	.002	
Works with PWCIs		0.508	1.66 (1.20-2.29)	.002	
Any moderate IPSB event over past 12 mo	Intercept		-2.921		
	Works with PWCIs		0.629	1.88 (1.30-2.71)	< .001
	Years of DPC	10+	Reference		
		6-10	0.731	2.08 (1.30-3.31)	.002
		0-5	0.359	1.43 (1.00-2.06)	.052
	Sex (women)		0.695	2.00 (1.24-3.23)	.004
	Sex of patients	Mostly women	Reference		
		Equal numbers	0.532	1.70 (0.92-3.16)	.091
Mostly men		1.245	3.47 (1.43-8.41)	.006	
Any severe IPSB event over past 12 mo	Intercept		-3.422		
	Works with PWCIs		1.701	5.48 (2.87-10.5)	< .001

^aDPC = direct patient care, PWCIs = patients with cognitive impairments.

and summarizes the discriminate ability of each of the models in determining the likelihood that each physical therapist will experience an IPSB event. All models had area under the curve significantly greater than 0.5 indicating the models could predict outcome better than chance alone. Sensitivity of classifying practitioners' past-12-month outcomes based on best-predicted probability cutoff ranged from 73% to 87% and, specificity ranged from 44% to 64%. Based on the pseudo-*R*² values,

the models are able to explain up to 15% of the variability of the outcome.

Qualitative Analysis

Three major categories emerged from analyzing 187 open-ended comments: patient-related characteristics (n = 184), provider-related characteristics (n = 38) and abusive actions (n = 143). One hundred eighty-four comments described specific patient-related characteristics including diagnoses, age, sex, and setting as illustrated

by the following: "I work in...a Skilled Nursing Facility. Most of the instances of IPSB come from older men with neurological impairments, mostly old veterans...." (#167); "[my answers] pertain to male offenses and advances 100% of the time" (#136); and "One of the most blatant instances of inappropriate behavior, the patient had no mental control over his actions."

Thirty-eight comments related to specific provider characteristics (personal

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and professional), including age, sex, marital status, patient care experience, and types of treatment, as the following quotes illustrate: “Most of my incidents occurred when I was much younger and early in my career” (#151); “this behavior tends to be geared more towards younger female therapists, especially those who are single” (#59); “I left the treatment room for some reason after performing manual therapy with the patient in prone. When I re-entered the room, I could tell he was masterbating [sp]....” (#71).

Finally, 143 comments described specific abusive actions or events such as inappropriate verbalizations, touch or gestures, flirting, jokes, unwanted behaviors, stalking, and sexual assault. For example:

I was treating a patient with low back issues. While massaging and mobilizing the patient, he became visibly aroused and purposely attempted to ejaculate. It was very disturbing to me and even twenty years later it makes me upset. (#18)

...he got my personal phone number from a colleague and started texting me and calling me all the time, sending graphic pictures and even showing up outside my dorm. It was a scary experience since I just started working after my undergrad. I had to change my work timings and departments...to avoid him. (#23)

In a home care setting I was attacked by an 80-year old patient I was seeing for the initial evaluation...He asked for a kiss and I declined, telling him I don't participate in that kind of activity with patients or any other man since I was married. At that point, he grabbed me forcing me toward him with his hands around my neck. (#140)

In addition, 18 participants commented on support, training or policies related to IPSB. Most described deficits in these areas: “I was told that when patients were inappropriate with me it was “part of the job” ... I did not have support from management to address the situation or to take further steps” (#42), and, “My company does not support transferring care, terminating the patient, or provide support to the employee. It is also better if the

company does not know because my immediate supervisor will blame it on the employee and ridicule” (#173).

Some students noted a lack of CI training as illustrated here:

Although I felt that my CI was generally supportive, he later said nothing when a patient's husband commented on my physical appearance. He also joined in when a patient started discussing my personal life and tried to give me dating advice. On the last day of the internship he said that he had never had a female student before, and that he didn't really know how to talk to me. I don't think that my CI knew that this behavior was inappropriate. He definitely didn't have enough training on the topic. When I discussed my experiences with two female classmates, I found out that every one of us had been harassed on our summer internships. (#89)

Conversely, there were instances where participants did feel supported: “We are well trained and supported on how to manage these situations since they are relatively frequent with this [PWCI] patient population” (#35) and “During and after these experiences I felt very supported by my clinical instructors and/or other staff, this was crucial” (#2).

Discussion Prevalence

This was the first study to assess prevalence of IPSB among US physical therapy professionals in twenty years, the first to include physical therapist assistants and physical therapist assistant students and the largest of its kind. Rates of IPSB from the current research reveal that very little has changed over the past 2 decades. Prevalence over the length of a career (84%) is consistent with the previous 3 surveys of IPSB in physical therapists (81%–86%). Milder IPSB was the most common, as was the case in the previous 3 surveys.^{14–16} Severity breakdown was published in only 1 prior physical therapist study; in comparing current data to McComas et al, rates for mild (77% compared to 70%) moderate (58% compared to 62%) and severe (37% compared to 35%) behaviors match as well.¹⁸ Past-12-month IPSB rates (47%) from this study cannot

be compared to past research as this was not previously studied in physical therapists. Prevalence data from this cohort are not directly comparable to the literature on rates of sexual harassment of international health care workers, as those studies frequently include nonpatient perpetrators and are limited to instances where the respondents identify the IPSB as sexual harassment.^{2–15}

Risk Factors

This was the first study to provide multivariable analysis of personal, professional, patient and environmental factors in physical therapists to determine what factors are associated with risk of IPSB. Clinical inexperience is the most predictive factor determined by the risk models, explaining the most variability in risk of IPSB. This was further confirmed by participant comments. One other health care study utilizing multivariable analysis did find experience to be a risk factor,⁴ but prior physical therapy research did not identify it as such.¹⁷ The increased vulnerability of novice clinicians points out a need for IPSB education in academic physical therapist/physical therapist assistant programs as well as knowledgeable and supportive supervision of students and new graduates. Unfortunately, clinical instructors and supervisors are often unprepared to guide new clinicians in appropriate responses, as noted in the student comment shared earlier.

Interestingly, entry-level training in IPSB was not found to be a protective factor in this study, in fact, it was associated with higher reported rates. This may reflect increased IPSB awareness yielding greater likelihood of a positive IPSB survey response and perhaps, greater IPSB recall, or it may reflect that training is not preventative.

The second most predictive risk factor for *any* IPSB is working with PWCI; this was also the only significant risk factor found for *severe* IPSB. This was the first study to consider working with PWCI as a potential risk factor. Of the 187 comments provided, 86 (46%) were related to patients with disorders such as acquired or traumatic brain injury,

older adults with dementia or delirium, and patients with impaired judgement. A survey of Australian occupational therapists found 42% of patients exhibiting IPSB had cognitive deficits.²³ Similarly, 53% of perpetrators in a survey of almost 5,000 nurses in Minnesota were cognitively impaired by disease or medication.³⁵ These findings suggest a need for clear workplace policies and procedures for managing IPSB in this population. Individuals specializing in these patient populations also benefit from structured workplace support systems to deal with the aftermath of IPSB.

The third most predictive risk factor was practitioner sex. Female professionals were found to be at greater risk for IPSB, consistent with previous studies.^{4,12,17} In the current study, only indecent exposure and stalking (categorized as severe events) generated equal risk among men and women, again consistent with the Canadian study in which men reported mostly moderate and severe IPSB events.¹⁸ This difference in reporting may reflect a true difference in how often women are targeted, but may also represent a difference in how memorable and impactful these experiences are for men and women. Research indicates that men and women experience sexual harassment differently due to the threat of sexual assault and rape that disproportionately affects women.⁴⁰⁻⁴³ In 1 nursing study, female nurses who were the target of IPSB feared for their safety, whereas the primary concern for male nurses was misinterpretation of their own behavior.⁴⁴

The final risk factor predictive of IPSB was patient sex. Treating male patients, regardless of practitioner sex, was associated with increased risk of IPSB and is consistent with a number of studies indicating the majority of perpetrators are men.^{17,23,35}

Clinician age was not found to be a significant factor for all IPSB, however, younger clinicians were more likely to encounter mild forms of IPSB. Previous physical therapy research and other health care literature also found young age to be a risk factor, though

these studies did not differentiate IPSB severity level.^{3,4,7,11,12,17} Although setting could not be included in the risk model due to missing data, the differences between settings were statistically significant. Clinicians in pediatric settings report lower rates compared to all adult settings. The Canadian physical therapist study reported higher rates in some settings, but statistical significance was not established. The previous US and Australian physical therapist surveys did not find practice setting to be a significant risk factor.^{17,19} Working alone in the clinic or treating alone in a private room has been hypothesized to increase IPSB risk, but this was not confirmed by the data. Neither was the hypothesis that clinicians working in pelvic health might incur increased risk.

Although each significant risk factor provides specific opportunities for forethought, the fact that nearly half of all physical therapist clinicians will experience IPSB in a given year indicates that the profession as a whole should be prepared. Each of the regression models created to explain IPSB risk could only account for up to 15% of the total variance. Although many possible risk factors were examined in this study, unaccounted-for physical therapy profession-related factors likely influenced the remaining variance. This suggests probable relevance to all therapists, regardless of personal, professional, patient, and environmental factors. The profession can support its members with training, specific policy, sensitive supervision, and co-worker intervention. One-third of respondents to this survey previously received IPSB training. Although training was not protective in avoiding IPSB, it may protect clinicians from adverse effects. In a 1994 British study, nurses who believed they could do something about sexual harassment suffered fewer negative health consequences than those who found the situation uncontrollable.⁴⁵ Health care facilities can provide assistance to staff via specific information and training about patient sexual behavior and caregiver responses, procedures for documentation and reporting, and procedures for transfer and termination of care. Supportive and

responsive managers are also essential for successful resolution of IPSB. In a survey of clinical supervisors, those that encouraged IPSB reporting achieved better resolution.⁴⁶ Unfortunately, a number of respondents in this study commented on the lack of administrative and supervisory support. Sexual harassment research indicates that bystander intervention is one of the most successful ways to stop harassment. Colleagues may interrupt the incident while it is occurring, confront the patient afterwards, or report the incident to management.⁴⁷

Comparison to APTA reported member demographic data assists in determining study generalizability. Respondents from this survey were more proportionately women than those in the 2013 APTA member survey⁴⁸ (80% compared to 70%) which may indicate an increased interest on the part of female practitioners to respond to a survey on sensitive patient issues. Our data set was younger with 26% of our respondents falling under age 30 as compared to 15% of the APTA cohort. This is likely due to recruitment from physical therapist and physical therapist assistant academic programs. Those reporting greater than 10 years of clinical experience in the profession were comparable (63% in this cohort compared to 67% among APTA membership).

Limitations

Generalizability to all physical therapists, physical therapist assistants, physical therapist students and physical therapist assistant students is somewhat limited, as a sample of convenience was used. Additionally, small numbers of physical therapist assistants and even fewer physical therapist assistant students completed the survey compromising generalizability to these groups. Finally, as is true with all qualitative research, the data is not meant to be generalizable. Direct quotes are provided to enable the reader to judge transferability.

Because the survey link was distributed to some, but not all, special interest components of the APTA, potential exists for bias in prevalence and risk

analysis. The sample may not be representative of all physical therapy professionals and should be interpreted with some caution. As is true with all voluntary survey research, those with greater interest, experience or content concerns typically complete a survey, skewing the data in favor of increased prevalence and exposure to the topic under study. An attempt was made to decrease this affect by using broad language in recruitment materials, referencing sensitive communication rather than sexual behavior specifically. Additional limitations may have resulted from self-report survey methodology, as retrospective research relies on participant memory. We attempted to control for memory issues by collecting data over both 12-month and career time frames.

Future Research

In addition to data of prevalence and risk factors, this survey also collected data on how clinicians responded to IPSB and the effects of these responses. Upcoming analysis of this data may contribute to discussion on how an individual might best handle IPSB and may help to determine effective training and education. Additional research is needed to establish effectiveness of workplace support and policy, co-worker intervention, and workplace training to mitigate and prevent IPSB. Future research might attempt to pursue issues raised by verbatim responses such as long-term impact of IPSB upon clinicians, inappropriate sexual behavior by patient's families, caregivers and visitors, and need for appropriate training for IPSB.

Conclusion

Eight hundred ninety-two physical therapist professionals and students completed this survey on IPSB. Results demonstrated a career prevalence of 84% and a 12-month prevalence of 47%. Statistical modeling for the association between collected variables and prevalence of *any* IPSB over the past 12 months indicated fewer years of DPC, routinely working with PWCIs, practitioner female sex, and patient male sex as risks. Qualitative comments reinforced quantitative outcomes. IPSB risks and prevalence warrant

practitioner and student education, as well as workplace policy and support.

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Ethics Approval

The University of Wisconsin—Madison (UW) Health Sciences Institutional Review Board provided approval for this study.

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Disclosure

The authors completed the ICJME Form for Disclosure of Potential Conflicts of Interest and reported no conflicts of interest.

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