

Title: Perceptions of Telehealth in Outpatient Orthopedic Physical Therapy: Contrasting Experienced Clinicians and Student Clinicians

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ABSTRACT

Background: The COVID-19 pandemic caused an abrupt shift to social-distancing which changed the way health care providers work. Specifically, the use of telehealth increased dramatically to reduced exposure, maintain social distancing, and continue to meet patient needs.¹ In general medicine, telehealth has many well-documented barriers that include inadequate reimbursement, lack of technology infrastructure, and lack of clinician training²; however, there is little work dedicated specifically to clinical practices that rely on direct “hands on” examinations and interventions, such as outpatient orthopedic physical therapy. Given that the reimbursement and utilization of telehealth will likely continue beyond the current pandemic³, it is vital that professions such as physical therapy examine the strengths and limitations of practicing via telehealth. Thus, the purpose of this project was to examine clinician confidence in performing key out-patient orthopedic practice areas using telehealth and compare perceptions of challenges between experienced clinicians and student clinicians.

Methods: A 28-item questionnaire was developed based on the American Board of Physical Therapy Specialties’ Description of Residency Practice of Orthopedics. A two-stage Delphi validation process was conducted in March 2021. The survey was distributed to Ithaca College physical therapy graduate students and alumni in April 2021 and was available through October 2021. Participants were asked to rate seven survey sections, focused on clinician psychomotor skills, on a 5-point Likert scale (1= Not at All Confident and 5= Very Confident). Participants were also asked to rate statements on the challenges and barriers associated with practicing telehealth on a different 5-point Likert scale (1= Strongly Disagree and 5=Strongly Agree). The survey concluded with five open-ended questions about advantages, challenges/barriers, concerns, and the likelihood of using telehealth once the pandemic has settled. Data were concatenated in Microsoft Excel. Differences in ratings between practicing and student clinicians on each rating were assessed via Chi Square and Cramer’s V effect size using SPSS. Open-ended question responses were imported into Atlas TI for coding and theme identification.

Results: The survey had a total of 161 responses: 107 practicing out patient orthopedic clinicians and 25 graduates students with some clinical exposure in this setting; 29 respondents did not meet the criteria to take the survey. Significant differences in confidence performing key psychomotor skills existed between experienced clinicians and students in the areas of: subjective exam, tests and measures, and assessment of patient outcomes ($p < 0.05$). Students were more confident in their ability to teach interventions in the areas of range of motion (ROM), flexibility, and patient education via telehealth. Whereas, experienced clinicians were

more confident in screening in red flags, prescribing aerobic exercise, performing outcome measures, and assessing function over telehealth compared to physical therapists. Both experienced clinicians and students agree that the use of telehealth will continue even when things start to return to "normalcy", telehealth decreases wait times for patients, and telehealth limits physical therapists' use of palpation or other manual examination procedures. Participants mentioned many of these topics when responding to the topic of educational preparation regarding telehealth. Common words noted in the qualitative analysis were manual/hands on, ROM/movement, technology concerns, and evaluation skills.

Discussion: Differences and similarities between students and experienced clinicians may be based on a multitude of factors. Significant differences may be based on clinical experience rather than experience with telehealth per se. Other differences could be due to students being confident with technology, which makes conducting an online physical therapy session smoother. Results from the quantitative analysis correlate with the results of our qualitative data. The survey shows that there are concerns regarding educational preparation for conducting a physical therapy session over telehealth. Participants comments showed the vast majority would like to learn ways to perform an examination, better assess ROM, teach joint mobilizations, and collect outcome measures over telehealth in the future.

Conclusion: Overall, it appears that the differences between licensed physical therapists and graduate physical therapy students may provide a better understanding how current and soon-to-be outpatient orthopedic physical therapists perceive their ability to practice via telehealth. Key areas of improvement in the future should focus on incorporating training in using telehealth for movement examination and interventions. Further research should also address issues around how to standardize physical exam items in a telehealth setting (e.g., ROM or strength).

References:

1. Hollander, J. E., & Carr, B. G. (2020). Virtually perfect? Telemedicine for COVID-19. *New England Journal of Medicine*, 382(18), 1679-1681.
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3. Demiris G, Speedie S, Finkelstein S. A questionnaire for the assessment of patients' impressions of the risks and benefits of home telecare. *J Telemed Telecare*. 2000;6(5):278-284. doi:10.1258/1357633001935914

Table 1. Qualitative analysis common codes with participant quotes.

Qualitative Analysis: Representative Quotes	
Manual Therapy	“It was difficult because I could not perform manual techniques on post op patients after joint replacements and other orthopedic surgeries. I had a pt s/p TKA who ended up stopping telehealth and coming to the clinic because he mostly needed manual. He was independent with all exercises and had a home gym.”
Travel	“Still using today, with patients who have scheduling difficulty, are leaving the city temporarily. Also in a big commuter location, if people are not in the city all the time they can schedule TH days they are home.”
Assessment	“3 dimensional seating and postural assessments, assessment of skin integrity, and delivery of skilled manual techniques are limited.”
Safety/Gait	“Several times Mostly medium/ high fall risk , balance and gait work.”
Patient Access	“Patients have access to care when they can't get into the clinic.”

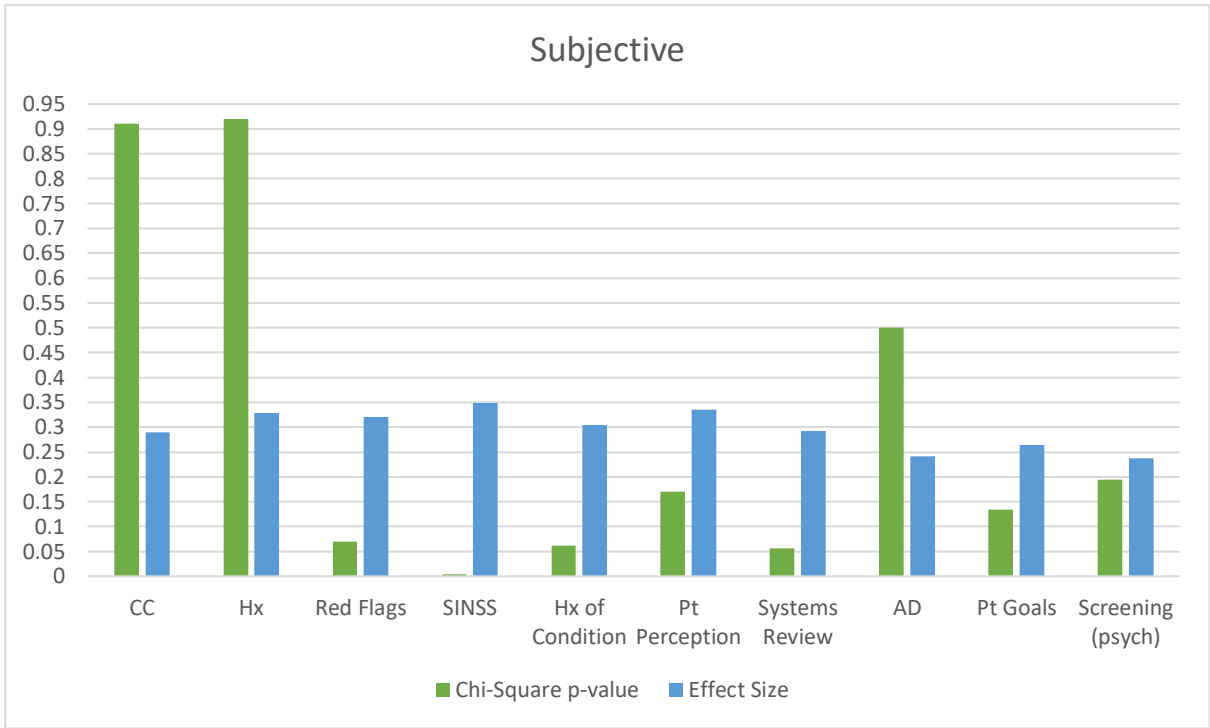


Figure 2: Comparing p-value to effect size in the subjective section
 *p<0.05

Symmetric Measures

		Value	Approximate Significance
Nominal by	Phi	.289	.073
Nominal	Cramer's V	.289	.073
N of Valid Cases		102	

Figure 3: Example of table used to determine effect size using Cramer's V.