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# Pilot Study: Affect of Power Posing on OT Student Performance when Implementing Interventions

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Pilot Study: Affect of Power Posing on OT Student Performance when Implementing  
Interventions

by

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Brittney Barelman, MOTS

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An Independent Study

Submitted to the Occupational Therapy Department

of the

University of North Dakota

in partial fulfillment of the requirements

for the degree of

Master of Occupational Therapy

Grand Forks, North Dakota

May 2014

Approval Page

This Independent Study, submitted by Aimee Abel and Britney Barelman in partial fulfillment of the requirement for the Degree of Master of Occupational Therapy from the University of North Dakota, has been read by the Faculty Advisor under whom the work has been done and is hereby approved.

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Faculty Advisor

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Date

PERMISSION

**Title:** Pilot Study: Affect of Power Posing on OT Student Performance when Implementing Interventions

**Department:** Occupational Therapy

**Degree:** Master of Occupational Therapy

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## **ACKNOWLEDGEMENTS**

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## **ABSTRACT**

*Objectives.* This pilot study used a quasi-experimental repeated measures design to explore the affect of power posing on Occupational Therapy student performance when conducting interventions with clients. The study was conducted in an attempt to determine an effective strategy used to enhance student therapist performance to support occupational adaptation in school and during the transition to entry-level clinician.

*Method.* Second year occupational therapy students (n = 10) from the University of North Dakota at the Casper, WY site and practicing clinicians (n = 10) from the community of Casper participated in the study. The student therapists conducted two interventions on a randomly paired clinician playing the role of the client. After the first intervention, the student therapist power posed for a total of two minutes and conducted a second intervention on the same client. Both the student therapist and client rated the student's performance after each intervention to determine changes in performance factors before and after power posing.

*Results.* Statistical analysis confirmed a significant difference in student therapist performance from the first intervention to the second. Overall, participants rated student therapist performance higher after power posing and demonstrated similar rating progressions throughout.

*Conclusion.* Power posing for two minutes has a positive impact on a student therapist performance when implementing interventions; by increasing confidence and priming students for potentially challenging and stressful situations that may be new and novel for them. This is



particularly beneficial for students to use as a strategy to overcome occupational challenges and performance concerns experienced in school and during the transition into practice.

## **CHAPTER I**

### **INTRODUCTION**

According to Hecimovich & Volet (2009), healthcare professionals have attempted to determine the most effective ways in which to develop student's confidence, especially in areas of patient communication and skills. However, limited strategies have been found to improve student performance although empirical evidence supports that student therapist and practitioner confidence level can either foster or impede relationships with clients.

Hecimovich & Volet, (2009) identified that there is a lack of available strategies to improve student confidence. Conveying confidence and ability from the standpoint of the therapist takes both academic knowledge and clinical experience, however many students are not able to draw from experience to supplement treatment (Garrett & Schkade, 1995). As a result, students are often at a disadvantage when making the transition from the classroom to the clinical environment and in doing so are more likely to lack confidence. May, Morgan, Lemke, Karst, and Stone (1995) argued that transitioning from the classroom to the clinic is one of the most demanding experiences students will face (as cited in Tressenaar & Perkins, 1999, p. 20). According to Tryssenaar & Perkins (1999), students experienced nervousness about the transition and the expectations put on them, which resulted in concerns of incompetence and moments of self-doubt. Due to confidence being such an important factor in the student's success

when treating clients, this pilot study explores the possibility of using power posing as a strategy to enhance occupational therapy student's confidence when implementing interventions.

### **Theoretical Framework**

The primary model chosen to guide the study is Occupational Adaptation (OA) by Schkade & Schultz, 1992. OA focuses on the process that occurs within the person in response to the environment when confronted with occupational challenges (Turpin & Iwana, 2011). Occupational adaptation is considered a normative process that occurs across the lifespan for any individual and does not require that an illness or condition be present as a basis or need for adaptation. Power posing is a potential strategy requiring changes to occur within the body or to be internalized as a means to prepare an individual for occupational challenges.

The Embodied Cognitive Theory also guided the research process. This theory is based on the idea that the body influences one's cognition, just as the mind influences an individual's bodily actions (Niedenthal, 2009). Niedenthal (2009) stated that Embodied Cognitive Theory analyzes how we look at emotional information. The theory suggests that how we perceive an emotion is due to our facial expression and posture during the emotional response, which affects how we process the information we receive. Carney, Cuddy, & Yap (2010) expanded the idea by suggesting that embodiment goes beyond cognition and emotion and could have immediate and actionable effects on physiology and behavior. This supported and guided the pilot study by providing background knowledge on the influential affect the mind has on the body and the body has on the mind.

The combination of these theories provided a strong theoretical approach for our hypothesis. power posing requires an internal adaptation, which is a concept identified in OA, and an internal change with respect to our study leads to embodiment of a feeling through a specific body position, called power posing.

### **Statement of the Problem**

The problem is occupational therapy student's limited confidence in their ability to conduct interventions with clientele during clinical experiences.

### **Assumption**

The assumption is that power posing will enhance occupational therapy student's performance when conducting interventions during clinical experiences.

### **Hypothesis**

An individual's body posture has an affect on their cognition, emotion, physiology and behavior (Carney, Cuddy, & Yap, 2010). Therefore, the researchers hypothesize that power posing will enhance the occupational therapy student's confidence and overall performance when conducting interventions.

### **Scope and Delimitation**

The pilot study was completed with second year University of North Dakota (UND) occupational therapy students. The clients, who the interventions were conducted on, were practicing occupational therapy clinicians in the community of Casper, Wyoming. The students were chosen due to having minimal clinical experience within the field of occupational therapy, which usually leads to a sense of low self-assurance. The clinicians were chosen to be the clients as they have an understanding of the

intervention process and the client therapist relationship. The data was gathered during the month of October 2013 in a UND classroom.

### **Importance of Study**

This research study has the potential to contribute to the occupational therapy profession by providing a strategy that enhances an individual's overall performance and confidence. Students will be able to use power posing during their education, fieldwork, and transition into clinicians because power posing has been found to cause advantageous physiological, psychological, emotional, and behavioral changes within the human body (Carney, Cuddy, & Yap (2010). Therefore, power posing has the potential to affect the client therapist relationship and improve the outcomes during therapy. According to Palmodottir (2006), the client-therapist relationship is of great importance to the treatment process, and the quality of this relationship has been linked to positive experiences and effective functional outcomes in therapy. Overall, confidence allows therapists to facilitate successful outcomes in therapy and enhance overall client satisfaction (Hasselkus & Dickie, 1994). Therefore, power posing may be useful to the student's success within the occupational therapy profession and in turn affect the success of their clientele.

### **Definition of Terms**

Power: Power is defined as the ability to control resources (Galinsky, Gruenfeld, & Magee, 2003). For the purpose of this study we define resources as internal assets used to control one's body and mind.

Power Posing: Non-verbal display of physical dominance through broad and expansive posturing of the body by openly expanding and positioning limbs away from the body as

a means to make oneself larger and to fill unoccupied space (Carney, Cuddy, & Yap, 2010, p. 2).

Occupational Adaptation: A normative process occurring within the individual that results in competence regarding occupational function (Schultz, 2009).

Occupational Challenge: An event experienced by an individual when circumstances create significant difficulty in carrying out occupational roles (Schultz, 2009).

Adaptive Capacity: An individual's capability to perceive the need for change and draw from a number of adaptive responses that enables one to experience mastery over the environment (Schultz, 2009).

Adaptive Response: An appropriate action presented by an individual when he or she responds successfully to environmental demands (Roley & Jacobs, 2009).

Chapter II presents the results of a comprehensive literature review in addition to an overview of the study. Chapter III presents the methodology in its entirety is available in Chapter IV. Finally, Chapter V is a summary of the project and includes recommendations and limitations of the study.

## **CHAPTER II**

### **LITERATURE REVIEW**

Power is an individual's ability to regulate his or her internal assets when adapting to occupational challenges (Galinsky, Gruenfeld, & Magee, 2003). Feeling powerful or empowered evokes highly specific nonverbal displays of posture and positioning (Carney, Cuddy, & Yap, 2010). According to Anderson & Berdahl (2002), characteristics such as confidence and self-esteem are enhanced when one feels empowered. Carney et al. (2010) have proven that feelings of power can be generated or "embodied" by assuming a power pose. Power posing is defined as the act of assuming an open expansive posture with widespread limbs to occupy a large space (Carney et al., 2010). Power posing enhances not only cognition and emotional responses but causes advantageous physiological, psychological, and behavioral changes needed to engage at optimal performance levels (Carney et al., 2010, p. 4). As a result, power posing may have advantageous benefits for individuals who experience difficulty with challenging situations, which may stem from low confidence and self-esteem. Students transitioning from school to the workforce must address new and novel challenges on a daily basis and in doing so are often at risk for doubting personal and professional competence and ability. Occupational therapy students, in particular, are at risk due to the transition into a highly interactive public service profession. To be an occupational therapist one must rely on quick clinical reasoning and problem solving skills to adapt activities to meet client needs during interventions.

The following literature review presents current research related to power posing and exploration of its link to empowerment, confidence and self-esteem for positive interactions and outcomes with healthcare professionals. This study is exploring the relationship between power and body posture to see if an increased feeling of power can be embodied by a specific body position to enhance performance. As a result, the researchers have posed the following question: can power posing serve as a vital tool to help occupational therapy student's transition into the role of a clinician by facilitating an increase in confidence and enhance performance when conducting interventions?

### **Power**

According to Galinsky, Gruenfeld, Magee, (2003) power is defined as the ability to control resources, and influence self and others without social interferences (p. 454). For the purpose of this pilot study, power is defined as an individual's ability to regulate his or her internal assets when adapting to occupational challenges. Power or the feeling of empowerment results in an internalized change. Keltner, Gruenfeld, and Anderson (2003) argued that power activates a general tendency to approach whereas powerlessness activates a general tendency to inhibit (p. 453).

The emotional response associated with increased power is an increased self worth, which means power has the capacity to produce a shift in a person's thinking due to increasing a person's confidence (Miller, 1992 p. 1019). According to Keltner, Gruenfeld, Anderson, (2003) self-empowerment is associated with perceived self-efficacy, independence, freedom, and control, which leads to dominance, assertiveness, social potency, and leadership roles. Not only does the individual feeling powerful experience a change in emotional responses, but people perceive empowered individuals



as dominant, in control, confident and less awkward (Cuddy, Wilmuth & Carney, 2012; Anderson & Berdahl, 2002). “Power is a positive force; it impacts the decisions that govern your lifestyle both personally and professionally” (Willey, 1987, p. 25). An increased feeling of power is essential for individuals who need to engage, take action or change an adaptive response to achieve relative mastery. The research indicates that there are specific postures/positions that elicit a positive feeling of empowerment, which will be explored more thoroughly in the next section.

### **Body Posture/Positioning**

Posture directly influences how we think and feel; it alone affects our neurophysiology (Price & Harmon-Jones, 2011, p. 721). According to Darwin, humans and other animals display power and dominance through expansive positioning (Darwin, C., 2009). For example, a dog stands erect, with its hair upright on its back to appear large and powerful (Carney, Cuddy, & Yap, 2010, p. 1). Charles Darwin recognized that humans position themselves in a similar fashion. Proud and successful humans are likely to display erect and expansive body postures (Stepper, Sabine, Strack, Fritz, 1993).

Carney, Hall, LeBeau (2005) found similar results; the researchers had 124 participants rate 70 different non-verbal behaviors and rate the associated degree of dominance from high to low on a ten point Likert scale. The researchers found that the participants rated posture and body position as having a statistically significant relationship with power. The specific body positions that were scored the most powerful included an erect posture, an upward tilt of the head, a forward lean, and open body position. The participants also rated the high power individuals as being more self-

assured, linking body position with an associated emotion. This research lends support that there may be a correlation between body posture and power.

Stepper, Sabine, Strack, Fritz (1993) examined if a body position can influence or generate emotions and feelings. The researchers had subjects either assume an upright posture or slumped position, and then all subjects were given test results that stated they performed above average. However, the subjects who assumed an erect posture felt more proud than individuals who assumed a slumped body position. Overall, researchers found that individuals who assume a posture with their head tilting upward induced feelings of pride (Stepper & Strack, 1993) whereas hunched postures elicited more depressed feelings (Riskind & Gotay, 1982). Similarly, Argyle, (1988) and Schubert, (2005) both found that people who expand their body by pushing out their chest feel more dominant and powerful than people who curve their backs. This evidence provides support that not only do individuals who feel powerful convey specific body postures, but that positioning in these body positions may elicit feelings of power. Therefore, body posturing may even affect performance by influencing cognitive capacity.

According to Riskind and Gotay (1982), slumped posture reduces the amount of thinking dedicated to various cognitive tasks, which was measured by the amount of time spent completing a task. Specifically, participants in a slumped posture were less persistent while working on a series of puzzles and reported an associated feeling of helplessness. Pablo, Richard, Benjamin, 2009, also investigated participants' perception when assuming an erect body position versus a slumped posture. They found that participants in the erect posture felt more confident, listed more positive attributes about themselves and rated themselves as having more future success than those in slumped

doubtful postures. Smith et al. (2008) discovered a statistically significant link between feelings of powerlessness and impairment of executive function. The executive functioning skills of updating, inhibiting, and planning were consistently impaired with participants of low power across four separate experiments. According to Smith et al. (2008, p. 445), these cognitive impairments lead to goal neglect or the inability to process information needed to effectively attain a goal. Smith et al. (2008) suggests that feeling powerless negatively impacts personal function by inhibiting optimal performance.

Although, feelings and emotions are typically conveyed through posture, body posture also has influential affects on an individual's thoughts, actions and feelings of power. The literature supports that not only do individuals who feel powerful convey specific body postures, but that positioning in these body positions may elicit feelings of power. Therefore, body posturing may even affect performance by influencing cognitive capacity and creating feelings of confidence and power. So how do you take these postures/positions and use them to one's advantage?

### **Power Posing**

In a study conducted by Price & Harmon-Jones (2011), researchers discovered that posture influences asymmetrical frontal cortical activity within the brain, which functions to align motivational thought and emotion (Price & Harmon-Jones, 2011). Certain postures are capable of heightening this neurophysiological response within the body, such as those previously associated with a particular stimulus or emotional state. However, according to Price & Harmon-Jones (2011), the associated stimulus does not have to be present to achieve the desired brain body affect nor does one need emotional priming to elicit the response. Thus, certain physical postures alone can serve as a

stimulus to activate areas of the brain that coordinate and drive goal-directed behavior. But what postures are specifically capable of eliciting a heightened response?

In a study conducted by Carney, Cuddy, & Yap (2010), researchers were able to determine certain non-verbal postures, or poses, most associated with states of power and dominance. The researchers asked 95 participants to rate poses on a 7-point likert scale from very low power to very high power. Open expansive postures, or what Carney, Cuddy, & Yap (2011) deemed high power poses, were rated statistically higher in power conveyance. These poses consist of wide spread limbs and expansive bodies that occupy a large space, whereas low power poses contract the body and limbs into a closed posture. The top rated poses determined by Carney, Cuddy, & Yap (2011) were utilized in the current study. Pictures illustrating the two high power poses are located in Appendix E and Appendix F.

Although researchers have found that empowerment leads to specific open and expansive postural displays Carney, Cuddy & Yap (2010) wanted to investigate whether assuming a specific pose can in fact generate a sense of empowerment within the individual. Their research focused on testing any physiological changes in the body, specifically within the neuroendocrine system. The researchers hypothesized that levels of testosterone and cortisol hormones would change after an individual assumed a high or low power pose. Testosterone is a hormone that displays and reinforces a feeling of dominance in the body and increases during competition, while cortisol is a hormone that increases during stress. Before posing, the researchers obtained saliva samples from each participant and then again approximately 17 minutes after posing. The results were consistent with predictions; individuals who high power posed experienced an increase in

testosterone and a decrease in the stress hormone cortisol. On the same token, individuals who demonstrated a low power pose had a decrease in testosterone and an increase in cortisol. “By simply changing physical posture, an individual prepares his or her mental and physiological systems to endure difficult and stressful situations, and perhaps to actually improve confidence and performance in situations (Carney, Cuddy, & Yap, 2010).”

In a subsequent study conducted by Cuddy, Wilmuth, & Carney (2012), students were confronted with a high stakes interview after power posing to determine if intentional posturing impacts overall performance, hireability, speech quality, and presentation quality. Sixty-six students from Columbia University were randomly assigned to either a high or low power posing group where each participant completed two distinct poses for one minute each in preparation for a Trier Social Stress Test. Participants were asked to prepare and present a five minute speech consisting of individual strengths, weakness, and personal qualifications.

Participants were given five minutes to prepare and then present their speech in front of experienced evaluators. After the speech, participants completed a three-item questionnaire to answer how dominant, in control, and powerful they felt. The interviews were video taped and assessed by four blind evaluators to rate performance as well as presentation and speech quality.

Results of statistical analysis indicated high power posers felt significantly more powerful than low power posers and were rated significantly higher on overall performance and hireability (Cuddy, Wilmuth & Carney, 2012). Presentation quality directly correlated to higher values of overall performance and hireability, speech quality

did not, indicating intermediary effects were due to higher ratings of enthusiasm, captivation, confidence, and less awkwardness (Cuddy, Wilmuth & Carney, 2012). According to Carney, Cuddy & Yap (2010), “assuming a two minute power pose manipulation was enough to significantly alter the physiological, mental, and feeling states of our participants.” Posturing has also been linked to positive interactions in the world of healthcare.

### **Healthcare Professionals**

According to Hall, Harrigan, and Rosenthal (1995, p. 22), nonverbal behavior such as broad gesturing and forward lean displayed by clinicians can strongly influence the generation of trust and rapport with patients, thus enhancing overall satisfaction. This finding was also reported by Griffith, Wilson, Langer, & Haist (2003), who determined patient satisfaction was greatly associated with expressive nonverbal communication and posturing during the patient/physician encounter.

Occupational therapists can also benefit from the postures to strengthen the client-therapist relationship. Empowerment and expression of confident nonverbal communication can heighten rapport-building moments for occupational therapists and potentially enhance the therapeutic relationship. Through confidence, therapists communicate their credence of skill and ability; they provide clients with a sense of professional competence. Professional competence and initiative allows therapists to facilitate successful outcomes in therapy and enhance overall client satisfaction (Haselkus & Dickie, 1994). The client-therapist relationship is of great importance to the treatment process, and the quality of this relationship has been linked to positive experiences and effective functional outcomes in therapy (Palmotottir, 2006).

Palmadottir (2006) explored the relationship that twenty individuals experienced with their occupational therapist in the rehabilitative setting. One of the most prominent dimensions of the process was “coalition” in which the therapist and client worked together in alliance to achieve outcomes in therapy. This aspect of the relationship was based on “a high level of confidence and an awareness of the worth and abilities of both individuals” (Palmadottir, 2006, p. 398). Expressing confidence as a therapist will positively affect client-centered therapy and when used effectively can reassure clients of the therapist’s ability to achieve desired outcomes in therapy.

Conveying confidence and ability from the standpoint of the therapist takes both academic prowess and clinical experience, however many students are not able to draw from experience to supplement treatment (Garrett & Schkade, 1995). As a result, students are often at a disadvantage when making the transition from the classroom to the clinical environment and in doing so are more likely to lack confidence in their abilities.

In a study conducted by Garrett & Schkade (1995), the researchers explored the adaptive response behaviors of students making the transition from the classroom to professional level fieldwork. The authors utilized the Occupational Adaptation Model of Professional Development (OAMPD) to address the transition in terms of occupational functioning. The model explores student development in regards to behavioral responses to occupational challenges. According to the model, at any given time a student is capable of demonstrating primitive, transitional, or mature behaviors in the work environment as a method of adaptation. According to Garrett & Schkade (1995), if the tasks are considered too difficult or novel for the student, primitive behaviors as opposed to mature behaviors may emerge.

Primitive behaviors are characteristic of occupational dysfunction and emerge as a result of immobilization or the attempt to avoid situations considered too challenging; this is the inability to produce adaptive movement (Garret & Schkade, 1995, p. 121). Transitional behavior is an awareness that one must act with purpose in the attempt to perform during challenges; this goal directed behavior is considered an intermediary stage toward a mature behavioral response. Mature behavior is demonstrated when a student feels they can successfully adapt to occupational challenges in their environment.

Garrett & Schkade (1995) selected eight academically strong students completing level II fieldwork rotations for the study. Students were asked to document in a student log developed by the researchers over the course of twelve weeks. The fieldwork supervisors overseeing the students were also asked to rate behavioral responses observed in their students over the course of the fieldwork. Documenting on the student's ability to develop and implement interventions was considered one of the five critical elements of student performance in the study. According to Garret & Schkade (1995), the results indicated that during the beginning of the process primitive and transitional behaviors significantly outweighed mature responses due to the amount of demands and novel challenges placed on the students.

The results were consistent with OAMPD predictions. However these adaptive responses were temporary and often changed at the midpoint of the process, indicating that students utilized more effective goal directed behavior to meet occupational challenges. Supplying students with ways to generate and utilize goal directed behavior might support modulation and adaptive capacity for challenging situations that arise in the present and in the future as entry-level clinicians. It was also important to remember



that the student may revert back to these behaviors when new levels of professional performance are demanded of them.

May, Morgan, Lemke, Karst, and Stone (1995) argued that transitioning from the classroom to the clinic is one of the most demanding experiences students will face (as cited in Tressenaar & Perkins, 1999, p. 20). According to Tryssenaar & Perkins (1999), students experienced nervousness about the transition and the expectations put on them, which resulted in concerns of incompetence and moments of self-doubt.

Tryssenaar and Perkins (1999) state that academic education must further facilitate the transition from student to therapist by teaching students what to expect during the transition as well as ways to internally adapt to occupational demands. Strategies to manage concerns of incompetence, stress, and frustration will help support role performance and expectations put on students during their shift into practice.

### **Research Purpose**

The purpose of this pilot study was to determine if power posing could serve as an effective strategy to support occupational adaptation during the occupational therapy students' transition to practice. Utilizing power posing to cognitively, physically, and physiologically adapt and heighten performance capacities during challenging situations may lead to expression of desired behavior. Preventing feelings of professional incompetence or powerlessness, as experienced by students in the academic and clinical setting, could limit primitive and transitional behaviors and generate mature behavioral responses, thus supporting relative mastery for students in practice.

Mast (2007) recommends the advantages of nonverbal behavior and expression be incorporated into professional training. Incorporating this into the academic training of

students would be most beneficial due to the insecurities and self-doubt expressed by many occupational therapy students readying themselves for practice. This population is most prominently at risk for absence of internal power conveyance, which leads entry-level clinicians to doubt themselves and clients to doubt the quality of care provided.

According to Clark (2010, p. 268):

Confidence leads us to persist in developing our abilities; avoiding the trap of underestimating our potential, our talents, and our contributions to patient care; and identifying and connecting with those people who think highly of both us and the work we do.

The accomplishment of this study was achieved through the implementation of a quasi-experimental repeated measures group design to determine the effect of power posing on a student therapist's performance when implementing occupational therapy treatment interventions. The sample, instrumentation and data collection procedures are provided in Chapter III.

## **CHAPTER III**

### **METHODOLOGY**

This study received approval from the institutional review board of the University of North Dakota. A quasi-experimental repeated measures group design was implemented to gather data from the sample participants.

#### **Design and Sample**

A quasi-experimental repeated measures group design was implemented to determine the affect of power posing on a second year occupational therapy student's performance when implementing occupational therapy treatment interventions. These students were enrolled in the course OT 463 Psychosocial Dysfunction Seminar and Practicum Integration during the fall of 2013. The course description is:

*Integration and synthesizing of theoretical knowledge with clinical experience toward the application of therapeutic use of self, self-evaluation and communication skills in professional development.*

Twenty participants were recruited through purposive and convenient sampling methods. Participants were made up of ten University of North Dakota second year occupational therapy students (8 females, 2 males) and ten occupational therapy clinicians (9 females, 1 male) from the community of Casper, WY. Ten student therapists were recruited based on the class size of those enrolled in the second year of the University of North Dakota occupational therapy program at the Casper College site. Second year students were selected for the study because they have previous experience

and knowledge about the occupational therapy treatment process. An important aspect of the treatment process is conducting interventions with clients. When the students transition into a clinical setting they must be confident in their ability to develop and implement interventions with clients on a daily basis. It is also critical that a therapist demonstrate a high level of confidence and knowledge during the interventions to gain trust and build rapport with the client. The second year students are at a point in their education where they possess some experience on this matter, however designing and implementing interventions on clients is still a new process for them. This allowed the researchers to simulate typical clinical scenarios between a therapist and client while measuring performance of student therapists.

Ten clinicians from Casper, WY were recruited to pair with each student for the study. The researchers recruited the clinicians over the phone, through email, and/or through face-to-face interaction. Clinicians from the community were chosen for the study because they have experience with conducting interventions as well as knowledge regarding client therapist interactions and relationships. They also all have experience transitioning from the role of a student to a clinician and understand the abilities needed to conduct interventions. The clinicians in this study cumulatively had 122 years of experience as an occupational therapist.

The occupational therapy students received five extra credit points in OT 463 Psychosocial Dysfunction Seminar and Practicum course for participating. No incentive, except the opportunity to participate in research and contribute to the evidence base, was offered to the clinicians. Exclusion criteria for the study consisted of anyone under the age of eighteen and anyone who was not a second year occupational student or practicing

clinician licensed in the state of Wyoming. Informed consent was obtained from each of the twenty participants prior to conducting research and gathering data.

### **Instrumentation**

The researchers developed two assessments, one for the student and one for the client, to rate the student therapist's performance. The student assessment was entitled OT Student Self-Assessment and the clinicians assessment was called Client Assessment of Student Therapist's Performance. Each of the assessments is described fully in the proceeding sections of this paper.

Copies of both assessments are located in Appendix A and Appendix B.

#### *OT Student Self-Assessment*

This assessment was developed to determine levels of self-perceived change in student therapist performance before and after power posing.

#### *Client Assessment of Student Therapist's Performance*

This assessment was developed to determine levels of change in student therapist performance from the perspective of the client before and after power posing.

Both assessments consisted of a ten-item questionnaire coded on five-point Likert scale (1 = unacceptable/no competency, 5 = outstanding/mastery). The assessment instruments evaluated areas of competence such as confidence, preparation, rapport, and attitude while implementing interventions.

The assessments were adapted from Oei & Shuttlewood (1999) Satisfaction with Therapy and Therapist Scale as well as Building Successful Teaching Evaluation Programs written by Seldin (1999) and tailored to reach the objectives of the current study. The rating scales used in the assessments are similar to the Self-Assessment Tool

Rating Scale based off of the National Board for Certification in Occupational Therapy (NBCOT) self-assessment in general practice. This rating scale was chosen due to the emphasis placed on areas of competency as well as current levels of proficiency held in the process and domain of occupational therapy (NBCOT: Self Assessment Tools, 2009).

## **Procedure**

### **Preliminary Procedures**

The student therapists were asked to develop two separate occupational therapy interventions to be implemented on practicing clinicians from the community. The clinicians played the role of the client in the intervention scenario and represented a well population with no specific diagnosis. The students were able to choose from a list of categories provided by the researchers which included Activities of Daily Living (ADLs), Instrumental Activities of Daily Living (IADLs), stress management, leisure, or kitchen tasks to base their two interventions on. Intervention categories chosen by eligible student therapist participants are as follows: six stress management interventions, one ADL, one IADL, and one leisure session. The interventions were not to exceed fifteen minutes in length. Each student therapist was randomly paired with a clinician with whom they did not know.

### **Data Collection**

The intervention sessions were conducted in assigned classrooms dedicated to the UND occupational therapy department at Casper College in Casper, WY to ensure reliability and environmental control. The researchers were also present for each intervention to observe and coordinate the intervention process. The sessions began with the student conducting their first self-developed intervention with the clinician. After

implementing the first intervention, the student therapist assumed two different high power poses, one in sitting and one in standing, and held them for one minute each. The students were provided both visual and written description of the poses. The students held the poses alone in a room to prevent distraction and were instructed to change poses after one minute had elapsed. Visual representations of the poses chosen for this study are located in the Appendix E and F.

After power-posing the student therapist conducted the second intervention on the same client. After each intervention, both the student therapist and client completed an assessment to rate the student therapist's performance. Please refer to the Appendix A and B for examples of the assessments used in the study.

The assessments, from each participant, were used to determine the affect of power posing on student therapist performance. To quantify a change, the Wilcoxon Rank-Sum non-parametric test was completed to compare data between the two assessments. This test was used due to categorical data. In order to measure a change, the researchers analyzed the comparative data between each student's pre and post-tests compared to the clinician's pre and post-test scores. Then the researchers completed a non-parametric correlation test, Spearman's rho, to determine if there was a relationship between the student's self assessment and the clinician's assessment of the student. Data was analyzed using SPSS Version 2.1.

## CHAPTER IV

### RESULTS

#### Demographics

Eighteen out of the twenty participants took part in the study. One student therapist and clinician were eliminated due to scheduling difficulties and therefore did not participate in the intervention process. Also, one participant failed to rate all ten categories on the performance assessment rendering the student therapist and clinician pair statistically invalid and were eliminated. As a result, eight out of the ten student therapist and clinician pairs were used to calculate results, leaving 32 out of the possible 40 pre-post assessments eligible for statistical analysis. Graphical results of the 32 assessments are presented in Tables 1 and 2.

<i>Table 1. Student Self-Assessment Summary</i>			
<i>Student Number</i>	<i>Pre - Test</i>	<i>Post - Test</i>	<i>Change</i>
1 – dropped			
2	25/50	38/50	+13
3	24/50	32/50	+8
4	27/50	39/50	+12
5	26/50	28/50	+2
6	29/50	28/50	-1
7	34/50	41/50	+7
8	32/50	38/50	+6
9	37/50	50/50	+13
	<b>Total:</b> 234/400	<b>Total:</b> 294/400	<b>Total:</b> 60

Data represented in Table 1 is a synopsis of point allocation designated by each student regarding their performance during interventions. These scores were determined by adding up the point value based on the rating on the five point likert scale. The ratings



assessment offered scores from one to five for each of the ten categories, rendering a total of fifty possible points for each intervention.

<i>Table 2. Client Assessment Summary</i>			
<i>Client Number</i>	<i>Pre - Test</i>	<i>Post - Test</i>	<i>Change</i>
1 - dropped			
2	40/50	45/50	+5
3	25/50	28/50	+3
4	37/50	43/50	+6
5	29/50	39/50	+10
6	50/50	50/50	0
7	48/50	50/50	+2
8	32/50	41/50	+9
9	50/50	50/50	0
	<b>Total:</b> 311/400	<b>Total:</b> 346/400	<b>Total:</b> 36

The subsequent client assessment summary represented in Table 2 is a synopsis of the point ratings of student performance given by each clinician playing the role of the client. As the tables indicate, there was a 60-point change in performance among the student ratings, signifying a substantial improvement in self-perceived performance from the first intervention to the second. When analyzing pre and post-test scores, performance among the student ratings indicate a 15% change in performance after power posing. Positive results were seen among the client ratings with a total point improvement of 36 among the group. Student performance, when rated by clients, changed by 8.7% from the first intervention to the second. A significant difference was found in the results of the Wilcoxon test ( $Z=2.386$ ,  $p < .017$ ).

### **Research Question Analysis**

The hypothesis was confirmed, students performed significantly better on the second intervention than the first. Also, a strong positive correlation was found with the Spearman rho correlation coefficient ( $\rho = .988$ ), indicating a significant relationship or similarity between how each student and clinician rated the assessments. Thus, participants rated student therapist performance higher overall after power posing and demonstrated similar rating progressions from the first intervention to the second.

### **Summary**

Chapter IV provided the results of the data analysis to answer the research question posed in this study. The findings are further examined in Chapter V.

## **CHAPTER V**

### **CONCLUSIONS & RECOMMENDATIONS**

The initial hypothesis stated that power posing enhances student therapist performance when implementing interventions. The pilot study results reinforce the hypothesis that assuming a two-minute power pose can increase confidence, rapport, and performance in students when faced with new and novel challenges. Therefore, power posing can serve as an effective strategy to support occupational adaptation during students' transition into a practicing clinician as well as many other implications for the field of occupational therapy academically and professionally.

Tryssenaar & Perkins (1999) stated that strategies to manage performance concerns and expectations put on students should be promoted within academic education. Our results demonstrate that power posing could be a strategy implemented into the academic curriculums of colleges and universities in order to better prepare students with skills to overcome occupational challenges experienced in school and during the transition into practice. It may also serve as a method to elicit mature behavioral responses from students while on fieldwork by strengthening goal directed actions and limiting regression back to primitive and transitional behaviors as indicated by Garrett & Schkade (1995). However, the positive results rendered from the study suggest that power posing may have a variety of implications and benefits across many professional areas.

Power posing can, in effect, serve as an intervention in itself for clinicians already in practice. Utilizing power posing as a preparatory technique when new levels of

professional performance are demanded of them could support relative mastery throughout practice. Open expansive posturing is well suited for use in various contexts, making it convenient for the clinical environment, which tends to be constricted by time and productivity standards throughout the workday. Power posing may even serve as a client intervention in the future, if supported by research, to achieve useful cognitive, physical, and physiological adaptations to better enable occupational performance. The benefit of power posing as a strategy used to enhance confidence, rapport, and performance may also have implications among disciplines other than occupational therapy.

Power posing may serve as an effective strategy to address the problem of healthcare students lacking confidence during their transition into clinicians. According to Hecimovich & Volet (2009), healthcare professionals have attempted to determine the most effective ways in which to develop student confidence, especially in areas of patient communication and skills. However, limited strategies have been found that improve student performance and empirical evidence supports that the confidence level of student clinicians and entry-level practitioners can either foster or impede relationships with clients. (Hecimovich & Volet, 2009) For instance, Hecimovich & Volet (2009) found specifically within chiropractic students, that fostering development of confidence within their education was of paramount importance not only to them as new practitioners but more importantly to the patient. Healthcare professionals must rely on their abilities to quickly problem solve using clinical reasoning in a variety of contexts, which is stressful. Power posing is a strategy with statistical support proving its effectiveness in increasing a student therapist's performance implementing interventions on clients. Therefore,

continued research needs to be conducted on the outcome of incorporating power posing into the healthcare professional's curriculum.

### **Limitations**

Several limitations were present in this study. First, it was a small preliminary pilot study with a low sample size, which hindered the reliability and validity of the study. Secondly, no control group was used therefore the researchers were unable to definitively conclude that power posing caused the change in performance. This opens up possible alternative explanations for the outcome. For example, the students could have become more comfortable with the client during the second intervention as a result of rapport gained from the first, contributing to the students' improved performance. Lastly, instrumentation was a limitation because the assessments used were adapted from other sources for the purpose of this study and have not been formally assessed for psychometric properties of validity and reliability.

### **Implications for Further Research**

Due to the limitations of the study, future research needs to be completed on power posing in regard to occupational therapy to ensure rigor within the study design. Recommendations include:

1. A larger sample size as well as utilization of a control group will enhance credibility and validity to the research process.
2. The researchers wish to see a study conducted on the effect of power posing when implemented in the educational curriculum of occupational therapy students. This could also be extended to studying the effect of power posing within multiple

healthcare professionals' education in order to find an effective strategy to increase student confidence and performance when working with clients.

3. The researchers would also like to explore the concept of power posing as a possible preparatory intervention for occupational therapy clients who lack necessary confidence to complete meaningful occupations in treatment.

### **Summary**

Feeling confident is an essential component to an effective relationship between the client and the occupational therapist. During the transition to the clinical environment students tend to lack confidence when faced with occupational challenges, which can hinder overall therapeutic performance and pose challenges to internal adaptation. Power posing is a strategy student therapists can utilize to increase confidence when conducting interventions and support overall performance and relative mastery as entry-level practitioners.

## **APPENDICES**

APPENDIX A

# OT Student Self-Assessment

Please indicate your level of agreement with the following statements. Note that your responses will remain confidential and will not affect your relationship with the University of North Dakota.

Complete the <b>self-assessment</b> page by giving each item of knowledge, skill or attitude a score from 1-5, based on your current level of ability conducting interventions.
<b>The Self-Assessment Rating Scale:</b>
1. Unacceptable/No competency
2. Needs improvement
3. Acceptable/Competent
4. Above-average/Service competent
5. Outstanding/Mastery

Task		1	2	3	4	5
1.	I provided a proper introduction before beginning the intervention					
2.	I provided clear instructions for the client to easily understand					
3.	I demonstrated confidence throughout the intervention					
4.	I was able to build rapport with the client					
5.	I demonstrated good organizational skills and had a well planned out intervention					
6.	I was responsive to the needs of my client and adapted the intervention accordingly					
7.	I was respectful and demonstrated a positive and professional attitude throughout the intervention					
8.	I communicated enthusiasm and interest towards the client during the intervention					
9.	I was sure of myself (not nervous) during the intervention					
10.	I believe my performance was at the level it should be for a second year student					

Adapted from Oei, T.P.S., & Shuttlewood, G.J. (1999). Development of a satisfaction with therapy and therapist scale. *Australian and New Zealand Journal of Psychiatry*, 33(5), 748-753.

Adapted from Seldin, P. (1999). Building successful teaching evaluation programs. In Seldin, P. & Associates (Eds.), *Changing practices in evaluation teaching: A practical guide to improve faculty performance and promotion/tenure decisions*. Bolton, MA: Anker Publishing.



## APPENDIX B

# Client Assessment of Student Therapist

Please indicate your level of agreement with the following statements. Note that your responses will remain confidential and will not affect your relationship with the University of North Dakota.

Complete the <b>client-assessment</b> page by giving each item of knowledge, skill or attitude a score from 1-5, based on the student therapist's current level of ability conducting interventions.
<b>The Client-Assessment Rating Scale:</b>
1. Unacceptable/No competency
2. Needs improvement
3. Acceptable/Competent
4. Above-average/Service competent
5. Outstanding/Mastery

Task	1	2	3	4	5
1. The therapist provided a proper introduction before beginning the intervention					
2. The therapist provided clear instructions that were easily understood					
3. The therapist demonstrated confidence throughout the intervention					
4. The therapist was responsive to client needs and adapted the intervention accordingly					
5. The therapist demonstrated the ability to build rapport					
6. The therapist was sure of themselves (not nervous) during the intervention					
7. The therapist demonstrated good organizational skills and had a well planned out intervention					
8. The therapist communicated enthusiasm and interest to the client					
9. The therapist was respectful and demonstrated a positive attitude throughout the intervention					
10. I believe this second year student is at the level he/she needs to be					

Adapted from Oei, T.P.S., & Shuttlewood, G.J. (1999). Development of a satisfaction with therapy and therapist scale. *Australian and New Zealand Journal of Psychiatry*, 33(5), 748-753.

Adapted from Seldin, P. (1999). Building successful teaching evaluation programs. In Seldin, P. & Associates (Eds.), *Changing practices in evaluation teaching: A practical guide to improve faculty performance and promotion/tenure decisions*. Bolton, MA: Anker Publishing.

## **APPENDIX C**

### **Student Consent Form**

**Title:** Pilot Study: Affect of Power Posing on Student Therapists' Performance when Implementing OT Interventions

**Project Directors:** Aimee Abel MOT/S, Britney Barelman MOT/S

**Department:** Occupational Therapy

#### **Statement of Research**

All persons who participate in this pilot study must give his or her informed consent. This consent is based on an understanding of the nature and risks of the research. The information in this document allows participants to acquire an understanding of the intent of the research before making an informed decision. Please take your time in making your decision. If you have questions at any time, please ask.

#### **Purpose of the Research**

The purpose of this pilot study is to determine if power posing has an affect on the occupational therapy (OT) students' performance when implementing interventions with a client, who is a local occupational therapy clinician. Power posing is a nonverbal display consisting of open expansive body posture that generates a perceived sense of power within the individual. The performance areas being researched include communication, confidence, and competence in the ability to complete a treatment intervention. This study will be conducted with second year University of North Dakota/Casper College occupational therapy students and occupational therapy clinicians who are unaffiliated with the student to simulate a typical therapist/client relationship in a clinical setting.

#### **How many people will participate?**

The OT student participants in this study will be recruited through the University of North Dakota at Casper College. The occupational therapy clinicians will be recruited from Casper, Wyoming through a variety of recruitment techniques. The approximate number of student participants is 10 and the number of occupational therapists will equal the number of students so each student has their own client to perform interventions with. Approximately 20 participants are being asked to participate in the study.

#### **What will happen during this study?**

If you chose to participate in the study and sign the informed consent then the pilot study process will proceed as follows:

1. You are asked to choose one treatment category from a list attached.

2. You will independently develop two interventions, no longer than 15 minutes, both related to the category you chose.
3. Your interventions will be implemented with an occupational therapist playing the role of a client. You will be assigned an occupational therapy clinician that you do not know.
4. You will sign up for a date and time that you will conduct your interventions.
5. Two days prior to implementing your interventions, you will describe your finalized ideas to the researchers, which can be a verbal description. This is to make sure you are on the right track and have two interventions that are based off of one category.
6. On the day you chose to conduct your interventions, you will begin by implementing your first intervention.
7. The researchers will be present to observe the process.
8. After the first intervention is completed both you and the client will complete a short assessment to rate your performance.
9. Once the first assessment is completed you will move to a private room and assume two power poses that you will hold for one minute each.
10. After power posing you will conduct the second intervention on the same client.
11. Both you and the client will again fill out the same assessments.

### **How long will I be in this study?**

The total time required for your participation in this study will be approximately 40 minutes. However, this does not include the time required to prepare the interventions, which will vary per student. You will sign up for a day and time that works for you. There will be dates and times available throughout an entire week during the month of October to try and accommodate various schedules. The study will be conducted at Casper College in the University of North Dakota occupational therapy department classrooms.

### **What are the risks of the study?**

There are minimal risks involved. Some participants may find the interventions to be stressful or you may feel uncomfortable rating your own performance. You may also experience frustration. These risks are considered minimal and a normal part of the process as the student prepares for the clinician transition. Do not hesitate to inform the researchers of any concerns you may have during the study.

### **What are the benefits of this study?**

The study is designed to identify if power posing has an effect on an OT students' performance when conducting interventions. This can benefit students transitioning to the role of entry-level clinician or any individuals who are performing in stressful situations, by potentially enhancing confidence, performance, and self-assurance. You will also personally aid the researchers in continuing to provide evidence base to our profession.

and promoting occupational therapy. You will have an additional benefit of gaining extra credit by participating.

### **Alternatives to participating in this study?**

If you choose not to participate in this study, you may earn course credit in others ways. Please ask your instructor, who will provide you with comparable assignments that you may choose to complete.

### **Will this study cost me anything?**

The study itself will not cost you anything, however costs of transportation to and from Casper College will be your responsibility.

### **Will I be paid for participating?**

You will not be paid for participating in this pilot study. However, you have the opportunity to gain course credit for conducting intervention plans. The results of this study may also benefit you during your transition to an entry-level clinician.

### **Who is funding the study?**

The University of North Dakota Occupational Therapy Department and the research team are receiving no payments from other agencies, organizations, or companies to conduct this research study.

### **Will my information be kept confidential?**

The informed consent and data collected from this study will be kept in a separate locked cabinet located at the University of North Dakota. These documents will be kept for three years to follow the research procedures required by law, they will then be shredded. The only people who will have access to your information are the researchers and their advisor. Any information that is obtained in this study that can be identified to you will remain confidential and will be disclosed only with your permission or when required by law. Names or other identifiable features will not be used or released in order to maintain confidentiality. All data and information publically presented will be in aggregate form.

The information gathered from the research assessment will be coded into quantitative data and used to measure a difference in performance between the first and second interventions. The article derived from this study will summarize the results and will not correlate any participant with the results.

The OT clinicians are restricted from discussing your performance to protect your confidentiality and possible future affiliations with local clinicians.

### **Do I have the right to withdraw from the study?**

Your participation is voluntary. You may choose to not participate or discontinue your participation at any time without penalty. However, the occupational therapy students will only receive extra credit if they complete the entire research process. Your decision whether or not to participate will not affect your current or future relations with the University of North Dakota.

If you decide to leave the study early, we ask that you contact the primary researchers by phone or email and give notice of your decision. The researchers are willing to reschedule intervention sessions in the event of an emergency or any unplanned scheduling conflicts if it is possible to do so. Participants will not experience any consequence for withdrawal.

You will be informed by the primary researchers of any significant new findings that develop during the study, which may influence your willingness to continue to participate in the study.

### **Contact Information and Questions**

Aimee Abel, MOT/S email: [aimee.abel@my.und.edu](mailto:aimee.abel@my.und.edu) phone: (307) 272-2555

Britney Barelman, MOT/S email: [brittney.barelman@my.und.edu](mailto:brittney.barelman@my.und.edu) phone: (307) 251-3965

### **Student Research Advisor**

Dr. LaVonne Fox email: [lavonne.fox@med.und.edu](mailto:lavonne.fox@med.und.edu) phone: (701) 777-2216

You may ask any questions you have now. Later if you have questions, concerns, or complaints about the study please contact the researchers through the contact information offered above. You may also contact the student research advisor offered above.

### **Participant Certification**

I have read the informed consent and have agreed to participate in the pilot study. I received feedback to any questions I had concerning the study. I understand if I have any more questions I shall contact the researchers using the contact information provided.

By my signature I agree to the terms and conditions of the research study. I am 18 years of age and am legally eligible to take part in the study

A copy of this consent form will be provided.

\_\_\_\_\_

Printed Name

\_\_\_\_\_

Participant's Signature

\_\_\_\_\_

Date

## **APPENDIX D**

### **Clinician Consent Form**

**Title:** Pilot Study: Affect of Power Posing on Student Therapists' Performance when Implementing OT Interventions

**Project Directors:** Aimee Abel MOT/S, Britney Barelman MOT/S

**Department:** Occupational Therapy

#### **Statement of Research**

All persons who participate in this pilot study must give his or her informed consent. This consent is based on an understanding of the nature and risks of the research. The information in this document allows participants to acquire an understanding of the intent of the research before making an informed decision. Please take your time in making your decision. If you have questions at any time, please ask.

#### **Purpose of the Research**

The purpose of this pilot study is to determine if power posing has an affect on the occupational therapy (OT) students' performance when implementing interventions with a client, who is a local occupational therapy clinician. Power posing is a nonverbal display consisting of open expansive body posture that generates a perceived sense of power within the individual. The performance areas being researched include communication, confidence, and competence in the ability to complete a treatment intervention. This study will be conducted with second year University of North Dakota/Casper College occupational therapy students and occupational therapy clinicians who are unaffiliated with the student to simulate a typical therapist/client relationship in a clinical setting.

#### **How many people will participate?**

The OT student participants in this study will be recruited through the University of North Dakota at Casper College. The occupational therapy clinicians will be recruited from Casper, Wyoming through a variety of recruitment techniques. The approximate number of student participants is 10 and the number of occupational therapists will equal the number of students so each student has their own client to perform interventions with. Approximately 20 participants are being asked to participate in the study.

#### **What will happen during this study?**

1. The OT students are asked to choose a treatment category, and develop two interventions no longer than 15 minutes that are related to that category.

2. The OT student will prepare their interventions to be implemented with you who will be playing the role of a client. You will be assigned with an OT student that you have not met.
3. You will sign up for a date to complete the intervention process.
4. On that day, the OT student will begin by conducting their first intervention with you.
5. The researchers will be present to observe the process.
6. After the first intervention is completed both you and the student will complete a short assessment to rate the students' performance.
7. Once the first assessment is completed the student will move to a different room and assume two power poses for one minute each.
8. After power posing the student will conduct the second intervention with you.
9. Both you and the student will again fill out the same assessments.

### **How long will I be in this study?**

The total time required for your participation in this study will be approximately 40 minutes. You will sign up for a day and time that works for you. There will be dates and times available throughout an entire week during the month of October to try and accommodate various schedules. The study will be conducted at Casper College in the University of North Dakota occupational therapy department classrooms.

### **What are the risks of the study?**

There are minimal risks involved. This may include feeling uncomfortable rating the performance of the OT student. You are restricted from discussing the OT student's performance after the study to protect the emotional risks of the student therapist. Do not hesitate to inform the researchers of any concerns you may have during the study.

### **What are the benefits of this study?**

The study is designed to identify if power posing has an affect on an OT students' performance when conducting interventions. This can benefit students transitioning to the role of entry-level clinician or any individuals who are performing in stressful situations, by potentially enhancing confidence, performance, and self-assurance. You will also personally aid the researchers in continuing to provide evidence base to our profession and promoting occupational therapy. You will have an additional benefit of gaining extra credit by participating.

### **Will this study cost me anything?**

The study itself will not cost you anything, however costs of transportation to and from Casper College will be your responsibility.

### **Will I be paid for participating?**

You will not be paid for participating in this pilot study. However, you will aid in the development of OT research, which may identify a successful approach to benefit OT students transitioning into the role of a clinician.

**Who is funding the study?**

The University of North Dakota Occupational Therapy Department and the research team are receiving no payments from other agencies, organizations, or companies to conduct this research study.

**Will my information be kept confidential?**

The informed consent and data collected from this study will be kept in a separate locked cabinet located at the University of North Dakota. These documents will be kept for three years to follow the research procedures required by law and will then be shredded. The only people who will have access to your information are the researchers and their advisor. Any information that is obtained in this study that can be identified to you will remain confidential and will be disclosed only with your permission or when required by law. Names or other identifiable features will not be used or released in order to maintain confidentiality. All data and information publically presented will be in aggregate form.

The information gathered from the research assessment will be coded into quantitative data and used to measure a difference in performance between the first and second interventions. The article derived from this study will summarize the results and will not correlate the person with the assessment results.

You are not allowed to discuss the OT student's performance after the study to protect their confidentiality.

**Do I have the right to withdraw from the study?**

Your participation is voluntary. You may choose to not participate or discontinue your participation at any time without penalty. Your decision whether or not to participate will not affect your current or future relations with the University of North Dakota.

If you decide to leave the study early, we ask that you contact the primary researchers by phone or email and give notice of your decision. The researchers are willing to reschedule intervention sessions in the event of an emergency or any unplanned scheduling conflict if it is possible to do so. Participants will not experience any consequence for withdrawal.

You will be informed by the primary researchers of any significant new findings that develop during the study, which may influence your willingness to continue to participate in the study.



**Contact Information and Questions**

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Britney Barelman, MOT/S email: [brittney.barelman@my.und.edu](mailto:brittney.barelman@my.und.edu) phone: (307) 251-3965

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You may ask any questions you have now. Later if you have questions, concerns, or complaints about the study please contact the researchers through the contact information offered above. You may also contact the student research advisor offered above.

If you have questions regarding your rights as a participant, or if you have any concerns or complaints about the research, you may contact the University of North Dakota Institutional Review Board at (701) 777-4279. Please call this number if you cannot reach research staff, or you wish to talk with someone else.

**Participant Certification**

I have read the informed consent and have agreed to participate in the pilot study. I received feedback to any questions I had concerning the study. I understand if I have any more questions I shall contact the researchers using the contact information provided.

By my signature I agree to the terms and conditions of the research study. I am 18 years of age and am legally eligible to take part in the study

A copy of this consent form will be provided.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Printed Name

Participant’s Signature

Date

**APPENDIX E**  
**Power Pose in Standing**



**APPENDIX F**  
**Power Pose in Sitting**



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