JOHNSTON, TYLER. Ed.D. Knowledge and Use of the Therapeutic Relationship in Physical Therapy. (2024)
Directed by Dr. Pam Brown. 78 pp.

Chronic low back pain is a common problem, and the consequences of this condition can affect every aspect of one's life. Therefore, a biopsychosocial (BPS) treatment model that addresses the biological, psychological, and social factors that can influence low back pain is appropriate for clinical practice. Physical therapy professionals, who commonly treat low back pain, can develop a therapeutic relationship with their patients to effectively implement these BPS-based treatments. With this therapeutic relationship (TR), patients have reported less pain, improved function, and quicker recovery, but physical therapy school and post-professional training to apply TR is inadequate. The purpose of this study is to determine what physical therapy professionals know and how they use the therapeutic relationship when treating patients with chronic low back pain. An online survey was sent to practicing physical therapists and physical therapist assistants in North Carolina to determine their knowledge and use of the therapeutic relationship in their current clinical practice. Therapists reported high levels of use, importance, and confidence in using TR in clinical practice. The findings suggest that physical therapy professionals know what TR is, but may not be applying it appropriately when delivering BPS based treatments. The findings may be used to develop educational materials and resources to help practicing physical therapy professionals implement TR in their clinical practice.

KNOWLEDGE AND USE OF THE THERAPEUTIC RELATIONSHIP IN PHYSICAL THERAPY

by

Tyler Johnston

A Dissertation
Submitted to
the Faculty of The Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

Greensboro

2024

Approved by

Dr. Pam Brown
Committee Chair

DEDICATION

To Shirley Johnston, aka Grammar Police, who would have used multiple red pens to edit this document.

To Don Johnston, aka “The man with a large amount of useless knowledge”, who truly deserves the doctorate title in this family and who would have read this dissertation three times over.

To Zach and Gina Johnston who taught me that an enjoyable conversation is sometimes all that people need.

To Keith and Suzanne Johnston who instilled in me that hard work can lead to great things.

To my kids, Emery and Matt, who showed me that this dissertation is supposed to be fun by frequently asking for a printed picture of a princess (Emery) and turning off the computer mid-sentence (Matt).

Most importantly to my wife Sarah. From the long nights, venting sessions, and long discussions about nothing, you were my foundation for this process. I couldn’t have done this with you.

APPROVAL PAGE

This dissertation written by Tyler Johnston has been approved by the following committee of the Faculty of The Graduate School at The University of North Carolina at Greensboro.

Committee Chair

Dr. Pam Kocher Brown

Committee Members

Dr. Diane Gill

Dr. Bill Karper

March 19, 2024

Date of Acceptance by Committee

February 20, 2024

Date of Final Oral Examination

ACKNOWLEDGEMENTS

I want to thank Dr. Pam Brown, Dr. Diane Gill, and Dr. Bill Karper for helping me create this dissertation. Dr. Brown kept me on track while providing concise constructive feedback about my dissertation. Even talking on the phone while avoiding a large accident just to give me feedback about my dissertation. Dr. Gill for showing me that less is more. Dr. Karper for his "incredible artistic skill" (Karper, 2023) in helping shape and improve my dissertation for the profession of physical therapy.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I: PROJECT OVERVIEW

Due to the commonality of low back pain, adults should not consider *will* they get low back pain, but *when* will they get low back pain (Hartvigsen et al., 2018; Mutubuki et al., 2020). With persistent or chronic LBP (CLBP), the individual will be affected physically, socially, and psychologically by this disease (Hartvigsen et al., 2018). Due to the multifaceted nature of this disease, a singular focus on the biological portion of CLBP is not optimal.

Biomedical treatments attempt to identify specific anatomical changes that are causing CLBP. This model is imperfect since it relies on imaging that frequently misdiagnoses patients (Brinjikji et al., 2015) and it takes power away from the person experiencing the disease (Engel, 1977). But the biopsychosocial (BPS) model is better for CLBP treatment since it focuses on the "whole person" by recognizing the individual's biological, social, and psychological components and how they impact disease (Bevers et al., 2016). The first step in delivering these BPS based treatments is building a therapeutic relationship (Diener et al., 2016; Kinney et al., 2020).

The therapeutic relationship (TR) is a relationship between medical provider and patient that is characterized by trust, mutual agreement, and open collaboration (Bordin, 1979; M. A. Miciak, 2015). Although this relationship is beneficial for patient care, therapy professionals find it difficult to implement due to lack of education and training (Connaughton & Gibson, 2016; Holopainen et al., 2020). Therefore, this inability to implement a TR is limiting CLBP outcomes. Physical therapy professionals commonly treat CLBP and without knowledge or ability to build a TR, CLBP problems will continue to grow and more patients will continue to suffer unnecessarily.

Background Literature

Low back pain (LBP) is the most common musculoskeletal problem in the world (Wu et al., 2020) and affects up to 540 million individuals daily (Hartvigsen et al., 2018). There are specific timelines to describe the progression of LBP: acute LBP can be defined as pain occurring less than six weeks, subacute LBP as pain occurring six to twelve weeks, and chronic LBP (CLBP) is experiencing pain greater than 12 weeks. The importance of these timelines in clinical practice is that most individuals suffering with LBP have a marked reduction in pain and disability at six weeks post pain on set (Costa et al., 2012; Hartvigsen et al., 2018). After this six week time period, pain reduction slows leading certain individuals to experience moderate levels of pain and disability up to one year after their LBP started (Costa et al., 2012). With the development of this CLBP, the individual may experience physical, social, and psychological changes.

Chronic Low Back Pain Effects on the Individual

CLBP is the number one cause of disability worldwide (Dutmer et al., 2019; Wu et al., 2020). It is the most common musculoskeletal reason to miss work in the USA (Hartvigsen et al., 2018) and it limits individuals' ability to work (Dutmer et al., 2019). CLBP also affects physical activities outside of work such as gardening, recreational activities, and sleep (Froud et al., 2014). In addition to physical changes, individuals experience changes in their social life.

The main reason to see a medical provider about CLBP is due to changes in one's social life (Froud et al., 2014). Individuals with CLBP report feeling isolated from others since pain leads to inactivity, difficulty interacting with family members, and difficulty performing sexual activity (Froud et al., 2014). These social changes impact quality of life, leading individuals with

CLBP to report lower quality of life levels than the general population and cancer patients (Dutmer et al., 2019). Psychological changes can occur with CLBP as well.

Individuals with CLBP experience changes to their mental health. Depression, anxiety, fear avoidance, poor coping strategies, poor self-efficacy, and pain catastrophizing are all seen in CLBP (Alhowimel et al., 2018). The development of these behavioral and psychological factors can lead to future disability and continued LBP (George & Beneciuk, 2015). For example, individuals with higher levels of psychological issues (i.e. fear avoidance, pain catastrophizing, poor self-efficacy, depression) reported higher levels of disability and higher pain ratings than other individuals with CLBP (Alhowimel et al., 2018). An individual suffering with CLBP will have changes to their physical, social, and psychological health and the predominant treatment model is not optimal to address all their needs.

Biomedical Model for Chronic Low Back Pain

The predominant treatment model of CLBP focuses on the biomedical model, which attempts to identify specific anatomical changes that are causing the patient's pain. But these natural degenerative changes (i.e., degenerative disc disease and spondylosis) frequently do not cause pain (Brinjikji et al., 2015). The focus on natural and typically asymptomatic anatomical changes as the source of back pain has led biomedical interventions (i.e., surgery and injections) to be equal to conservative treatments (i.e., physical therapy, education, medication) for certain LBP conditions (Yang et al., 2020; Zaina et al., 2016). Further, these biomedical interventions can have adverse side effects that may cause the patient more harm compared to conservative treatments (Zaina et al., 2016). CLBP changes an individual's physical, social, and psychological health so a singular focus on *only* the biological portion of this disease is not appropriate to treat

this complex condition. The biopsychosocial model is more appropriate since it recognizes the impact physical, social, and psychological factors can have on a disease (Hartvigsen et al., 2018).

Biopsychosocial (BPS) Model for Low Back Pain

The biopsychosocial (BPS) model is based off George Engel's observation that biomedical data does not provide enough information to treat patients because it *only* focuses on lab/test results and takes power away from the patient (Engel, 1977). The BPS model focuses on the "whole person" by recognizing the individual's biological, social, and psychological components and their impact on disease (Bevers et al., 2016). The use of the BPS model is becoming a standard of practice within many medical professions such as physical therapy (George et al., 2021). The first step in implementing any BPS based treatment in physical therapy is by developing a therapeutic relationship (Diener et al., 2016; Kinney et al., 2020; Unsgaard-Tøndel & Søderstrøm, 2021).

Effects of Therapeutic Relationship In Physical Therapy

Building a positive therapeutic relationship (TR) with a patient improves outcomes in physical therapy (Kinney et al., 2020). Although there are many terms used for this relationship, the common definition is a relationship between the medical provider and patient that allows for collaborative treatment decision in an empathetic and open environment (Bordin, 1979; Kinney et al., 2020; M. A. Miciak, 2015). When implemented correctly, this mutual relationship can lead to improved exercise adherence and improved patient outcomes (Alodaibi et al., 2021; Ferreira et al., 2013; Hall et al., 2010). With CLBP, patients reporting higher levels of TR reported less disability, improved function, and less pain compared to patients who reported a lower level of TR (Alodaibi et al., 2021; Ferreira et al., 2013). Since building a relationship can vary based upon the individual, certain elements have been identified as necessary when building a TR.

Therapeutic Relationship between the Physical Therapist and Patient

Miciak's theoretical framework for TR provides a solid foundation for the study of TR in physical therapy (McCabe et al., 2022). This framework identified three components for developing a TR in physical therapy: conditions of engagement, ways of establishing connections, and elements of the bond. Conditions of engagement, which are therapist and patient factors that allow a TR to be developed during their interaction, include being present, receptive, genuine, and committed to the relationship (M. Miciak et al., 2018). Acknowledging the individual, giving of self by both provider and patient, and connecting treatment to the patient's body were all found to be key for establishing a connection between therapist and patient (M. Miciak et al., 2019). The elements of the bond describe behaviors that create an affective relationship between therapist and patient and were defined as being caring, trusting, respectful, and being able to build rapport (M. A. Miciak, 2015). Physical therapy professionals (physical therapists [PT]and physical therapist assistants [PTA]) try to build this relationship but many have found it difficult to implement.

Limitations of Therapeutic Relationship in Clinical Practice for Physical Therapy

Although patients with CLBP are seen by PTs and PTAs, research about limitations in implementing BPS based treatments focuses on only physical therapists. Therapists report understanding the positive benefits of BPS based treatments, but do not feel adequately trained in implementing these into clinical practice (Driver et al., 2016; Synnott et al., 2015). For example, therapists may use inappropriate verbiage for the patient, lack confidence in their ability to implement BPS treatments, and don't feel comfortable communicating with patients about psychosocial issues (Holopainen et al., 2020; Morera-Balaguer et al., 2018). Furthermore, therapists report using BPS techniques in practice, but aren't implementing them correctly (Fritz

et al., 2019). This shortcoming has been noted in physical therapy research with many recommending the inclusion of psychosocial skills training in physical therapy education and post-graduate courses (Driver et al., 2016; Fritz et al., 2019; Synnott et al., 2015). Although developing TR is beneficial to individuals with CLBP, therapy professionals can't perform this in daily practice due to lack of knowledge and ability. This leads many individuals with CLBP to continue to suffer with this pain unnecessarily.

Purpose and Aims

The purpose of this study is to determine what therapy professionals (PTs and PTAs) know about TR and what elements of TR they use in daily practice for the treatment of CLBP. Because there is a lack of BPS training in physical therapy education, it is important to assess the current knowledge and use of TR prior to making targeted education to address this shortage. Increasing the amount and quality of TR in clinical practice could improve the life of many of those suffering from CLBP. The objectives of this study are:

1. To determine what physical therapists and physical therapist assistants who treat chronic low back pain know about the therapeutic relationship.
2. To determine what elements of the therapeutic relationship that physical therapists and physical therapist assistants use in treating chronic low back pain.

Methods/Approach

An exploratory study was completed with individuals licensed in the state of North Carolina (NC) as a PT or PTA. The online survey (see Appendix A) assessed what practicing

NC physical therapy professionals know and how they use the TR in clinical practice when treating CLBP.

Participants

The participants were NC licensed PTs and PTAs who were currently practicing. Of the total 15,525 registered physical therapy professionals in NC those 14,914 with valid emails were sent information and links to the survey. Of those who completed the survey (n=580), 503 (92.5%) were currently practicing in the state of NC with 41 (7.5%) not practicing in NC. The majority of the survey participants were women (n=416, 76.5%). For professional title, 415 (76.3%) physical therapists and 129 (23.7%) physical therapist assistants took the survey. Participants had varying physical therapy degrees with the most common degree being a Doctorate in Physical Therapy (n = 232, 42.6%). Years of practice in physical therapy ranged from less than one year to greater than twenty with more than half of the participants practicing for more than ten years, Complete demographics are provided in Appendix B.

Instrumentation

An online survey assessed therapy professionals' use and knowledge of the TR. Because no validated survey exists, an initial survey was created and piloted with four PTAs and two PTs living outside of NC. These PTs and PTAs were asked to provide feedback about the wording, organization, and overall impression of the survey. All reported that the survey was well organized and addressed the research aims. Wording of several questions was changed and reviewed by the same therapists to confirm clarity. In addition, expert reviewer feedback was provided by a physical therapist and co-author of multiple research articles on TR. The reviewer recommended additional questions be included to improve the quality of the survey. The survey

was separated into five parts and took 15-20 minutes to complete. The first section collected general demographic and specific physical therapy information.

Familiarity, Knowledge, and Use of TR

The second section assessed the participant's familiarity, knowledge, and use of TR. Participants rated their familiarity on a 5-point Likert scale (Not At All to Extremely Familiar) with TR and four other terms used interchangeably with TR (therapeutic alliance, working alliance, patient-provider interaction, and therapist-patient relationship). Participant's knowledge of TR was assessed using one open ended question that asked the definition of TR and a "quiz" based upon TR literature. For the "quiz", six multiple choice and two true/false questions assessed the therapists theoretical and clinical knowledge of TR. Correct answers received one point and incorrect answers received no points. For example, one multiple choice question asked what the fundamental themes of TR are while a true/false question asked if TR changed the effect of electrical stimulation for CLBP in clinical practice. Open ended questions assessed the use of TR by asking how therapists create TR, how they would tell a colleague to build TR, and what makes TR difficult in clinical practice.

Application, Importance and Confidence of TR

The third section examined the application, importance, and confidence in implementing elements of TR in clinical practice for the treatment of CLBP. The survey was based on Miciak's Therapeutic Relationship framework (Miciak, 2015). 5-point Likert scales for frequency (Never to Always), importance (Not At All to Very Important), and confidence (Not Confident to Very Confident) were used for each TR component and actions of that component. The components and their specific actions were Conditions of Engagement (actions: being present, receptive, genuine, committed), Ways of Establishing Connections (actions:

acknowledging the individual, using the body as a pivot point, giving of self), and Elements of the Bond (actions: caring, nature of rapport, trust, respect). To specifically assess the importance of TR to CLBP outcomes, a 5-point Likert scale for importance (Not At All to Very Important) and one open-ended question assessed why the participant believed that importance rating was used.

Limitations and Enhancements of TR

The fourth section assessed how limitations and enhancements affect therapists' ability to use of TR in clinical practice. A 5-point Likert scale for likelihood (Not At All to Extremely) assessed how much each limitation or enhancement affected their use of TR in clinical practice. Limitations included clinical constraints and patient constraints, as well as environmental, educational, reimbursement, and personal limitations. Enhancements included better clinical practices, better interpersonal skills, better TR education, better environment, better reimbursement/resources, and better evidence. Participants were asked to list any limitations or enhancements that were not provided.

Educational Resources to Improve TR

The final section assessed what type of education would increase the use of TR in clinical practice. Participants were asked whether common modes of physical therapy education (pre-recorded online, in-person seminar, combination of online and in-person, interactive online seminar with virtual mentorship, and combination of in-person and interactive online seminar with virtual mentorship) would be most likely to increase use of TR by using a 5-point Likert scale for likelihood (Not at All to Very Likely). See Appendix A for full survey.

Procedures

The study was approved by the Institutional Review Board at the University of North Carolina at Greensboro. Contact information of all physical therapy professionals in NC was obtained from the NC Board of Physical Therapy Examiners. The online survey was emailed to potential participants through Qualtrics. The survey remained open for six weeks to allow individuals to respond. Email reminders were sent out every other week to help increase the number of surveys completed.

Data Analysis

The survey data were downloaded from Qualtrics into IBM SPSS Statistics 27 for analysis. The responses were analyzed using descriptive statistics (mean and frequencies) for demographic and Likert scale questions used throughout the survey. The "quiz" portion was scored as total correct with possible score of 0-8. The open-ended question responses were entered into Atlas.ti 23 for thematic analysis (Terry et al., 2017). The analysis began with the researcher reading the responses multiple times and identifying common statements. The researcher then assigned specific codes to each statement and organized them into overarching themes. Lastly, the researcher created a chart for each open-ended question to display the themes, subthemes, and supporting quotes. See Appendix B for these charts.

To ensure valid and trustworthy results, the researcher performed peer debriefing, audit trail, and triangulation (Nowell et al., 2017). The codes and themes identified in this study were discussed with a fellow medical provider to ensure codes were representative of the participants' statements. To provide an audit trail, an Excel spreadsheet was used to show how codes were organized to create themes. The themes created from these responses were compared with responses to other survey questions.

Results/Findings

The second section assessed therapists' knowledge of TR. For familiarity of terms, therapists reported being *extremely* familiar with the terms therapist-patient relationship and patient-provider interaction while being *moderately* familiar with the therapeutic relationship term. Therapists reported being *unfamiliar* with working alliance and being *not at all* familiar with therapeutic alliance. See Table 1 for more details.

Table 1. Familiarity with Terms

	Not At All, n(%)	**Unfamiliar, n(%)**	**Slightly Familiar, n(%)**	**Moderately Familiar, n(%)**	**Extremely Familiar, n(%)**	**Mean**
Therapeutic Relationship (n=440)	87 (19.8%)	79 (18.0%)	95 (21.6%)	110 (25.0%)	69 (15.7%)	2.99
Therapeutic Alliance (n=439)	125 (28.5%)	97 (22.1%)	79 (18.0%)	68 (15.5%)	70 (15.9%)	2.68
Working Alliance (n=436)	121 (27.8%)	123 (28.2%)	103 (23.6%)	60 (13.8%)	29 (6.7%)	2.43
Patient-Provider Interaction (n=437)	13 (3.0%)	24 (5.5%)	82 (18.8%)	148 (33.9%)	170 (38.9%)	4.0
Therapist-Patient Relationship (n=437)	9 (2.1%)	12 (2.7%)	53 (12.1%)	135 (30.8%)	230 (52.4%)	4.3

On the "quiz" portion, questions were answered inconsistently. For example, when assessing practical knowledge, 82.5% of the therapists were able to determine that TR increased participation in therapy with TBI patients while only 29.8% of therapists were able to choose that TR decreases depression for geriatric patients. For theoretical knowledge, 78.3% of therapists were able to identify the components of TR and 36.5% of therapists were able to identify the main themes to support TR in clinical practice. For specific scores on each question see Appendix B.

The third section on the use of the TR asked how frequent, how important, and how confident the participants were in performing a certain action within TR elements. For frequency, majority of therapists (>50% of participants) reported *always* using most actions (10 out of 11) of TR. The only action not used by most therapists was giving of self. See Table 2 for details.

Table 2. Frequency of Use of TR Elements

	Never	Rarely	Sometimes	Often	Always	Mean
Conditions of Engagement (n=316), n(%)						
Being Present	-	-	5 (1.6%)	119 (37.7%)	192 (60.8%)	4.59
Being Receptive	-	-	5 (1.6%)	114 (36.1%)	197 (62.3%)	4.61
Being Genuine	-	-	19 (6.0%)	93 (29.4%)	204 (64.6%)	4.59
Being Committed	-	-	8 (2.5%)	93 (29.4%)	215 (68%)	4.66
Ways of Establishing a Connection (n=310), n(%)						
Acknowledging the Individual	1 (.3%)	-	2 (.6%)	76 (24.5%)	231 (74.5%)	4.73
Using Body As Pivot Point	1 (.3%)	1 (.3%)	22 (7.1%)	123 (39.7%)	163 (52.6%)	4.44
Giving of Self	1 (.3%)	1 (.3%)	39 (12.6%)	157 (50.6%)	112 (36.1%)	4.22
Elements of the Bond (n=308), n(%)						
Caring	-	1 (.3%)	2 (.6%)	67 (21.8%)	238 (77.3%)	4.76
Nature of Rapport	-	-	6 (2.0%)	95 (30.9%)	206 (67.1%)	4.65
Trust	-	1 (.3%)	17 (5.5%)	140 (45.5%)	150 (48.7%)	4.78
Respect	-	-	3 (1.0%)	63 (20.5%)	242 (78.6%)	4.78

For importance of use of TR, majority of therapists reported that each action was *very important* for their CLBP treatment. Table 3 provides specific details about each action and any areas with a dash (-) indicate that no therapist selected this rating.

Table 3. Importance of Use of TR Elements

	Not at all Important	Slightly Important	Moderately Important	Important	Very Important	Mean
Conditions of Engagement (n=316), n(%)						
Being Present	-	-	4 (1.3%)	58 (18.4%)	254 (80.4%)	4.66
Being Receptive	-	-	3 (.9%)	46 (14.6%)	267 (84.5%)	4.84
Being Genuine	-	1 (.3%)	11 (3.5%)	61 (19.3%)	243 (76.9%)	4.73
Being Committed	-	-	10 (3.2%)	50 (15.8%)	256 (81.0%)	4.78
Ways of Establishing a Connection (n=310), n(%)						
Acknowledging the Individual	-	-	6 (1.9%)	50 (16.1%)	254 (81.9%)	4.80
Using Body As Pivot Point	-	2 (.6%)	16 (5.2%)	94 (30.3%)	198 (63.9%)	4.57
Giving of Self	-	6 (1.9%)	34 (11%)	110 (35.5%)	160 (51.6%)	4.37
Elements of the Bond (n=309), n(%)						
Caring	-	1 (.3%)	3 (1.0%)	46 (14.9%)	259 (83.8%)	4.82
Nature of Rapport	-	-	7 (2.3%)	62 (20.1%)	240(77.7%)	4.72
Trust	-	-	10 (3.2%)	69 (22.3%)	230 (74.4%)	4.71
Respect	-	-	3 (1.0%)	42 (13.6%)	264 (85.4%)	4.84

For confidence in use of TR in clinical practice, therapists were *very confident* in all actions associated with TR. Table 4 provides further detail about each action and any areas with a (-) indicate that no therapist selected this rating.

Table 4. Confidence of Use of TR Elements

	Not Confident	Slightly Confident	Moderately Confident	Confident	Very Confident	Mean
Conditions of Engagement (n=316), n(%)						
Being Present	-	1(.3%)	13 (4.1%)	98 (31.0%)	204 (64.6%)	4.60
Being Receptive	-	-	15 (4.7%)	107 (33.9%)	194 (61.4%)	4.57

Being Genuine	-	1 (.3%)	18 (5.7%)	94 (29.7%)	203 (64.2%)	4.58
Being Committed	-	1 (.3%)	16 (5.1%)	97 (30.7%)	202 (63.9%)	4.58
Ways of Establishing a Connection (n=311), n(%)						
Acknowledging the Individual	-	1 (.3%)	11(3.5%)	80 (25.7%)	219 (70.4%)	4.66
Using Body As Pivot Point	1 (.3%)	3 (1.0%)	37 (11.9%)	102 (32.8%)	168 (54.0%)	4.39
Giving of Self	-	4 (1.3%)	33 (10.6%)	109 (35.0%)	165 (53.1%)	4.4
Elements of the Bond (n=309), n(%)						
Caring	-	1 (.3%)	3 (1.0%)	63 (20.4%)	242 (78.3%)	4.77
Nature of Rapport	-	1 (.3%)	4 (1.3%)	103 (33.3%)	201 (65.0%)	4.63
Trust	1 (.3%)	2 (.6%)	20 (6.5%)	110 (35.6%)	176 (57.0%)	4.48
Respect	-	1 (.3%)	9 (2.9%)	66 (21.4%)	233 (75.4%)	4.72

The final question of section three asked therapists to rate the importance of TR to CLBP outcomes. Most therapists reported that it was *very important* to CLBP outcomes with 235 (76.3%) stating it was *very important*, 70 (22.7%) reporting it was *important*, 3 (1.0%) reporting it was *moderately important*, and no therapist reporting it was *slightly or not* at all important.

The fourth section assessed limitations and enhancements that impact the use of TR in clinical practice. Personal and reimbursement limitations were *not at all* a limitation. Patient constraints, environmental, and educational limitations *slightly* impacted the therapists' ability to perform TR. Clinical limitations was the only limitation that *moderately* impacted the use of TR in clinical practice. See Table 5 for details.

Table 5. Limitations Impact on TR

	Not At All, n (%)	Slightly, n (%)	Moderately, n (%)	Very, n (%)	Extremely, n (%)	Mean
Clinical Constraints (n=299)	64 (21.4%)	68 (22.7%)	85 (28.4%)	50 (16.7%)	32 (10.7%)	2.73
Patient Constraints (n=300)	40 (13.3%)	111 (37.0%)	99 (33.0%)	32 (10.7%)	18 (6.0%)	2.59
Environmental (n=298)	93 (31.2%)	95 (31.9%)	77 (25.8%)	25 (8.4%)	8 (2.7%)	2.19
Reimbursement (n=299)	89 (29.8%)	63 (21.1%)	71 (23.7%)	49 (16.4%)	27 (9.0%)	2.54
Educational Limitations (n=300)	93 (31.0%)	115 (38.3%)	64 (21.3%)	16 (5.3%)	12 (4.0%)	2.13
Personal Limitations (n=299)	134 (44.8%)	111 (37.1%)	35 (11.7%)	12 (4.0%)	7 (2.3%)	1.82

For enhancements, responses were varied with better clinical practices, improved reimbursement/resources, better interpersonal skills education, and better evidence to support TR having the most responses within the *extremely* category. For details see Table 5.

Table 6. Enhancements Impact on TR

	Not At All, n (%)	Slightly, n (%)	Moderately, n (%)	Very, n (%)	Extremely, n (%)	Mean, n (%)
Better Clinical Practices (n=298)	32 (10.7%)	32 (10.7%)	35 (11.7%)	80 (26.8%)	119 (39.9%)	3.74
Better interpersonal skills education (n=299)	41 (13.7%)	54 (18.1%)	62 (20.7%)	65 (21.7%)	77 (25.8%)	3.28
Improved Environment (n=299)	36 (12.0%)	60 (20.1%)	70 (23.4%)	67 (22.4%)	66 (22.1%)	3.22
Improved Reimbursement/Resources (n=299)	31 (10.4%)	33 (11.0%)	66 (22.1%)	62 (20.7%)	107 (35.8%)	3.61
Better evidence to support TR (n=298)	31 (10.4%)	46 (15.4%)	60 (20.1%)	70 (23.5%)	91 (30.5%)	3.48

The fifth section assessed which educational resources would most likely improve the use of TR in clinical practice. Pre-recorded online materials, in-person seminar, interactive online seminar with virtual mentorship, and in-person and interactive online seminar with virtual mentorship were *somewhat* likely to increase the use of TR in clinical practice. Combination of online and in-person education was *likely* to improve the use of TR in clinical practice. See Table 7 for more details.

Table 7. Education Resources to Improve TR

	Not At All, n(%)	**Somewhat, n(%)**	**Likely, n(%)**	**Very Likely, n(%)**	**Mean**
Pre-Recorded Online Materials (n=299)	51 (17.1%)	101 (33.8%)	85 (28.4%)	62 (20.7%)	2.53
In-Person Seminar (n=299)	50 (16.7%)	103 (34.4%)	97 (32.4%)	49 (16.4%)	2.48
Combination of Online and In-Person (n=299)	47 (15.7%)	98 (32.8%)	110 (36.8%)	44 (14.7%)	2.51
Interactive online seminar with virtual mentorship (n=298)	70 (23.5%)	93 (31.2%)	85 (28.5%)	50 (16.8%)	2.39
In-Person and interactive online seminar with virtual mentorship (n=299)	68 (22.7%)	110 (36.8%)	73 (24.4%)	48 (16.1%)	2.34

Responses to the Open-Ended Questions

Reponses to the open-ended questions on therapists' knowledge and use of TR were coded and organized into themes for each question. See Table 8 for a summary of responses. Select quotes are used below to support each theme. For all responses see Appendix B.

How do you define therapeutic relationship?

The four themes identified were that TR must have a coming together, the relationship should have certain characteristics, the therapist behaviors impact the relationship, and this relationship can improve therapy outcomes. Therapists used terms like "relationship", "bond", or "interaction" to show the importance of the coming together of patient and therapist. For the

characteristics of the relationship, therapists wanted to build a relationship that was both "personal" and "professional" in hopes of creating a "team relationship". To describe this relationship, therapists referenced certain behaviors that would be used in a TR such as "active listening", "building rapport", and developing "mutual trust" with their patient. Lastly, therapists stressed that this relationship could help therapy by improving "outcomes", their patient's ability to "comply with education and skilled services provided to them", and it would help with "the patient's success and ability [to] reach their goals".

How do you create a therapeutic relationship with your patients?

The three themes identified as needed to create TR were therapists demonstrating certain behaviors to the patient, designing their physical therapy care a certain way, and ensuring a positive interaction with their patient. Therapists reported that showing certain behaviors like "empathy for their symptoms/issues", "developing trust", and "treating patients like I would my own mother" helped create TR with their patients. When designing care for their patients, therapists would perform "inclusive goal settings with pt [patient]/family, "ask pt. their preference between a choice of exercise for ownership and buy in", and explain "diagnosis and rational for treatment in easy to understand format" in an attempt to create TR. To make sure that the patient had a positive interaction, therapists would "find common ground in personal life experience, use reflections and affirmations in communication, [and] ask for feedback" in hopes of creating a TR.

What advice would you give a colleague about how to build a therapeutic relationship?

The themes identified were that the therapist must demonstrate certain behaviors, they should design their care for the patient, and they must create a good interaction with their patient. When instructing other therapists on how to build TR, therapists reported that they should show

certain behaviors to their patients such as being “empathetic”, able to “adapt to feedback”, and be “interested in the patient”. During their treatment session with the patient, therapists recommended that checking “on progress towards patient’s goals”, explaining “why you’re doing certain treatments and how it relates to their goals and life”, and modifying “interventions to make them meaningful to the patient” can build TR. To ensure a good patient-therapist interaction, therapists should “listen more and ask questions to clarify”, “share something relatable about yourself”, and “give the patient time to speak” in hopes of building TR.

What makes it difficult to create a therapeutic relationship in your clinical practice?

The themes identified were clinical practice limitations, therapist limitations, patient limitations, and factors that limit the development of a relationship. For clinical limitations, therapists reported “lack of time”, “documentation requirements”, and “productivity concerns” impacted the development of TR. Therapists’ own personal limitations such as “lack of confidence”, “burn out”, and “decrease job satisfaction” limited their ability to create TR. TR was difficult to develop due to patient limitations when a patient “isn’t very forthcoming or interactive”, has “depression or anger”, or has a “negative outlook on therapy”. Therapists reported that “language/cultural barriers”, “rude patients or patients that say inappropriate things”, and “patient not giving effort into PT sessions or compliance of HEP” limited the development of a relationship and creation of TR.

How important is building a therapeutic relationship to your outcomes when treating chronic low back pain? Why do you believe that?

The themes identified were that TR creates a bond between therapist and patient, it affects physical therapy care, and it is a standard part of physical therapy practice. Therapists felt that making this connection between therapist and patient was needed because “human

connection is a big part of healing", it allows for "the patient to trust you", and "they often are looking for a safe place to be recognized and heard". By using TR, therapists can address chronic pain "not limited to physical inputs", improve compliance to "complete their HEPs and participate in PT more often", and affects outcomes "without a positive TR, the treatment will never be as effective". Therapists included TR with CLBP treatment "based on the literature I have seen", "CPG's [clinical practice guidelines]" and it is within our scope of practice that requires "delivery of ethical evidence-based interventions".

Table 8. Open-Ended Questions and Summary Responses

Open-Ended Question	Summary Response
How do you define TR?	Specific connection that occurs during physical therapy facilitated by the therapist behavior to help improve physical therapy outcomes
How do you create TR with your patients?	By organizing their treatment and interacting with their patients to ensure a personalized and compassionate physical therapy experience
What advice would you give a colleague about how to build a TR?	Therapists recommend that their colleague should use their behaviors, specific personalized treatments, and have a positive interaction with their patients to build this relationship
What makes it difficult to create a TR in your clinical practice?	Therapists find it difficult to create TR with their patients due to clinical constraints, their own limitations, their patient limitations, and by factors that limit the ability to build a relationship.
How important is building a TR to your outcomes when treating CLBP? Why do you believe that?	It allows for a bond to be created between patient and provider allowing the therapist to implement standardized, effective, evidence-based physical therapy treatments.

Discussion/Implications

The aims of this study were to determine what therapy professionals know and how they use TR in clinical practice for CLBP. Findings show that therapists were able to define and

discuss TR in clinical practice, but they were unaware of all its benefits and uses in clinical practice. Therapists reported high levels of use, importance, and confidence in TR. Overall, this study provides a baseline for current knowledge and use of TR in clinical practice.

The first aim of this study was to assess the therapists' knowledge of TR. Therapists were able to define parts of TR correctly. When defining TR, therapists' responses were similar to those found in research with personalized patient centered care (Unsgaard-Tøndel & Søderstrøm, 2022), communication (Søndenå et al., 2020), and trust (Kinney et al., 2020) as needed to build a TR. Therapists also reported similar limitations noted in research with patient behaviors (Kinney et al., 2020), lack of knowledge of BPS treatments (Morera-Balaguer et al., 2018), and clinical time constraints (Fritz et al., 2019) limiting TR development. However, therapists did not demonstrate a complete understanding of TR. Therapists were only *moderately familiar* with the term TR and were unable to answer the "quiz" questions as noted in the results. Further, research supporting the use of TR was the least mentioned reason to use TR in clinical practice although it is an evidence-based practice (Alodaibi et al., 2021; Fuentes et al., 2014; Hall et al., 2010). Therapists had some knowledge of TR but were missing information about TR in clinical practice. This lack of knowledge could possibly lead to missed opportunities to implement TR, which has been reported in other BPS research (Driver et al., 2021; Fritz et al., 2019). This study supports the need for BPS skills training in PT education and post professional courses to improve the use of TR in clinical practice (Fritz et al., 2019; Kinney et al., 2020; Morera-Balaguer et al., 2018; Unsgaard-Tøndel & Søderstrøm, 2022).

The second aim of the study was to assess the use of TR in clinical practice. Therapists reported high levels of use, importance, and confidence in implementing all actions of TR. For frequency of use therapists reported *always* using TR, except for the action of giving of self,

which many therapists have difficulty with due to discomfort with sharing personal information (M. Miciak et al., 2019). Therapists' strong belief that TR is *very important* for outcomes matches research reports that therapists are aware of TR and its benefits (Connaughton & Gibson, 2016; Driver et al., 2016, 2021) and that building a TR is cited as a necessary first step to implement other BPS treatments (Diener et al., 2016; Main et al., 2023). Therapists' reported a high level of confidence in using TR which is surprising given that lacking confidence has been cited as a limitation to implementing TR (Connaughton & Gibson, 2016; Driver et al., 2021; Holopainen et al., 2020; Synnott et al., 2015). This discrepancy could be related to the years of experience of this sample because more clinical experience has been shown to increase use of psychosocial questions during therapy (Roberts et al., 2013; Schaumberg, 2020). Overall, therapists use TR frequently, feel it is important to their treatment, and are confident in using it in clinical practice.

When using TR in clinical practice, therapists reported limitations similar to those found in literature with patient characteristics (Synnott et al., 2015) and clinical constraints (Unsgaard-Tøndel & Søderstrøm, 2022) limiting the creation of TR. Therapists' own limitations have been reported as a barrier to building a relationship with their patients (Morera-Balaguer et al., 2018), but therapists in this study did not feel this way. This difference may be related to an implicit bias that is present within physical therapy (Dunn et al., 2022). For enhancements, therapists' responses matched those found in research with better clinical practices (Morera-Balaguer et al., 2018) and improved reimbursement/resources (Fritz et al., 2019) would increase the use of TR in clinical practice. This supports the need for professional organizations and health care policy makers to make changes to support the use of TR and other BPS based interventions in clinical

practice (Driver et al., 2016; Morera-Balaguer et al., 2018; Synnott et al., 2015; Unsgaard-Tøndel & Søderstrøm, 2022).

Several limitations exist in this study. Individuals may have a personal bias towards or against TR which may have led some to not participate in this study (Andrade, 2020). CLBP is a common diagnosis in outpatient orthopedic care but is less common in hospital or inpatient rehab settings. These therapists with minimal exposure to CLBP may not have accessed this survey. There is no accepted response rate for online surveys (Morton et al., 2012), but the response rate to this survey was low (3.7% of invitees completing survey). Response rates are not necessarily representative of study validity (Morton et al., 2012) and the sample size is larger than other survey-based BPS PT research (Connaughton & Gibson, 2016; Driver et al., 2021). Thus, the results of this study likely are representative of practicing physical therapists.

Overall, physical therapy professionals know what TR is and use it in their clinical practice. The study findings provide examples of how, when, and why therapists currently perform TR in clinical practice. Although BPS training is available, implementation of these BPS treatments in clinical practice is limited (Dijk et al., 2023). By using the current findings and suggestions from these practicing clinicians, targeted education can be created to increase use of BPS treatments in clinical settings.

CHAPTER II: DISSEMINATION

The findings of this study will be presented to practicing therapy professionals. The immediate target audience is the approximately 200 physical therapy professionals that work at OrthoCarolina. Through this presentation these therapists would learn more about TR and its use in clinical practice. In addition, many of these individuals participated in this study and may have personal interest in the results.

The presentation will share the findings described in Chapter I and focus on educating the therapists on the use of TR and provide practical ways to implement TR in their clinical practice. The following is an overview of the presentation that will be offered to the OrthoCarolina Therapy Department as a 60-minute lunch and learn presentation. The presentation slides can be found in Appendix C.

Presentation Overview

Patients who can build a relationship with their physical therapist are able reach their goals and improve their quality of life when suffering from many conditions. One common yet complex ailment that physical therapists treat daily is chronic low back pain (CLBP). CLBP is frequently complicated by multiple factors and many practice guidelines call for a biopsychosocial (BPS) treatment to address these issues. The first step in implementing many of these BPS based treatments is to develop a therapeutic relationship (TR) with their patients. But the current use and knowledge of TR in physical therapy is unknown. The purpose of this presentation is to discuss the evidence supporting TR in clinical practice, the use and knowledge of TR in current clinical practice, and clinical barriers and solutions to these barriers in clinical practice. Attendees will be able to apply tactics to improve their use and effectiveness of TR in clinical practice to improve the quality of life of those they care for.

Objectives

Upon completion of the educational presentation, attendees will be able to:

1. Understand current evidence supporting the use of TR in clinical practice
2. Compare the use and knowledge of TR in clinical practice to their own clinical practice
3. Discuss barriers to implement TR in clinical practice
4. Be able to apply simple tactics to increase use of TR in clinical practice to improve care

Script

Slide 1 - Title

Hello and welcome to my presentation. My name is Tyler Johnston and I will be presenting today about the Knowledge and Use of the Therapeutic Relationship in Physical Therapy. For some background about myself, I've been a practicing physical therapist for the past eight years who has specialized in treating individuals with chronic back pain. During this time, I have obtained my Orthopedic Certified Specialist certification from the American Physical Therapy Association and I was able to earn my Doctorate of Education in Kinesiology from UNCG. My passion for treating individuals suffering from chronic back pain has led to this presentation and I would like to inform you about the results to hopefully improve your clinical practice.

Slide 2 – Course Objective

The objectives of today's presentation will be to understand the current evidence to support the use of TR in clinical practice, to compare the use and knowledge of TR in clinical practice to your own, be able to discuss barriers to implement TR in clinical practice, and most

importantly be able to apply simple tactics to increase use of TR in clinical practice to improve care.

Slide 3 – Course Outline

Here is the course outline. I've broken this presentation into three parts. Part one we will discuss research about TR. Part 2 we will have you reflect on your own clinical practice and compare these to results of my TR study. Lastly and most importantly, we will talk about the clinical application of TR. We will discuss the barriers to implement TR and clinical practice and ways to work around these barriers.

Slide 4 – Part 1 Research about TR

In part one of the presentation, we will talk about the definition of the therapeutic relationship, what actions qualify as building a therapeutic relationship, and the impact that TR has on clinical practice.

Slide 5 – Definition of TR

So to begin let's talk about how we would define the therapeutic relationship. The term therapeutic relationship is frequently used interchangeably with several different terms. Some common terms you may have seen in research are the patient provider interaction, the therapeutic alliance, working alliance, and the therapist patient relationship. This definition is still something that is trying to be defined within research currently. But for my presentation, I provided the summary definition of the relationship between the medical provider and patient that allows for open collaborative treatment decisions in an empathetic and considerate environment.

Slide 6 – TR by Miciak

The therapeutic relationship model that I decided to use for this presentation and my research was the therapeutic relationship model created by Maxi Miciak, PT, PhD. I selected this

model because it was created in an outpatient orthopedic setting by a physical therapist with physical therapy patients. She identified three components of creating or developing a therapeutic relationship with her patients. They were conditions of engagement, ways of establishing a connection, and elements of a bond. The right side of this chart shows the actions of each component. We will discuss these actions in clinical practice later in this presentation.

Slide 7 – TR and LBP

To begin, I just want to give you a bit of background about low back pain. Low back pain is probably something many of you have treated many times in your clinical practice. This ailment affects all aspects of your patient's life, not just one area. The more common treatment model, which we were taught in PT school, was the biomedical model which attempts to address chronic back pain by identifying certain anatomical changes and linking them to your pain. But the thing is, with the biomedical model, these anatomical changes such as degenerative disc disease, degenerative joint disease, are all naturally occurring, and are typically asymptomatic, making it not the best treatment model to treat chronic low back pain. But there is a better model. The biopsychosocial model, which uses the benefits from the biomedical model and addresses the individual psychological and social health to create a better treatment model for chronic low back pain. The first step in implementing many biopsychosocial treatments is by developing a therapeutic relationship with your patient. Physical therapists who commonly treat chronic back pain, find that the therapeutic relationship is important, but they lack confidence, training and education on how to include it in their clinical practice. This led to my research.

Slide 8 – Purpose and Research Aims

The purpose of my research is to determine what physical therapy professionals, so these are PTs and PTAs who treat low back pain know about that therapeutic relationship and what

elements of the therapeutic relationship they use in daily practice. The first aim of my study was to determine what physical therapists and physical therapists assistants know about the therapeutic relationship. The second aim was to determine what elements of the therapeutic relationship that they are using in clinical practice.

Slide 9 – Study Overview

I used an exploratory online survey. The inclusion criteria of the study were individuals who had a North Carolina physical therapy license and were currently practicing. For data analysis, I used descriptive statistics, so particularly I wanted to look at the frequency and the mean for the Likert scale questions, and I included multiple choice questions as part of a quiz assessment. The survey included open-ended questions to give participants more freedom to share their opinions or ideas about TR. My survey was open for 6 weeks.

Slide 10 – Part 2

For Part 2 of this presentation, I will ask you to self-reflect on your own clinical practice and your use of the therapeutic relationship. After reflecting on your own practice, I will then present the results of my research study so we can compare your use with my sample population use.

Slide 11 – Self Reflection

For your reflection I would like to ask how often do you try to make connections with your patients? How important do you think making this connection is to your clinical practice? And how good do you think you are at making connections with your patients? Take a moment and write/type your answers to these questions.

Slide 12 – Results for Demographic, Quiz, and Familiarity

I want to give you some background about my sample population. 415 physical therapists and 129 PTA's physical therapist assistants participated in the survey. The sample population had been practicing for quite some time with more than 50% practicing for > 10 years and > 1/3 had been practicing for more than 20 years. The most common therapy setting was an OP orthopedic. There were approximately 15,000 physical therapists and physical therapists assistants in the state of North Carolina. 580 responded to the survey with 306 fully completing the survey. To help assess the knowledge of therapeutic relationship in clinical practice, I created a quiz. The quiz assessed both practice and theoretical knowledge of TR and neither practical or theoretical knowledge questions were answered more than another. I wanted to discuss and examine how familiar they are with different terms that are used interchangeably with the therapeutic relationship. The main term used for the study was the therapeutic relationship which was moderately familiar with to the participants.

Slide 13 – Results continued

I wanted to determine how frequently they used it, how important it was to their clinical practice, how confident they were in using it, and how important the therapeutic relationship was to their chronic low back pain outcomes. Therapists report frequently using all actions related to the therapy relationship except the action of giving self, which is how that therapist shares personal information or a personal story with the patient. Therapists reported that the therapeutic relationship was important to their clinical practice and that they were confident in using it. Lastly, the therapeutic relationship was very important when treating individuals with chronic low back pain. For limitations, therapists' personal limitations and reimbursement were not at all limitation in clinical practice. Patient restraints, the environment of PT, and education about TR

only slightly limited their ability to perform TR. The largest limitation was the clinical constraints that moderately impacted the use of TR. For enhancements, changing the environment would moderately enhance the use of TR and clinical practice. For other enhancements, clinical practice reimbursement, interpersonal skills education and evidence for TR would greatly enhance TR in clinical practice.

Slide 14 – Results of Open-Ended Questions

These 5 questions were posed to the participants to determine their knowledge and use of TR. These summary statements provide more information about how therapists use TR in clinic. Therapists defined TR correctly and reported that the bond was a key feature of TR. For the creation of TR, therapists reported that organizing their treatment for the patient was the most important way to create TR. When asked to provide advice to others, therapists stressed that the therapist ensure their patient has a good time in PT to build TR. When asked about challenges in creating TR, therapists reported the biggest limitation was their patients' limitations (i.e., beliefs and attitudes). Lastly, when explaining why TR was so important for PT, they reported that they had seen results of this in their clinical practice.

Slide 15 – Discussion

The first aim of my study was to assess what therapists know about TR. Therapists know what TR is. But may not have a full understanding of TR and its uses in clinical practice. The second aim of my study was to assess how therapists use TR. Therapist use TR a lot, they think it is important, and they are confident in using TR. The confidence level in using TR is different from other studies which may be explained by the experience of my sample population. Another difference is that their ability to implement TR was not limited by therapists' personal limitations.

Slide 16 – What does this mean to our profession?

Therapists know about TR but may not be applying TR in all situations that would benefit from this approach. This study provides information about what and how therapists are performing TR in clinical practice currently. By using this information, we can educate other therapists on how to perform TR and increase the use of TR in clinical practice.

Slide 17 – Part 3 – Reflection on Clinical Practice

We will now discuss support for TR in clinical practice, common limitations and their solutions, and how to perform TR in clinical practice.

Slide 18- Impact of TR on Clinical Practice

The study from Hall et al. in 2010 found that developing a relationship can lead to improved exercise at home exercise adherence for individuals with TBI patients. For individuals suffering from musculoskeletal conditions, they reported increased satisfaction with the physical therapy. For CLBP patients, they reported an increased amount of physical function with higher levels of TR. For the Ferreria study, they found that a good relationship with their provider led to increased patient perceived effect of their treatment, improved functional ability, less disability, and less pain. For the Alodaibi study they found that individuals with a better relationship with their therapist led to improved functional outcomes specifically lumbar motion.

Slide 19 – Limitations in Clinical Practice

This is a list of common limitations to implementing TR and possible solutions to these issues. I realize that these solutions may not be feasible for everyone's work setting but could be a good starting place to make change. [Then discuss each limitation and provide personal examples of solutions].

Slide 20, 21, 22 – Creating TR in Your Clinical Practice

These are all examples of how therapists from my study performed an action associated with TR. If you found a shortcoming with one of these actions in your clinical practice, follow the advice from other practicing therapists to change your practice. [Then discuss each action and the specific example by the therapists]

Slide 23 – References

Here are my references for this presentation.

Slide 24 – Contact Information

Please contact me with any additional questions or advice. Thank you for your time.

CHAPTER III: ACTION PLAN

The American Physical Therapy Association (APTA) champions the use of BPS model in physical therapy practice due to its positive benefits on patient care. The results of this research can help therapists better implement BPS based treatments in their clinical practice. Current BPS training is limited and therapists who participate in this training have difficulty with applying these tactics in clinical practice. This study provides information about how therapists are currently using TR in clinical practice. These results may help therapists implement BPS in their clinical practice easier allowing them to fulfill the BPS mission of the APTA. My plans on sharing this information would help the profession locally, regionally, and nationally.

Short-Term Goals

I will plan on using the presentation from Chapter 2 to create an online webinar. The presentation will be uploaded onto The NC Area Health Education Centers (AHEC) website. This site offers affordable online education to working physical therapy professionals and students. Participants who complete the online course will be required to complete a post course survey to give me continuous feedback about how to improve the presentation. In addition to this online platform, an in-person presentation of this material at the North Carolina Physical Therapy Conference would be appropriate. The NCPTA annual conference allows physical therapy students, clinicians, and educators to learn about different and novel treatment techniques within the profession of physical therapy. By disseminating this material virtually and in-person, more therapists will be exposed to the concept of TR in North Carolina.

Intermediate Goals

The next step would be to present this information at the APTA Combined Sections meeting. This conference hosts approximately 15,000 physical therapists from across the US and

features presentations from leaders in the field of physical therapy. I plan to collaborate with Loretta Holmes to create a presentation about "Improved Care for Chronic Low Back Pain" that provides practical tips on how to improve physical therapist care for CLBP. By presenting at this national conference, I hope to make therapists aware of TR and considerate for use in their clinical practice.

The results from this research would be appropriate to be published. *Physical Therapy & Rehabilitation Journal* and *Physiotherapy Theory and Practice* would be excellent journals to publish this research. *Physical Therapy & Rehabilitation Journal* is an APTA sponsored journal that produces research about anything related to physical therapy. This journal would be appropriate to publish my research since it would address the APTA's mission of creating and producing clinically focused research by working therapists. The *Physiotherapy Theory and Practice* is an international journal focusing on recent developments and advances in the practice of physical therapy. This journal has previously produced multiple research studies that examined the benefits of TR and BPS treatments in clinical practice and my study would add further information about the use of TR in clinical practice. By publishing in these journals, the results of this study could create positive changes in the art of physical therapy globally.

Long-Term Goals

I plan to conduct additional research to improve physical therapists' relationships with their patients. There is a lack of education about interacting with patients in physical therapy. I will plan on addressing this issue by performing more research and creating educational courses that address these needs within the profession. Future research will build on this exploratory study to make connections on how certain actions by therapists and patients impact physical therapy care. Long term plans also include developing two course to provide additional

education to basic physical therapy education and post-graduate continuing education. The courses will address how therapists can personalize their interaction with each patient and use certain actions to reach optimal outcomes. With these courses, I hope to improve the relationship between patient and physical therapists.

REFERENCES

Alhowimel, A., AlOtaibi, M., Radford, K., & Coulson, N. (2018). Psychosocial factors associated with change in pain and disability outcomes in chronic low back pain patients treated by physiotherapist: A systematic review. *SAGE Open Medicine*, *6*, 2050312118757387. https://doi.org/10.1177/2050312118757387

Alodaibi, F., Beneciuk, J., Holmes, R., Kareha, S., Hayes, D., & Fritz, J. (2021). The Relationship of the Therapeutic Alliance to Patient Characteristics and Functional Outcome During an Episode of Physical Therapy Care for Patients With Low Back Pain: An Observational Study. *Physical Therapy*, *101*(4), pzab026. https://doi.org/10.1093/ptj/pzab026

American Council of Academic Physical Therapy. (n.d.). *APTA Position on Research*.

Bevers, K., Watts, L., Kishino, N., & Gatchel, R. (2016). The Biopsychosocial Model of the Assessment, Prevention, and Treatment of Chronic Pain. *US Neurology*, *12*, 98. https://doi.org/10.17925/USN.2016.12.02.98

Bordin, E. S. (1979). The generalizability of the psychoanalytic concept of the working alliance. *Psychotherapy: Theory, Research & Practice*, *16*, 252–260. https://doi.org/10.1037/h0085885

Brinjikji, W., Luetmer, P. H., Comstock, B., Bresnahan, B. W., Chen, L. E., Deyo, R. A., Halabi, S., Turner, J. A., Avins, A. L., James, K., Wald, J. T., Kallmes, D. F., & Jarvik, J. G. (2015). Systematic Literature Review of Imaging Features of Spinal Degeneration in Asymptomatic Populations. *American Journal of Neuroradiology*, *36*(4), 811–816. https://doi.org/10.3174/ajnr.A4173

Connaughton, J., & Gibson, W. (2016). Do Physiotherapists Have the Skill to Engage in the "Psychological" in the Bio-Psychosocial Approach? *Physiotherapy Canada*, *68*(4), 377–382. https://doi.org/10.3138/ptc.2015-66

Costa, L. da C. M., Maher, C. G., Hancock, M. J., McAuley, J. H., Herbert, R. D., & Costa, L. O. P. (2012). The prognosis of acute and persistent low-back pain: A meta-analysis. *CMAJ*, *184*(11), E613–E624. https://doi.org/10.1503/cmaj.111271

Diener, I., Kargela, M., & Louw, A. (2016). Listening is therapy: Patient interviewing from a pain science perspective. *Physiotherapy Theory and Practice*, *32*(5), 356–367. https://doi.org/10.1080/09593985.2016.1194648

Dijk, H. van, Köke, A. J. A., Elbers, S., Mollema, J., Smeets, R. J. E. M., & Wittink, H. (2023). Physiotherapists Using the Biopsychosocial Model for Chronic Pain: Barriers and Facilitators—A Scoping Review. *International Journal of Environmental Research and Public Health*, *20*(2). https://doi.org/10.3390/ijerph20021634

Driver, C., Kean, B., Oprescu, F., & Lovell, G. P. (2016). Knowledge, behaviors, attitudes and beliefs of physiotherapists towards the use of psychological interventions in physiotherapy practice: A systematic review. *Disability and Rehabilitation*, *39*(22), 2237–2249. https://doi.org/10.1080/09638288.2016.1223176

Driver, C., Lovell, G. P., & Oprescu, F. (2021). Physiotherapists' views, perceived knowledge, and reported use of psychosocial strategies in practice. *Physiotherapy Theory and Practice*, *37*(1), 135–148. https://doi.org/10.1080/09593985.2019.1587798

Dunn, B., Mcintosh, J., Ray, L., & McCarty, D. (2022). The Prevalence of Implicit Bias in Practicing Physical Therapists. *Carolina Journal of Interdisciplinary Medicine*, *2*(1), 1. https://doi.org/10.47265/cjim.v2i1.2008

Dutmer, A. L., Schiphorst Preuper, H. R., Soer, R., Brouwer, S., Bültmann, U., Dijkstra, P. U., Coppes, M. H., Stegeman, P., Buskens, E., van Asselt, A. D. I., Wolff, A. P., & Reneman, M. F. (2019). Personal and Societal Impact of Low Back Pain: The Groningen Spine Cohort. *Spine*, *44*(24), E1443. https://doi.org/10.1097/BRS.0000000000003174

Engel, G. L. (1977). The need for a new medical model: A challenge for biomedicine. *Science (New York, N.Y.)*, *196*(4286), 129–136. https://doi.org/10.1126/science.847460

Ferreira, P. H., Ferreira, M. L., Maher, C. G., Refshauge, K. M., Latimer, J., & Adams, R. D. (2013). The Therapeutic Alliance Between Clinicians and Patients Predicts Outcome in Chronic Low Back Pain. *Physical Therapy*, *93*(4), 470–478. https://doi.org/10.2522/ptj.20120137

Fritz, J., Söderbäck, M., Söderlund, A., & Sandborgh, M. (2019). The complexity of integrating a behavioral medicine approach into physiotherapy clinical practice. *Physiotherapy Theory and Practice*, *35*(12), 1182–1193. https://doi.org/10.1080/09593985.2018.1476996

Froud, R., Patterson, S., Eldridge, S., Seale, C., Pincus, T., Rajendran, D., Fossum, C., & Underwood, M. (2014). A systematic review and meta-synthesis of the impact of low back pain on people's lives. *BMC Musculoskeletal Disorders*, *15*, 50. https://doi.org/10.1186/1471-2474-15-50

Fuentes, J., Armijo-Olivo, S., Funabashi, M., Miciak, M., Dick, B., Warren, S., Rashiq, S., Magee, D. J., & Gross, D. P. (2014). Enhanced therapeutic alliance modulates pain intensity and muscle pain sensitivity in patients with chronic low back pain: An experimental controlled study. *Physical Therapy*, *94*(4), 477–489. https://doi.org/10.2522/ptj.20130118

George, S. Z., & Beneciuk, J. M. (2015). Psychological predictors of recovery from low back pain: A prospective study. *BMC Musculoskeletal Disorders*, *16*, 49. https://doi.org/10.1186/s12891-015-0509-2

George, S. Z., Fritz, J. M., Silfies, S. P., Schneider, M. J., Beneciuk, J. M., Lentz, T. A., Gilliam, J. R., Hendren, S., & Norman, K. S. (2021). Interventions for the Management of Acute and Chronic Low Back Pain: Revision 2021. *The Journal of Orthopaedic and Sports Physical Therapy*, *51*(11), CPG1–CPG60. https://doi.org/10.2519/jospt.2021.0304

Hall, A. M., Ferreira, P. H., Maher, C. G., Latimer, J., & Ferreira, M. L. (2010). The Influence of the Therapist-Patient Relationship on Treatment Outcome in Physical Rehabilitation: A Systematic Review. *Physical Therapy*, *90*(8), 1099–1110. https://doi.org/10.2522/ptj.20090245

Hartvigsen, J., Hancock, M. J., Kongsted, A., Louw, Q., Ferreira, M. L., Genevay, S., Hoy, D., Karppinen, J., Pransky, G., Sieper, J., Smeets, R. J., Underwood, M., Buchbinder, R., Hartvigsen, J., Cherkin, D., Foster, N. E., Maher, C. G., Underwood, M., Tulder, M. van, … Woolf, A. (2018). What low back pain is and why we need to pay attention. *The Lancet*, *391*(10137), 2356–2367. https://doi.org/10.1016/S0140-6736(18)30480-X

Holopainen, R., Simpson, P., Piirainen, A., Karppinen, J., Schütze, R., Smith, A., O'Sullivan, P., & Kent, P. (2020). Physiotherapists' perceptions of learning and implementing a biopsychosocial intervention to treat musculoskeletal pain conditions: A systematic review and metasynthesis of qualitative studies. *PAIN*, *161*(6), 1150–1168. https://doi.org/10.1097/j.pain.0000000000001809

Kinney, M., Seider, J., Beaty, A. F., Coughlin, K., Dyal, M., & Clewley, D. (2020). The impact of therapeutic alliance in physical therapy for chronic musculoskeletal pain: A systematic

review of the literature. *Physiotherapy Theory and Practice*, *36*(8), 886–898. https://doi.org/10.1080/09593985.2018.1516015

Main, C. J., Simon, C. B., Beneciuk, J. M., Greco, C. M., George, S. Z., & Ballengee, L. A. (2023). The Psychologically Informed Practice (PiP) Consultation Roadmap: A Clinical Implementation Strategy. *Physical Therapy*, pzad048. https://doi.org/10.1093/ptj/pzad048

McCabe, E., Miciak, M., Roduta Roberts, M., Sun, H. (Linda), & Gross, D. P. (2022). Measuring therapeutic relationship in physiotherapy: Conceptual foundations. *Physiotherapy Theory and Practice*, *38*(13), 2339–2351. https://doi.org/10.1080/09593985.2021.1987604

Menon, V., & Muraleedharan, A. (2020). Internet-based surveys: Relevance, methodological considerations and troubleshooting strategies. *General Psychiatry*, *33*(5), e100264. https://doi.org/10.1136/gpsych-2020-100264

Miciak, M. A. (2015, Fall). *Bedside Matters: A Conceptual Framework of the Therapeutic Relationship in Physiotherapy*. ERA. https://doi.org/10.7939/R34B2X97W

Miciak, M., Mayan, M., Brown, C., Joyce, A. S., & Gross, D. P. (2018). The necessary conditions of engagement for the therapeutic relationship in physiotherapy: An interpretive description study. *Archives of Physiotherapy*, *8*, 3. https://doi.org/10.1186/s40945-018-0044-1

Miciak, M., Mayan, M., Brown, C., Joyce, A. S., & Gross, D. P. (2019). A framework for establishing connections in physiotherapy practice. *Physiotherapy Theory and Practice*, *35*(1), 40–56. https://doi.org/10.1080/09593985.2018.1434707

Morera-Balaguer, J., Botella-Rico, J. M., Martínez-González, M. C., Medina-Mirapeix, F., & Rodríguez-Nogueira, Ó. (2018). Physical therapists' perceptions and experiences about barriers and facilitators of therapeutic patient-centred relationships during outpatient

rehabilitation: A qualitative study. *Brazilian Journal of Physical Therapy*, *22*(6), 484–492. https://doi.org/10.1016/j.bjpt.2018.04.003

Morton, S. M. B., Bandara, D. K., Robinson, E. M., & Carr, P. E. A. (2012). In the 21st Century, what is an acceptable response rate? *Australian and New Zealand Journal of Public Health*, *36*(2), 106–108. https://doi.org/10.1111/j.1753-6405.2012.00854.x

Mutubuki, E. N., Beljon, Y., Maas, E. T., Huygen, F. J. P. M., Ostelo, R. W. J. G., van Tulder, M. W., & van Dongen, J. M. (2020). The longitudinal relationships between pain severity and disability versus health-related quality of life and costs among chronic low back pain patients. *Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care and Rehabilitation*, *29*(1), 275–287. https://doi.org/10.1007/s11136-019-02302-w

Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic Analysis: Striving to Meet the Trustworthiness Criteria. *International Journal of Qualitative Methods*, *16*(1), 1609406917733847. https://doi.org/10.1177/1609406917733847

Roberts, L. C., Whittle, C. T., Cleland, J., & Wald, M. (2013). Measuring verbal communication in initial physical therapy encounters. *Physical Therapy*, *93*(4), 479–491. https://doi.org/10.2522/ptj.20120089

Schaumberg, E. C. (2020). *How are we doing? The psychosocial history-taking practices of physical therapists when evaluating adults with chronic pain*. https://hdl.handle.net/11274/12299

Søndenå, P., Dalusio-King, G., & Hebron, C. (2020). Conceptualisation of the therapeutic alliance in physiotherapy: Is it adequate? *Musculoskeletal Science & Practice*, *46*, 102131. https://doi.org/10.1016/j.msksp.2020.102131

Synnott, A., O'Keeffe, M., Bunzli, S., Dankaerts, W., O'Sullivan, P., & O'Sullivan, K. (2015). Physiotherapists may stigmatise or feel unprepared to treat people with low back pain and psychosocial factors that influence recovery: A systematic review. *Journal of Physiotherapy*, *61*(2), 68–76. https://doi.org/10.1016/j.jphys.2015.02.016

Terry, G., Hayfield, N., Clarke, V., & Braun, V. (2023). *The SAGE Handbook of Qualitative Research in Psychology* (By pages 17-36). SAGE Publications Ltd. https://doi.org/10.4135/9781526405555

Unsgaard-Tøndel, M., & Søderstrøm, S. (2021). Therapeutic Alliance: Patients' Expectations Before and Experiences After Physical Therapy for Low Back Pain-A Qualitative Study With 6-Month Follow-Up. *Physical Therapy*, *101*(11), pzab187. https://doi.org/10.1093/ptj/pzab187

Unsgaard-Tøndel, M., & Søderstrøm, S. (2022). Building therapeutic alliances with patients in treatment for low back pain: A focus group study. *Physiotherapy Research International: The Journal for Researchers and Clinicians in Physical Therapy*, *27*(1), e1932. https://doi.org/10.1002/pri.1932

Wu, A., March, L., Zheng, X., Huang, J., Wang, X., Zhao, J., Blyth, F. M., Smith, E., Buchbinder, R., & Hoy, D. (2020). Global low back pain prevalence and years lived with disability from 1990 to 2017: Estimates from the Global Burden of Disease Study 2017. *Annals of Translational Medicine*, *8*(6), 299. https://doi.org/10.21037/atm.2020.02.175

Yang, S., Kim, W., Kong, H. H., Do, K. H., & Choi, K. H. (2020). Epidural steroid injection versus conservative treatment for patients with lumbosacral radicular pain: A meta-analysis of randomized controlled trials. *Medicine*, *99*(30), e21283. https://doi.org/10.1097/MD.0000000000021283

Zaina, F., Tomkins-Lane, C., Carragee, E., & Negrini, S. (2016). Surgical versus non-surgical treatment for lumbar spinal stenosis. *The Cochrane Database of Systematic Reviews*, *1*, CD010264. https://doi.org/10.1002/14651858.CD010264.pub2

APPENDIX A: SURVEY

PART 1 - INTRODUCTION/DEMOGRAPHIC SECTION

Statement 1

THANK YOU FOR PARTICIPATING IN THIS SURVEY!
The following survey was created to assess physical therapy professional's knowledge and use of therapeutic relationships in clinical practice for the treatment of low back pain.

Results of this survey will be used to fulfill the dissertation requirement for the Doctorate of Education in Kinesiology program from University of North Carolina at Greensboro. If you have any questions, please feel free to contact Tyler Johnston via email at t_johnston@uncg.edu.

Statement 2

Therapeutic Relationship by Physical Therapist in the Treatment of Low Back Pain

You are invited to participate in a research study about the use and knowledge of the therapeutic relationship (TR) by physical therapy professionals when treating individuals with chronic low back pain. The goal of this research study is to determine the knowledge and use of TR by physical therapy professionals in hopes of improving the quality of care for those suffering with chronic low back pain. You are allowed to skip questions during this survey. This study is being conducted by Tyler Johnston from UNCG EdD Kinesiology program.

Inclusion Criteria:

- NC licensed physical therapist or physical therapy assistant
- Currently practicing

Please review the consent form sheet prior to enrolling in the survey by clicking on the following link: Consent Form Sheet

By clicking “I Consent”, you are consenting to taking this survey. By clicking, “I Do Not Consent” you will not have to answer any questions and will be directed away from this survey. Do you Consent?

- I Consent
- I Do Not Consent

PART 1 – DEMOGRAPHIC INFORMATION

Statement 1

DEMOGRAPHIC INFORMATION

This section will gather information about you, your physical therapy education, and your current practice setting

Q1

What is your gender?

- Man
- Woman
- Non-binary
- Do not wish to share
- Other. Please specify (text box)

Q3

Professional Title

- Physical Therapy Assistant
- Physical Therapist

Q4

Highest Earned Physical Therapy Degree

- Associate's Degree - Physical Therapy Assistant
- Bachelor Degree - Physical Therapy
- Masters Degree - Physical Therapy
- Doctoral Degree - Physical Therapy
- Transitional Doctoral Degree - Physical Therapy
- Doctor of Philosophy - Physical Therapy/Rehabilitation Sciences
- Other - Please Specify (text box)

Q5

Years of Practice in Physical Therapy

- <1 year
- 1-5 years
- 6-10 years
- 11-15 years

- 16-20 year
- > 20 years

Q6

Current Practice Setting (If you work in multiple settings, please select the one you spend the most time working in).

- Hospital/Acute Care
- Outpatient Ortho
- Orthopedics Neuro
- Inpatient Rehab/SNF
- Home Health
- Other (text box)

Q7

Years of Practice in Current Physical Therapy Setting

- <1 year
- 1-5 years
- 6-10 years
- 11-15 years
- 16-20 year
- > 20 years

Q8

Current Employment Status at your primary work setting

- Full Time (>35 hours or more a week)
- Part-Time
- Other (please specify) (text box)

Q9

In what percentage of your patient caseload do you specifically treat chronic low back pain? (Chronic low back pain = > 3 months of low back pain)

- 0-20%
- 21-40%

- 41-60%
- 61-80%
- 81-100%

Q11

Have you completed any advanced education to manage patients with chronic low back pain? (select all that apply)

- Residency Program
- Fellowship Program
- Continuing Education (e.g., Maitland, McKenzie, Pain Science Education, etc.) If so specify below (text box)
- Other. (text box)
- No additional education

Q12

Do you have any advanced certifications in the field of physical therapy? Select all that apply

- Certified Specialist (ie OCS, NCS, GCS, SCS) If so specify below (text box)
- Fellowship (ie FAAOMPT) If so specify (text box)
- Other Certifications (ie MDT, COMT) If so specify (text box)
- No additional certifications

PART 2 - KNOWLEDGE OF THERAPEUTIC RELATIONSHIP

Statement 1

KNOWLEDGE OF THERAPEUTIC RELATIONSHIP

This section is designed to check your understanding of the therapeutic relationship and its benefits as part of patient care in the physical therapy practice.

Q1

How familiar are you with the therapeutic relationship?

- Not At All Familiar
- Unfamiliar
- Slightly Familiar

- Moderately Familiar
- Extremely Familiar

Q2

How do you define the therapeutic relationship?

- Open ended text box

Q3

How familiar are you with each of the following terms?

	Not At All Familiar (1)	Unfamiliar (2)	Slightly Familiar (3)	Moderately Familiar (4)	Extremely Familiar (5)
Therapeutic Alliance	○	○	○	○	○
Working Alliance	○	○	○	○	○
Patient-Provider Interaction	○	○	○	○	○
Therapist-Patient Relationship	○	○	○	○	○

Statement 1

For this survey I will use the following definition which is based off of Miciak's TR dissertation in 2015.

The therapeutic relationship is the development of a compassionate, empathetic, and open interaction between the therapists and their patient to improve the patient's well being.

Q4

What components are needed to build a therapeutic relationship (TR)?

- A - Conditions of Engagement - circumstance or relational "space" between physical therapist and patient that build the relationship
- B - Ways of Establishing Connection - actions of physical therapist and patient that bring them together in an interaction
- C - Elements of the Bond - emotional or affective relationship between patient and therapist
- Both A and B
- All of the above (ANSWER)

Q5

What are the main themes (foundational ideas) that explain the therapeutic relationship in physical therapy practice?

- A - Teamwork between therapist and patient, body is central to relationship, both "personal and professional" (ANSWER)
- B - Unconditional positive regard, empathy, and congruence
- C - Agreement on goals, agreement on tasks, therapist/client bond
- D - Physical similarities, timing of care, monetary/social gain

Q6

When a positive TR is developed during physical therapy, which of the following changes are noted with patients suffering from a TBI?

- A - Increase performance of dynamic balance
- B - Increase participation in physical therapy (ANSWER)
- C - Improved short-term memory recall
- D - Increased ability to follow commands

Q7

When a positive TR is developed in physical therapy, it decreases which of the following in the geriatric population?

- A - rates of depression (ANSWER)
- B - post exercise soreness
- C - adherence to home exercise program
- D - non-show/cancellations of therapy appointments

Q8

True or False: When a positive therapeutic relationship is developed, it DOES NOT AFFECT the perceived effect of treatment for MSK conditions when included in clinical practice.

- True
- False (ANSWER)

Q9

True or False: The therapeutic relationship increases the effect of TENS for chronic low back pain when included in clinical practice.

- True (ANSWER)
- False

Q10

Developing a therapeutic relationship has been shown by researchers to improve outcomes (ie pain, function, disability level) when combined with standard practice in which of the following conditions?

- A - Low Back Pain
- B - Brain Injury
- C - Carpal Tunnel
- Both A and B (ANSWER)
- All of the above

Q11

The therapeutic relationship has been extensively studied in psychotherapy and is new to physical therapy. In psychotherapy, which of the following is MORE predictive of successful outcomes with therapy?

- Patient-rated level for TR (ANSWER)
- Therapist-rated level of TR
- Both are equally predictive
- Neither are predictive

Statement 2

The next questions will ask how you have developed and implemented TR in your clinical practice.

Q13

How do you create a therapeutic relationship with your patients? Please list three ways you do this.

- Open ended text box

Q14

What advice would you give a colleague about how to build a therapeutic relationship? Please list three things you would say.

- Open ended text box

Q15

What things make it difficult for you to build a therapeutic relationship? Please list the top three things.

- Open ended text box

PART 3 - APPLICATION OF THERAPEUTIC RELATIONSHIP IN YOUR CLINICAL PRACTICE

Statement 1

APPLICATION OF THERAPEUTIC RELATIONSHIP IN YOUR CLINICAL PRACTICE

This section will ask about the application of the components of TR (i.e., conditions of engagement, ways of establishing connections, and elements of the bond) in your clinical practice.

The components of each element are listed and defined with each question.

Q1

Conditions of Engagement - circumstance or relational "space" between physical therapist and patient that build the relationship

How **FREQUENTLY** do you use each of the following actions when treating patients with chronic low back pain?

- Being Present - focusing on patient and being "in the moment"
- Being Receptive - therapist willing to listen without bias, active listening, noticing patients' non-verbal cues (ie facial expression, posture)
- Being Genuine - therapist being their "true self", accepting the patient for who they are, being honest about progress, and being clear and transparent with communication
- Being Committed - dedicated understanding patients problem, patient's life, and helping patient in rehab

	Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Always (5)
Being Present	○	○	○	○	○
Being Receptive	○	○	○	○	○
Being Genuine	○	○	○	○	○
Being Committed	○	○	○	○	○

Q2

Conditions of Engagement - circumstance or relational "space" between physical therapist and patient that build the relationship

How **IMPORTANT** is it to use the following actions when treating patients with chronic low back pain?

- Being Present - focusing on patient and being "in the moment"
- Being Receptive - therapist willing to listen without bias, active listening, noticing patients' non-verbal cues (ie facial expression, posture)
- Being Genuine - therapist being their "true self", accepting the patient for who they are, being honest about progress, and being clear and transparent with communication
- Being Committed - dedicated understanding patients problem, patient's life, and helping patient in rehab

	Not at All Important (1)	Slightly Important (2)	Moderately Important (3)	Important (4)	Very Important (5)
Being Present	○	○	○	○	○
Being Receptive	○	○	○	○	○
Being Genuine	○	○	○	○	○
Being Committed	○	○	○	○	○

Conditions of Engagement - circumstance or relational "space" between physical therapist and patient that build the relationship

How **CONFIDENT** are you in applying the following actions when treating patients with chronic low back pain?

- Being Present - focusing on patient and being "in the moment"
- Being Receptive - therapist willing to listen without bias, active listening, noticing patients' non-verbal cues (ie facial expression, posture)
- Being Genuine - therapist being their "true self", accepting the patient for who they are, being honest about progress, and being clear and transparent with communication
- Being Committed - dedicated understanding patients problem, patient's life, and helping patient in rehab

	Not Confident (1)	Slightly Confident (2)	Moderately Confident(3)	Confident (4)	Very Confident (5)
Being Present	○	○	○	○	○
Being Receptive	○	○	○	○	○
Being Genuine	○	○	○	○	○
Being Committed	○	○	○	○	○

Q3

Ways of Establishing Connections - actions of physical therapist and patient that bring them together in an interaction

How **FREQUENTLY** do you use each of the following actions when treating patients with chronic low back pain?

- Acknowledging the individual - treatments individualized for patient's needs and abilities, working with the patient as equal, and validating the patient's pain and physical experience
- Using the body as a pivot point - clarifying physical problem and solution, helping patients connect and self manage their ailment, and using touch to help patient (i.e. manual therapy, cueing during exercise)

- Giving of self - going “above and beyond” for a patient (i.e., provide personal information to patient to develop relationship, seeking education/help about patient's condition from research or other providers)

	Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Always (5)
Acknowledging the individual	○	○	○	○	○
Using the body as a pivot point	○	○	○	○	○
Giving of self	○	○	○	○	○

Q4

Ways of Establishing Connections - actions of physical therapist and patient that bring them together in an interaction

How **IMPORTANT** is it to use the following actions when treating patients with chronic low back pain?

- Acknowledging the individual - treatments individualized for patient's needs and abilities, working with the patient as equal, and validating the patient's pain and physical experience
- Using the body as a pivot point - clarifying physical problem and solution, helping patients connect and self manage their ailment, and using touch to help patient (i.e. manual therapy, cueing during exercise)
- Giving of self - going “above and beyond” for a patient (i.e., provide personal information to patient to develop relationship, seeking education/help about patient's condition from research or other providers)

	Not at All Important (1)	Slightly Important (2)	Moderately Important (3)	Important (4)	Very Important (5)
Acknowledging the individual	○	○	○	○	○
Using the body as a pivot point	○	○	○	○	○
Giving of self	○	○	○	○	○

Ways of Establishing Connections - actions of physical therapist and patient that bring them together in an interaction

How **CONFIDENT** are you in applying the following actions when treating patients with chronic low back pain?

- Acknowledging the individual - treatments individualized for patient's needs and abilities, working with the patient as equal, and validating the patient's pain and physical experience
- Using the body as a pivot point - clarifying physical problem and solution, helping patients connect and self manage their ailment, and using touch to help patient (i.e. manual therapy, cueing during exercise)
- Giving of self - going "above and beyond" for a patient (i.e., provide personal information to patient to develop relationship, seeking education/help about patient's condition from research or other providers)

	Not Confident (1)	Slightly Confident (2)	Moderately Confident(3)	Confident (4)	Very Confident (5)
Acknowledging the individual	○	○	○	○	○
Using the body as a pivot point	○	○	○	○	○
Giving of self	○	○	○	○	○

Q5

Elements of the Bond - emotional or affective relationship between patient and therapist

How **FREQUENTLY** do you use each of the following behaviors when treating patients with chronic low back pain?

- Caring - recognizing the patient as a person and wanting to improve their health
- Nature of rapport - ability to develop a professional, friendly and open interaction between you and your patient
- Trust - PT's belief that patient is being honest in therapy
- Respect - recognizing the patients experience, worth, and value in this relationship

	Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Always (5)
Caring	○	○	○	○	○
Nature of rapport	○	○	○	○	○
Trust	○	○	○	○	○
Respect	○	○	○	○	○

Q6

Elements of the Bond - emotional or affective relationship between patient and therapist

How **IMPORTANT** are these behaviors when working with patients with chronic low back pain?

- Caring - recognizing the patient as a person and wanting to improve their health
- Nature of rapport - ability to develop a professional, friendly and open interaction between you and your patient
- Trust - PT's belief that patient is being honest in therapy
- Respect - recognizing the patients experience, worth, and value in this relationship

	Not at All Important (1)	Slightly Important (2)	Moderately Important (3)	Important (4)	Very Important (5)
Caring	○	○	○	○	○
Nature of rapport	○	○	○	○	○
Trust	○	○	○	○	○
Respect	○	○	○	○	○

Elements of the Bond - emotional or affective relationship between patient and therapist

How **CONFIDENT** are you in applying these behaviors when working with patients with chronic low back pain?

- Caring - recognizing the patient as a person and wanting to improve their health

- Nature of rapport - ability to develop a professional, friendly and open interaction between you and your patient
- Trust - PT's belief that patient is being honest in therapy
- Respect - recognizing the patients experience, worth, and value in this relationship

	Not Confident (1)	Slightly Confident (2)	Moderately Confident(3)	Confident (4)	Very Confident (5)
Caring	○	○	○	○	○
Nature of rapport	○	○	○	○	○
Trust	○	○	○	○	○
Respect	○	○	○	○	○

Q7

How important is building a strong therapeutic relationship to your clinical outcomes when working with individuals with **CHRONIC LOW BACK PAIN?**

- Not at all
- Slightly important
- Moderately important
- Important
- Very important

Q8

Why do you believe that?

- Open ended text question

PART 4 - IMPLEMENTING THE THERAPEUTIC RELATIONSHIP IN YOUR CLINICAL PRACTICE

Statement 1

IMPLEMENTING THE THERAPEUTIC RELATIONSHIP IN YOUR CLINICAL PRACTICE

This section will ask about factors that affect your ability to implement therapeutic relationships in your clinical practice.

Q1

How much do the following issues LIMIT your ability to implement a therapeutic relationship with your patients?

- Clinical Constraints - short appointment times, double booking
- Patient Constraints - language barrier, communication issues
- Environmental - no treatment rooms, close proximity to other patients
- Reimbursement Limitations - unable to bill for psychosocial based treatments
- Educational Limitations - don't know much about this subject, don't know how to implement TR
- Personal Limitations - personality of therapist, discomfort with emotions

	Not at All (1)	Slightly (2)	Moderately (3)	Very (4)	Extremely (5)
Clinical Constraints	○	○	○	○	○
Patient Constraints	○	○	○	○	○
Environmental	○	○	○	○	○
Reimbursement Limitations	○	○	○	○	○
Educational Limitations	○	○	○	○	○
Personal Limitations	○	○	○	○	○

Q2

Please list any factors not mentioned above that limit your ability to implement a therapeutic relationship with your patients.

- Open box text entry

Q3

How much would each of the following ENHANCE your ability to implement the therapeutic relationship in clinical practice?

- Better Clinical Practices - 45-60 minutes for each session, no double bookings
- Better interpersonal skills education - unconscious bias training, more communication training in PT school and/or continuing education, training to cope with emotion
- Better Environment -more private treatment areas, better equipment
- Better Reimbursement/Resources - higher reimbursement for physical therapy, funding for psychosocial treatments
- Better evidence to support TR - more research supporting TR and its use in clinical practice

	Not at All (1)	Slightly (2)	Moderately (3)	Very (4)	Extremely (5)
Better Clinical Practices	○	○	○	○	○
Better interpersonal skills education	○	○	○	○	○
Improved Environment	○	○	○	○	○
Improved Reimbursement /Resources	○	○	○	○	○
Better evidence to support TR	○	○	○	○	○

Q5

Please list any other factors not mentioned above that may enhance your ability to perform therapeutic relationships with your patients.

- Open box text entry

PART 5 - EDUCATIONAL RESOURCES TO IMPROVE THE THERAPEUTIC RELATIONSHIP IN CLINICAL PRACTICE

This section will ask whether educational resources would increase your use of therapeutic relationships in clinical practice.

Q1

How LIKELY would the following educational materials increase your use of TR in your clinical practice?

- Pre-recorded online materials - recorded video and PowerPoint Presentation
- In-Person Seminar - 1-2 day seminar with live lecture and patient interaction
- Combination of Online and In-Person - recorded video then 1-2 day in person seminar
- Interactive Online seminar with virtual mentorship - weekly classes requiring self study with mentorship from trained professional about individual's patient
- Combination of In-Person and Interactive Online Seminar with virtual mentorship - weekly classes requiring self study with mentorship from trained professional about individual's patient, then 1-2 day in person class

	Not at All (1)	Somewhat (2)	Likely (3)	Very Likely (4)
Pre-recorded online materials	○	○	○	
In-Person Seminar	○	○	○	
Combination of Online and In-Person	○	○	○	
Interactive Online seminar with virtual mentorship	○	○	○	
In-Person and Interactive Online Seminar with virtual mentorship	○	○	○	

END OF SURVEY

Thank you for completing the survey!

Questions for this survey were based on relevant literature. For additional learning, please see the citations below:

Miciak, M. A. (2015, Fall). Bedside Matters: A Conceptual Framework of the Therapeutic Relationship in Physiotherapy. ERA. https://doi.org/10.7939/R34B2X97W.

McCabe, E., Miciak, M., Roduta Roberts, M., Sun, H. (Linda), & Gross, D. P. (2022). Measuring therapeutic relationship in physiotherapy: Conceptual foundations. *Physiotherapy Theory and Practice*, *38*(13), 2339–2351. https://doi.org/10.1080/09593985.2021.1987604

Hall, A. M., Ferreira, P. H., Maher, C. G., Latimer, J., & Ferreira, M. L. (2010). The Influence of the Therapist-Patient Relationship on Treatment Outcome in Physical Rehabilitation: A Systematic Review. Physical Therapy, 90(8), 1099–1110. https://doi.org/10.2522/ptj.20090245

Ferreira, P. H., Ferreira, M. L., Maher, C. G., Refshauge, K. M., Latimer, J., & Adams, R. D. (2013). The Therapeutic Alliance Between Clinicians and Patients Predicts Outcome in Chronic Low Back Pain. Physical Therapy, 93(4), 470–478. https://doi.org/10.2522/ptj.20120137

APPENDIX B: TABLES

Table B 1. Demographic Information

Sex (n=544), n (%)	Male	122 (22.4)
	Female	416 (76.5)
	Do not wish to share	4 (.7)
	Other. Please specify	2 (.4)
Highest Earned Physical Therapy Degree (n=544), n (%)	Associate Degree – Physical Therapy Assistant	118 (2.7)
	Bachelor Degree – Physical Therapy	52 (9.6)
	Masters Degree – Physical Therapy	72 (13.2)
	Doctorate Degree– Physical Therapy	232 (42.6)
	Transitional Doctorate – Physical Therapy	51 (9.4)
	Doctor of Philosophy – Physical Therapy	5 (.9)
	Other	14 (2.6)
Years of Practice in Physical Therapy (n=544), n (%)	<1 year	31 (5.7)
	1-5 years	98 (18.0)
	6-10 years	106 (19.5)
	11-15 years	73 (13.4)
	16-20 years	53 (9.7)
	>20 years	183 (33.6)
Current Practice Setting (n=544), n (%)	Hospital Acute Care	43 (7.9)
	Outpatient Ortho	268 (49.3)
	Outpatient Neuro	10 (1.8)
	Inpatient Rehab/SNF	61 (11.2)
	Home Health	53 (9.7)
	Other	109 (9.7)
Years of Practice in Current Therapy Setting (n=544), n (%)	< 1 year	55 (10.1)
	1-5 years	162 (29.8)
	6-10 years	126 (23.2)
	11-15 years	68 (12.5)
	16-20 years	53 (9.7)
	>20 years	80 (14.7)
Current Employment Status (n=544), n (%)	Full Time (>35 hours or more a week)	389 (71.5)
	Part Time	108 (19.9)
	Other (please specify)	27 (8.6)
Percentage of Caseload Chronic Low Back Pain (n=544), n(%)	0-20%	217 (39.9)
	21-40%	192 (35.3)
	41-60%	104 (19.1)
	61-80%	27 (5.0)
	81-100%	4 (.7)
Advanced Education to	Residency	16 (2.9)
	Fellowship	5 (.9)

Manage Chronic Low Back Pain Patients (n=542), n(%)	Continuing Education (ie Maitland, Mckenzie, Pain Science, etc.)	248 (45.8)
	Other	33 (6.0)
	No Additional Education	270 (49.8)
Advanced Certifications in Field of Physical Therapy (n=537), n (%)	Certified Specialist (ie OCS, NCS, GCS, SCS)	78 (14.5)
	Fellowship (ie FAAOMPT)	6 (1.1)
	Other Certifications (ie MDT, COMT)	116 (21.6)
	No additional certifications	368 (68.5)

Table B 2. Percentage of TR Knowledge Questions

Question	**% Correct (Correct Answer)**
Q4 – Components of TR	78.3 (All of the Above)
Q5 – Foundational Idea of TR	36.5 (A)
Q6 – TR for TBI	82.5 (B)
Q7 – TR for Geriatric	29.8 (A)
Q8 – TR and MSK effects	95.4 (True)
Q9 – TR and TENS effects	68.4 (True)
Q10 – TR effects on standard practice	49.3 (Both A and B)
Q11 – Psychotherapy predictive	39.9 (A)

Table B 3. Examples of Creating TR in Clinical Practice

How do you create TR in your Clinical Practice?		
Main Themes	**Sub-Themes**	Quotes
Characteristics of Therapist	**Caring –** showing concern for patient	"show empathy for their symptoms/issues"
		"create and environment of trust"
		"compassion for their pain, taking it easy on tougher days"
	Patience – ability to delay to help patient	"listening completely without offering advice first"
		"understanding patients situation/desire for therapy"
	Altruistic – focusing on well-being on patient	"show genuine interest in their lives"
		"not being judgmental with comments"
Designing their Care	**PT Treatments Used –** physical treatments used in clinic	"Assess and reassess how they are doing and responding to treatment"
		"physical touch via manual therapy"
		"Incorporate something into treatment that patient likes/enjoys"
	Conversational Treatments	"explaining diagnosis and rationale for treatment in easy to understand format"

	Used – words or phrases that are used for treatment purposes	"highlight progress, celebrate with them" "confirm the patients complaints are valid"
	Environmental – surroundings where PT occurs	"strong first impression/clinic presentation" "availability beyond treatment session via text, email, phone" "Take my time with each patient"
	Personalize – treatments are based on one individual	"seek the patient's input in clarifying goals "modify plans based on patient's input" "ask what is important to them"
Therapist-Patient Interaction	**Verbal –** words used to during interaction with patient	"speak respectfully in calm tone and use positive reinforcement" "open-ended questions (Tell me more?)" "encourage and praise any effort" "find common ground similarities/likes/dislikes"
	Non-Verbal – physical actions used during interaction with patient	"face to face and eye to eye communication" "By listening to the patient, giving them my direct attention" "Body language (smile, eye contact, gentle touch)

Table B 4. Examples of Things that Make TR Difficult

What things make it difficult for you to build a therapeutic relationship? Please list the top three things.

Main Themes	**Sub-Themes**	Quotes
Factors that Impact the Relationship	**Bias –** beliefs that impact care	"cultural differences" "age difference" "racial tension"
	Communication Barriers – challenges when communicating with patient	"language barrier" "rude patients or patients that say inappropriate things" "different personality"
	Treatment Barriers – challenges that limit physical therapy treatment	"Patient not giving effort into PT sessions or compliance of HEP" "Bio psychosocial issues" "unremitting pain that is beyond the scope of our practice OR red-flags" "patient not willing to share information"

Patient Limitations	**Behavioral –** how the patient interacts with others	"extreme negative attitude toward any treatment" "Client not taking responsibility for self"
	Educational – incorrect or misinformation limiting care	"Already preconceived ideas from patient that therapy isn't going to work" "pts limited understanding of what PT is" "previously misguided information received by the patient from other medical providers"
	Personal – patients medical history and support network	"cognitive impairments" "patient without support network" "substance abuse"
Clinical Limitations	**Healthcare Financial –** monetary or metric based limitations on therapist	"insurance, paperwork, billing" "focus to billing and metrics versus quality care" "Demand of the rehab industry whether it's productivity, reimbursement, etc."
	Practice – PT's daily activities	"point of service documentation" "time allowed for evaluation/treatment by insurance companies and employers" "Having multiple patients at 1 time"
Therapist Limitations	**Personal –** therapists' belief or behavior that impact care	"my own shortcomings" "My personal energy for the day-taking on a therapeutic relationship can be draining and I need to keep boundaries in check" "Employee fatigue/burnout"
	Practice – therapist lack of skill/knowledge	"When a case is complex beyond what I'm used to" "lack of skill needed to treat effectively" "poor therapist perception/communication"

Table B 5. Examples of Why TR is Important for CLBP Treatment

How important is building a therapeutic relationship to your outcomes when treating chronic low back pain? Why do you believe that?		
Main Themes	**Sub-Themes**	Quotes
Creates a Bond	**Address patient's emotional concerns –** ability of therapists to connect with	"Due to the negative interactions, they may not feel heard and understood and feel hopeless. It's important to give them hope again" "Pain is clearly not limited to physical inputs, but rather is a complex process involving thoughts and emotions" "Controlling pain does have an emotional component and having that relationship helps to bridge that gap"

	patient emotionally	
	Builds connection – starts interaction with patient	"human connection is a big part of healing" "To help the patient trust you to help them with their pain" "partnership for recovery and empowering for the client to become stable and in charge"
	Learn about patient experience – can find out more information about patient and their illness	"when you can place yourself in their shoes, truly listen to them, show you care and gain their trust" "Because of it's chronic condition, there has to be a deeper understanding of the patient, his or her expectations and how to best manage it" "Let's the patient realize they are not the only ones going through what they are experiencing"
Effects Physical Therapy	**Improves Care –** helps with PT outcomes	"Patients are more likely to experience positive outcomes if they feel supported" "pts have better outcome when there is a good relationship with the therapist" "building a relationship it can have a positive effect on their attitude and progress with therapy"
	Needed for Certain Treatment – used for certain BPS based treatments	"When the alarm system [sympathetic nervous system] becomes less triggered the patient is able to learn, musculature relaxes, etc." "To educate pts about pain science and encourage them to make lifestyle changes and explore their pain from a bio-psycho-social view" "Therapeutic relationship is the first step of helping them on their journey"
	Patient's Commitment to PT – helps patient be more adherent to PT	"Patients are more willing to comply with skilled services if they trust their" "The more a patient feels comfortable with their therapist, the more likely they are to buy into what he/she is saying and asking them to do" "they are more willing to follow your guidance, do their hep, and return for PT appointments"
PT's Practice	**Clinical Experience –** therapist see it in clinic	"It is important with all of my patients, not just chronic LBP" "Having a therapeutic relationship and providing positivity can result in improvements even more so than exercise in my experience" "I have seen patients make significant progress in a short period of time after establishing a therapeutic relationship"
	Evidence Based Practice –	"I was taught it was the most important thing in school" "Research has shown that the patient engages more and achieves improved positive outcomes"

found in PT literature	"CPGs and our professional scope of practice require delivery of ethical effective evidence-based interventions – a part of which is use of TRs"

Knowledge and Use of the Therapeutic Relationship in Physical Therapy

By Tyler Johnston, PT, DPT, OCS, EdD

1

Course Objectives

- Understand current evidence to support the use of TR in clinical practice
- Compare the use and knowledge of TR in clinical practice to their own practice
- Discuss barriers to implement TR in clinical practice
- Be able to apply simple tactics to increase use of TR in clinical practice to improve care

Course Outline

Part 1 – Research about TR

- Definition of TR
- Application of TR
- My Research Study about TR

Part 2 – Reflection on TR use in Clinical Practice

- Your own use
- Results of my study

Part 3 – Clinical Application of TR

- Barriers to TR in clinical practice
- Ways to perform TR in clinical practice

3

Part 1 – Research about TR

Definition of TR
How do you perform TR?
My TR Research

Definition of Therapeutic Relationship

- Many synonyms
  - Patient-provider interaction
  - Therapeutic alliance
  - Working alliance
  - Therapist-patient relationship
- No real definition (Babatunde et al., 2017)
- Summary Definition – a relationship between the medical provider and patient that allows for open, collaborative treatment decision in an empathetic and considerate environment

5

Therapeutic Relationship by Miciak, 2015

Components of Developing TR	Actions
Conditions of Engagement – therapist and patient factors that allow for TR to be developed	Being Present
	Being Receptive
	Being Genuine
	Being Committed to the Relationship
Ways of Establishing a Connection - tactics to make a bond between patient and provider	Acknowledging the Individual
	Giving of self by pt and PT
	Connecting treatment to patient's body
Elements of the Bond – affective relationship between patient and provider	Being Caring
	Trusting
	Respectful
	Being able to build rapport

Low Back Pain (LBP) and Therapeutic Relationship (TR)

- LBP affects all aspects of life (Hartvigsen et al., 2018)
- Treatment Model
  - Biomedical = not the best (Brinjikji et al., 2015)
  - Biopsychosocial (BPS) = better (Bevers et al., 2016)
- TR is the 1st step for BPS treatment (Main et al, 2023)
  - Mutual relationship between therapist and provider that allows for open, empathetic communication to encourage healing
- TR by Physical Therapists (Driver et al., 2016)
  - Find it important, but lack confidence, training, and education
- Current BPS training lackluster (Dijk et al., 2023)
  - Limited options
  - Not focused on real-world application

7

Purpose and Research Aims

Purpose Statement: To determine what physical therapy professionals (PTs and PTAs) who treat low back pain know about the therapeutic relationship and what elements of the therapeutic relationship they use in daily practice.

- **Aim 1**: To determine what physical therapists and physical therapist assistants who treat chronic low back pain know about the therapeutic relationship.
- **Aim 2:** To determine what elements of the therapeutic relationship that physical therapists and physical therapist assistants use in treating chronic low back pain.

Study Overview

- **Exploratory Online Survey**
  - Assessed use and knowledge of TR in clinical practice
  - Miciak's Model of TR (Miciak, 2015)
- **Inclusion Criteria**
  - Active NC physical therapy license (PTs and PTAs)
  - Currently practicing
  - Able to complete English-based survey
- **Data Analysis**
  - Descriptive for Likert and multiple choice (SPSS)
  - Thematic Analysis for open-ended questions (Atlas.ti)

9

Part 2 – Reflection on Clinical Practice

Self Reflection

Results of My Study

Self Reflection

- How often do you try to make a connection with a patient?
- How important do you think this is to your clinical practice?
- How good do you think you are at this?

11

Results

- **Demographics**
  - 415 PTs and 129 PTAs
  - 56% practicing for > 10 years
  - 33.6% for > 20 years
  - Majority from OP Ortho (49.7%)
- **Response rate**
  - 3.7% (580/14,914)
- **Quiz %**
  - 30% to 95% correct
  - Neither practical or theoretical knowledge questions answered more than another

Familiarity with Terms	Rating of Familiarity
Therapeutic Alliance	Not at all
Working Alliance	Unfamiliar
Therapeutic Relationship	Moderately
Patient-Provider Interaction	Extremely
Therapist-Patient Relationship	Extremely

Results (continued)

Use of TR by Therapists	Rating
Frequency	Always (except giving of self)
Importance	Very Important
Confidence	Very Confident
Importance to CLBP Outcomes	Very Important

Using TR in Clinical Practice	Rating	Limitations
Limitations	Not At All	Personal, Reimbursement
	Slightly	Patient, Environment, Educational
	Moderately	Clinical

Using TR in Clinical Practice	Rating	Enhancement
Enhancement	Moderately Enhance	Environment
	Extremely Enhance	Clinical Practice, Reimbursement, Interpersonal skills, Evidence for TR

13

Results: Open Ended Questions

How do you define TR?	Specific connection that occurs during physical therapy facilitated by the therapist behavior to help improve physical therapy outcomes
How do you create a TR with your patients?	By organizing their treatment and interacting with their patients to ensure a personalized and compassionate physical therapy experience
What advice would you give a colleague about how to build a TR?	Therapists recommend that their colleague should use their behaviors, specific personalized treatments, and have a positive interaction with their patients to build this relationship
What makes it difficult to create a TR in your clinical practice?	Therapists find it difficult to create TR with their patients due to clinical constraints, their own limitations, their patient limitations, and by factors that limit the ability to build a relationship.
How important is building a TR to your outcomes when treating CLBP? Why do you believe that?	It allows for a bond to be created between patient and provider allowing the therapist to implement standardized, effective, evidence-based physical therapy treatments.

Discussion

Aim #1 - What do therapists know about TR?

- They know what it is
  - Actions of TR, relevance to outcomes, and limitations to TR
- They may be lacking evidence-based practice (EBP) knowledge
  - Poor "quiz" results, research infrequently mentioned, request for more evidence and training

Aim #2 – How do therapists use TR?

- They use it a lot
- They think it is important
- They are confident in using it (different)
  - More experience = more BPS (Schaumberg, 2020)
- Don't feel that "they" impact it (different)
  - Implicit Bias (Dunn et al., 2022)

15

What does this research add to the physical therapy profession?

- Therapists may not have enough EBP knowledge about TR
  - Supports the well-established need for BPS education
- Therapists know what TR is and use it for their patients with chronic low back pain
  - Measure what is being performed in clinical practice currently
- Education from this study can be created for **real world application**
  - Insight into practicing clinicians use of TR
  - Solutions to the barriers practicing clinician's experience

Part 3 – Reflection on Clinical Practice

Addressing Barriers to TR in Clinical Practice
Ways to Perform TR in Clinical Practice

17

Impact of TR on Clinical Practice

Hall et al., 2010

- Systematic Review of Therapeutic Alliance
- Results:
  - For TBI, increase adherence to PT
  - For cardiac, decrease depression
  - For MSK issues, increase satisfaction with PT
  - For CLBP, increase physical function

Many for CLBP

- Ferreria et al., 2013
  - Good relationship with provider predicted:
    - Increase effect of treatment
    - Improved function
    - Less disability
    - Less pain
- Alodaibi et al., 2021
  - Increase in relationship with provider = improved functional outcome

TR Limitations in Clinical Practice

Limitations noted in Clinical Practice:

- Clinical – time with patient, documentation, double booking
  - Solution – use smart phrases or documentation tricks, ask for help from efficient therapists, try to schedule more complex patients during specific times
- Patient – patients attitudes, believes or issues with PT
  - Solution – ask patient why they feel that way, validate their concerns, demonstrate humility
- Environmental – loud gyms, no personal space, no treatment rooms
  - Solution – find area where you can be private, schedule patients during slower or quieter times
- Educational – lack of knowledge about BPS
  - Solution – Sign up for CEU about this subject, listen to Pain Reframed Podcast or Evidence in Motion podcast, journal club

19

Creating TR in Your Clinical Practice

Components of Developing TR	Actions	Examples of how these are performed
Conditions of Engagement – therapist and patient factors that allow for TR to be developed	Being Present	• Ignoring computer during evaluation • Active Listening
	Being Receptive	• Asking for feedback • Responding to pt feedback
	Being Genuine	• Honest about patient prognosis • Only treating when needed
	Being Committed to the Relationship	• Answering messages/phone calls in timely manner • Answering all of patient questions

Creating TR in Your Clinical Practice

Components of Developing TR	Actions	Examples of how these are performed
Ways of Establishing a Connection - tactics to make a bond between patient and provider	Acknowledging the Individual	• Validating their pain • Recognizing their experience
	Giving of self by pt and PT	• PT telling personal info • PT remembering info not related to therapy
	Connecting treatment to patient's body	• Giving them exercise for their issue • Matching imaging with patient reports

21

Creating TR in Your Clinical Practice

Components of Developing TR	Actions	Examples of how these are performed
Elements of the Bond – affective relationship between patient and provider	Being Caring	• Giving them easy exercises on flare up days • Showing empathy
	Trusting	• Believing what patient says • Believing what patient can do
	Respectful	• Not interrupting patients • Letting the patient speak
	Being able to build rapport	• Small talk • Making the patient laugh

References

- Alodaibi, F., Beneciuk, J., Holmes, R., Kareha, S., Hayes, D., & Fritz, J. (2021). The Relationship of the Therapeutic Alliance to Patient Characteristics and Functional Outcome During an Episode of Physical Therapy Care for Patients With Low Back Pain: An Observational Study. *Physical Therapy, 101*(4), pzab026. https://doi.org/10.1093/ptj/pzab026
- Babatunde, F., MacDermid, J., & MacIntyre, N. (2017). Characteristics of therapeutic alliance in musculoskeletal physiotherapy and occupational therapy practice: A scoping review of the literature. *BMC Health Services Research, 17*, 375. https://doi.org/10.1186/s12913-017-2311-3
- Bevers, K., Watts, L., Kishino, N., & Gatchel, R. (2016). The Biopsychosocial Model of the Assessment, Prevention, and Treatment of Chronic Pain. *US Neurology, 12*, 98. https://doi.org/10.17925/USN.2016.12.02.98
- Brinjikji, W., Luetmer, P. H., Comstock, B., Bresnahan, B. W., Chen, L. E., Deyo, R. A., Halabi, S., Turner, J. A., Avins, A. L., James, K., Wald, J. T., Kallmes, D. F., & Jarvik, J. G. (2015). Systematic Literature Review of Imaging Features of Spinal Degeneration in Asymptomatic Populations. *American Journal of Neuroradiology, 36*(4), 811–816. https://doi.org/10.3174/ajnr.A4173
- Diener, I., Kargela, M., & Louw, A. (2016). Listening is therapy: Patient interviewing from a pain science perspective. *Physiotherapy Theory and Practice, 32*(5), 356–367. https://doi.org/10.1080/09593985.2016.1194648
- Driver, C., Kean, B., Oprescu, F., & Lovell, G. P. (2016). Knowledge, behaviors, attitudes and beliefs of physiotherapists towards the use of psychological interventions in physiotherapy practice: A systematic review. *Disability and Rehabilitation, 39*(22), 2237–2249. https://doi.org/10.1080/09638288.2016.1223176
- Dunn, B., Mcintosh, J., Roy, L., & McCarty, D. (2022). The Prevalence of Implicit Bias in Practicing Physical Therapists. *Carolina Journal of Interdisciplinary Medicine, 2*(1), 1. https://doi.org/10.47265/cjim.v2i1.2008
- Ferreira, P. H., Ferreira, M. L., Maher, C. G., Refshauge, K. M., Latimer, J., & Adams, R. D. (2013). The Therapeutic Alliance Between Clinicians and Patients Predicts Outcome in Chronic Low Back Pain. *Physical Therapy, 93*(4), 470–478. https://doi.org/10.2522/ptj.20120137
- Hall, A. M., Ferreira, P. H., Maher, C. G., Latimer, J., & Ferreira, M. L. (2010). The Influence of the Therapist-Patient Relationship on Treatment Outcome in Physical Rehabilitation: A Systematic Review. *Physical Therapy, 90*(8), 1099–1110. https://doi.org/10.2522/ptj.20090245
- Hartvigsen, J., Hancock, M. J., Kongsted, A., Louw, Q., Ferreira, M. L., Genevay, S., Hoy, D., Karppinen, J., Pransky, G., Sieper, J., Smeets, R. J., Underwood, M., Buchbinder, R., Hartvigsen, J., Cherkin, D., Foster, N. E., Maher, C. G., Underwood, M., Tulder, M. van, … Woolf, A. (2018). What low back pain is and why we need to pay attention. *The Lancet, 391*(10137), 2356–2367. https://doi.org/10.1016/S0140-6736(18)30480-X
- Main, C. J., Simon, C. B., Beneciuk, J. M., Greco, C. M., George, S. Z., & Ballengee, L. A. (2023). The Psychologically Informed Practice (PIP) Consultation Roadmap: A Clinical Implementation Strategy. *Physical Therapy*, pzad018. https://doi.org/10.1093/ptj/pzad018
- Miciak, M. A. (2015, Fall). *Bedside Matters: A Conceptual Framework of the Therapeutic Relationship in Physiotherapy*. ERA. https://doi.org/10.7939/R3H98ZW7M
- Schoenenberg, F. C. (2020). *How are we doing?: The psychosocial history-taking practices of physical therapists when evaluating adults with chronic pain.* https://hdl.handle.net/11274/12299

23

Contact Information

- Tyler Johnston, PT, DPT, OCS, EdD
  - T_johnston@uncg.edu