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A Comparison of Doctor of Physical Therapy Students' Self-Reported Empathy With Standardized Patients Perceptions of Empathy During a Simulated Telehealth Encounter

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Abstract

Empathy is an important factor in developing a positive patient–provider relationship. It has been shown to lead to improved patient outcomes, well-being, and satisfaction. This study examines the relationship between first-year physical therapy students' self-reported empathy levels and a patient's perceptions of caregiver empathy during a standardized patient interview via telehealth. Forty-five students completed a self-reported empathy survey before the standardized patient encounter using telehealth. Following the experience, standardized patients rated the perceived empathy demonstrated by the students during that patient–provider encounter using 2 validated measures. The mean student self-reported empathy using the Jefferson Scale of Empathy-Health Care Provider Student (JSE-HPS) version was 123.93 (range 95-135 SD 7.328). The standardized Jefferson Scale of Patient Perception of Provider Empathy (JSPPPE) scores showed a mean of 23.8 (range 11-32 SD 3.951) and a mean of 3.16 (range 1-5 SD.85) on the Global Rating of Empathy (GRE). There was no significant correlation found between the JSE-HPS and the JSPPPE, $r = -.47$, $P = .760$, or the GRE $r = -.166$, $P = .276$. The artificial nature of a standardized patient interaction using the telehealth format for this encounter may have contributed to the students' inability to communicate empathy to the patient and may explain this discrepancy.

Keywords

empathy, telehealth, physical therapy, patient–provider relationship

Introduction

Background

Empathy, the ability to temporarily place yourself in someone else's situation, is an important attribute for all health professionals (1,–3). The clinical importance of empathy has led researchers to investigate this attribute in current and future health care providers using self-reporting surveys, such as the Jefferson Scale of Empathy (4). Empathy is a key factor in the development of a positive patient–provider relationship which has been shown to improve patient outcomes, patient satisfaction, and a patient's sense of well-being (1,3,–5,6). However, these improved health care outcomes are a reflection of the patients' perception of providers' empathy, not the self-report of empathy by the caregiver. Research has recently investigated a potential gap between these 2 assessments of empathy with conflicting results. Bernardo et al (7) found that physicians' self-reported empathy showed no significant relationship to patients' perceptions of physician empathy, suggesting that while physicians may have an appreciation for, or a valuing of, empathy, it is not always conveyed to, or at least received by, the patient during a patient–provider interaction. These findings were corroborated by Kane et al (8) and Grosseman et al. (9) Alternately, Katsari et al (10) found an inverse association between a patient's perception

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of physician empathy and the self-report of physician empathy while Glaser et al (3) were able to demonstrate a statistically significant positive correlation between physicians' self-reported empathy and their patients' reported perceived empathy.

Considering future health care providers, research into medical students' self-reported levels of empathy and the perception of their empathy, usually by a standardized patient (SP), also seems to be without a consistent correlation. McTighe et al (11) found no significant correlation between students' self-reported empathy levels and the SP's perception of empathy while Berg et al (12) were able to report a low but significant correlation.

In the fall of 2020, the COVID pandemic necessitated that our Doctor of Physical Therapy (DPT) students switch most of their in-person learning to a virtual format, including their SP encounters. One student goal for these standardized patient interviews is to develop a positive patient–provider relationship during the telehealth session, which would include demonstrating empathy. To our knowledge, no work has yet explored the relationship between self-reported empathy by DPT students and patients perceived empathy from student physical therapists, either during in-person or telehealth encounters. Therefore, our aim was to explore the relationship between first-year DPT students' self-reported empathy levels and the SP's perceptions of empathy during a simulated patient encounter provided via telehealth. Our hypothesis was that there would be a positive correlation between these 2 measures.

Methods

This study used a cross-sectional design and obtained IRB approval from Boston University (5647x). A convenience sample of first-year DPT students were invited via email to complete an electronic version of the JSE-HPS survey before participating in a telehealth SP experience, as part of their integrated clinical experience (ICE) course during the fall of 2020. Forty-five first-year DPT students out of a possible 78 students (58%) volunteered to participate in this study. The mean age of the sample was 22.5, and 80% of the sample identified as female. The JSE-HPS is a validated modification of the original JSPE and has been previously used to measure physical therapy students' self-reported levels of empathy. (13,–15) The possible total scores for the JSE-HPS range from 20 to 140 with higher scores indicating greater levels of empathy.

The objective of the SP encounter was for each individual student to gain practice in efficiently taking the patient's history and providing the patient with some education on what to expect during the subsequent physical examination and future physical therapy sessions. Prior to the encounter, students participated in 2 2-h classes focused on skills and strategies for taking a patient history including a discussion of the therapeutic alliance and ways to develop such a bond with patients. Activities included synchronous and asynchronous opportunities for role playing with peers, lecture, discussion, and watching and critiquing mock patient interviews.

SPs were licensed, physical therapists. Each SP participated in a 2-h training session where they learned how to portray one of 3 different patient scenarios. Each case had 1 to 3 scripted patient lines that were amenable to an empathic student response, for example: "I'm really stressed about not being able to do my job due to my elbow pain." During the training sessions, the SPs were instructed on how to complete the JSPPPE as well as the Global Rating of Empathy (GRE). The JSPPPE is a brief five-item scale measuring the patient's perspective of empathetic engagement. Each of the 5 items is answered on a 7-point Likert-type scale (from Strongly Disagree—1 to Strongly Agree—7) for a range of 5 to 35 with higher scores indicating a higher level of perceived provider empathy. This survey has been used in health care educational programs that utilize SP interactions. (2,12) The GRE is a 5-point scale rating the patient's overall experience with 5 representing the highest and most positive response. (12) After each telehealth session, the SP rated their perceptions of student empathy using both validated tools.

The telehealth sessions took place via Zoom using stable high-speed internet connections. Each student was provided with the case vignette 1 week prior to the encounter allowing them time to prepare for the session. The vignettes gave a brief overview of the patient's chief complaint, and relevant past medical history, and provided some details on the patient's social history. Each encounter involved one student and one SP portraying one case, and lasted approximately 15 min followed by 10 min of debriefing with the SP where the students received feedback on their history-taking skills. Following each student encounter, the SP completed the JSPPPE and GRE, which were pre-coded paper forms in order to match them to the appropriate student for analysis while maintaining students' anonymity. No faculty or course instructors were present during the telehealth session to increase the fidelity. SP ratings on the JSPPPE and GRE and the students' self-reported empathy measurements using the JSE-HPS were entered into RedCap, a data management storage software, for data storage. (16)

Correlation analysis explored the relationship between student self-reported rating of empathy and SP rating of provider empathy. *T*-test explored group comparisons. All statistical analyses were conducted using SPSS statistical software version 27 (SPSS Inc).

Results

The students' mean self-reported empathy score using the JSE-HPS was 123.93 (range 95-135, SD 7.328). The mean perceived empathy score recorded by the SP using the JSPPPE was 23.8 (range 11-32, SD 3.951), and using the GRE was 3.16 (range 1-5, SD.85). In this sample, there was no difference in the mean rating of self-reported

empathy by gender ($P = .905$). See Table 1 for descriptive statistics.

Correlations

Pearson product-moment correlation was used to explore the relationship between empathy rating variables. There was no significant correlation found between student self-reported empathy as measured by the JSE-HP and the SP perception of provider empathy as measured by the JSPPPE, $r = -.47$, $P = .760$ or the GRE $r = -.166$, $P = .276$. A strong positive correlation was found between the 2 SP empathy evaluations, GRE and the JSPPPE, $r = .827$, $P = <.001$. See Table 2.

Discussion

This study aimed to explore the relationship between DPT students self-reported empathy and SP perceptions of empathy during a telehealth session. The results of the study found no significant correlation between first-year DPT students' self-report of empathy and the SPs' perception of students' empathy. McTighe et al (11) and Ogle et al (17) similarly did not find a significant correlation between the scores on the JSPE by medical students and the JSPPPE during SP encounters.

Hojat defines empathy as "a predominantly cognitive (rather than an affective or emotional) attribute that involves an understanding (rather than feeling) or experiences, concerns, and perspectives of the patient, combined with a capacity to communicate this understanding and an intention to help." (18) This definition includes both the cognitive aspect of empathy as well as the ability to convey that emotion through effective communication. In this study, our subjects were first-year DPT students who may agree cognitively with the importance of empathy and therefore scored themselves as having high levels of empathy on the self-report survey. However, their ability to then communicate that attribute, so that the recipient perceives an intention to help, may require more training and practice.

Studies by McTighe et al (11) and by Chen et al (19) demonstrated that students who were further along in their medical school education were more likely to be perceived as empathetic during an SP encounter than those students who were just beginning their training. The SP experience in this study occurred during the DPT students' first full academic semester of a three-year program. The naiveté of our students may have impacted their ability to portray empathy to the SP.

The SP experience in this study was conducted via telehealth. The digital nature of this endeavor also may have influenced the outcome of this study. It has been noted that during telehealth encounters, when compared to in-person encounters, physicians tended to provide fewer empathetic verbal responses and tended to speak more frequently than the patient, making the sessions seem more physician-centered than patient-centered. (20,21) Simpson et al (22) also stated that it may take more time for a patient–provider relationship to develop, especially in telehealth. Therefore, we believe that the telehealth nature of the SP-student encounter may have influenced the ability of these students to demonstrate empathy towards the SP.

In this study, we did find a strong correlation between the JSPPPE and the GRE. This same relationship was also found by Berg et al (12) suggestings that both tools were measuring SP perceptions of student empathy during these encounters.

In this sample, there was no significant difference in the mean rating of self-reported empathy by gender ($P = .905$), which is contrary to findings from many other studies, where female participants were found to have significantly higher self-reported empathy levels than males. (4,23) The overall small sample size and the relatively few male participants could explain this unusual finding.

Limitations

Limitations of this study include the small sample size. All 78 DPT students enrolled in the ICE course were invited to participate, however, only 58% responded by completing the online version of the JSE-HPS survey. Students who participated in this study may be those students who highly value the attribute of empathy, creating a sample bias. This study used students from a single DPT program, which limits generalizability. The telehealth sessions were only approximately

Table 1. Descriptive Statistics and Demographics.

	Mean (range) and (standard deviation)
Age	M = 22.5 (21-26), (SD = 1.3)
Gender (f/%)	
Male	9 (20%)
Female	36 (80%)
JSPPPE (5-35)	M 23.8 (11-32) (SD 3.951)
GRE (1-5)	M 3.156 (1-5) (SD.8516)
JSE-HPS (20-140)	M 123.93 (95-135) (7.328)

Abbreviations: JSPPPE, Jefferson Scale of Patient Perception of Provider Empathy. SP rating of student empathy; JSE-HPS, Jefferson Scale of Empathy - Health Professional Student. Student self-report of empathy; GRE, Global Rating of Empathy. SP rating of student empathy.

Table 2. Correlation Analysis Between Student Self-Reported Empathy and SP Perceived Empathy.

	Pearson correlation	*P* value	95% Confidence Interval
JSPPPE-JSE-HPS	−.047	.760	−.336–.250
JSPPPE-GRE	.827	.000*	.704–.901
JSE-HPS-GRE	−.166	.276	−.438–.134

Abbreviations: JSPPPE, Jefferson Scale of Patient Perception of Provider Empathy. SP rating of student empathy; JSE-HPS, Jefferson Scale of Empathy - Health Professional Student. Student self-report of empathy; GRE, Global Rating of Empathy. SP rating of student empathy.
* = $P < .01$.

15 min, which may not have been enough time for an empathetic relationship to develop. (12) This SP encounter, rather than an actual patient encounter, may have limited the students' ability to suspend reality in order to fully engage in the exercise. Furthermore, this exercise was a course assessment, which adds to the artificial nature of the experience, limiting the ability of the student to develop and portray empathy.

Future Research

Future research should focus on pedagogical interventions targeting student's ability to demonstrate empathy during a patient–provider encounter. Additionally, research including DPT students later in their academic preparation has the potential to track how empathetic engagement develops over time. Given an increased utilization of telehealth in rehabilitation services in response to the COVID pandemic, future studies could explore how provider empathy is experienced by patients using this model of care.

Conclusion

Self-reporting of empathy by 1st year DPT students did not correlate with perceived empathy by SPs during a telehealth experience. While first-year DPT students' self-reporting of empathy was high, showing that they valued the attribute, they lacked the ability to portray empathy to a standardized patient during a telehealth experience. Therefore, it is advised that self-reports of DPT student empathy should not be used as a surrogate for patient's perceptions of provider empathy, which is one element necessary to form a strong patient–provider relationship. Both the JSPPPE and the GRE, each measuring the perceived provider empathy, were strongly correlated.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical Standard

IRB approval was obtained for this study.

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