



COLLEGE OF HEALTH PROFESSIONS

# Patient Awareness of Physical Therapist Doctoral Title Changes Intent to Adhere to a Treatment Plan: A Double-Blind, Randomized Controlled Pilot Study

James Dauber, Kueifu Chang, Chang Ha Doh, Paige Muellerleile  
School of Physical Therapy, Marshall University, Huntington, WV 25702



COLLEGE OF HEALTH PROFESSIONS

## Background / Introduction

- Non-musculoskeletal factors such as patient beliefs, expectations, and perceptions have been shown to affect clinical outcomes.
- Psychology literature has demonstrated a strong human tendency to adhere to instructions provided by a perceived authority figure, even if the change in behavior is dangerous to self or others.
- Change in behavior has been shown to be heavily influenced by superficial cues such as clothing and title.
- Research indicating that perception of apparent authority can change behavior in a positive or useful manner is scarce.

## Conclusion

- The initial intent of this pilot study was to investigate the feasibility of a novel study design, which we believe to be a strong, randomized, double-blinded, multi-center design.
- Due to the small numbers used, no strong conclusions can be drawn from this pilot study. A larger study needs to be performed to better understand the magnitude of any possible effect on patient behavior.
- There does seem to be an initial indication that knowledge of PT doctoral status may positively influence a patient's intent to adhere to a treatment plan.
- Whether an intent to adhere would translate to actual improved adherence is not known at this time and should be the subject of further investigation.
- The apparent inconsistency with greater intent to adhere, despite no increased perception of PT competence, supports previous psychology research demonstrating the large effect of perceived authority on individual willingness to adhere.
- Patient perception of medical authority based on title may have the greatest effect on the practice of new graduate PTs.

## Methods

- Approval granted by the Marshall University Institutional Review Board.
- Subjects collected through a sample of convenience as they presented to one of three private practice clinics.
- One PT at each practice was used for the study and served as his or her own control.
- Once consented, subjects were randomly assigned to an experimental or control group.
- Subjects were asked to read a biography about their attending PT prior to the first encounter.
- Control group read a biography in which the title "Dr." appeared in front of the PT's name throughout, while the control group read a biography in which only first and last name of the PT was used. Biographies were otherwise identical.
- The PT was blinded as to which group each subject had been assigned.
- The subjects were blinded to any information about the PT other than the biography.
- Immediately after the initial encounter, subjects completed an eight-item survey regarding beliefs about the PT, using a 5-point Likert scale with ordinal level measurement.

## Study Objective

**Investigate the feasibility of a novel study design to determine if patient knowledge of physical therapist (PT) doctoral status changes patient expectations, patient perception of the PT, or patient intent to adhere to a treatment plan.**

## Results

- 48 subjects participated, with 16 at each clinic. Two subjects were removed after it became known that the survey was filled out by a family member, leaving a total of 46.
- Demographic information of age, gender, ethnicity, income, and education were collected.
- Items 2-5 addressed subject perception of PT competence / appropriateness of care. Post-hoc analysis revealed 2, 4, 5 were internally consistent (Cronbach's alpha = .80), allowing a summary score, but 3 was not internally consistent with the others.
- For items 2, 4, 5, no statistically significant difference between groups, either independently or as a summary score  $F(1,40) = 2.73, p = .11$ .
- Item 3, no statistically significant difference between groups  $F(1,40)$  value of .02 and  $p = .11$ .
- Item 7 yielded a factorial ANOVA  $F(1,44)$  value of 4.56 and  $p$  value of .039, demonstrating statistical significance in favor of the experimental group.
- Severity of condition (assessed using item 8) did not change the result of any of the other question items.

## Discussion

- Primary research question was whether a patient's intent to adhere to an established treatment plan would be altered based on the knowledge that his or her PT had the title "Doctor."
- Item 7 most closely addressed this question.
- For item 7, a statistically significant difference was found in favor of the experimental group suggesting that patients who are aware that the PT possesses a doctorate may have a greater intent to adhere to a prescribed treatment plan.
- The magnitude of this difference was similar in the two younger / less experienced PTs, but less with the older / more experienced PT.
- Interestingly, although item 7 indicated that patients may change their willingness to adhere to instructions based on a knowledge of doctoral status, items 2-5 suggest perception of PT competence or appropriateness of care are not necessarily altered.
- Finally, subject perception of the PT and intent to adhere were not affected by subject perception of severity of the condition.

### Survey Items

1. Estimated number of years of experience of the PT.
2. Belief that PT understood the condition.
3. Belief that the PT was competent.
4. Belief that care received today was appropriate.
5. Belief that established plan of care was appropriate.
6. Expectation for improvement over the next four weeks.
7. Likelihood of sticking with the established treatment plan.
8. Perception of the severity of condition being addressed.

- All surveys were anonymous and were placed in a sealed envelope and deposited in a sealed box.
- Researchers were blinded as to the identity of the subjects and determined experimental vs. control group by a slight change in font on a single question mark on the survey form.