Teaching Interpersonal Communication Skills in Athletic Training Professional Education: A Mixed Methods Study

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ABSTRACT

Studies examining the impact interpersonal communication skills have on patient satisfaction, outcomes, and patient compliance have been conducted in healthcare. In addition, athletic training research suggests communication is a top attribute observed when hiring, yet many athletic trainers are deficient in their ability to communicate effectively. Although communication skills are highly important in athletic training, little research exists on how to teach such skills in athletic training programs.

This was a mixed methods treatment randomized baseline post-test control group study designed to determine the effectiveness of a six-week communication skills training on athletic training students' interpersonal communication skills during initial patient encounters, whether athletic training students utilize effective interpersonal communication in the athletic training clinical education setting, and to understand athletic training students' perceptions of their interpersonal communication skills. Data were collected from 8 (n=8) athletic training students enrolled in an athletic training professional program during fall 2018 using a modified Calgary-Cambridge Observation Guide-Medical Skills Evaluation during patient encounters with a standardized patient.

Results indicated athletic training students improved their communication skills over time by a mean score of 10 points out of 120 points once taught communication skills. Students perceived their communication skills to improve by a mean of 24.38 points out of 120 points, which research suggests this may be due to the student being less confident in a skill. Athletic training students' communication scores improved by a mean score of 23.75 out of 120 points when provided an opportunity to apply the skills learned in clinical practice.

DEDICATION

I dedicate this dissertation to my family. My husband, Joe Wehrlin supported me throughout the entire dissertation process and doctoral program. His words of encouragement gave me strength and motivated me to persevere through the end. A special feeling of gratitude goes to the best son a mother could ask for during doctoral work. Seth Wehrlin, I appreciate your patience and understanding over the years while I focused on my studies. My love is endless for both of you and I could not have completed this journey without either of you.

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CHAPTER I. INTRODUCTION

Background of the Problem

Established as a profession in 1950, athletic training is a relatively new profession among healthcare specialists. Just as in other allied healthcare professions, interpersonal communication skills such as information sharing, problem-solving, and decision-making are key abilities to be effective practitioners. In fact, communication is one of the top attributes examined by employers hiring entry-level athletic trainers (Day, 2013; Kahanov & Andrews, 2001). Certified athletic trainers also believe communication is a key skill in the profession (Hazelbaker, 2013). Communication scholars Kreps & Thornton (1992) stated, that "health communication is the singularly most important tool health professionals have to provide health care to their clients" (p. 2). According to Aldret (2014), non-competency-based skills, such as interpersonal communication and administrative responsibility ranked very highly with a panel of expert athletic trainers, with communication believed to be the most important skill needed for an entry-level athletic trainer. Therefore, communication is a critical skill that must be learned by athletic trainers in order to be perceived as effective allied healthcare professionals. Despite the clear necessity for interpersonal communication skills in athletic training, many athletic training professional programs currently do not focus on teaching communication skills. These findings emphasize the importance of communication skills in athletic training and suggest they should be explicitly taught in athletic training programs.

Communication. Communication is a broad term defined differently in varied disciplines. For example, communication can be defined as developing a rapport with peers and professionals and the ability to clearly articulate thoughts and ideas with others (Kutz, 2008; Kutz, 2012). du Pré (2005) describes communication as a process in which understanding, and meaning are involved (as cited in Pearson and Nelson, 1991). Furthermore,

Kreps & Thornton (1992) defined human communication as “an area of study concerned with human interaction in the health care process” which is comprised of two components, the message and the meaning (p. 2). Additionally, Schiavo (2007) defined health communication as “…a two-way exchange of information that uses a common system of signs and behaviors…that creates mutual feelings of understanding and sympathy among members of the communication team and intended audiences” (p. 4). For the purpose of this study the health communication definition by Schiavo (2007) is used as the definition of communication due to the examination of such criteria as verbal and non-verbal behaviors of the clinician, demonstration of feelings of respect, confidence, and empathy, and observing the two-way interaction between the athletic trainer and their patients. Because communication occurs in a context, understanding that context and the purpose it serves is of utmost importance.

Communication is considered an essential task because it is performed daily to build rapport with coaches, administrators, athletes, patients, parents, and other allied health care professionals. According to Stiller and Ostrowski (2007), a higher level of patient compliance and better outcomes can be attained when an athletic trainer builds a positive rapport with their patient. This rapport-building can occur by demonstrating key traits such as forming genuine interactions, relating to the patient on a personal level, keeping a positive attitude, and remaining informative. Silverman, Kurtz, & Draper (2013) stated patient outcomes improve with better communication, along with improving accuracy and efficiency of the consultation, patient satisfaction, and the therapeutic relationship. Health communication scholar du Pré (2005) wrote health communication is important in patient satisfaction; it increases the patient’s trust, and improves patient compliance. Thus, in order to have patient compliance, patient satisfaction, and improved patient outcomes, the athletic trainer must be an efficient communicator and build relationships with not only colleagues and supervisors, but also with

patients and athletes every day. To understand how an athletic trainer learns to be an effective communicator, this study seeks to explore how communication skills are taught, practiced, and assessed in athletic training education. More specifically, the study focuses on the effectiveness of communication skills training in professional education programs.

Competencies. Through a student's educational experience, both didactic and clinical, every student needs to master certain skills, or competencies, prior to graduating from an athletic training program. Competencies in athletic training education were first developed in 1983 (Weidner & Henning, 2002). Currently the 5th edition of the Athletic Training Education Competencies includes the following content areas: evidence-based practice, prevention and health promotion, clinical examination and diagnosis, acute care of injury and illness, therapeutic interventions, psychosocial strategies and referral, healthcare administration, and professional development and responsibility (National Athletic Trainers' Association, 2011). These competencies are the minimum requirements of a student's professional education within athletic training (NATA, 2011). Out of the two hundred twenty-nine competencies in the 5th edition Athletic Training Education Competencies (NATA, 2011), three specifically pertain to communication:

1. PHP-18 Explain strategies for communicating with coaches, athletes, parents, administrators, and other relevant personnel regarding potentially dangerous conditions related to the environment, field, or playing surfaces (NATA, 2011).
2. PS-4 Summarize and demonstrate the basic processes of effective interpersonal and crosscultural communication as it relates to interactions with patients and others involved in the healthcare of the patient (NATA, 2011).
3. CIP-9 Utilize documentation strategies to effectively communicate with patients, physicians, insurers, colleagues, administrators, and parents or family members while

using appropriate terminology and complying with statutes that regulate privacy of medical records (NATA, 2011).

Two of the competencies described above, PHP-18 and CIP-9, involve communicating about dangerous conditions relevant to the playing arena and documentation. Only one of the two hundred twenty-nine competencies, PS-4, address interpersonal communication and interactions with patients. Entry-level athletic trainers need to have effective oral communication skills and the expectation of communication skills to be taught or assessed is present in the 5th edition Athletic Training Education Competencies.

It is imperative for athletic trainers to be able to communicate with persons within the profession, including physicians, administrators, coaches, patients, and parents. Interpersonal communication is important for entry-level athletic trainers for various reasons, yet many new graduates are deficient in these skills (Carr & Volberding, 2012). The lack of communication in athletic training with any of the previously mentioned persons may lead to suboptimal treatment outcomes and patient non-compliance (Stiller & Ostrowski, 2007). Furthermore, effective communication improves patient satisfaction, patient health outcomes, decreases patient anxiety and uncertainty, and improves accuracy and efficiency during the patient encounter (Silverman, Kurtz, and Draper, 2013). Collaborating with the patient and building a relationship by using competent communication skills may prevent deficiencies, or gaps, when caring for a patient.

Deficiencies in communicating with a patient may lead to several concerns for both the clinician and patient. Issues such as the patient not disclosing all of their medical problems to the clinician and disagreements between the clinician and patient can be a result of ineffective communication (Silverman et al., 2013). Therefore, it is unacceptable to lack such an important skill in the field of athletic training. Since communication is deemed highly important to hiring

personnel and others that interact with athletic trainers, especially the patient population, the concern of how communication is taught and assessed in our athletic training education programs needs to be investigated.

To date, there have been very few studies examining how communication is taught in the athletic training discipline, if communication should be taught in the didactic or clinical arena, and how to assess whether communication skills are learned. Weidner & Laurent (2001) developed an evaluation tool to be utilized in the clinical education setting that involved assessing particular standards. Two forms were utilized in this study. One was a self-assessment by the head athletic trainer or clinical instructor and the other involved the student assessing the clinical setting. Both assessed standards such as whether the student was given an orientation, instructed about appropriate dress code, given clear objectives and expectations of the rotation, and so forth. These tools assessed the clinical setting rather than the skills performed or observed by the student. According to Seegmiller (2003), the clinical education setting is where athletic training students learn how to transition from thinking like an athletic trainer to becoming athletic trainers. Furthermore, Armstrong, Walker, & Jarriel (2011) used self-assessment in standardized patients to evaluate students' interpersonal skills. The students assessed themselves on basic communications skills such as introducing themselves, asking relevant questions to the patient regarding their injury or illness, informing the patient of their condition and treatment plan, and being attentive to the patient. The previously mentioned studies have shown communication is deemed important and entry-level athletic trainers are deficient in communicating, but there is limited research on how to teach and assess communication in the athletic training profession.

In order to be an effective athletic trainer and to attempt to prevent non-compliance, patient dissatisfaction, and poor patient outcomes from occurring, establishing rapport,

demonstrating respect, building trust, listening attentively, using empathy, and using open-ended questions are specific communication skills necessary in the profession. With so few teaching and assessment tools on the skill of communication in athletic training, it is time to consider ways to teach and assess communication skills in athletic training clinical education to produce quality and competent entry-level athletic trainers.

Rationale & Significance of the Study

Understanding how communication skills can be taught, practiced, and assessed along with clinical competencies within a student's clinical education experience could better prepare entry-level athletic trainers and make them more effective practitioners. Entry-level athletic trainers' skill sets include cognitive competencies, psychomotor competencies, and clinical proficiencies (Middlemas & Hensal, 2009). Thus far, the research states the overall quality of an athletic trainer is partially based upon one's ability to demonstrate non-competency-based skills, which includes communication (Raab, Wolfe, Gould, & Piland, 2011). According to Massie, Strang, & Ward (2009) employers see an entry-level athletic trainer's technical skills and knowledge to be adequate but believe communication skills to be underdeveloped. These findings suggest entry-level athletic trainers appear to be well educated in the competency-based skills but seem to lack with the non-competency-based skills, including that of communication, which is examined by potential employers. Therefore, it is necessary to include a way of teaching, rehearsing, and assessing such non-competency-based skills in a student's clinical education. The professional athletic training curriculum should focus on both clinical proficiencies and interpersonal attributes, such as communication to produce competent entry-level athletic trainers.

Currently there is limited research regarding teaching, practicing, or assessing communication skills in athletic training clinical education. The clinical education setting

could be utilized to teach communication skills which include attributes such as building rapport with the patient, showing concern, having the ability to communicate the patient's diagnosis, treatment, mechanisms of injury, and prevention of injury (Armstrong, Walker, & Jarriel, 2011). One study used basic checklists of such communication skills during clinical examinations to provide feedback regarding a student's use of clinical skills, as well as self-assessment checklists for the students to fill out after the exam (Middlemas & Hensal, 2009). Observed structured clinical exam (OSCE) is another form of assessment used within the clinical setting to observe and assess clinical proficiencies (Middlemas & Hensal, 2009). Furthermore, a method called SNAPPS (Summarize, Narrow, Analyze, Probe, Plan, Select) has been developed for students to reflect upon their clinical reasoning skills (Heinerichs, Vela, & Drouin, 2013). While the clinical education setting appears to be an ideal situation to evaluate communication skills, along with assessing clinical proficiencies, it appears as if this sort of evaluation is lacking in the research. Also, there seem to be several methods available to assess clinical competencies and clinical reasoning skills, but there are very few studies available with methods to evaluate a student's ability to communicate in the clinical setting. Exploring how to teach, practice, and assess communication skills in the clinical education setting will not only improve the quality of entry-level athletic trainers produced by athletic training programs, but having quality athletic trainers with effective communication skills will greatly impact patient care and healthcare outcomes in all settings.

Purpose of Study

The purpose of this study is to determine the effectiveness of a six-week communication skills training on athletic training students' interpersonal communication skills during initial patient encounters and application in clinical practice. Communication skills are deemed very important for quality entry-level athletic trainers but are lacking in newly certified

athletic trainers. According to Randy Aldret (2014), an athletic training program director at the University of Louisiana at Lafayette, “new athletic training graduates lack interpersonal communication skills and employers of athletic trainers consistently ranked personal characteristics such as oral and written communication, leadership and interpersonal communications, highest in their list of hiring criteria” (p. 9). Furthermore, Aldret (2014) explained athletic training education should provide more opportunities for interpersonal interactions with diverse persons in the clinical setting. Consequently, it is necessary for athletic trainers to learn and improve upon interpersonal communication because it is considered to be a vital skill in this profession. Athletic training professional education programs have the opportunity to expose athletic training students to interactions in a wide array of professional settings with diverse audiences, such as other healthcare professionals, coaches, and student-athletes within the clinical education setting in order to provide experiences for students to enhance their interpersonal communication skills. By providing these opportunities to communicate with others, educators need to have a method to assess such interactions, and this study seeks to provide such a method.

Communication in a healthcare profession is a central ability in one’s skill set to provide quality care to the patient. An athletic trainer needs to have the capability to listen to the patient’s symptoms and complaints, communicate the treatment plan to the patient, and relay any necessary information to other healthcare providers affiliated with the patient. According to Kutz (2008), good communicators clearly articulate and carefully listen to others as they articulate their thoughts. Silverman et al. (2013) stated that effective communication improves recall, understanding, and adherence of patients. Interpersonal communication skills such as building rapport, demonstrating respect, developing trust, listening attentively, and displaying empathy, play a key role in the daily tasks of an athletic trainer because of the

diverse populations (from health care providers to patients to administrators) athletic trainers interact with and the patient care provided each and every day. It is imperative entry-level athletic trainers are taught how to efficiently communicate in order to be identified as quality athletic trainers to prevent poor patient outcomes, dissatisfaction of patients, and patient non-compliance. This study will determine if a communication skills training can facilitate the acquisition of communication skills, as well as introduce tools to assess such skills in the clinical setting. Therefore, finding a method to teach, practice, and assess communication skills in professional athletic training education programs will benefit athletic training educators by giving them a means to examine communication, athletic trainers will benefit by learning how to effectively communicate, and patients will benefit with improved care and outcomes.

Theoretical Framework

The concepts and structure of Peplau's Theory of Interpersonal Relations provide the theoretical framework to interpret and understand this study. Hildegard Peplau was a nurse theorist who examined the relationship between the nurse and patient at various levels of care, specifically in psychiatric mental health nursing (Deane & Fain, 2016). Developed in 1952, Peplau's theory is from an "interactionist school of thought," or one that concentrates on fostering connections between people (Deane & Fain, 2016, p. 38). Although Peplau focused on the nursing-patient relationship, the same thought process could be adapted to other health care professions that involve relationships with patients. Athletic training is a field that could benefit from the notions of Peplau's theory.

Building interpersonal relationships, the ability to communicate effectively, and managing patients with varying levels of difficulty are at the core of Peplau's Theory of Interpersonal Relations. To support the notion of the importance of patient care and building rapport Nyström (2007) stated "Each healthcare provider should, thus, be able to identify

human problems that confront patients, the degrees of skill used to meet situations and be able to develop with patients the kind of relationships that will be conducive to improving the patients' ability to take care of his/her own healthcare problems" (p. 286). In addition, two common emotional reactions toward patients, frustration and anger, may induce anxiety (D'Antonio, Beeber, Sills, & Naegle, 2013). Therefore, examining the concepts and phases in Peplau's Theory of Interpersonal Relations during patient interactions could assist clinicians with developing and maintaining a productive and meaningful relationship used within patient care.

Research Questions

It is imperative to develop clear, concise research questions in research studies. According to Butin (2010), research questions "become the key guide throughout your dissertation…and must be intertwined with your research purpose" (p. 53). The research questions will guide each component of this study, including the methodology, the theoretical framework, and research design. This study seeks to find the answers to the following research questions:

1. To what degree does a six-week communication skills training improve an athletic training student's interpersonal communication skills during a patient encounter?
2. Do athletic training students with interpersonal communication skills training apply the communication skills into clinical practice?
3. What are athletic training students' perceptions of their interpersonal communication skills during a patient encounter?

Definition of Terms

To help clarify the conversation for the reader, defined key terms that are utilized throughout the discussion are provided. These terms will assist with the context of the dialogue, the literature, and the findings.

Athletic Trainer. Health care professionals who collaborate with physicians. The services provided by ATs comprise of prevention, emergency care, clinical diagnosis, therapeutic intervention and rehabilitation of injuries and medical conditions (BOC, 2015).

Athletic Training. A health care profession that includes the domains of injury/illness prevention and wellness protection, clinical evaluation and diagnosis, immediate and emergency care, treatment and rehabilitation, and organizational and professional health and well-being. Athletic training is recognized by the American Medical Association (AMA) as a health care profession (BOC, 2015).

Athletic Training Student. An individual enrolled as a full-time undergraduate or graduate student studying athletic training in an accredited program who has not fulfilled Board of Certification (BOC) requirements for certification (NATA, 2015).

Board of Certification. The Board of Certification, Inc. was incorporated in 1989 to provide a certification program for entry-level Athletic Trainers (ATs). The BOC establishes and regularly reviews both the standards for the practice of athletic training and the continuing education requirements for BOC Certified ATs. The BOC has the only accredited certification program for ATs in the US (BOC, 2015).

Clinical Education. The process of attaining relevant psychomotor, critical thinking, decision-making, and professional skills through time spent in a clinical setting with patients (Phan, McCarty, Mutchler, & Van Lunen, 2012, p. 104).

Communication. A two-way exchange of information that uses a common system of signs and behaviors that creates mutual feelings of understanding and sympathy among members of the communication team and intended audiences (Schiavo, 2007).

Competence. The degree to which the individual can use the knowledge, skills, and judgments associated with the profession to perform effectively in the domain of possible encounters defining the scope of professional practice (Thompson, Moss, Applegate, 2014).

Competencies. The NATAs knowledge, skills, and clinical abilities to be mastered by students enrolled in professional athletic training education programs. Mastery of these competencies as deemed by the professional program's athletic training faculty provides the entry–level athletic trainer with the capacity to provide athletic training services to clients and patients of varying ages, lifestyles, and needs (NATA, 2011).

Effective Communication. The operational definition for the purpose of this study is a score of 96 out of 120 on the Calgary-Cambridge Medical Skills Evaluation.

Entry-Level Athletic Trainer. One who is newly certified by the Board of Certification (Raab et al., 2011).

Essential Skills. The knowledge, skills, and abilities required for competent performance as an entry-level athletic trainer. These fall into three categories: 1) Understanding, applying, and analyzing; 2) Knowledge and decision-making; 3) Special performance abilities (NATA, 2014).

Interpersonal Communication. Communication between two people, usually face-to-face (du Pré, 1992).

Interpersonal Skills. Goal-directed behaviours used in face-to-face interactions in order to bring about a desired state of affairs (Hayes, 2005).

These key definitions provide a context of athletic training education, as well as the athletic training profession, to a reader that may not have experience with the field. The intent of defining these terms is to clarify and elucidate particular aspects of the discussion.

Limitations

The study will be limited to a small sample size of no more than 30 students at a private, four-year university due to time constraints involving the Objective Structured Clinical Evaluations (OSCE) during the baseline and post-testing, the conducting of the communication skills training sessions, and the data analysis. Therefore, the study will not be generalizable to a larger population.

Another limitation is subjects are self-reporting on the self-assessment forms. The researcher cannot control the subject's perceptions of their abilities that are being evaluated. Therefore, the self-assessment, although a data source, has limited reliability.

Additionally, the researcher was instructing an athletic training course in which some of the subjects were enrolled in, which may have limited the subjects' ability to practice the learned skills from the communication skills training.

Finally, there is no way to control for other variables or factors that may impact the development of interpersonal communication skills of athletic training students.

Researcher Bias

Throughout the course of completing a research study, the researcher may have biases regarding the topic in question. According to Mahoney (1977), humans have a tendency "to seek out, attend to, and sometimes embellish experiences, which support or confirm their beliefs…while disconformity experiences, on the other hand, are often ignored, discredited, or treated with obvious defensiveness" (pp. 161-162). With this being said, the researcher must put aside her own biases in order to find the truth and report findings from her study regardless

of her own personal beliefs. The researcher in this study does have biases that will be controlled throughout the course of the research. These biases include assuming the notion of interpersonal communication skills not being taught within the program being examined, the control group not receiving communication skills training will have little to no change in their ability to communicate during a patient encounter and the treatment group with the training will have better communication skills at the conclusion of the study. Knowing which students are in each group could sway the researcher's observation data; therefore, a research assistant will be utilized to perform the communication skills training and to prevent the researcher from knowing which students are in each group.

The author in this study has extensive clinical experience within various settings in the athletic training profession. She has witnessed the lack of communication skills in entry-level athletic trainers as Carr & Volberding (2012) discussed in most, if not all, of the clinical settings, she has been exposed to in her career. Communication is an important part of an athletic trainer's job in every setting. Therefore, this study seeks to find a way to teach and assess communication to undergraduate athletic training students in the clinical setting to better prepare them for entry-level positions.

The researcher will set aside her own feelings and experiences regarding communication in the clinical setting and with athletic training clinical education to understand the results of this study. The understanding of how communication skills may be taught, rehearsed, and assessed in athletic training professional education programs will become clear with both quantitative and qualitative data collected with the study. Results of the study will determine the effectiveness of a six-week communication skills training on athletic training students' interpersonal communication skills during initial patient encounters and application into clinical practice.

CHAPTER II. LITERATURE REVIEW

Introduction

The profession of athletic training is both an art and a science, and athletic trainers are expected to have competent skills in each area. However, the science, or the knowledge, skills, and abilities as outlined in the Athletic Training Education Competencies, 5th edition, is not held quite as high when determining if an athletic trainer is one of quality. In a Delphi study completed by Raab, Wolfe, Gould, & Piland (2011), thirteen athletic trainers from the high school, college, and clinical settings across four districts were interviewed with open-ended questions. The study concluded that quality athletic trainers are seen to demonstrate constructs such as care, commitment, integrity, knowledge, and communication and these skills lead to positive relationships, which improves health care (Raab et al., 2011). Raab et al (2011) developed a grounded theory to support the assessment and integration of the characteristics, such as communication, into athletic training professional education programs if the characteristics develop athletic trainers into quality athletic trainers. Four of the five characteristics listed are focused on interpersonal skills rather than the competencies that are used by athletic trainers. With the scientific skills and knowledge being vital in a health care profession, one would think the technical skills would be much more important than the interpersonal skills of a health care provider.

Effective interpersonal skills are deemed as highly as technical skills because such skills can enhance patient satisfaction, which could ultimately improve patient outcomes. As stated by Choudhary & Gupta (2015), “interpersonal and communication skills have a significant impact on patient care and correlate with improved healthcare outcomes” (p. S41). In a study by Unruh, Unruh, Moorman, & Seshadri (2005) three hundred twenty-five student-athletes were randomly selected from forty division I and II schools over four regions to

answer a questionnaire regarding the student-athletes' perception of care of their athletic trainer. Patients who have an athletic trainer who listens to their concerns and shows interest in them exhibit a higher level of satisfaction with their care (Unruh et al., 2005). Patient satisfaction based off the clinician's interactions partially explains the significance placed on interpersonal skills in the profession of athletic training. When a practitioner shows they truly care for the individuals they are treating, patients value this and often increase trust in the clinician.

Athletic training is not much different from other health care professional programs as to focus placed upon technical skills compared to interpersonal skills. In fact, nursing programs were the only caregiver education programs giving attention to interpersonal skills such as communication and relationship building as recent as nineteen hundred (du Pré, 2005). Since mid-nineteen hundred, medical schools, along with nursing programs have begun to incorporate communication courses and application of communication skills into the curriculum. Athletic training is a health care profession interacting with patients just as nurses and physicians and should include such interpersonal skills as communication and relationship training into the curriculum as well.

Interpersonal skill is a wide-ranging term used to describe social characteristics necessary for interactions and relationships with others. Hayes (2005) defined interpersonal skill as "goal-directed behaviours used in face-to-face interactions in order to bring about a desired state of affairs" (p. 3). The face-to-face interaction highlighted in this study is the contact between the patient and the athletic training student. The desired state of affairs from the interaction examined here are patient satisfaction, increased patient compliance, and better patient outcomes. Additionally, the behaviors included in the patient-clinician relationship

include time management, problem-solving, decision-making, persuasion skills, team-work, and the skill that is focused on in this study, communication.

Effective communication consists of verbal, non-verbal, and listening skills. Components of proficient verbal skills used in health care include asking open-ended questions, providing feedback, using non-threatening language, being clear and honest, and being positive when communicating (Weidner & Henning, 2002). Non-verbal communication skills include the use of body language, eye contact, posture, and turning toward the individual (Tipton, 2017). Listening involves active listening and components of this include responding accordingly with appropriate non-verbal gestures such as maintaining eye contact, nodding your head, smiling, agreeing, and encouraging the individual to continue ("Skills You Need", n.d.). Verbal, non-verbal, and active listening skills are important for athletic training students to learn, practice, and develop when interacting with others. These skills are all a part of interpersonal communication, which is needed in patient-clinician interactions.

There are various types of communication in the literature. For example, du Pré (2005) discussed physician-centered communication in which the physician does most of the talking and controls the conversation between the physician and the patient. du Pré (2005) also explained collaborative communication where health care providers and patients are viewed as peers and mutually control the conversation and is neither patient-centered nor physician-centered. There is also patient-centered communication where the patient does most of the talking and controls the conversation. Each type of communication has benefits and complications associated with them. The type of communication used during the patient interview is dependent upon the patient's personality (passive or assertive), the length of visit, and the patient's background (du Pré, 2005).

Additional types of communication include those involved in communication skills curricula, which is the focus of this study. The first type of communication consists of content skills (Silverman et al., 2013; Kurtz et al., 2005). Content skills involve “what healthcare professionals communicate” (Silverman et al., 2013, p. 10; Kurtz et al., 2005, p. 32). During a patient interview, content skills are the questions and responses that the health care provider disseminates to the patient. Examples of this could include anything from greeting the patient to describing their treatment protocol.

The second type of communication are the process skills. Process skills include the ways the clinician discovers information and how the clinician structures the interview (Silverman et al., 2013; Kurtz et al., 2005). The ‘how’ involves their verbal and non-verbal communication behaviors. For example, the clinician may choose to use non-verbal behaviors such as maintaining eye contact or nodding their head to encourage the patient to continue. Some health care providers may choose vocalics, or non-verbal uses of voice that signifies emotion, such as ‘mhmm’ every once in a while, for encouragement. All health care professionals conduct their interviews in different manners.

The final type of communication are perceptual skills, and this includes what the clinician is thinking and feeling (Silverman et al., 2013; Kurtz et al., 2005). This involves the clinician’s internal dialogue of problem-solving and decision-making skills. An example of this includes taking in what the patient is stating and making sense of it in the clinician’s head before responding to the patient. Attitudes, feelings, emotions, and thoughts of the clinician are all involved in this type of communication (Silverman et al., 2013; Kurtz et al., 2005). This type of communication is also known as one of the four levels of communication, otherwise known as intrapersonal communication.

Human communication is further broken down into four levels. The simplest level of communication is intrapersonal communication (Kreps and Thornton, 1992). Intrapersonal communication involves a continuous internal dialogue with our self (Kreps and Thornton, 1992). Health care professionals use intrapersonal communication when decision-making and problem-solving about a patient's care or during the interview process. For example, athletic trainers listening to a patient describe their injury would use intrapersonal communication to make sense of the patient's story, problem solve to come to a consensus of what injury they might have and decide on the next step of the evaluation or treatment process.

The next, more complex level of communication is interpersonal communication. Interpersonal communication builds upon intrapersonal communication and involves communication between two people, usually face-to-face (Kreps and Thornton, 1992). Intrapersonal and interpersonal communication occur at the same time (Kreps and Thornton, 1992). For instance, as a clinician is listening to the patient describe their pain, the clinician is making sense of what the patient is stating and decision-making on how to respond (intrapersonal). Once the patient has concluded their statement and the clinician has decided on what to say, the clinician responds verbally to the patient (interpersonal). This process goes back and forth between the clinician and patient for the remainder of the interview.

The third level of communication is small group communication. Small group communication "occurs when three or more people interact with one another in an attempt to adapt to their environment and achieve commonly recognized goals" (Kreps and Thornton, 1992, p. 16). Small group communication is more complex than intrapersonal and interpersonal communication due to the number of messages exchanged (Kreps and Thornton, 1992). Small group communication does occur in athletic training. An example of small group

communication would be when a staff of athletic trainers meet for a monthly staff meeting to problem solve, make decisions, or discuss goals for the program.

The fourth and final level is organizational communication. Organizational communication is the most complex level and involves groups of people working toward a common organizational task (Kreps and Thornton, 1992). This level includes all previous levels of communication (intrapersonal, interpersonal, and small group). Athletic trainers may be one interdependent group of a large health care system that includes other interdependent groups such as nurses, physicians, administration, etc. All of the interdependent groups within the health care system must communicate and work together toward a common organizational goal.

Figure 1. Levels of Communication

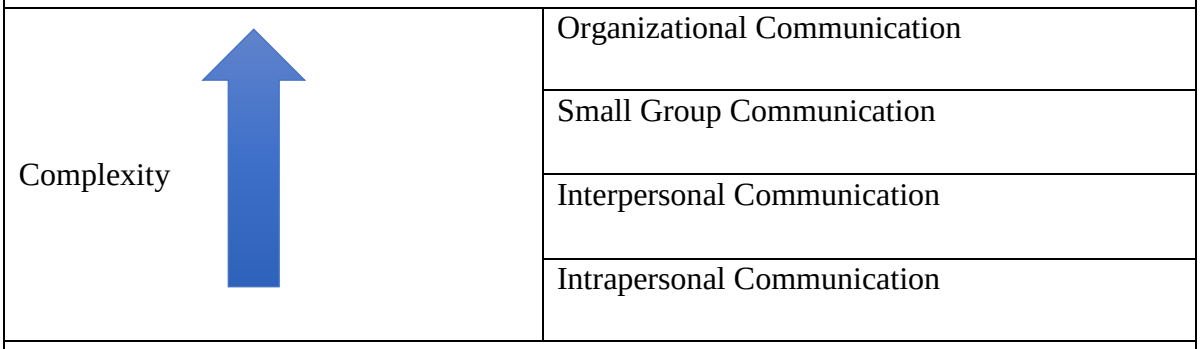

Figure 1. Description of the levels and complexity of communication. Adapted from Kreps, G. L. & Thornton, B. C., 1992, *Health communication: Theory & practice*. Long Grove, IL: Waveland Press, Inc.

Communication can be taught and developed in students pursuing a health care profession. According to Kreps and Thornton (1992) communication skills do not just happen, occur naturally, nor are people born with such skills. Communication skills are behaviors that are taught and practiced in order to become effective (Kreps and Thornton, 1992). Furthermore, “communication is a series of skills that can be both learned and retrained; it is

not just a personality trait" and communication should be taught with the same rigor as technical skills (Silverman et al., 2013). Therefore, communication skills, specifically interpersonal communication, should be treated similarly to technical skills within health care educational programs. Interpersonal communication is a behavior that can and should be taught to athletic training students in professional programs and beyond.

Educational Preparation of Athletic Trainers

Athletic training is a profession dating back as far as the 1800's. Although not formally recognized, athletic training emerged in the 19th century in intercollegiate athletics (Alley, 2012). It was not until after World War I when athletic trainers attempted to become officially recognized by forming the National Athletic Trainers' Association (NATA) (Bertoncino, n.d.). The first attempt to form this organization failed, but it was successfully formed in 1950 in Kansas City, Missouri with approximately two hundred members (Alley, 2012). Succeeding the formation of the NATA, formalized curriculum which included clinical education took place in the 1970s (Weidner, 2002). The first national certification examination was given in the 1970s, followed by the creation of the Board of Certification, Incorporated (BOC) in 1989, which developed the certification examination for entry-level athletic trainers (Bertoncino, n.d.). It was not until 1990 that the profession of athletic training was recognized by the American Medical Association (AMA) as an allied health care profession (Bertoncino, n.d.). Being identified as a health care profession by such an organization is significant to athletic training and places even more importance on effective communication. As a health care provider, one is expected to be able to clearly articulate to patients and their families, as well as to other health care providers.

In a chronologic review by Delforge & Behnke (1999) the first athletic training curriculum was introduced in 1959, but it was not until 1969 that the first undergraduate

athletic training curriculum was approved by the National Athletic Trainers' Association (NATA). Over two decades later, in 1990, the first accrediting body was developed, the Joint Review Committee on Educational Programs in Athletic Training (JRC-AT) (Delforge & Behnke, 1999). Accreditation has transformed over the years from the JRC-AT in 1990 to Committee on Allied Health Education and Accreditation (CAHEA) in 1994 to Commission on Accreditation of Allied Health Education Programs (CAAHEP) also in 1994, to the current accrediting body the Commission on Accreditation of Athletic Training Education (CAATE) in 2006 (Delforge & Behnke, 1999 and Historical Overview, n.d.). Today, "there are more than 360 professional (entry-level) Athletic Training programs" in the United States (Historical Overview, n.d.). Fall 2022 will be the last year baccalaureate programs may matriculate students into an athletic training program ("2020 Standards", n.d.). By fall 2026, all athletic training professional programs will be Masters level. Overall athletic training education has transformed quite a bit over a relatively short amount of time. With the evolution of accrediting bodies, the athletic training education curriculum, clinical education, and standards have also evolved.

Through 2003, there were two educational routes to certification; an internship route and an accredited curriculum route. The internship route consisted of 1500 clinical hours and core athletic training and physiology courses, while the accredited curriculum route consisted of 800 clinical hours and an increase in scientific coursework including courses such as physiology, anatomy, modalities, rehabilitation, kinesiology, biomechanics, nutrition, psychology, and athletic training (Bertoncino, n.d.). Athletic training education, like other health care professions, has always had clinical education as part of the curriculum, regardless of which route was permitted (Weidner & Henning, 2002). In 2004, all athletic training students were required to graduate with a baccalaureate degree through a Commission on

Accreditation of Athletic Training Education (CAATE) (formerly known as CAAHEP) accredited program, therefore discontinuing the internship route (Alley, 2012; Bertoncino, n.d.). With the transition from the internship route to the accredited curriculum route, there is even more of an emphasis on coursework within the sciences, but most programs still do not require courses within communication, written or oral. With this being said, students are expected to learn how to communicate either on their own or within the clinical educational setting.

Clinical education consists of a large part of an athletic training student's professional education preparation. According to Weidner & Henning (2002) entry-level athletic trainers perceived approximately fifty-three percent of their development came from their clinical education experiences. This is over half of a student's educational career. Therefore, significant importance should be placed on what a student is exposed to in the clinical settings, in addition to the didactic environment.

There are several competencies over eight content areas within the Athletic Training Competencies, 5th edition to be taught within the didactic and clinical education in athletic training education programs. The content areas include evidence-based practice, prevention and health promotion, clinical examination and diagnosis, acute care of injury and illness, therapeutic interventions, psychosocial strategies and referral, healthcare administration, and professional development and responsibility (NATA, 2011). Out of two hundred twenty-nine competencies included in the 5th edition Athletic Training Competencies, only three are directed toward any form of communication skills. Following are the three communication competencies identified by the NATA:

1. PHP-18 Explain strategies for communicating with coaches, athletes, parents, administrators, and other relevant personnel regarding potentially dangerous conditions related to the environment, field, or playing surfaces (NATA, 2011).

2. PS-4 Summarize and demonstrate the basic processes of effective interpersonal and crosscultural communication as it relates to interactions with patients and others involved in the healthcare of the patient (NATA, 2011).

3. CIP-9 Utilize documentation strategies to effectively communicate with patients, physicians, insurers, colleagues, administrators, and parents or family members while using appropriate terminology and complying with statues that regulate privacy of medical records (NATA, 2011).

Only one of these competencies, PS-4, discuss the use of interpersonal communication toward patients the future athletic trainer will need daily. However, in March 2018, new professional standards were released by the CAATE and beginning in the 2020-2021 academic year Section IV (Curricular Content Standards) of the new professional standards, must be taught in all programs, both at the baccalaureate and master levels (“2020 Standards”, n.d.). In the core competencies, one competency, Standard 59, speaks of communication:

1. Communicate effectively and appropriately with clients/patients, family members, coaches, administrators, other health care professionals, consumers, payors, policy makers, and others (“2020 Standards”, n.d.).

In the new professional standards there is one out of ninety-four standards addressing the skill of communication in athletic training education preparation. How this standard will be taught

in professional programs will vary but providing a communication skills program as an option may be very beneficial to athletic training professional programs.

Laurent & Weidner (2002) stated clinical education, which was defined for the study as "the hands-on experience involving clinicians, students, and patients in a real-life environment," should allow for opportunities for the student to develop clinical competencies that pertain to the health care of the athlete. In fact, the quantitative study completed by Laurent & Weidner (2002) used a twenty-two-item questionnaire to survey one hundred twenty-nine recently employed athletic trainers to measure their perceptions of the helpfulness of each standard in preparing certified athletic trainers for their roles and responsibilities and the results showed over half of the respondents indicated their professional development came from the clinical education. Interpersonal communication skills such as introducing themselves to the patient, listening to the patient's concerns, describing a treatment plan to the patient, or following up with the patient for progress are all vital components of communication pertaining to the health care of the athlete which is needed for entry-level athletic trainers.

Necessity of Communication in Healthcare Education

Although athletic trainers rely heavily on interpersonal communication to facilitate care, there is a gap in what athletic training students and other health care professionals are taught and what is needed once they enter the profession. According to Lawn, Battersby, Lindner, Mathews, Morris, Wells…Reed (2009) "fundamental skills gaps appear to exist for the current primary health care workforce…(and) it is recommended that training for primary health care professionals addresses communication skills, including listening and asking questions…" (p. 43). This study completed by Lawn et al. (2009) included focus groups, surveys and interviews of consumers, health professionals, educators, professional bodies and

state departments of health over a six-month time frame that led to the conclusion good communication is the most important skill that needs to be addressed with training. There is clearly a disparity when it comes to instructing interpersonal communication skills to students. In a health care profession, interpersonal communication is used much too often and is of such importance, that it is a skill deserving of more time and emphasis in athletic training curriculums.

The lack of interpersonal communication or the presence of poor interpersonal communication may lead to poor patient outcomes, medication errors, or even death. In a two-staged literature review prepared by Manojlovich, Squires, Davies, & Graham (2015) “poor communication between physicians and nurses is one of the most common causes of adverse events for hospitalized patients and a major root cause of all sentinel events” (p. 4). Kreps and Thornton (1992) stated communication inadequacies, such as lack of empathy, judgmental listening, and no display of respect, lead to less patient compliance, misinformation, unrealistic patient expectations, insensitivity, dissatisfaction with health care, and malpractice suits. If health care workers, including athletic trainers, had better interpersonal communication skills, the chances of harm to the patient population and law suits may decrease. One way to improve health care workers’ interpersonal communication skills is to teach these skills in the professional preparation phase of a student’s education.

Interpersonal communication skills may be taught in both the didactic and clinical settings and should be taught over time. The clinical setting is an ideal setting to teach communication skills, so students can practice the skills they are being taught (Choudhary & Gupta, 2015). Choudhary & Gupta (2015) stated communication skills can be learned during the formative years, and practitioners can continue to practice and perfect their communication throughout their years of experience. Kreps and Thornton (1992) also stated “human

communication is a dynamic, ongoing process-communication does not start and stop" (p. 19). Therefore, communication skills should be taught early in a curriculum and practiced often by the students, especially in the clinical setting. Athletic training students should be taught communication skills, including interpersonal communication skills, in the beginning courses of a curriculum and then these skills ought to be practiced throughout their clinical experiences, along with regular assessment of their interpersonal communication skills. Through repetition of interpersonal communication, athletic trainers can become more competent health care providers.

Theoretical Framework

Peplau's Theory of Interpersonal Relations provide the theoretical framework to interpret and understand this study. There are three phases to Peplau's theory: orientation phase, working phase, and termination phase (Deane & Fain, 2016; Peplau, 1997). The first phase, orientation, occurs during the first encounter between the clinician and the patient and involves an introduction of the clinician to the patient, the clinician gains an understanding of the patient holistically, and the clinician demonstrates caring and compassion for the patient, both verbally and non-verbally (Deane & Fain, 2016). Making the patient feel safe, secure, and comforted, as well as gaining the patient's trust, during this initial interaction are goals to achieve during this phase. Verbal examples of how to comfort the patient and gain their trust and respect include greeting and introducing oneself and clarifying the clinician's role (Silverman, et al., 2013). Non-verbal behaviors to establish rapport and respect involve eye-contact, listening attentively, use of silence, and facial expressions (Silverman et al., 2013). There are also environmental factors that play a role in patient comfort. Such factors involve room temperature, lighting, curtained windows for privacy, the patient seated versus lying down when talking, and the clinician seated knee-to-knee on equal footing (Silverman et al.,

2013). Verbal, non-verbal, and environmental factors should all be taken into account during the orientation phase.

As the goals of the brief orientation phase are met by making the patient feel at ease, the clinician can begin to transition into the more intense and lengthy working phase. In the working phase, the clinician continues to build the relationship and often times needs to take on numerous roles, such as teacher, counselor, interviewer, etc. over the period of treatment (Deane & Fain, 2016). An emphasis during the working phase includes assisting the patient to understand themselves and what their illness will require of them, as well as observing their reactions to the illness (Peplau, 1997). Athletic trainers are health care providers that often times need to act in various roles when working with a patient. These roles may include counselors, educators, mediators, advocates, and negotiators. The concepts from the working phase of Peplau's Theory of Interpersonal Relations could be adapted to the athletic training profession when helping a patient from the date of injury to return to play or work. For example, at the onset of an injury, an athletic trainer may need to act as an educator in order to explain the injury and the treatment plan. In this case effective verbal skills are needed such as using shorter words and sentences and reducing the use of jargon (Silverman et al., 2013). However, when the patient is preparing to return to work or play the athletic trainer may need to act as a negotiator and while still needing to use the same effective verbal communications skills, good non-verbal skills may be needed when the patient, coach, or employer asks questions regarding the patient's return. In this situation, attentive listening, good eye-contact, and appropriate facial expressions would be used.

The final phase in Peplau's Theory of Interpersonal Relations is the termination phase. This phase occurs when a patient is preparing for discharge (Deane & Fain, 2016). Planning for discontinuation of treatment may begin in the working phase and should end with closure of

work and accomplishments that were achieved (Peplau, 1997). The clinician can also take time during this phase to reflect on the care provided and how the knowledge gained with the patient relationship can help with future encounters (Deane & Fain, 2016). Athletic trainers can provide discharge instructions that may include home exercise programs so patients can continue with their recovery, activity modifications that may be needed, or advice regarding prevention of further injury. The termination phase is the last interaction that the clinician will have with the patient.

Peplau's Theory of Interpersonal Relations is a theoretical framework in which to ground this communication study. This study focuses on how to instruct, practice, and evaluate communication skills for students in a health care profession. Peplau's theory is a holistic convention that can be used to structure both the didactical and clinical health care educational settings to assist students in the development of interpersonal relationships with patients at all levels (Deane & Fain, 2016). The nuances of this theory, in addition with the components of the Calgary-Cambridge Observation Guide, will enhance the students' skills used during the patient interview process.

Literature Search Strategies

A variety of search engines were utilized for this literature review. Most of the research was attained through the use of EBSCO Host. Other means included Google Scholar, athletic training textbooks, and communication textbooks.

Objectives and Overview of the Remaining Literature Review

Thus far, a leading attribute of a quality athletic trainer includes effective communication, specifically interpersonal communication. It has also been determined that athletic trainers, along with other health care providers, lack training of interpersonal communication skills in their education preparation. Research suggests communication skills

training may occur in the didactic setting, but the clinical setting is preferred so students may practice the skill with real patients. Teaching interpersonal communication skills should also begin early in the curriculum, rehearsed, and evaluated throughout the entire course of a student's education. Athletic trainers with enhanced interpersonal communication skills may improve patient satisfaction and outcomes.

The remainder of this review will then focus on options of how to implement interpersonal communication skills training into the curricula, the practice of interpersonal communication skills, and interpersonal communication skills assessments. Many health care professions currently teach various forms of communication skills in their professional preparation of their students. The following sections will describe possibilities of methods of implementation, rehearsal, and assessment of interpersonal communication skills training that could potentially fit in to athletic training education.

Implementation of Interpersonal Communication Skills Training

Implementation of interpersonal communication skills training is not a new concept in the health care professions. Many other disciplines are currently teaching these skills and producing more competent health care providers. Professional educational programs for physicians, nurses, and physical therapists are among several occupations incorporating such training. There are common themes among them that could be incorporated into an athletic training education program. These themes include practicing interpersonal communication skills in the clinical setting, beginning interpersonal communication skills training early, repetition of them throughout the students' education, and incorporating a wide array of strategies to introduce effective interpersonal communication skills.

Communication is a complicated skill to learn and should be taught not only over time, but in fragments. According to Kurtz et al. (2005) medical communication is a "series of

learned skills" and needs to be broken down into "individual components and then put…back together again into a seamless whole" (p. 21). It takes time to implement and teach communication skills to students in order for the skill to be considered proficient. Therefore, just as with core technical skills, communication skills need to be broken down into pieces and introduced in a variety of ways early on in the curriculum, so the student can practice the skills often and routinely to become competent.

Interpersonal communication skills can be taught in a variety of ways in health care education. In a qualitative study performed by Hazavehei, Moonaghi, Moeini, Moghimbeigi, & Emadzadeh, (2015) inductive content analysis examined the experiences and perceptions of stakeholders in order to design a communication skills training program/curriculum for medical students. Forty-three participants, who included faculty, nurses, physicians, residents, and medical students participated in the study (Hazavehei et al., 2015). Focus group discussions and semi-structured interviews were used to collect data and then was analyzed by MAXQDA software using the Graneheim & Lundman model (Hazavehei et al., 2015). Two main themes appeared in the results: 1) present communication skills training and 2) administrative requirements of the training program (Hazavehei et al., 2015). In the discussion section, some strategies on how to teach communication skills were listed and included a physician-patient workshop, direct observation, self-assessment, role-playing, video clips, technology, social networking, and the suggestion that communication skills training be implemented in the clinical setting (Hazavehei et al., 2015). In addition, Choudhary & Gupta (2015) suggest students begin learning communication skills early. So, it might be appropriate to incorporate several of the methods into a curriculum over time, with some in the didactic setting and others in the clinical setting. In other words, there is not one instructional method that is considered to be the gold standard.

Although experts may not agree on a gold standard method of implementation of communication skills in a curriculum, several authors do agree learning by doing, or experiential learning, in the clinical setting is best. According to Keir & Wilkinson (2013) the method of experiential learning when teaching communication skills is considered to be the most effective approach. Furthermore, Hazavehei et al. (2015) suggests that real environments are best for students because the atmosphere facilitates learning of communication skills. Although some of the methods may be initially taught in the didactic setting, communication skills, including interpersonal communication skills, ought to be practiced and evaluated in the clinical environment to enhance the development of such skills in the health care student. With athletic training students spending over half of their education in the clinical setting, interpersonal communication skills should be integrated in a rather effortless way during these experiences.

One way to incorporate interpersonal communication into clinical education is to develop competencies that should be taught in athletic training education programs. Henry, Holmboe, & Frankel (2013) developed a literature review using PubMed to search for current communication skills competencies. Criteria used with the search concluded successful communication were associated with better clinical outcomes or failed communication was affiliated with harm, such as inadequate medication reconciliation or unnecessary tests and procedures due to poor history taking skills (Henry et al., 2013). The competencies chosen also had to be observable and able to be evaluated with patient-physician interactions (Henry et al., 2013). Verbal communication versus written was focused on in this review to develop twelve (four basic, four intermediate, four complex) evidence-based communication competencies based off of their criteria (Henry et al., 2013). These competencies include 1) the ability to take accurate and complete patient histories by encouraging the patient to provide more information

and asking for specific symptoms to increase accuracy of the interview, 2) the ability to communicate with other doctors with effective written communication, 3) the ability to communicate with other members of the health care team by demonstrating trust and building rapport, 4) the ability to set agendas with patients by understanding the patient's problems and having an efficient interaction, 5) the ability to assess and improve patient adherence by building a rapport and demonstrating respect, 6) the ability to deliver diagnostic and prognostic news with honest and open communication, 7) the ability to elicit patients' beliefs, perspectives, and concerns about illness by involving the patient in the discussion, 8) the ability to communicate treatment plans with using a check for understanding process with the patient, 9) the ability to establish patient rapport and demonstrate empathy with the use of both verbal and non-verbal communication and being supportive, 10) the ability to manage conflict and negotiate with patients with direct, clear verbal communication, 11) basic patient counseling skills by demonstrating care and compassion along with attentive listening, and 12) counseling families and caregivers by involving the family in the conversation (Henry et al., 2013). These competencies are skills certified athletic trainers use daily in practice and need to be proficient in when interacting with patients of all ages and in every setting. If athletic trainers want to be competent communicators, then interpersonal communication skills need to be taught in our athletic training education programs.

Another framework used to teach and examine interpersonal skills on a segmental basis is the Calgary-Cambridge Observation Guide developed by Kurtz and Silverman in 1996. The Calgary-Cambridge Observation Guide is a "skills-based curriculum" that focuses on the specific skills included within the doctor-patient consultation that can be taught at the undergraduate level, within residencies, and in continuing education (Kurt et al., 2005, p. 37). The Calgary-Cambridge Observation Guide is a versatile tool in which educators at all levels

can utilize to teach and assess communication skills. Such a tool could be used in the athletic training profession to educate students on how to communicate with their patients.

The Calgary-Cambridge Observation Guide is broken down into tasks and skills. There are six tasks involved in the framework with "seventy-one core, evidence-based communication process skills" (Kurtz et al., 2005, p. 43). The six tasks include the following:

1. Initiating the session
2. Gathering information
3. Providing structure to the consultation
4. Building the relationship
5. Explanation and planning
6. Closing the session (Kurtz et al., 2005; Silverman et al., 2013).

The seventy-one skills are divided up into each of the tasks. For example, within the first task of initiating the session, there are seven skills including greeting the patient, the clinician introducing themselves and their role, demonstrating respect by using their name and asking level one questions (superficial communication such as asking about their day), identifying the patient's problems, listening attentively, confirming the list and screening for further problems, and negotiating an agenda taking both the patient's and physician's needs into account (Kurtz et al., 2005; Silverman et al., 2013). Each task and skill can be taught individually and then the student should rehearse these skills in both the didactic and clinical settings to become proficient in their interpersonal communication skills.

There are numerous methods of how to incorporate interpersonal communication skills training regardless of the framework chosen. According to duPré (2005) in her chapter about the caregiver perspective, she discusses medical school reform and how communication skills trainings may be incorporated into the curricula over a three-year timeframe. Other

studies discuss the benefit of three day programs (Kurtz et al., 2005 as in Levinson & Roter, 1993). There is research to suggest that even an eight hour communication skills course improves patient outcomes and patient satisfaction (Kurtz et al., 2005 as in Roter et al, 1995 and in Roter et al., 1998). Hence communication skills programs and curricula vary in length and methodology. However even a small amount of time teaching and practicing communication skills with health care providers may improve a clinician's interview skills, which in turn lead to better patient care.

Rehearsal of Interpersonal Communication Skills

Once the skills are introduced and taught to students, just as with technical skills such as performing an ankle tape on an athlete, practice of communication skills needs to take place to enhance the skills. According to Kurtz et al. (2005) the skills should be practiced in a safe, supportive environment where there is no chance of harm to the patient, and with peers or simulated patients so that the student can receive feedback. Repetitive rehearsal and feedback allows the student to become more confident and competent in the communication skills learned. Once students begin to feel comfortable with their newly learned skill, they can then practice on real patients, which will only increase the student's skill development.

All students learn at different paces and in a variety of ways and this does not differ when it comes to learning interpersonal communication skills. Kurtz et al. (2005) stated, "Each learner has to discover their own way to put each skill into practice" in order to refine their interpersonal communication skills (p. 69). When instructing such skills, the educator needs to allow for flexibility in how the student chooses to practice each skill. A few examples of methods used to practice interpersonal communication skills include small group or one-on-one and could involve recording themselves, receiving feedback, and observation (Kurtz et al., 2005). Just as with most content taught in education, one method will not work for all students.

Educators need to realize there are diverse student learners, especially with communication, and should allow and encourage multiple methods of rehearsing interpersonal communication skills.

Assessment of Interpersonal Communication Skills

When evaluating interpersonal communication skills of health care students, there are several methods that may be utilized. Directed observation & portfolios (Hazavehei et al., 2015), objective structured clinical examination (OSCE) (Khanal, Bhusal, Sigdel, & Bajracharya, 2015, Cömert, Jördis, Christalle, Dirmaier, Härter, & Scholl, 2016, Jahan, Moazzam, Norrish, & Naeem, 2014, O'Sullivan, Chao, Russell, Levine, & Fabiny, 2008) and forms of self-assessment (Nørgaard, Kofoed, Kyvik, & Ammentorp, 2012, Ramaswamy, Williams, Clark, & Kelley, 2014, King, Servais, Bolack, Shepherd, & Willoughby, 2012). OSCE's and self-assessment techniques are examined in this review.

Objective Structured Clinical Examination (OSCE). The OSCE is a tool that many medical schools utilize to evaluate interactions between medical students and standardized patients (SP) (a volunteer that will perform as a patient and has been trained about the content of the situation and is to act out with appropriate cooperation and emotions) (Khanal et al., 2015). The OSCE was originally introduced by Harden in 1975 (Setyonugroho, Kennedy, & Kropmans, 2015). There are many different types of the OSCE with different purposes. According to Cömert et al. (2016) "an OSCE consists of several stations with different tasks and aims to simulate real clinical encounters between physician and patient" (p. 2). For example, students may go through a mock interview followed by an evaluation of an SP, including history taking, evaluation, and discussion of their findings with the patient. This mock evaluation could then be analyzed by the SP, reflection by the student, or observed by a

clinical instructor. The OSCE is designed to provide the student with a simulated situation in which the evaluation can focus on any area in health care, such as communication.

There are advantages and disadvantages when using an OSCE to assess clinical skills. The OSCE is a valid and reliable form of assessment but can be “logistically demanding” and expensive (O’Sullivan et al., 2008 and Setyonugroho et al., 2015). It takes time and money to adequately train the SP, develop the scenarios, find appropriate settings, and develop the assessment checklists. However, the OSCE can provide the student and teacher with valuable information to assist in guiding the student to become a more competent health care clinician.

Studies were conducted utilizing an OSCE to evaluate communication skills in other health care professions. A quasi-treatment study that included twenty-five family medicine residents performed by Pagels, Kindratt, Arnold, Brandt, Woodfin, & Gimpel (2015) used an OSCE to examine communication skills and found the OSCE to be a reliable tool. Setyonugroho et al. (2015) completed a systematic literature review on studies that reported empirical validity or reliability values for the communication skill assessment checklists used using Pubmed, Embase, PsycINFO, and the ProQuest Education Databases up to 2013 to examine the reliability and validity of OSCE checklists used to evaluate communication skills in undergraduate medical students. The review suggested that adoption of a standardized measurement instrument to assess communication skills would be beneficial (Setyonugroho et al., 2015). In addition, a cross-sectional, quantitative study completed by Khanal et al. (2015) examined the effectiveness of the Early Clinical Exposure (ECE), which is a method in teaching history-taking, physical examination and communication to clinical students. Methods in this study included a seventeen station Objective Structured Clinical Examination (OSCE) to seventeen clinical students (Khanal et al., 2015). The OSCE utilized determined that student performance was not meeting curriculum expectations (Khanal et al., 2015). The results of this

study could be used to enhance the ECE course to better fulfill its objectives. These studies are a small representation of the use of an OSCE in the medical profession, and as demonstrated, the OSCE is a widely used tool to examine communication skills in health care education.

Self-assessment. Self-assessment is another common form of evaluation used in the medical field when assessing clinical skills. According to Jahan et al. (2015) self-assessment is "guiding the future learning, providing reassurance, and promoting reflection" in students (p. 27). Self-assessment could be a more practical method of assessing communication skills. There are several techniques available to self-assess.

Questionnaires are one tool that can be used with students to assess themselves, as well as evaluations by the SP and clinical instructors. The Calgary-Cambridge Consultation Guide often serves as a basis for checklists that are developed for questionnaires (figure 1) (Jahan et al., 2015). Statements are developed from each of the tasks from the Calgary-Cambridge Consultation Guide and placed on a Likert scale for rating. For example, in the task of "initiating the session," a statement such as 'I introduced myself to the patient.' would be placed into the questionnaire and then a student would have to rate himself from 1-5 (strongly disagree to strongly agree) on the statement.

There are numerous items that one could use when asking students to self-report on their communication skills. General communication, obtaining history, delivering bad news, discussing bad news with family, discussing goals of care, and leading a family meeting are all examples of communication that could be evaluated in a self-assessment (Ramuswamy et al., 2014). There are also various listening skills that can be reflected upon such as checking to see if the patient understood what you have said, clarifying goals, encouraging the patient to ask questions, and listening to what is not being said are just a few listening domains to consider (King, Servais, Bolack, Shepherd, & Willoughby, 2012). There are numerous components one

could include when evaluating communication skills in the health care profession. Finding the skills that most closely relate to the profession of athletic training can be adapted from the other health care professions that have been incorporating communication skills training for many years.

Feedback. Feedback can be a valuable tool when assessing students and their interpersonal communication skills. This form of assessment allows for the student to learn what is done well and what areas need improvement, along with the student gaining a better understanding of their patient interaction skills. In order for feedback to be beneficial for the student, it needs to be "specific, detailed, non-judgmental, and well intentioned" (Kurtz et al., 2005, p. 68). Students can gain a lot about their skill development through feedback and it can help motivate them to continue improving their skills. The educator needs to provide very descriptive feedback in a safe environment for the student to take the criticism in a positive and educational manner.

The Calgary-Cambridge Observation Guide can also be used with training and videotaping as a form of feedback. In a study by Nørgaard et al. (2012) participants (doctors, nurses, nursing assistants, and medical secretaries) were trained using the Calgary-Cambridge Observation Guide for three days, then were given six-weeks to practice the tools provided to them in the training and videotaping a real situation with a patient or colleague. The videotapes were then used for discussions and personal feedback sessions (Nørgaard et al., 2012). Overall, the study showed an increase in patient satisfaction after the training was complete (Nørgaard et al., 2012). This study supports earlier statements that training, and assessment of communication skills should occur often to improve patient satisfaction.

Summary

Athletic trainers are health care professionals that, just like all other health care workers, need to communicate with patients and other allied health care professionals daily. Effective interpersonal communication skills are deemed extremely important by athletic trainers, employers, and patients, yet training in interpersonal communication is lacking in athletic training education programs. It is vital in the profession of athletic training that interpersonal communication skills are taught to students. Teaching interpersonal communication skills is not new to health care professions. In fact, previous research demonstrates that medical students and nursing students currently receive such training. Commonalities found among research in other fields conclude that communication skills can be taught. Research suggests communication skills should be introduced early and students should be given the opportunity to practice these skills often, as well as assessed regularly. Another commonality in previous research is that it is recommended to teach communication and allow students to practice this skill in the clinical education setting. Although there are discrepancies in previous research as to the methods of implementation of teaching strategies in the health care fields, it is a common practice to use the OSCE, self-assessments, and feedback in the evaluation process.

Discussion

Conclusion. A gap exists in athletic trainer preparation when it comes to interpersonal communication skills. Entry-level athletic trainers are considered to be quality if they can communicate and relate to patients, coaches, parents, administrators, etc. Athletic trainers are also expected to have effective interpersonal communication skills when entering the workforce, yet many entry-level athletic trainers are found to be deficient in their interpersonal communication skills. Athletic training curriculums do not incorporate courses or clinical

education rotations that focus on communication, specifically interpersonal communication skills. When and where are athletic trainers expected to acquire the skill of interpersonal communication in order to become an effective and quality athletic trainer? This study will determine the effectiveness of a six-week communication skills training on athletic training students' interpersonal communication skills during initial patient encounters and application in clinical practice.

Implications. Demonstrating a method of teaching, practicing, and assessing interpersonal communication skills in athletic training education may greatly impact the profession of athletic training. Athletic training programs that can incorporate such training may produce more quality entry-level athletic trainers. Athletic trainers that are competent in their daily communication with patients and other necessary individuals will lead to improved patient care and improved patient outcomes.

Suggestions for Further Research

Future research should replicate the study on a larger scale with a more diverse and larger population. Research could also be conducted on the impact interpersonal communication skills training has on entry-level athletic trainers and employers' perceptions of entry-level athletic trainers' interpersonal communication skills if interpersonal communication skills training was received in the athletic training education program. Perceived confidence of entry-level athletic trainers who received interpersonal communication skills training could also be examined in future research.

CHAPTER III. METHODOLOGY

The purpose of this study was to determine the effectiveness of a six-week communication skills training on athletic training students' interpersonal communication skills during initial patient encounters and application into clinical practice. Employers consider interpersonal communication skills to be extremely important for the athletic training profession, but often lack in entry-level athletic trainers (Aldret, 2014). Since interpersonal communication skills are viewed so highly, yet underdeveloped in new graduates, it was crucial to develop and examine a method of instructing such skills in athletic training professional education programs. The intent of this study was to assess whether an interpersonal communication skills training improved communication in athletic training students and whether athletic training students utilized effective interpersonal communication in the athletic training clinical education setting.

The remainder of this chapter describes all methods used in this study, including the research design, selection of participants, the instrumentation utilized to gather the data, data collection procedures, all the research questions, data analysis, and assumptions associated with the study.

Research Design

The research approach used to gather, analyze, and interpret data for this study was mixed methods, utilizing both qualitative and quantitative analysis. Quantitative data were collected to investigate whether there was a numerical difference in the baseline and post-testing of both groups, while qualitative data were utilized to analyze students' perceptions of the communication skills training and to examine the impact on clinical application. An "advantage is that by using multiple methods, researchers are better able to gather and analyze considerably more and different kinds of data than they would be able to using just one

approach" (Fraenkel, Wallen, & Hyun, 2012, p. 11). A mixed-methods approach allowed the researcher to view the data from multiple perspectives, gain a deeper understanding of the data, and have the ability to use various methodologies within the study.

Quantitative. In order to attempt to control for extraneous variables and biases and to reduce threats to internal validity for the communication skills training, a treatment randomized baseline-post-test control group methodology was used. According to Fraenkel et al. (2012) this design is used when examining two groups (treatment and control groups) that are measured twice, once before and once after the treatment. This type of design allowed the researcher to compare one group with interpersonal communication skills training to a group without training during patient encounters. This type of quantitative methodology was used to examine the first and third research questions which evaluated the impact interpersonal communication skills training had on an athletic training student's interpersonal communication skills during a patient encounter and self-perceptions of athletic training students' communication skills.

Qualitative. All three research questions involved qualitative analysis. Research question one, to what degree does a six-week communication skills training improve an athletic training students' interpersonal communication skills during a patient encounter and research question two, do athletic training students with interpersonal communication skills training apply the communication skills into clinical practice. Both utilized responses from a structured interview process of the research assistant and the subjects in the treatment group. Research question three, which examined athletic training students' perceptions of their interpersonal communication skills during a patient encounter, involved qualitative analysis as well. Self-assessment forms were completed by the subjects following their patient encounters during baseline and post-testing. Descriptive and pattern coding were used to identify

categories from the data to develop themes as to athletic training students' perceptions with interpersonal communication skills.

Participants

The target population for this study included athletic training students from an athletic training program at a small, private, Division III liberal arts institution consisting of approximately 2253 students located in a small Midwest town. There were approximately 2140 undergraduate students represented from thirty-one states and thirteen countries.

At the time of the study the athletic training program consisted of twenty-nine students, including fourteen males and fifteen females, all of whom were studying to become certified athletic trainers and had clinical experience with the student-athletes, or patients, on campus. Students ranged in level of the athletic training professional program and included sophomores (n=12), juniors (n=6), and seniors (n=11). All levels of the athletic training professional program were used to address each research question.

The sampling scheme that was used was convenience sampling with groups stratified to balance demographic variables. In this study, participants were placed into the control group or the treatment group that consisted of interpersonal skills training based upon gender and year in the athletic training professional program.

All participants included within the study completed the informed consent to keep their rights protected. The informed consent and all data collection procedures received Institutional Review Board (IRB) approval prior to any data collection.

Instrumentation & Data Sources

Instrument #1-Calgary-Cambridge Observation Guide-Medical Skills Evaluation. The Calgary-Cambridge Observation Guide was first introduced in 1996 by Kurtz and Silverman to provide a structure for teaching and learning communication skills and to help

program directors across multiple medical professions establish communication training programs to teach and assess their students' communication skills. Kurtz, Silverman, & Draper (2005) made the recommendation to "adapt the guides for use as research instruments" (p. 338). The guide is a skills-based curriculum with seventy-one communication process skills within four main components that include 1) structure (organization of communication skills), 2) skills, 3) validity (evidence that such skills impact doctor-patient interactions), and 4) breadth (scope of communication curriculum) (Kurtz et al., 2005). The Calgary-Cambridge Observation Guide was an appropriate tool to use to teach and assess communication skills in an athletic training curriculum.

The Medical Skills Evaluation (See Appendix D) includes the Calgary-Cambridge Observation Guide's framework which comprises six tasks encompassing forty of the seventy-one communication process skills:

1. Initiating the session
2. Gathering information
3. Providing structure to the consultation
4. Building relationship
5. Explanation and planning
6. Closing the session (Kurtz et al., 2005).

During a patient encounter, or OSCE, if a clinician incorporates the six tasks and the communication process skills within each, increase in patient satisfaction, improved patient outcomes, and increase in patient interview accuracy and effectiveness are all goals to be reached (Kurtz et al., 2005). These goals are no different when an athletic trainer interacts with a patient during an evaluation. Therefore, a modified Calgary-Cambridge Observation Guide was chosen for this study in the athletic training profession and was completed by the

researcher on all test subjects during baseline, post-, and post-post-testing sessions. Modifications made included twelve additional items added to the evaluation that were taken from the *Teaching and Learning Communication Skills in Medicine* text and moving from a three-point likert scale to a four-point scale. All six categories were incorporated in the Medical Skills Evaluation with a total possible score of 120 points. The Calgary-Cambridge Observation Guide has a high inter-rater reliability (α=.95) according to Schirmer, Mauksch, Lang, Marvel, Zoppi, Epstein, Brock, & Pryzbylski (2005).

Validity. The following were the instruments utilized to gather data for this study. To ensure validity of the instrument, content validity was utilized. Experts in the profession of athletic training education were given a definition of what the instruments were to measure, along with the instruments and intended subjects, and were asked to judge the content and format of the instruments for appropriateness and to confirm the instrument addressed the intended variable.

Reliability. To confirm interrater reliability an intraclass correlation coefficient (ICC) was completed at the conclusion of the study to determine the degree of correlation and agreement between two measurements. A single rating with absolute agreement, two-way mixed effects in SPSS was used. The researcher and the standardized patient completed scoring on the Calgary-Cambridge Observation Guide-Medical Skills Evaluation during baseline and post-testing sessions after instrument training occurred.

Instrument #2-Subject Information Sheet. All subjects completed the Subject Information Sheet (See Appendix E) in order to gather data regarding gender and year in the athletic training program, which guided the determination of being placed in the treatment or control group for the study.

Instrument #3-Calgary-Cambridge Observation Guide-Medical Skills Evaluation-Self-Assessment. The Calgary-Cambridge Observation Guide-Medical Skills Evaluation was modified for this portion of study to include open-ended questions within each of the six categories completed by the subjects following their patient encounter during the post-testing session. This instrument, the Calgary-Cambridge Observation Guide-Medical Skills Evaluation-Self-Assessment (See Appendix F), allowed for themes and categories to emerge regarding student perceptions of their communication abilities during a patient encounter.

Instrument #4-Interview Protocol. An audiotaped structured interview protocol with the research assistant and an audiotaped focus group interview protocol with the four subjects in the treatment group were conducted following the repeated post-testing to gather qualitative data regarding students' thoughts and perceptions on their improvement in their communication skills from the communication skills training and application of such skills in the clinical setting (See Appendix G).

Data Collection Procedures

There was one research assistant that helped with conducting the interpersonal communication skills training. The research assistant was a certified athletic trainer currently working in the clinical setting at the Midwest institution. There were two standardized patients affiliated with the physical therapy department from the same institution that were utilized during the baseline and post-testing. Standardized patients, or simulated patients in some texts, "portray live interactive simulations of specific medical problems and communication challenges to order…(and) are now more commonly either professional or amateur actors or trained members of the community…who portray roles outside their own experience" (Kurtz et al., 2005, p. 89 as in Barrows, 1987). Utilizing standardized patients prevents the student from inflicting harm on real patients in a safe environment. Prior to data collection during the fall

semester, training of the research assistant and both standardized patients took place. The training spanned over one week and consisted of the following:

- Training on instruments (observation guide and surveys) for both the standardized patients and research assistant
- Training on signs and symptoms for grade one ankle sprain for standardized patients
- Training of the study (data collection, sampling of participants, etc.)

Potential participants were gathered in early November for approximately one hour to explain the study and seek interest. Participant consent was gained of all interested participants with the informed consent form.

Convenience sampling of participants by the research assistant was performed once all interested participants completed their informed consent form. A subject information sheet (Appendix E) was completed by all interested subjects, which included their gender and year in the athletic training program. From here, subjects were placed in either the control or treatment group.

Baseline. Baseline of all subjects was completed to identify baseline scores on all instruments. Baseline data collection expanded over a one-week timeframe with thirty minutes spent on each participant (See Table 1).

- OSCE consisting of off-field ankle evaluation in a laboratory setting (same setting for all)
- Standardized patients were two physical therapy students
- Both the control group (n=4) and treatment group (n=4) performed an ankle evaluation

- The researcher observed and completed the Calgary-Cambridge Medical Skills Evaluation
- Standardized patient completed the Calgary-Cambridge Medical Skills Evaluation
- The student performed a self-assessment utilizing the Calgary-Cambridge Medical Skills Evaluation-Self-Assessment form

Communication Skills Training. All training was completed by the research assistant. Each session consisted of two hours (thirty minutes of presenting and discussing the skills within each task of the evaluation form (one task per session), twenty minutes viewing videotapes of appropriate interpersonal communication skills during a patient encounter, fifty minutes of practicing the skills in the session utilizing role play with partners, and twenty minutes for questions and answers) for the treatment group participants (See Table 1). All training came from the textbook titled *Teaching and Learning Communication Skills in Medicine* by Kurtz, Silverman, & Draper (2005). All training sessions were accompanied by a power point presentation, appropriate videos of effective patient interactions, and session learning outcomes. All sessions were video recorded for training purposes, which was part of the consent agreement. Please see Appendices D-I for each of the six communication skills training power points.

Communication Skills Training Program Outline.

Session #1 (two hours)-Initiating the session (See Appendix H)

Thirty minutes of discussing and presenting the skills within the task of initiating the session (greeting, introduction of self, demonstrating respect, identifying the problem list, listening attentively, confirming the problem list)-See power point

Twenty minutes viewing and discussing videotapes of appropriate and inappropriate interpersonal communication skills during a patient encounter when initiating the

session-See https://vimeo.com/20273465 , https://www.youtube.com/watch?v=-_Q7eR1cvgY in power point

Fifty minutes of practicing the skills of initiating the session with partners

Twenty minutes for debriefing and questions and answers

Session #2 (two hours)-Gathering Information (See Appendix I)

Thirty minutes of discussing and presenting the skills within the task of gathering information (Encourages patient to tell story, uses open and closed questions, listens attentively, verbal and non-verbal responses, clarifies patient's statements, clear language used)-See power point

Twenty minutes viewing and discussing videotapes of appropriate and inappropriate interpersonal communication skills during a patient encounter when gathering information-See "Poor Communication", "Proper Communication" videos in power point

Fifty minutes of practicing the skills of gathering information with partners

Twenty minutes for debriefing and questions and answers

Session #3 (two hours)-Providing Structure to the Consultation (See Appendix J)

Thirty minutes of discussing and presenting the skills within the task of providing structure to the consultation (Summarizes interview, uses transitional statements, logical sequence, timing)-See power point

Twenty minutes viewing and discussing videotapes of appropriate and inappropriate interpersonal communication skills during a patient encounter when providing structure

to the consultation (pick up summarizing, signposting, sequencing, and timing)-See "Medical Interview" video in power point

Fifty minutes of practicing the skills of providing structure with partners

Twenty minutes for debriefing and questions and answers

Session #4 (two hours)-Building the Relationship (See Appendix K)

Thirty minutes of discussing and presenting the skills within the task of building the relationship (Uses verbal and non-verbal behavior, prevent interference when writing notes, demonstrates confidence, not judgmental, empathetic, shares thinking with patient, explains process of examination with patient)-See power point

Twenty minutes viewing and discussing videotapes of appropriate and inappropriate interpersonal communication skills during a patient encounter when building the relationship -See "Build Rapport & Trust" and "Building Rapport" videos in power point

Fifty minutes of practicing the skills of building the relationship with partners

Twenty minutes for debriefing and questions and answers

Session #5 (two hours)-Explanation and Planning (See Appendix L)

Thirty minutes of discussing and presenting the skills within the task of explanation and planning (Checks for patient understanding, uses repetition when summarizing, clear language, uses explicit categorization, uses visual methods, negotiates plan)-See power point

Twenty minutes viewing and discussing videotapes of appropriate and inappropriate interpersonal communication skills during a patient encounter when explaining and planning -See “Explanation & Planning” and “Explanation” videos in power point

Fifty minutes of practicing the skills of explanation and planning with partners

Twenty minutes for debriefing and questions and answers

Session #6 (two hours)-Closing the Session (See Appendix M)

Thirty minutes of discussing and presenting the skills within the task of closing the session (Contracts with patient next steps, explains possible outcomes, summarizes session, final check for patient understanding or has questions)-See power point

Twenty minutes viewing and discussing videotapes of appropriate and inappropriate interpersonal communication skills during a patient encounter when closing the session -See “Closing the session”, “Closing the session II”, and “Child interview” videos in power point

Fifty minutes of practicing the skills of closing the session with partners

Twenty minutes for debriefing and questions and answers

Post-Testing. Post-testing of all subjects was completed to attain scores once again on all instruments in order to perform the data analysis. Post-testing expanded over a one-week timeframe with thirty minutes spent on each participant (See Table 1).

- OSCE consisting of off-field ankle evaluation in a laboratory setting (same setting for all)
- Standardized patients were two physical therapy students

- Both the control group (n=4) and treatment group (n=4) performed an ankle evaluation
- The researcher observed and completed the Calgary-Cambridge Medical Skills Evaluation
- Standardized patient completed the Calgary-Cambridge Medical Skills Evaluation
- The student performed a self-assessment utilizing the Calgary-Cambridge Medical Skills Evaluation-Self-Assessment form

Repeated Post-Testing. Repeated Post-Testing of all subjects was completed once more one and a half months after post-testing over a one week period to analyze the athletic training students' interpersonal communication skills application in clinical practice (See Table 1). These testing procedures were completed over a week time period.

- Clinical education setting
- The researcher observed subjects in both groups performing various injury evaluations and completed the Calgary-Cambridge Medical Skills Evaluation

Interviews. An interview with the research assistant and a focus group interview session was completed in separate sessions after all other data were collected (See Table 1). The research interview took approximately twenty minutes and the focus group interview took approximately forty-five minutes.

- Interviews took place in a quiet, secluded laboratory setting
- The researcher conducted both the interview and the focus group
- The RA and three subjects from the treatment group were interviewed

Table 1

Data Collection

Sessions	Date of Session
Baseline Testing	November 7-8, 2017
Session 1-Initiating the Session	November 9, 2017
Session 2-Gathering Information	November 14, 2017
Session 3-Providing Structure to the Consultation	November 20, 2017
Session 4-Building the Relationship	November 28, 2017
Session 5-Explanation and Planning	December 5, 2017
Session 6-Closing the Session	December 11, 2017
Post-Testing	December 13-14, 2017
Repeated Post-Testing	January 17-23, 2018
Interviews	March 15, 2018

Research Questions

1. To what degree does a six-week communication skills training improve an athletic training student's interpersonal communication skills during a patient encounter?
2. Do athletic training students with interpersonal communication skills training apply the communication skills into clinical practice?
3. What are athletic training students' perceptions of their interpersonal communication skills during a patient encounter?

Data Analysis

This study was a mixed methods study; therefore, data analysis included both inferential statistics and descriptive content analysis to triangulate the data. When triangulating

in a study, a number of different instruments are used to collect data which heightens the validity (Fraenkel et al., 2012). The inferential and descriptive statistics used in this study are described in the following paragraphs. All inferential data analysis were performed using IBM SPSS software. Descriptive and pattern coding were performed using MAXQDA software.

Research bias included knowledge of which subjects were in the control and the treatment groups. To control for this bias, the research assistant kept all Subject Information Sheets and knowledge of which subjects were in each group until after all data analysis was completed.

Both quantitative and qualitative analysis allowed the researcher to examine research question one which was to what degree the six-week communication skills training improved the athletic training students' interpersonal communication skills during a patient encounter. Inferential statistics were used to evaluate the sum of the participants' scores on the Calgary-Cambridge Medical Skills Evaluation for both the control and the treatment groups. The total possible points available to achieve were 120 points on this instrument each time tested. Gain scores were examined to assess the growth of the athletic training students' interpersonal communication skills. These scores were analyzed using Repeated Measures Analysis of Variance (ANOVA) with the alpha at 0.05. This analysis was completed baseline and post-communication skills training on both the control and treatment groups to evaluate the athletic training students' interpersonal communication skill development over the six-week period.

In addition to the use of inferential statistics, descriptive and pattern coding were also completed to answer research question one. The qualitative analysis was performed on data collected via an interview with the research assistant and a focus group interview with the subjects in the treatment group. Themes and categories were developed from the interviews to

create a narrative to explain how the communication skills training improved students' interpersonal communication skills during patient encounters.

Qualitative analysis was used to examine the results of research question two which evaluated athletic training students' interpersonal communication skills applied in the clinical setting. Descriptive and pattern coding were performed on the data attained from the structured interviews with the research assistant and the subjects in the treatment group. Themes and categories were developed from the interviews to create a narrative to explain how the students were applying the interpersonal communication skills learned in the communication skills training during patient encounters in the clinical setting.

Descriptive coding was then used with all open-ended responses for both the control and treatment groups with their baseline and post-testing self-assessment forms to assign labels to the open-ended responses. Descriptive coding is a process which enables the researcher to assign labels to the data to summarize phrases into a word, usually a noun (Miles et al., 2014). Both the start codes and descriptive codes were narrowed down to the following categories: relationships, non-verbal communication, communication, patient care, and demonstration of caring

Pattern coding was then utilized for the second-cycle coding process. "Pattern codes are explanatory or inferential codes, ones that identify an emergent theme, configuration, or explanation. They pull together a lot of material from first cycle coding into more meaningful and parsimonious units of analysis" (Miles et al., 2014, p. 86).

When evaluating research question three, what athletic training students' perceptions of their interpersonal communication skills are during a patient encounter, both quantitative and qualitative statistics were used. The scores from the Calgary-Cambridge Medical Skills Evaluation-Self-Assessment (Appendix F) forms were analyzed using Paired Samples t-test

with the alpha at 0.05. This analysis completed baseline and post- communication skills training on all subjects to evaluate the athletic training students' perceived interpersonal communication skill development over the six-week period. A Pearson Correlation with the alpha at 0.05 was utilized to compare the researcher's scores on the Calgary-Cambridge Medical Skills Evaluation to that of the Self-Assessment scores provided by the subjects.

When performing a content analysis, the subjects in the study performed a self-assessment utilizing the Calgary-Cambridge Medical Skills Evaluation-Self-Assessment (Appendix F) that included open-ended questions pertaining to student perceptions of their communication abilities for each portion of the evaluation. Conceptual categories emerged from the data found on the Calgary-Cambridge Medical Skills Evaluation-Self-Assessment form. These themes were then taken to create a narrative explaining the athletic training students' perceptions of their interpersonal communication skills during a patient encounter.

Assumptions

It was assumed that all participants were honest when completing the self-assessments and the treatment group remained confidential with the communication skills training content. Another assumption was the subjects understood the self-assessment form and the questions on the self-assessment form uncovered any themes or categories that were present. It was assumed the communication skills training is the factor that impacts the development of the athletic training students' communication. However, this could not be controlled. It was assumed the control group not receiving the communication skills training would have little to no change in their ability to communicate and the treatment group with the training would have improved communication skills at the conclusion of the study. It was assumed the research assistant was

adequately trained and proceeded with the communication skills training as outlined and did not deviate from the program. One final assumption was all instruments were valid and reliable.

CHAPTER IV. RESULTS

The analysis of this treatment baseline-post-test control group methodology utilized inferential statistics to compare one group who received interpersonal communication skills training to a group without such training to answer two of the three research questions addressing interpersonal communication skills in athletic training students. Descriptive content analysis was also utilized to develop categories and themes from the data to analyze all three research questions. This mixed-methods approach allowed the researcher to view the data from multiple perspectives and gain a deeper understanding of the data.

All inferential data analysis was performed using IBM SPSS software, while the descriptive and pattern coding was performed using MAXQDA software. The remainder of this chapter describes the characteristics of the sample, how the subjects were assigned to each group, and the analysis of the three research questions.

Characteristics of the Sample

The participants for this study included eight (n=8) athletic training students from an athletic training professional program (See Table 2). The sample included seven (n=7) females and one (n=1) male, all of whom had clinical experience with evaluating, or having initial patient encounters, with the student-athletes, or patients, on campus. Students ranged in level of the athletic training professional program and included sophomores (n=5), juniors (n=2), and seniors (n=1).

Table 2

Participant Characteristics

Subjects	Age	Gender	Year in Athletic Training Program	Cumulative GPA	Previous Communication Training
1	20	Female	2	3.61	No
2	19	Female	2	2.938	No
3	21	Female	3	3.701	Yes
4	21	Male	4	3.2	No
5	19	Female	2	3.7	Yes
6	19	Female	2	3.375	Yes
7	20	Female	3	3.33	No
8	20	Female	2	3.059	No

The sampling scheme that was used was convenience sampling with groups stratified to balance demographic variables. In this study, participants were placed into the control group or the treatment group that consists of interpersonal skills training based upon year in the athletic training program, GPA, and previous communication skills training or communication courses. For example, if there were two sophomore students with similar GPAs, one of the students was placed into the treatment group while the other was placed into the control group. Few participants had previous communication courses or training, but for those students in the same cohort that did have previous communication training experience, they were first stratified based upon GPA, then grouped based upon previous communication experience.

All participants included within the study completed the informed consent to keep their rights protected. The informed consent and all data collection procedures received Institutional Review Board (IRB) approval prior to any data collection.

Instrument Validity and Reliability

Validity. The modified Calgary-Cambridge Medical Skills Evaluation instrument was utilized by the researcher and the subjects as a self-assessment instrument to gather data for this study. To ensure validity of the instrument, content validity was utilized. Three experts in the profession of athletic training education identified the content and format of the instruments for appropriateness and confirmed the instrument addressed the intended variable to be measured.

Reliability. Interrater reliability confirmation was gained using an intraclass correlation coefficient (ICC) (See Figure 2). The ICC using multiple raters with absolute agreement, two-way mixed effects in SPSS was calculated on both baseline and post-testing rater scores on the

Figure 2. Intraclass Correlation Coefficient

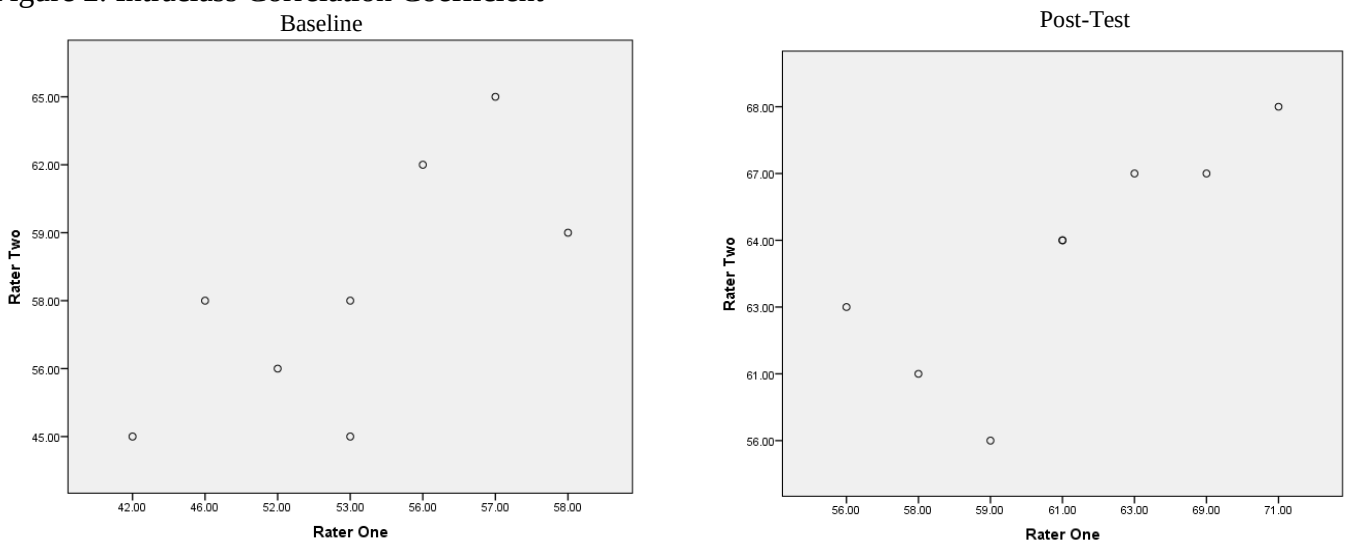

Figure 2. A two-way mixed effects model with absolute agreement and confidence level at 95% was used to determine the variance in the mean of the two raters.

Calgary-Cambridge Observation Guide-Medical Skills Evaluation. The baseline ICC score was 0.691 with p=0.045 and the post-test ICC score was 0.804 with p=0.022.

Research Question 1

Research Question 1. To what degree does a six-week communication skills training improve an athletic training students' interpersonal communication skills during a patient encounter? Inferential statistics were used to evaluate the sum of the participants' scores on the Calgary-Cambridge Medical Skills Evaluation for both the control and the treatment groups. The total possible points available to achieve were 120 points on this instrument each time tested. The gain scores examined the difference between the baseline and post-tests to assess the growth of the athletic training students' interpersonal communication skills. These scores were analyzed using Repeated Measures Analysis of Variance (ANOVA) with the alpha at 0.05 (See Figure 3). This analysis was completed on baseline, post-, and repeated post- communication skills training on both the control and treatment groups to evaluate the athletic training students' interpersonal communication skill development over the six-week period.

The results of the repeated measures analysis of variance identify both the treatment and control groups' interpersonal communication scores on the Calgary-Cambridge Medical Skills Evaluation improved over time, but there were no significant differences between the groups. There was a difference across trials, $F(2, 12)=18.476$, $p=.00022$. Using a Tukey HSD post-hoc test, it was determined there were improvements made over time between the baseline and repeated post-test and between the post-test and the repeated post-test. There were no significant differences between the baseline and the post-test $F(2, 12)=.03862$, $p=.96224$ (See Figure 3).

Figure 3. Research Question 1-Communication Skills Over Time

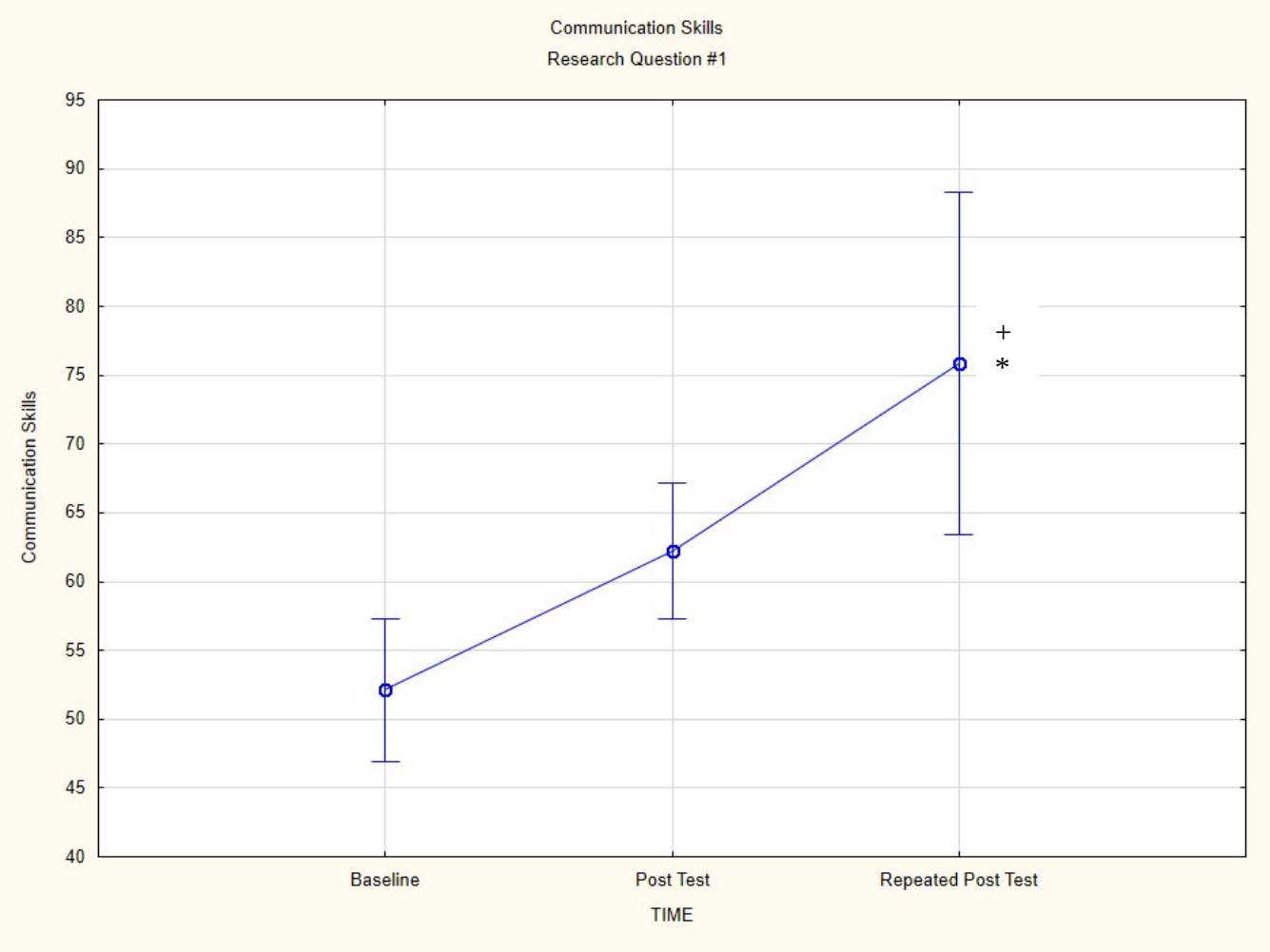

Figure 3. Subject scores on the Calgary-Cambridge Medical Skills Evaluation of both groups over time. Confidence interval at 95%.
*Significant difference from baseline to repeated post-test, p=0.00022
+Significant difference from post-test to repeated post-test, p=0.00032

Figure 4. Research Question 1-Communication Skills By Group

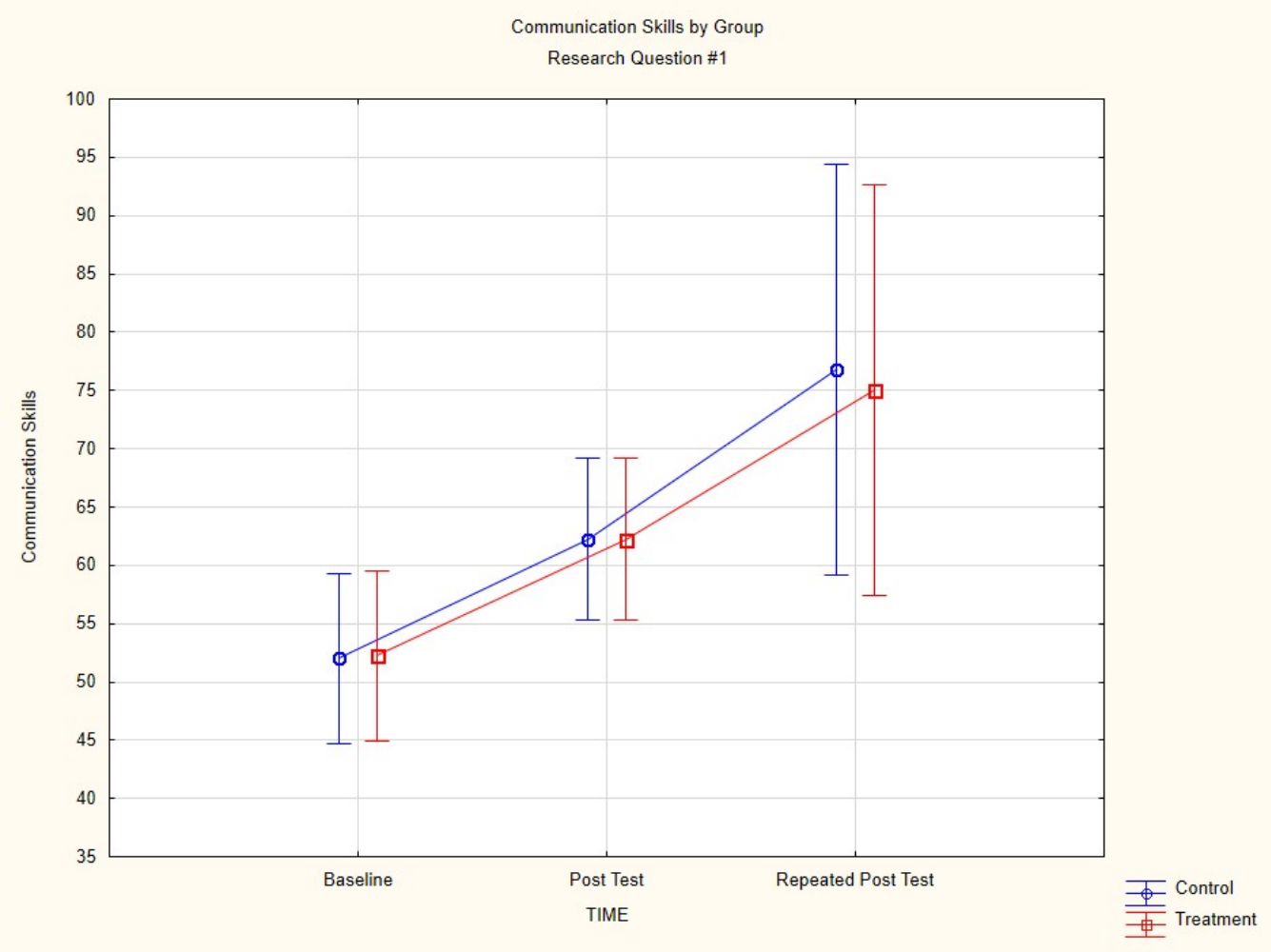

Figure 4. Subject scores on the Calgary-Cambridge Medical Skills Evaluation of the treatment and control groups over time. Confidence interval at 95%.

Qualitative analysis was also performed to examine the degree to which a six-week communication skills training can improve an athletic training student's interpersonal communication skills during a patient encounter. Descriptive and pattern coding were used to

interpret interviews completed with the treatment group of subjects. Open coding was used to develop categories from the interview responses. Descriptive coding was then utilized to assign labels to the interview responses. See table 3 for the responses the treatment group offered eluded to two categories: skills learned and comfort during an evaluation.

Skills Learned. The subjects describe communication skills learned from the training as being useful during a patient evaluation. One student noted "I didn't introduce myself before the training because I didn't know the proper way." The subjects also discussed experiences prior to the training and provided thoughts as to why the patient did not return for treatment or went to another athletic training student or athletic trainer instead of going to them. She stated, "by not communicating (effectively) it effected the whole season…". This statement suggests poor communication skills effected not only a single patient encounter, but an entire season of working with a team. Multiple students agreed the training was useful and "eye-opening." The students were introduced to new skills that could be incorporated into patient encounters to positively effect interpersonal relationships.

Comfort During an Evaluation. The subjects also identified comfort levels of both the patient and themselves during a patient encounter once communication skills training was received. A student stated patient encounters as "…not being awkward because we were given guidelines to follow to make them (patient) feel more comfortable". Overall the athletic training students feel more comfortable performing an evaluation as well as assisting the patient with feeling more comfortable when using the skills learned in the communication skills training. Responses regarding patient comfort included the students "…make them (patient) feel more comfortable" and "…helped them (patient) understand everything…". By incorporating interpersonal communication skills into the patient encounter students feel they and the patient are put more at ease during the process.

Table 3

Summary of Findings-Participant Interviews Regarding Improvement of Communication Skills

Categories	Meaning	Evidence from Data
Skills Learned	Verbal and non-verbal techniques to communicate, active listening, building trust and rapport, introduction of self	Guidelines to follow, eye-opening, understood source of miscommunication with patient
Comfort During Evaluation	Comfort during the evaluation process includes comfort for the clinician and the patient, both physical and emotional comfort	Make them (patient) feel comfortable, make the evaluation less awkward, slowed down evaluation, helped the patient understand everything, understood the non-technical components of an evaluation, patients will have an increase in their willingness to see the athletic trainer if they are comfortable

Note. The evidence described above was extracted from the treatment group interviews, not from the research assistant interview.

Research Question 2

Research Question 2. Do athletic training students with interpersonal communication skills training apply the communication skills into clinical practice?

Descriptive and pattern coding were utilized to address students' clinical application of interpersonal communication skills learned in the communication skills training during a patient encounter. Open coding was used to develop categories from the interview responses. Descriptive coding was then utilized to assign labels to the interview responses. Refer to table 4 for responses from both the subjects in the treatment group and the research assistant

concluded three categories: skills applied, purpose of skill application, and focus on technical skills.

Skills Applied. The subjects discussed which communication skills were applied in the clinical setting. Early in the communication skills training the process of initiating the session was taught and included in this aspect of the training involved introductions of the clinician and their role. One student described the importance of introductions as "it is important to introduce yourself, so patients will go to her...". It is necessary for patients to get to know their athletic trainer, so they feel comfortable going to them for treatment. Students also referred to "making small talk", having a "conversation", and "getting to know your athlete" as important aspects of initiating the encounter and building a relationship with the patient.

Another technique taught in the communication skills training that students were attempting to apply clinically was explaining to the patient what was being done and why during the patient encounter. Students pointed out clinicians should "…explain what you're doing, for example palpating and performing special tests…". Explaining the evaluation process during a patient encounter while it is being performed is an interactive process that can build trust and rapport, which may lead to understanding, patient adherence, and better patient outcomes.

Active listening is a component crucial during the patient encounter and is used to hear the patient's complaints, gather noteworthy data, and to build the clinician-patient relationship. Students understand the significance of listening as "listening is an important skill in the clinic and in life" and that assumptions should not be made "…don't assume". In addition, students agreed interrupting the patient is inappropriate by the remark "…don't interrupt" being made.

The research assistant also spoke to the students about applying the communication skills content in to the clinical setting and being aware of the skills learned. She stated

"students were able to slow down and apply..." the communication skills during their patient interactions. She also noted "students used approaches and techniques…" that were taught in the communication skills training sessions. The research assistant also described conversations she had with the students regarding the communication skills and "students self-reported using and thinking about the techniques in the clinic".

Purpose of Skill Application. The subjects referred to reasons why communication skill application is important in the clinical setting. Explanations such as "letting the patient know what you are doing will make them less scared and relax them" were described by the students. The subjects also discussed ways communication allows others to know what the athletic training student is thinking during an evaluation. Other persons who need to understand a student's thought process include their preceptor and the patient. Students shared, communication "…lets your preceptors know what you are thinking…" and it "…allows the athlete (patient) to understand what is going on." By sharing the students' thoughts during an evaluation, trust and rapport are built, as well as developing an understanding of both patient and clinician perspectives.

Focus on Technical Skills. The subjects mentioned why they may not have thought about communication skills during a patient encounter prior to the communication skills training. Students reported, "I was focused on the injury" and I was "…focused on the injury rather than what the patient is telling us". Discussion of focusing on technical skills, such as hand placement during palpating anatomical structures, proper performance of a special test, or using the correct exercises in a rehabilitation plan were in the forefront of the students' minds rather than communication skills. This could be explained by the treatment group consisting mostly of sophomore students who have just recently learned the evaluation process and technical skills. Students also stated, I "…had no experience with being taught communication

skills like special tests or palpating.”. This suggests the focus of most athletic training professional education programs is on technical skills rather than interpersonal skills.

Table 4

Summary of Findings-Participant Interviews Regarding Clinical Application

Categories	Meaning	Evidence from Data
Skills Applied	Verbal and non-verbal techniques to communicate, active listening, building trust and rapport, introduction of self, explaining to patient	Explaining skills and what’s next, listening is important, conversation versus speaking, get to know patients, important to introduce yourself
Purpose of Skill Application	Reasons effective communication skills are needed as an athletic training student	Allows preceptor to know what you are thinking, allows patient to know and understand evaluation process, decreases anxiety of patient, increases relaxation of patient
Focus on Technical Skills	Technical skills are such skills as performing special tests, evaluating range-of-motion and manual muscle testing, neurological screening, and designing a rehabilitation plan	Focused on injury, assumed their goals, overthinking injury, had no previous experience with communication skills

Note. The evidence described above was extracted from both the research assistant and the treatment group interviews.

Research Questions 3

Research Question 3. What are athletic training students’ perceptions of their interpersonal communication skills during a patient encounter? Both quantitative and qualitative analysis were utilized with research question three. The scores from the Calgary-Cambridge Medical Skills Evaluation-Self-Assessment (Appendix C) forms were analyzed

using a Paired Samples t-test with the alpha at 0.05. This analysis was completed baseline and post- communication skills training on all subjects to evaluate the athletic training students' perceived interpersonal communication skill development over the six-week period (See Table 5). Results from the Paired Samples t-test reveal all participants perceived their interpersonal communication skills improved by 24.38 points out of 120 points over the six-week period $t(3)=-2.09$, $p=0.127$. This study did not determine the cause of perceived improvement by the subjects in both groups. Potential causes could include the subjects' knowledge of the self-assessment form and its contents from the baseline date to the post-test or the subjects from the treatment group sharing the communication skills training with the control group.

Table 5

Subject Self-Assessment Paired Samples Statistics

		Mean	N
Pair 1	Baseline	55.12±21.82	8
	Pos-Test	79.50±20.56	8

Note. ($p>0.05$)

A Pearson Correlation with the alpha at 0.05 was also utilized to compare the researcher's scores on the Calgary-Cambridge Medical Skills Evaluation to that of the Self-Assessment scores provided by the subjects (See Tables 6 and 7). Results from the Pearson Correlation comparing the researcher's scores on the Calgary-Cambridge Medical Skills Evaluation to that of the Self-Assessment scores provided by the subjects suggest a significant difference of perceived communications skills to the score of the researcher, $r=.328$, $p=0.428$. Athletic training students in this study perceived their interpersonal communication skills to be much higher than what the researcher suggests during the post-testing by 17.25 out of 120 points. This study did not determine the cause of perceived improvement by the subjects in

both groups. This study did not determine the cause of such differences in perception of the athletic training students compared to those of the researcher.

Table 6

Research Question 3-Pearson Correlation Baseline

	Mean	N
Researcher	52.12±5.54	8
Subject	55.12±21.82	8

Note. (p>0.05) Correlation is significant at -0.847 with p=0.008

Table 7

Research Question 3-Pearson Correlation Post-Test

	Mean	N
Researcher	62.25±5.25	8
Subject	79.50±20.56	8

Note. (p>0.05) Correlation is not significant at 0.328 with p=1.0

Descriptive and pattern coding were also used to analyze the qualitative data. The Calgary-Cambridge Medical Skills Evaluation-Self-Assessment form included open-ended questions pertaining to student perceptions of their communication abilities for each portion of the evaluation. Utilizing MAXQDA, conceptual categories emerged from the data found on the Calgary-Cambridge Medical Skills Evaluation-Self-Assessment forms.

The qualitative analysis involved several steps and types of comparison among the subjects from their baseline and post-test Calgary-Cambridge Medical Skills Self-Assessment forms to gain a deeper understanding of students' perceptions of their communication skills. The first step involved open coding from the open-ended responses on the baseline and post-test self-assessment forms to develop categories, or themes. Start codes were developed from

the theoretical framework which involves Peplau's Theory of Interpersonal Relations with building interpersonal relationships, the ability to communicate effectively, and managing patients with varying levels of difficulty at the core of the theory (Nyström, 2007). The method of deductive coding, which uses a start list of codes derived from a conceptual framework, research questions, or key variables brought to the study by the researcher prior to data collection, was used in this study (Miles, Huberman, & Saldañ̃a, 2014). The start codes included relationships, connections, holistic care, interactions, trust, respect, understanding, reflection of care, return to play, non-verbal communication, verbal communication, patient care, and demonstration of caring.

The meaning of each category and sample evidence gathered from subject responses within the data in MAXQDA is displayed in Table 8. These codes and themes were then taken to create a narrative explaining the athletic training students' perceptions of their interpersonal communication skills during a patient encounter.

Table 8

Summary of Findings of Descriptive Codes

Categories	Meaning	Evidence from Data
Relationships and Interactions	Developing rapport with the patient, establishing trust, supportive, involving the patient, demonstrating respect	Didn't interrupt, let him express his concerns, didn't cut him off, encouraged dialogue, made a joke, tried to make him laugh, asked about his sport
Non-Verbal Communication	Behaviors consisting of posture, touch (handshake), facial expressions, eye contact, vocal cues (silence, intonation), physical presence (grooming), environmental cues (location, lighting, furniture placement), active listening	Shook his hand, eye contact, listened, didn't interrupt patient, open posture
Verbal Communication	Clear and concise vocal communication, lack of jargon, explanations (of process, plan of care), encouragement of the patient, repetition, sharing of thoughts, open-ended questions	Introduces self, clarifies patient's statements, told him the plan, use of transitional statements, asked questions, asked what his problem was, discussed the injury
Patient Care and Satisfaction	Encourages emotions; picks up on verbal and non-verbal cues, determines patient's goals and expectations, holistic care demonstrated	Stressed the importance of treatment, make them feel comfortable, asked if things were ok, tried not to add stress
Explanation and Understanding	Contracts next steps with patient, summarizes the evaluation, checks for understanding, explains return to play	Explained each process, explained short-term and long-term rehab plan, stated what he could do, discussed possible diagnosis, asked if he had questions, asked if plan was good

The initial categories were evaluated to identify patterns, relationships, and themes with the students' perceptions of their interpersonal communication skills. Themes found included most student responses were related to verbal communication skills used regularly in the gathering information phase of the patient encounter. Building a relationship occurred typically during initiating the session and when building a relationship with the patient portions of the encounter. Students' perceptions of non-verbal communication skills typically included eye contact and active listening during initiating the session and gathering the information from the patient.

Unfortunately, patient care and satisfaction were not frequently addressed with the self-assessments (See Figure 5). Many times, the athletic training student did not ask for the patient's goals and expectations or concerns regarding their injury and summarizing the session to ensure patient understanding occurred.

Figure 5. Frequency of Athletic Training Student Responses on the Self-Assessment Form

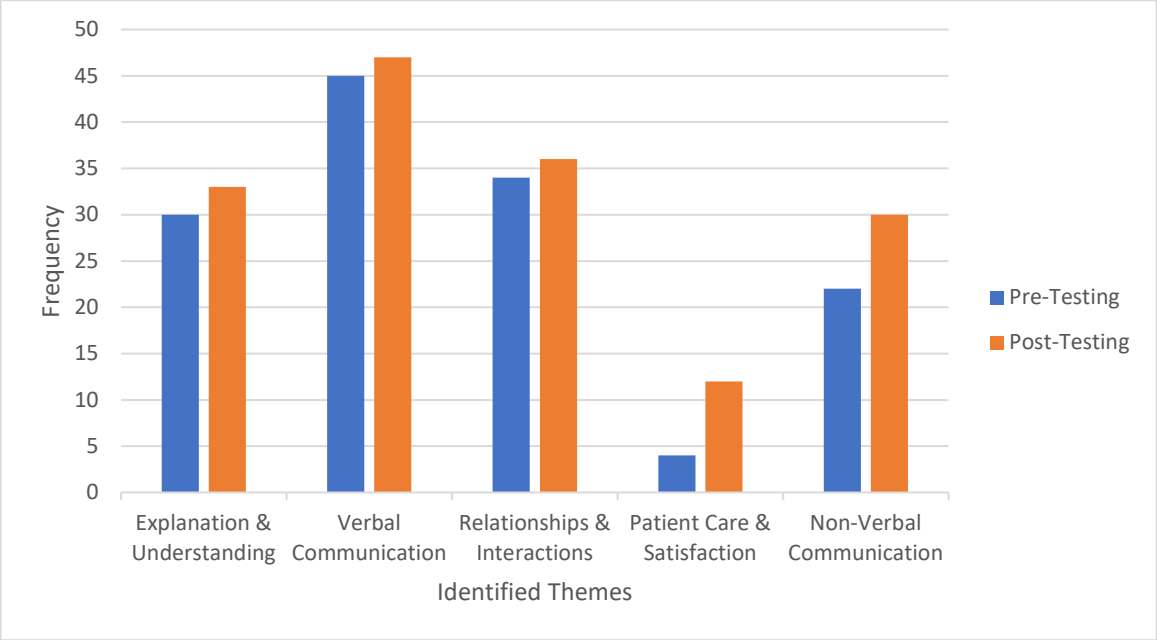

Figure 5. On the self-assessment forms the athletic training students did not address patient care and satisfaction as often as the other identified themes in the study.

Summary

The results of this study demonstrated athletic training students' interpersonal communication skills during initial patient encounters can improve with clinical practice over time. The study could not determine the cause of improvement in interpersonal communication skills among the athletic training students, including the use of the six-week interpersonal communication skills training.

The qualitative analysis suggested students attempted to apply interpersonal communication skills in clinical practice once such skills were taught. Themes emerged included skills applied, purpose of skill application, and focus on technical skills.

Both the treatment and control groups improved their Calgary-Cambridge Medical Skills Evaluation scores over time via the researcher's scores and the students' self-

perceptions. Overall, the students perceived their interpersonal communication skills to be better than the researcher viewed them at the time of this study. Both the control and the treatment groups self-assessment scores did improve over time as well. The study did not determine the cause of the self-assessment score improvements, but the researcher developed possible explanations as to why the scores did improve. These include the subjects potentially speaking to each other about the communication skills training, simply seeing the self-assessment form during the baseline and realizing what skills were being examined for the post-test, or the communication skills training not working. These possibilities will be further examined in more detail in Chapter 5.

Five themes emerged with the student responses provided on the Calgary-Cambridge Medical Skills Evaluation Self-Assessment forms. Of the five themes, student responses were more frequent in the areas of verbal communication and building relationships with the patient and less attention given to patient care and satisfaction.

This chapter provided an overview of the results of the data analyses for all three research questions. In the next chapter the results of each research question are interpreted and discussed in relation to previous literature. Implications, conclusions, recommendations, and suggestions for future research are described in the concluding chapter as well.

CHAPTER V. CONCLUSIONS AND RECOMMENDATIONS

The final chapter of this dissertation provides an overview of the study, discussion of each research question, conclusions, recommendations, and suggestions for future research on the topic of interpersonal communication within athletic training education. Chapter five demonstrates how the findings of each research question adds to the conversation about teaching interpersonal communication skills in athletic training education and the impact effective communication has on patient outcomes.

Review of the Study

Purpose of the Study. This study was designed to determine the effectiveness of a six-week communication skills training on athletic training students' interpersonal communication skills during initial patient encounters, as well as application of the skills in clinical practice and self-perceptions of students' communication skills. Thus far, the research states that the overall quality of an athletic trainer is partially based upon one's ability to demonstrate non-competency-based skills, which includes communication (Raab, Wolfe, Gould, & Piland, 2011). According to Massie, Strang, & Ward (2009) employers see an entry-level athletic trainer's technical skills and knowledge to be adequate but believe the communication skills to be underdeveloped. Currently there is limited research regarding teaching, practicing, or assessing communication skills in athletic training clinical education. According to Aldret (2014) "new athletic training graduates lack interpersonal communication skills and employers of athletic trainers consistently ranked personal characteristics such as, oral and written communication, leadership and interpersonal communications, highest in their list of hiring criteria" (p. 9). Entry-level athletic trainers are deemed quality based upon their interpersonal skills and not their technical skills, but interpersonal skills are not always taught in athletic training professional education programs. Understanding how communication skills can be

taught, practiced, and assessed along with clinical competencies within a student's clinical education experience could better prepare entry-level athletic trainers and make them more effective practitioners, thereby improving patient outcomes and satisfaction. Exploring how to teach, practice, and assess communication skills were addressed with the following research questions:

1. To what degree does a six-week communication skills training improve an athletic training student's interpersonal communication skills during a patient encounter?
2. Do athletic training students with interpersonal communication skills training apply the communication skills into clinical practice?
3. What are athletic training students' perceptions of their interpersonal communication skills during a patient encounter?

Theoretical Framework. Peplau's Theory of Interpersonal Relations provided the theoretical framework to interpret and understand this study, as well as supported the start codes for the qualitative analysis. Peplau's Theory focuses on the relationship between the practitioner and patient and concentrates on the connections people make (Deane & Fain, 2016). Building interpersonal relationships and the ability to communicate effectively are at the core of Peplau's Theory and are an appropriate fit when examining the skill of interpersonal relationships and communication amongst athletic training students.

Population. The participants for this study included eight (n=8) athletic training students in an athletic training professional program from a small, Midwest Division III institution. The sample included seven (n=7) females and one (n=1) male, all of whom had clinical experience with evaluating, or having initial patient encounters, with the student-athletes, or patients, on campus. Students ranged in level of the athletic training professional program and included sophomores (n=5), juniors (n=2), and seniors (n=1).

The sampling scheme that was used was convenience sampling with groups stratified to balance demographic variables. In this study, participants were placed into the control group or the treatment group that consists of interpersonal skills training based upon year in the athletic training program, GPA, and previous communication skills training or communication courses. For example, if there were two sophomore students with similar GPAs, one of the students was placed into the treatment group while the other was placed into the control group. Very few participants had previous communication courses or training, but for those students in the same cohort that did have previous communication training experience, they were first stratified based upon GPA, then grouped based upon previous communication experience.

Methods. This study used a mixed-methods, treatment randomized baseline-post-test control group methodology. The approach involved quantitative data to investigate whether there was a numerical difference on the Calgary-Cambridge Observation Guide Medical Skills Evaluation Form in the baseline and post-testing of both groups. Quantitative analysis was also utilized to examine student self-perceptions on the Calgary-Cambridge Medical Skills Self-Assessment form.

Qualitative analysis was used to examine research question one, the extent to which a six-week communication skills training can improve an athletic training student's interpersonal communication skills, as well as research question two which evaluated whether or not an athletic training student attempted to apply communication skills into clinical practice. Qualitative analysis was also applied to research question three which examined athletic training student's perceptions of their interpersonal communication skills during a patient encounter. Descriptive and pattern coding were used to identify categories and themes using MAXQDA software.

Discussion

Reliability. An intraclass correlation coefficient (ICC) was used to determine interrater reliability. The ICC was calculated on both baseline and post-testing rater scores on the Calgary-Cambridge Observation Guide-Medical Skills Evaluation. The baseline ICC score was 0.691 with p=0.045 and the post-test ICC score was 0.804 with p=0.022. These scores demonstrate interrater reliability improved from baseline testing to post-testing. Additional training of the standardized patient on the research instrument may have increased the interrater reliability.

Research Question 1. The literature suggests newly certified athletic trainers are unable to successfully communicate, which in turns effects patient care. According to Carr, Volberding, & Timson (2016), "the ability to communicate effectively is a skill that is often overlooked during a student's education but is crucial to success upon graduation…employers and new employees agree that communication skills are lacking in new graduates" (p. 220). Carr et al., (2016) goes on to state such communication skills impact patient satisfaction and "are central to quality patient care" (p. 220). Effective communication skills impact health care outcomes, including patient compliance and adherence to the plan of care by building rapport and trust with the patient. Utilizing both verbal and non-verbal forms of communication are important in building the clinician-patient relationship. If communication skills are lacking in a student's education but are highly relevant in the workforce and effect health outcomes, teaching communication skills in athletic training professional programs is vital.

The first research question in this study examines to what degree a six-week communication skills training improve an athletic training student's interpersonal communication skills during a patient encounter. If entry-level athletic trainers are unable to effectively communicate, professional programs should evaluate a form of instructing

communication skills. This study contained two groups, one was the treatment group which was provided a six-week communication skills training. Both the treatment and control groups demonstrated growth from baseline to post-testing. The results of the repeated measures analysis of variance demonstrated both the treatment and control groups' interpersonal communication scores on the Calgary-Cambridge Medical Skills Evaluation improved over time, and there were no significant differences between the groups. After running a Tukey HSD post-hoc test, it was determined there were improvements made over time between the baseline and repeated post-test by a mean of 23.75 points out of 120 points and between the post-test and the repeated post-test 13.62 points out of 120 points. There were no significant differences between the baseline and the post-test. This analysis illustrates that with time and clinical practice, students continue improve their communication skills.

It cannot be determined if the growth was from the communication skills training since both groups similarly improved by approximately ten points on the Calgary-Cambridge Medical Skills Evaluation. Several factors may account for why the scores of both groups improved, including both groups sharing the communication skills training information. Both groups included athletic training students on a small campus that are in the same athletic training courses together, take many other required courses together, and spend numerous hours together in the clinical setting. Needless to say, there were plenty of opportunities to discuss the communication skills training techniques between the students. Control group students also could have observed a student from the treatment group incorporate such skills into clinical practice and could have picked up on the techniques learned in the training.

Other factors as to why both groups' scores improved is the communication skills training did not work for whatever reason and the subjects knowing what they were being assessed on after the baseline session. Both groups were exposed to items on the Calgary-

Cambridge Medical Skills Evaluation Self-Assessment Form during baseline and post-testing. It is quite possible students identified skills that were being observed and took it upon themselves to practice such skills regardless of the which group they were in.

During a focus group session with the treatment group participants following all baseline, post-, and repeated post-testing procedures, two categories emerged regarding the improvement of the athletic training students' interpersonal communication skills following the communication training, skills learned and comfort during an evaluation. Subjects claim the skills learned in the communication skills training will improve their interactions with patients. Examples of skills learned in the training included verbal communication skills ("I didn't introduce myself before the training because I didn't know the proper way."), active listening, and building rapport with the patient. Like rapport building, the second category identified was the notion of comfort for both the clinician and the patient. Learning the skills of verbal and non-verbal communication, active listening, and explaining are all components of the Calgary-Cambridge Observation Guide, which is utilized to improve patient satisfaction, adherence, and clinical outcomes (Silverman et al., 2013). The subject responses and data from the standardized patient encounters demonstrate interpersonal communication skills during a patient encounter can improve in athletic training students. Subjects were also making the connection between effective communication skills and patient care when making comments such as "by not communicating (effectively) it effected the whole season…", "…were given guidelines to follow to make them (patient) feel more comfortable", and "…helped them (patient) understand everything…". These statements demonstrate student understanding of how communication skills effect patient care.

These comments are consistent with previous literature regarding athletic trainers' communication skills and communication skills affecting patient care. Carr & Volberding

(2012) discuss many new athletic training graduates are deficient in communication skills, which the subjects in this study spoke of not "knowing the proper way". The subjects also referred to "making them (patient) feel more comfortable" which demonstrates how effective communication improves patient satisfaction and decreases patient anxiety during the patient encounter described by Silverman, Kurtz, and Draper (2013). This study provides support athletic training students' communication skills may improve, but further research is needed to determine the most effective way to teach, rehearse, and assess communication skills in athletic training programs. The communication skills training used in this study was taken from a training used for physicians. Future research should examine communication skills training specific to athletic training and repeat this study with a larger sample size. Other methods of communication skills assessment, such as video or audio feedback and peer assessment could also be researched. Examining the use of communication skills in the clinical setting for both the athletic training student and the newly certified athletic trainer could be further evaluated than simply looking to see if the skills are used in clinical practice, which is what the next research question addressed.

Research Question 2. Research suggests learning communication skills should occur in the clinical setting. Authentic situations and experiential learning environments are considered to be the best settings for improving communication skills (Carr et al., 2016; Hazavehei et al., 2015; Keir & Wilkinson, 2013). Based on these prior findings, professional education programs should introduce communication skills in the classroom but allow students to practice the skills in the clinical setting. Research question two addresses whether or not athletic training students who received interpersonal communication skills training applied the communication skills to clinical practice.

Interviews with the research assistant and treatment group were conducted to evaluate the students' clinical application of interpersonal communication skills learned in the communication skills training. Themes were organized into three categories: skills applied, purpose of skill application, and focus on technical skills. Frequent topics and themes that came from the interviews included communication skills such as listening, explaining, and building relationships which involve skills taught in the communication training that students were attempting to apply clinically, hence the category of 'skills applied'. The next theme involved interactions with the patient such as relaxing the patient, helping the patient understand, and allowing the patient to know what the clinician is thinking. These skills describe the students' understanding of the purpose of effective communication skills during a patient encounter and led to the category of 'purpose of skill application'. Lastly students described previous experiences including past communication training and skills taught in the athletic training professional program as having an effect on their use of communication skills. The category of 'focus on technical skills' was developed due to the students claiming their focus was more so on the technical skills they have been taught so far in their education.

Comments from the interviews suggested the students were attempting to utilize the skills in the clinical setting. One student reported they "…remember a lot of stuff (from training)" and added "I think about it in the clinic". This suggests students are attempting to utilize the skills from the training in the clinical setting.

The research assistant also suggested the students were incorporating the communication skills taught in the training to the clinical environment. She shared, "students were able to slow down and apply..." communication skills, as well as "students used approaches and techniques…" learned in the communication skills training. The research assistant also discussed "students self-reported using and thinking about the techniques in the

clinic". All of these responses indicate students are attempting to apply their communication skills into clinical practice.

Students also addressed the reasons why they thought effective communication skills are necessary in the athletic training profession during patient encounters. Ensuring "…preceptors know what you are thinking…", "…allows the athlete (patient) to understand what is going on", and "letting the patient know what you are doing will make them (patient) less scared and relax them (patient)" were comments made by the students to explain why they felt effective communication skills are necessary in the clinical setting. The athletic training student identifies the importance of communicating not only with the patient, but with their preceptor as well.

Finally, the subjects discussed the reasons why they may not have incorporated communication skills into their patient encounters previously. Students stated, they were "…focused on the injury rather than what the patient is telling us" and in particular aspects of their evaluations for this study due to having "…no experience with being taught communication skills like special tests or palpating". This suggests athletic training students tend to focus on their technical skills, such as taping and evaluating compared to interpersonal communication skills.

The comments and themes described above suggest students will practice communication skills once the skills are taught and the students understand the purpose of such skills. With extended time to rehearse communication skills in the clinical setting, students may begin to focus on more than just their technical evaluation skills. This supports previous literature that states as students mature, more opportunities to practice communication are reported (Carr et al., 2016). Silverman et al., (2013) also stated communication skills should be taught with the same rigor as core skills and experiential learning methods should be

incorporated. As students get more comfortable with evaluation skills that are taught earlier in the curriculum, they can begin to focus on interpersonal skills during the patient encounter. This suggests communication skills should be taught early on in the curriculum and many opportunities to practice theses skills should be provided throughout a student's education.

This study demonstrates athletic training students with interpersonal communication skills training do attempt to apply communication skills into clinical practice. Students with training also understand the importance of effective communication skills in the clinical setting and once the students have been taught both technical and communication skills, both are rehearsed in the clinic. This study also suggests the more time a student has to practice communication skills, the more their skills improve.

Research Questions 3. Students were asked to self-assess their interpersonal communication skills using the Calgary-Cambridge Medical Skills-Self Assessment form during a patient encounter during baseline and post-testing to examine a students' perception of their interpersonal communication skills during a patient encounter. This form is similar to the form the standardized patient and researcher used while also providing an opportunity for students to respond to open-ended questions. Results from the Paired Samples t-test reveal all subjects perceived their interpersonal communication skills to have improved by an average of 24.38 points out of 120 points over the six-week period. This study did not determine the cause of perceived improvement by the subjects in both groups. Potential causes could include the subjects' knowledge of the self-assessment form and its contents from the baseline date to the post-test or the subjects from the treatment group sharing the communication skills training with the control group. As mentioned previously, students in both groups do spend quite a bit of time together, both in class and in their clinical rotations. Therefore, the possibility of sharing techniques learned from the communication skills training is rather high.

Results from the Pearson Correlation comparing the researcher's scores on the Calgary-Cambridge Medical Skills Evaluation to that of the Self-Assessment scores provided by the subjects suggest a significant difference of perceived communications skills to the score of the researcher with a mean difference of 17.25 points out of 120 points during the post-test. Athletic training students in this study perceived their interpersonal communication skills to be much higher than what the researcher suggested. Literature indicates self-assessment is related to a student's competence in a skill (Motycka, Rose, Ried, & Brazeau, 2010). Students with higher levels of competence tend to be over critical of themselves when self-assessing and students with low competence tend to overestimate their skills and abilities (Motycka et al., 2010; Kalata & Abate, 2013; Ünaldi, 2016). This could explain why students' scores in both groups in this study improved. Most subjects indicated lacking communication training of any kind prior to this study. Therefore, their competence in communication would be low, and according to the literature, would overestimate their ability to communicate.

In the theoretical framework used in this study, Peplau's Theory of Interpersonal Relations, focuses on building interpersonal relationships, the ability to communicate effectively, and managing patients with varying levels of difficulty. The themes discovered in this study confirm athletic training students focus on building a relationship with patients and utilizing verbal communication skills during the patient encounter, which align with Peplau's Theory. However, the students need to address communication at particular points of the patient encounter to progress their interpersonal communication skills overall and improve patient satisfaction.

Understanding the patient may have personal goals regarding outcomes and expectations of the treatment plan are essential to understanding the whole person, building a relationship, and patient satisfaction. Having the patient restate information provided to them

by the clinician “increases retention and understanding” (Silverman et al., 2013, p. 214). When a patient increases their understanding of the plan of care, increase in adherence to the plan occurs which leads to better patient outcomes. Therefore, if patient goals, expectations, and ensuring patient understanding were not addressed with the subjects in this study, does this explain why patient care and patient satisfaction were eluded on the self-assessments? Evidence gathered from the subject interviews suggest students may be focused on their technical skills rather than patient understanding, patient goals, patient expectations, patient satisfaction, and overall patient interpersonal relationships. Instructing students on how to incorporate communication skills into a patient encounter may assist students with spreading their focus to a more holistic approach to patient care versus clinician-centered, technical care which may improve patient outcomes.

Conclusion

This study attempted to answer three research questions concerning interpersonal communication skills of athletic training students in athletic training professional education programs. The first question investigated the ability of athletic training students to learn and improve upon their communication skills. Secondly, once athletic training students learned communication skills, their attempt of incorporating the skills into clinical practice was examined. Lastly, athletic training students’ perceptions of their interpersonal communication skill abilities were evaluated. Below, each question is discussed in more detail.

Improved Communication Skills. This study demonstrates athletic training students can learn and improve interpersonal communication skills once they are taught the skills. Furthermore, students made the connection between effective communication skills and enhanced patient care. At the conclusion of this study students understood the purpose of communication skills training and how communicating impacts patient outcomes by the

comments made during the interview sessions. A student stated, “by not communicating (effectively) it effected the whole season…”. Student understanding was also suggested by a response “…were given guidelines to follow to make them (patient) feel more comfortable”. These responses suggest the students made a connection between effective communication and patient care.

Application in Clinical Setting. Students attempted to apply interpersonal communication skills into the clinical setting, which improved their interpersonal communication skills over time and with practice. Students felt as if they focused on their technical skills during the patient encounter because that is what they have been taught thus far in their education. Students suggested if they were taught interpersonal communication skills, along with their technical skills, and provided more time to practice, they would become better at applying such skills into their patient encounters. Students suggested communication skills should be addressed “once a week in (their) practicum class” and another student stated such skills should be incorporated “in oral practical exams or given a checklist or weekly tips to practice” in the clinical setting. There are several ways communication skills training could be incorporated into the curriculum. Future research should address these, and other, forms of teaching interpersonal communication skills training in athletic training.

Student Perceptions. When students were asked to self-assess their interpersonal communication skills they demonstrated a tendency to overestimate their abilities. Research suggests this is due to having less competence in a skill (Motycka et al., 2010; Kalata & Abate, 2013; Ünaldi, 2016). Students also addressed verbal communication and relationship building more so on the self-assessment forms. Utilizing verbal communication and skills to build a relationship typically occur at the beginning or the end of a patient encounter, while the rest of the evaluation involves using technical skills which are the focus in most athletic training

professional programs. Patient care and satisfaction were not addressed so much by the students even though students see the relationship of effective communication skills and patient outcomes. The area patient outcomes and effective communication skills could be an area to further investigate.

Recommendations

Although this study determined communication skills can be learned, athletic training students attempt to incorporate communication skills into clinical practice, and students perceive their communication skills to be better due to low comprehension of the skill, further investigation of communication skills in athletic training professional programs is recommended. Interpersonal communication skills in health care plays a significant role on patient outcomes and often times, the skill is overlooked in a student's education (Carr et al., 2016). Determining how to further incorporate communication skills training in athletic training professional programs is recommended.

Communication Skills Training. Both the treatment and control groups in this study both improved from baseline to repeated post-testing. This could suggest the communication skills training used in this study was not effective. Further research using this training is recommended to determine the effectiveness, preferably with a larger sample size. The Calgary-Cambridge Observation Guide has been in use since the late 1990s and is evidence-based (Kurtz et al., 2005). Therefore, the training concepts and the instrument used are reliable and valid, but further investigation is needed regarding its implementation in the athletic training profession.

The research assistant and subjects see the benefit of a communication skills training and its relation to patient care. Students saw the training as "eye-opening" and they were "glad to get training" and the research assistant regarded the training as "well-received", "worth it",

and “others should do it”. Both the students and research assistant would like to see modifications made to the communication training used in this study. Suggestions included “role playing is awkward”, “better and more relevant videos are needed”, “less repetitive power points”, and “more time and space…”. Both parties also suggested beginning communication skills training earlier in the curriculum and possibly “threading (communication training) throughout the classes” or incorporating the training in oral practical examinations.

Overall, a communication skills training should be developed that is relevant to the athletic training profession and one that could be incorporated early into the athletic training professional education programs which provides increased opportunities for students to practice the skills over time. The communication skills training should also be held over a longer period of time as compared to the six weeks of training used in this study, so the students have more time to practice the skills, which may lead to improved communication skills during their patient encounters. The concepts used in the communication training for this study are applicable to the field of athletic training and with modifications made to make the training more relevant to athletic training, as well as increasing the length of the training may yield more favorable results.

Clinical Application. Allowing more time for the students to practice and rehearse the communication skills in the clinical setting was suggested by the students and the research assistant with comments like “preceptors could provide prompts…” and “preceptors could teach communication skills after they have had the training”. Students suggested “weekly tips to practice from a checklist or general communication…” could occur in their clinical education settings. Ultimately, it is agreed upon that students should be provided opportunities to improve their communication skills in the clinical setting. Providing interpersonal

communication skill prompts, checklists, or incorporating communication more so into a student's clinical evaluations are examples of how to integrate interpersonal communication skills into the clinical setting. The first step however, would be teaching communication skills to the preceptors.

Future Research Opportunities

Findings from this study, along with previous literature discussing the importance of interpersonal communication and patient-clinician relationships on health care outcomes and many newly certified athletic trainers being deficient in their communication skills, further research is needed on this topic (Motycka et al., 2010; Kalata & Abate, 2013; Ünaldi, 2016; Stiller & Ostrowski, 2007; Silverman et al., 2013, Carr et al., 2016). Suggestions for future research opportunities are discussed in this section.

Communication Skills Training. Because communication skills are vital to the work an athletic trainer does, it is imperative to investigate a way to include these skills within athletic training professional education programs and allow students to have ample opportunity to practice the skills in the clinical setting. Exploring a successful method of teaching, practicing, and assessing interpersonal communication skills to athletic training students in professional education programs still remains a question to be answered with further research. The researcher suggests modifying the communication skills training in this study to make it more relevant to the athletic training profession, then replicate the study on a larger scale. Modifications may include making athletic training videos to increase relevance to the profession, altering the power points to include more athletic training scenarios, incorporating the skills taught in the classroom into the clinical setting intentionally, and possibly try feedback versus self-assessments.

Clinical Application. This study and previous literature suggest having opportunities in the clinical setting to practice communication skills is necessary (Carr et al., 2016; Hazavehei et al., 2015; Keir & Wilkinson, 2013; Seegmiller, 2003). Kurtz et al (2005) claims students should have a safe environment to practice their skills. Findings from this study demonstrated students' communication skills improved by an average of 23.75 points out of 120 points from the beginning of the study to the repeated post-testing. In addition, an interview response "I think about it in the clinic" from a student also indicates students are attempting to utilize communication skills in the clinical setting. Students suggested to incorporate practice of communication skills in "oral practical exams" or "give us a checklist at our clinical rotations". Finding a method of incorporating rehearsal and assessment of communication skills in a student's clinical education should be further investigated to find suitable techniques to utilize in this setting.

Entry-Level Athletic Trainers' Communication Skills. Research could be conducted on the impact interpersonal communication skills training has on entry-level athletic trainers. Up to this point research suggests entry-level athletic trainers are lacking in their communication skills but such skills are top attributes employers evaluate when hiring (Day, 2013; Kahanov & Andrews, 2001; Hazelbaker, 2013, Aldret, 2014). Research has yet to be conducted on incorporating a communication skills training and then evaluating entry-level athletic trainers' communication skills, preferably by their employers. The communication skills training used in this study could be implemented into a curriculum and post-graduation surveys to employers of the students who received communication skills training could be a start of such research.

Patient Care. Literature concludes effective communication skills impacts patient care in health care settings involving nurses and physicians (Kurt et al, 2005; Silverman et al,

2013). But very little research has been completed in the profession of athletic training. More studies need to be done regarding interpersonal communication skills of athletic trainers and their patient outcomes. Replicating any of the studies performed in other health care settings in the athletic training setting could provide an opportunity to evaluate the effectiveness of interpersonal communication skills on patient outcomes in athletic training.

Perceived Confidence. Perceived confidence of entry-level athletic trainers who received interpersonal communication skills training should be further examined in future research. This study and previous health care literature conclude students with low competence in skills overrate their abilities (Motycka et al., 2010; Kalata & Abate, 2013; Ünaldi, 2016). Students in this study who either did not receive the communication skills training or potentially had less competence in their communication ability for various reasons (no previous communication training for example) did have higher self-assessment scores as compared to the researcher's scores. Currently there is little to no research in the area of student perceptions and their communication skill competence in the profession of athletic training. One could take the data from this study and replicate the study on a larger scale or research could be conducted by having the subjects self-assess their communication skills after a patient encounter, then have them watch a video of themselves and repeat the assessment.

This study demonstrates athletic training students can learn interpersonal communication skills, which can be incorporated into daily clinical practice to enhance patient satisfaction and to continue improving their interpersonal communication skills over time. What method of introducing and teaching interpersonal communication skills to athletic training students in the professional program still remains a question to be answered with further research. The researcher of this study intends on further investigating an effective form of teaching and assessing interpersonal communication skills training in athletic training

professional programs by first modifying the communication skills training to make it more related to athletic training and potentially making the training online to reach more subjects. She will then duplicate this study on a larger scale, perhaps in either the athletic conference or the current NATA district she resides.

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APPENDIX A

University of Findlay

Institutional Review Board

Date: **November 3, 2017**

To: Dr. Chris Moser

CC: Sonia Wehrlin

RE: Teaching Interpersonal Communication Skills in Athletic Training Professional Education: A Mixed Methods Study

Project Expiration date: November 3, 2018

The University of Findlay Institutional Review Board (IRB) has completed its review of your project utilizing human subjects and has granted authorization. This study has been approved for a period of one year only. The project has been assigned the number **1157**.

In order to comply with UF policy and federal regulations, human subject research must be reviewed by the IRB on at least a yearly basis. If you have not completed your research within the year, it is the investigator's responsibility to ensure that the **Progress Report** is completed and sent to the IRB in a timely fashion. The IRB needs to process the re-approval before the expiration date, which is printed above.

Please note that if any changes are made to the present study, you must notify the IRB immediately. Understand that any proposed changes may not be implemented before IRB approval, in which case you must complete an **Amendment/Modification Report**.

Following the completion of the use of human subjects, the primary investigator must complete a **Certificate of Compliance form** indicating when and how many subjects were recruited for the study.

Please refer to the IRB policy and procedures manual for additional information. Please include the project number on any other documentation or correspondence regarding the study.

Thank you very much for your cooperation. If you have any questions, please feel free to contact IRB at (419) 434-4640 or email irb@findlay.edu.

Sincerely,

Susan W. Stevens EdD, AT

Susan W. Stevens, EdD., AT
Chair, Institutional Review Board

Cc: IRB Office

APPENDIX B

University of Findlay

Institutional Review Board
Amendment/Modification Report Approval

Date: **March 9, 2018**

To: Dr. Chris Moser

CC: Sonia Wehrlin

Project #: 1157

Project Title: Teaching Interpersonal Communication Skills in Athletic Training Professional Education: A Mixed Methods Study

Project Expiration date: November 3, 2018

The University of Findlay Institutional Review Board (IRB) has completed its review of your Amendment/Modification Report on your project utilizing human subjects and has granted you to continue with your research.

In order to comply with UF policy and federal regulations, human subject research must be reviewed by the IRB on at least a yearly basis. If you have not completed your research within the year, it is the investigator's responsibility to ensure that the **Progress Report** is completed and sent to the IRB in a timely fashion. The IRB needs to process the re-approval before the expiration date, which is printed above.

Please note that if any changes are made to the present study, you must notify the IRB immediately. Understand that any proposed changes may not be implemented before IRB approval, in which case you must complete an **Amendment/Modification Report**.

Following the completion of the use of human subjects, the primary investigator must complete a **Certificate of Compliance form** indicating when and how many subjects were recruited for the study.

Please refer to the IRB guidelines for additional information. Please note that if any changes are made to the present study, you must notify the IRB immediately. Please include that number on any other documentation or correspondence regarding the study.

Thank you very much for your cooperation. If you have any questions, please feel free to contact IRB at (419) 434-4640 or email irb@findlay.edu.

Sincerely,

Susan W. Stevens EdD, AT

Susan W. Stevens, EdD., AT

Chair, Institutional Review Board

Cc: IRB Office

APPENDIX C

FINDLAY

University of Findlay

Institutional Review Board

Recruitment Email

November 1, 2017

Dear _____,

You are invited to participate in a study of interpersonal communication skills in athletic training. I hope to learn without prejudice how to implement and assess interpersonal communication skills training into the athletic training professional program. You were selected as a possible participant in this study because you are in the professional phase of the University of Mount Union's athletic training professional program. If you decide to participate, please complete the voluntary consent form.

You will be placed in either a control group or a treatment group. The treatment group will receive free two-hour interpersonal communication skills training sessions on a weekly basis over the course of six weeks. Theoretically these interpersonal communication skills training sessions should help you improve your interactions with patients in the health care profession.

All participants that complete the study will be compensated with a $5.00 gift card to a local restaurant. Non-participation will not impact your standing at the University of Mount Union or effect your ability to attain licensure as an athletic trainer.

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will not be disclosed. Your decision whether or not to participate will not prejudice any future relationships with the University of Findlay or at the University of Mount Union.

If you decide to participate, you are free to discontinue participation at any time without prejudice. If you have any questions, please ask. If you have any additional questions later, contact Dr. Chris Moser at 419-434-5320 or at Moser@findlay.edu.

Thank you for your time.

Sincerely,

Sonia Wehrlin
wehrlins@findlay.edu

APPENDIX D

Calgary-Cambridge Medical Skills Evaluation

Student ID: _____ Date: ____

Comments:	*Initiating the Session*	Poor (0)	Fair (1)	Good (2)	SPSSlent (3)
	Greets patient				
	Introduces self and role				
	Demonstrates respect				
	Identifies and confirms problems list				
	Listens attentively				
	Confirms list and screens				
	Gathering Information				
	Encourages patient to tell story				
	Appropriately uses open and closed questioning techniques				
	Listens attentively				
	Facilitates patient's responses verbally and non-verbally				
	Picks up on verbal and non-verbal cues				
	Clarifies patient's statements				
	Uses clear and concise language				
	Establishes dates				
	Understanding Patient's Perspective				
	Determines and acknowledges patient's ideas regarding cause				
	Explores patient's concerns regarding problem				
	Determines the patient's expectations/goals				
	Encourages expression of emotions				
	Picks up/responds to verbal and non-verbal cues				
	Providing Structure to Consultation				
	Summarizes interview before moving on				
	Progresses using transitional statements				
	Structures logical sequence				

	Attends to timing and keeps interview on task				
	Building Relationship				
	Demonstrates appropriate non-verbal behavior				
	If reads or writes notes, doesn't interfere with dialogue				
	Demonstrates confidence				
	Is not judgemental				
	Empathises with and supports patient				
	Shares thinking and rationale for questions with patient				
	Explains process of examination				
	Explanation and Planning				
	Checks for patient understanding				
	Uses repetition and summarizing				
	Uses concise and clear language				
	Uses explicit categorization				
	Uses visual methods				
	Negotiates a mutually acceptable plan				
	Closing the Session				
	Contracts with patient next steps				
	Explains possible outcomes				
	Summarizes session				
	Final check that patient understands or has questions				
	Total Scores:				

Overall Evaluation: Poor _____ Fair _____ Good _____ Excellent ___

(This is simply the examiner's overall impression-it is not used as the final score for the examination.)

Adapted from Kurtz, S., Silverman, J., & Draper, J. (2006). Medical skills evaluation: Second edition [Assessment Instrument]. United Kingdom; Radcliffe Publishing Ltd.

APPENDIX E

Subject Information Sheet

Name: _____ Age: _____

Gender (please circle one): Male Female

Permanent Home Address: _____

_____

Year in Athletic Training Program (Please circle one): Year 2 Year 3 Year 4

Cumulative GPA: _____ Major GPA: _____

Previous Communication Courses Taken: _____

_____

APPENDIX F

Calgary-Cambridge Medical Skills Evaluation-Self Assessment Form

Student ID: _____ **Date: _____**

Instructions: Please rank your ability to perform each of the tasks listed below using the scale provided and answer the question at the end of each category to the best of your ability.

Comments:	***Initiating the Session***	**Poor (0)**	**Fair (1)**	**Good (2)**	**SPSSlent (3)**
	Greets patient				
	Introduces self and role				
	Demonstrates respect				
	Identifies and confirms problems list				
	Listens attentively				
	Confirms list and screens				
1) How did you demonstrate respect towards the patient? 2) How did you listen attentively?					
	Gathering Information				
	Encourages patient to tell story				
	Appropriately uses open and closed questioning techniques				
	Listens attentively				
	Facilitiates patient's responses verbally and non-verbally				
	Picks up on verbal and non-verbal cues				
	Clarifies patient's statements				
	Uses clear and concise language				
	Establishes dates				
1) How did you encourage the patient to tell his/her story? 2) How did you listen attentively?					
	Understanding Patient's Perspective				
	Determines and acknowledges patient's ideas regarding cause				
	Explores patient's concerns regarding problem				
	Determines the patient's expectations/goals				
	Encourages expression of emotions				

	Picks up/responds to verbal and non-verbal cues				
1) How did you acknowledge the patient's ideas regarding cause? 2) How did you determine the patient's expectations?					
	Providing Structure to Consultation				
	Summarizes interview before moving on				
	Progresses using transitional statements				
	Structures logical sequence				
	Attends to timing and keeps interview on task				
1) Please describe the transitional statements you used.					
	Building Relationship				
	Demonstrates appropriate non-verbal behavior				
	If reads or writes notes, doesn't interfere with dialogue				
	Demonstrates confidence				
	Is not judgemental				
	Empathises with and supports patient				
	Shares thinking and rationale for questions with patient				
	Explains process of examination				
1) Please explain how you built a relationship with the patient.					
	Explanation and Planning				
	Checks for patient understanding				
	Uses repetition and summarizing				
	Uses concise and clear language				
	Uses explicit categorization				
	Uses visual methods				
	Negotiates a mutually acceptable plan				
1) How did you explain the plan for the patient?					
	Closing the Session				
	Contracts with patient next steps				
	Explains possible outcomes				
	Summarizes session				

	Final check that patient understands or has questions				
1) How did you close the session with the patient?					
	Total Scores:				

Overall Evaluation: Poor _____ Fair _____ Good _____ Excellent ___

Adapted from Kurtz, S., Silverman, J., & Draper, J. (2006). Medical skills evaluation: Second edition [Assessment Instrument]. United Kingdom; Radcliffe Publishing Ltd.

APPENDIX G

Interview Protocol

Research Questions

4. To what degree does a six-week communication skills training improve an athletic training student's interpersonal communication skills during a patient encounter?
5. Do athletic training students with interpersonal communication skills training apply the communication skills into clinical practice?
6. What are athletic training students' perceptions of their interpersonal communication skills during a patient encounter?

Research Assistant Interview Questions

1. In what ways do you think the communication skills training will improve the athletic training students' interpersonal communication skills during patient encounters?
2. How do you think the athletic training students will apply the learned interpersonal communication skills into their clinical practice?
3. In what ways would you change the communication skills training to enhance its effectiveness?
4. How do you believe the athletic training students received the interpersonal communication skills training?
5. Please explain which part of the interpersonal skills training (lecture, videos, role playing) you believe was most beneficial for the athletic training students.

Focus Group Interview Questions

1. In what ways do you think the communication skills training will improve your interpersonal communication skills during patient encounters?
2. How do you think you will apply the learned interpersonal communication skills into your clinical practice?

3. In what ways would you change the communication skills training to enhance its effectiveness?
4. How much time do you believe a communication skills training should be to influence your clinical practice?
5. Please explain which part of the interpersonal skills training (lecture, videos, role playing) you believe was most beneficial.

APPENDIX H

Communication Skills Training-Session 1

- Session #1-Initiating the Session
- Communication Skills Training
- Interpersonal Communication

- *Communication*-A two-way exchange of information that uses a common system of signs and behaviors that creates mutual feelings of understanding and sympathy among members of the communication team and intended audiences (Schiavo, 2007).
- *Interpersonal Communication*-Communication between two people, usually face-to-face (du Pré, 1992).
- Importance of Communication
- Importance in health care
    - Effective consultation
    - Improves accuracy and efficiency
    - Improved health outcomes
    - Improved patient compliance
    - Increased patient satisfaction
    - Promotes collaboration between clinician and patient
- Professions who incorporate communication training
    - Physicians, nursing, physical therapy
- Importance in athletic training
    - Communicate with: physicians, PAs, CNPs, PTs, ADs, coaches, parents, athletes, ATs, administration, etc.
- Failure to Communicate
- 54% of complaints and 45% of concerns not elicited (Stewart et al, 1979)
- 50% of the time patients and doctor disagree (Starfield et al, 1981)
- Frequent interruptions of the patient…after 18 seconds! Failure to disclose important information (Beckman & Frankel, 1984)
- ER residents introduce themselves only 2 out of 3 encounters (Rhodes et al, 2004)
- Calgary-Cambridge
- *Skills for Communicating with Patients* by Silverman, Kurtz, & Draper (2013) will be used for this training.
- The Calgary-Cambridge Guide has 2 aims:
    - Help facilitators and learners structure their teaching and learning
    - Assist program directors establish training programs for learners and facilitators in medical education
- Communication skills
    - Content-what healthcare professionals communicate
    - Process-how healthcare professionals communicate
    - Perceptual-what healthcare professionals are thinking and feeling
- Principles of Effective Communication
- Ensures interaction v. direct transmission process
    - Engage, use feedback, interact
- Reduces unnecessary uncertainty
    - Uncertainty leads to anxiety and a lack of concentration
- Requires planning and thinking in terms of outcomes
    - Determined by the context and intended outcomes
- Demonstrates dynamism
    - Needs and context change, so flexibility and engagement are needed
- Follows the helical model
    - What I say influences what you say
    - Reiteration and repetition
- Objectives for Initiating the Session

- Establish a supportive environment
- Develop awareness of patient's emotional state
- Identify all of the patient's issues and concerns they came to discuss
- Establish a mutually agreed agenda or plan for the visit
- Develop a partnership or collaboration with the patient
- Initiating the Session & Building the Relationship
- Preparation
- Establishing initial rapport
- Identifying reasons for the consultation
- Preparation
- Put aside the last task or unresolved issues
- Attend to your personal needs and comfort
    - Hunger, heat, sleepiness
- Shifting focus to the consultation
    - Prepare for the visit (read chart or notes)
- Conclude the above prior to greeting the patient
- Establishing Initial Rapport
- Greeting the patient
    - Verbal and non-verbal (handshake, eye contact, smile)
- Introducing yourself
    - "Hi, my name is Joe."
- Clarifying your role
    - "I am a second-year athletic training student learning how to evaluate patients. My certified athletic trainer is Marci and she would like me to evaluate you first, then discuss with her."
- Obtain patient's name
    - Check that the name is correct and for proper pronunciation
- Establishing Initial Rapport Cont'd.
- Demonstrate interest, respect, attend to patient's physical comfort
    - Maintain attention the entire time, encourage patient's participation, collaborate, environmental factors (room temperature, lighting, curtains, decrease diversions)
    - Most patients are more comfortable talking while sitting v. lying down
    - Be on the same level as the patient (seated if they are seated)
    - Sit knee-to-knee v. side-to-side or opposite a desk
    - Talk with patient while they are fully dressed
- Identify Reasons for Initial Consultation
- Opening question
    - Open-ended…What are some examples?
    - Don't assume why the patient is here for a visit!
    - Detailed questioning leads to a passive patient
- Listening
    - Attentively listen to what the patient wants to discuss
    - Make the patient feel comfortable
    - Gauge how the patient is feeling
    - Get out of your "fixed" routine and meet the patient's needs
    - Active listening
        - Increase your wait time to hear the patient

        - Facilitate or encourage a response from the patient
        - Non-verbal communication (posture, proximity, direction of gaze, eye contact, gestures, vocal cues (tone, rate, volume), facial expressions, touch)
        - Picking up verbal and non-verbal cues
- Identify Reasons for Initial Consultation
- Screening and agenda setting
    - Screening is checking and confirming with the patient that you have all that they wish to discuss
        - "So you have had 3/10 knee pain for 1 week with no treatment, correct? Has anything else been bothering you?"
        - Repeat and reiterate
    - Negotiating by both the patient and the clinician is needed to set the agenda
        - Where to start: "Let's begin with your knee pain first and we will then address your back pain."
- Video Clips
- https://vimeo.com/20273465
- https://www.youtube.com/watch?v=-_Q7eR1cvgY

APPENDIX I
Communication Skills Training-Session 2

- Session #2-Gathering Information
- Communication Skills Training
- What do we remember from last time?
- Objectives
- Explore the patient's problems
- Ensure information gathered is:
    - Accurate
    - Complete
    - Mutually understood
- Ensure patients feel listened to
- Develop a supportive environment
- Efficient information gathering
- Involve the patient
- Traditional Medical History
- Standard approach
    - Chief complaint
    - Past illness
    - Medications
    - Allergies
    - Family history
    - Personal and social history
    - Systems review
- Disease-Illness Model

- ‘Relationship-centered care’
    - Personhood of participants (status of being a person)
    - Affect and emotion are important components
    - Relationships are reciprocal in nature
    - Genuine relationships are morally valuable
- Disease-biomedical cause of sickness (pathophysiology)
- Illness-patient’s unique experience of sickness
    - Perceptions, experiences, coping
- Patients can be ill but have no disease
- Disease-Illness Model
- Disease Framework
(biomedical perspective)
    - Symptoms
    - Signs
    - Investigations
    - Underlying pathology
    - Differential diagnosis
- Illness Framework
(patient’s perspective)
    - Ideas
    - Concerns
    - Expectations
    - Thoughts
    - Feelings
    - Effects
    - The patient has a unique experience of their illness
    - When you gather information, you weave back and forth between the two frameworks
- Biomedical Perspective
- Sequence of events
    - Where? When?
- Symptom analysis
    - Quality? Quantity? Aggravating? Alleviating?
- Relevant systems review
    - Associated symptoms
- Patient’s Perspective
- Ideas & beliefs
    - about the causation of illness; what influences it
        - ‘Tell me about what you think is causing your pain.’
- Concerns
    - Worries about what symptoms mean
        - ‘What are you concerned it might be?’
- Expectations
    - Hopes of how the clinician may help, outcomes
        - ‘What do you think might be the best plan of action?’
- Effects of life
    - How does the illness effect daily living
- Feelings

    - Emotions surrounding or the illness cause
- Gathering Information
- Questioning Techniques
- Encourage patient to tell their story
    - **Use open-ended questions**
- Allow for time to think and listen
    - Don't ask the next question while they are still thinking about the previous question
    - **Listen** and think about the patient's replies
- Contribute to a more effective diagnostic reasoning
    - Listen to more than the first few statements in order to gather enough information to make a sound differential diagnosis
- Explore both the disease and illness frameworks
- Patient participation v. clinician domination
- Eliciting a Patient's Narrative
- Use open-ended questioning
    - "Tell me about your pain."
    - "You mentioned knee pain. Where exactly is it?"
    - "Tell me from the beginning what happened."
- Listen attentively
    - Wait time before responding
    - Non-verbal skills-eye contact, facial expression, touch, environmental, touch, gestures, vocal cues (tone, rate, volume)
    - Picking up on verbal and non-verbal cues
        - Body language, vocal cues (hesitation), facial expressions
- Use concise, easily understood questions and comments without jargon.
        - We MUST hear what the patient has to say!
- Facilitative Response
- Encouragement
    - Non-verbal (head nods & facial expression), 'uh-huh', 'go on', 'I see'
- Silence
    - Brief wait time
- Repetition
    - Repeating the last few words the patient states
- Paraphrasing
    - Restate in your own words the content or feelings in the patient's message
- Sharing your thoughts
    - Share why you are asking certain questions
    - EX: 'Sometimes, chest pains can be brought on by stress-I was wondering if you felt that might be true for you?'
- Clarifying & Summarizing
- Clarifying
    - Patient's statements may have multiple meanings
    - May be closed or open-ended in nature
        - 'Could you explain what you meant by light-headed?'
        - 'When you say dizzy, do you mean that the room seems to actually spin round?'
        - Internal summary

        - Accuracy-check for understanding with the patient…have you heard them correctly?
        - Summarizing helps facilitate and encourage the patient to continue
        - Demonstrates you have been listening
        - Demonstrates you are interested
        - Offers a collaborative approach
        - Gives the patient an opportunity to confirm or correct clinician
- Complete Medical Interview
- Patient's problem list
- Exploration of patient's problems
    - Biomedical perspective
        - Sequence of events, symptom analysis, relevant systems review
    - Patient's perspective
        - Ideas, concerns, expectations, effects on life, feelings
    - Background information
        - Past medical history
        - Drug and allergy history
        - Family history
        - Systems review
        - Personal and social history
    - Video Clips
        - Poor Communication
        - Proper Communication

APPENDIX J
Communication Skills Training-Session 3

- Session #3-Providing Structure to the Consultation
- Communication Skills Training
- What do we remember from last time?
- Objectives
    - Enable a flexible, but ordered interview
        - Allow the patient to be involved in the interview
        - Encourage the patient to be a part of the structuring process
        - Encourage patient participation and collaboration
        - Enable accurate information gathering and giving
        - Use time efficiently
    - Skills for a Structured Interview
        - Internal summarizing
        - Signposting
        - Sequencing
        - Timing
        - Internal Summarizing
    - Confirm understanding before moving on
        - Pull together and review what you have heard
        - Order the information in a coherent pattern
        - Realize what information you still need to obtain
        - Consider where the consultation should go next
        - Consider both disease and illness
        - Lack of Internal Summarizing
- Leads to miscommunication!
    - Clinician may have forgotten what the patient said
    - Patient may have misunderstood the clinician's question
    - Assumptions may occur by both parties
    - Distorted meanings
    - Misinterpretations of meanings
    - Personal biases and prejudices may occur
- Signposting
- A statement that introduces and draws attention to what we are about to say; a transitional statement
    - EX: 'Can I just check if I have understood you…'
- Used to make progression from one section to another
    - EX: 'Since we haven't met before, I would like to get your medical history. Can we do that now?'
- Explain rationale for next section
- When to Signpost
- Transitioning from introduction to information gathering stage
- From open to closed questions
- From specific questions about patient's ideas or concerns
- Into different parts of the history
- Into the physical examination

- Into explanation and planning
- Into closing the session
- Sequencing
- Clinician's responsibility to maintain a *logical* sequence in the medical interview
    - The clinician should have in their head a clear structure of how the interview should go
- Be sure to make the sequence apparent to the patient
- Helps with efficient and accurate data gathering
- Allows the clinician to regain control over the interview, if needed
- Decreases chance of confusion
- Timing
- To enhance communication efficiency:
    - Build rapport
    - Set the agenda upfront
    - Pick up on emotional cues
- Pace (structure) the interview
- Quality over quantity
- Complete Medical Interview
- How would you the skills of summarizing, signposting, sequencing, and timing in the medical interview?
- Patient's problem list
- Exploration of patient's problems
    - Biomedical perspective
        - Sequence of events, symptom analysis, relevant systems review
    - Patient's perspective
        - Ideas, concerns, expectations, effects on life, feelings
    - Background information
        - Past medical history
        - Drug and allergy history
        - Family history
        - Systems review
        - Personal and social history
    - Video Clips
        - Medical Interview

APPENDIX K
Communication Skills Training-Session 4

- Session #4-Building the Relationship
- Communication Skills Training
- What do we remember from last time?
- Relationships
    - Easily taken for granted or forgotten
    - Central to a successful consultation
    - Extends beyond the single interview
    - Patients need to feel understood and supported
    - There needs to be a shift from clinician-dominant to relationship-centered care
- Objectives
    - Develop rapport
    - Establish trust
        - Encourage a supportive environment
        - Develop and maintain a relationship
        - Involve the patient
        - Reduce potential conflict
    - Increase satisfaction of the patient and clinician
    - How Do We Develop a Relationship?
    - Use appropriate verbal and non-verbal communication
    - Develop rapport
    - Involve the patient
- Use of Non-Verbal Behavior
- Non-verbal
    - Posture (sitting, standing, relaxed)
    - Proximity (space, positioning)
    - Touch (handshake, pat)
    - Body movement (hand gestures, nodding)
    - Facial expression (frown, smile)
    - Eye behavior (eye contact, staring)
    - Vocal cues (pitch, rate, volume)
    - Use of time (early, late, rushed)
    - Physical presence (clothing, grooming)
    - Environmental (lighting, temperature)

<u>Video clip</u>

- Notes and Computers
- Patients may withhold their reply until eye contact is made
- Patients may pause when the clinician looks down at notes
- Patients may use body movements to catch a clinician's gaze if they are reading notes
- Patient's fluency may deteriorate when clinician looks away
- Clinicians may miss or forget information when reading notes

<u>Computer Video</u>

- Use of Verbal Behavior
- Silence
- Vocal
    - Auditory or written

    - Voluntary control
    - Used to convey thoughts and ideas
- Developing Rapport
- Accepting response
    - Acknowledges and accepts the patient's emotions and thoughts wherever and whatever they are
    - Does not mean that you agree with them, but that you hear them
        - Non-judgementally accepting what the patient says
        - Acknowledging the legitimacy of the patient to hold their own values and feelings
        - Valuing the patient's contributions
- Developing Rapport-Cont'd
- Empathy
    - Essential building block for compassion (Goleman, 2011)
    - Understanding and sensitive appreciation of another person's predicament or feelings
    - Communicating understanding back to the patient in a supportive way
    - 'I can see', 'I understand', 'I appreciate'
    - Attentive listening
- Developing Rapport-Cont'd
- Support
    - Concern
    - Understanding
    - Willingness to help
    - Partnership
    - Acknowledging coping efforts
        - 'You've really done exactly the right thing…'
- Sensitivity
    - 'I'm sorry this is embarrassing for you.'
- Involving the Patient
- Sharing of thoughts
    - Shares thinking with patient to encourage patient involvement
        - 'What I'm thinking is…'
- Provides rationale
    - Explain why you are asking certain questions
        - 'How many pillows do you sleep with? I am asking because you get breathless at night.'
    - Explain the process of your examination and ask permission when necessary
- Video Clips
    - Build Rapport & Trust
    - Building Rapport

APPENDIX L
Communication Skills Training-Session 5

- Session #5-Explanation & Planning
- Communication Skills Training
- What do we remember from last time?
- Statistics
- In a study on young doctors with medical interviewing skills five years previously, the doctors' results were:
    - Discovering patient's views and expectations-70% made no attempt
    - Negotiation-90% made no attempt
    - Encouraging questions-70% made no attempt
    - Repetition of advice-63% made no attempt
    - Checking for understanding-89% made no attempt
    - Categorizing information-90% made no attempt

Maguire et al. (1986)

- Objectives
    - Gauging the correct amount and type of information to give a patient
    - Providing explanations to the patient they can understand and remember
    - Providing explanations to the patient that relate to the patient's perspective
    - Using an interactive approach to ensure shared understanding
    - Involving the patient and collaboration
    - Continuing to build the relationship
    - Providing Correct Amount & Type of Information
- Chunks and checks
    - Give information in chunks
    - Check for understanding
    - Use patient's response as a guide on how to proceed
- Assesses patient's starting point
    - Ask for patient's prior knowledge early
    - Determine extent of patient's wish for information
- Amount & Type of Information cont'd
- Asks patient what other information would be helpful
    - Prognosis, etiology, etc.
- Gives explanation at appropriate times
    - Avoid giving advice, information, or reassurance prematurely
- Aiding Accurate Recall & Understanding
- Organizes explanation
    - Divide information into sections
    - Develop a logical sequence
- Uses explicit signposting or categorization
    - Transition statements
    - 'There are three items to discuss. First…'
- Uses repetition and summarizing
    - Repeat and summarize to reinforce information
- Aiding Accurate Recall & Understanding Cont'd
- Language

    - Concise
    - Easily understood statements
    - Avoid using jargon
- Use visual methods to convey information
    - Diagrams, models, written information or instructions
- Check for understanding
    - Ask patient to restate information in their own words
    - Recall does not mean understanding or committment
- Achieve a Shared Understanding
- Relates explanations to patient's perspective
    - Relate information to patient's previously elicited ideas, concerns, and expectations
- Provides opportunities for patient to participate
    - Encourage patient to contribute and ask questions
    - Seek clarification
    - Responds appropriately
- Achieve a Shared Understanding Cont'd
- Picks up and responds to verbal and non-verbal cues
    - Verbal-asking questions, contribute information
    - Non-verbal-information overload, distress
        - What are some non-verbal cues?
- Elicits patient's beliefs, reactions, and feelings
    - Regarding information given and terms used
    - Acknowledge and address when necessary
- Planning: Shared Decision Making
- Shares own thinking
    - Patient shares own ideas, thought process, and dilemmas
- Involves the patient
    - Offer suggestions and choices v. directives
    - Explain expected outcome, short-term and long-term consequences
    - Encourages patient to offer their ideas
- Explores management options
    - Provide options to the patient
    - Explain benefits, advantages, and possible side effects
- Planning: Shared Decision Making Cont'd
- Ascertains patient's level of involvement
    - Seek the patients wish of how involved they want to be in the decision making process
- Negotiates a *mutually* acceptable plan
    - Provide preference of option and rationale
    - Determine patient's preferences
- Checks with patient
    - To see if they accept the plan
    - To see if concerns have been addressed
- Shared Decision-Making Model
- Essential Elements
- Explain problem

- Present options
- Discuss pro's/con's
- Explore patient values
- Discuss patient ability
- Discuss clinician knowledge
- Check for understanding
- Make decision
- Arrange follow-up
- Ideal Elements
- Unbiased information
- Define roles
- Present evidence
- Mutual agreement
- Video Clips
    - Explanation & Planning
    - Explanation

APPENDIX M
Communication Skills Training-Session 6

- Session #6-Closing the Session
- Communication Skills Training
- What do we remember from last time?
- Statistics
- Found when observing physician interviews:
    - Length of visit=16.8 minutes
    - Length of closure=1.6 minutes
    - Closure initiated by physician=86% of the time
    - New problems mentioned=21%
    - Physician behaviors:
        - Clarifying the plan=75%
        - Next steps=56%
        - Providing information=53%
        - ***Checking for understanding=34%***
        - ***Asking if the patient has more questions=25%***
- Objectives
    - Confirming the plan of care
    - Clarifying next steps
    - Establishing contingency plans
    - Maximizing patient adherence and outcomes
    - Making efficient use of time
    - Continue to make the patient feel a part of the collaborative process
    - Continue to build the relationship for future visits
    - Skills for Closing the Session
- Forward planning
    - Contracting
        - Contract with patient next steps
    - Safety-netting-use appropriately
        - Explains possible unexpected outcomes
        - What to do if plan is not working
        - When and how to seek help
- Skill for closing the session cont'd
- Ensuring appropriate point of closure
    - End summary
        - Brief summary of session
        - Clarify plan of care
    - Final checking
        - Check to see if patient agrees
        - Check to see if patient is comfortable with plan
        - Asks patient for any corrections or issues
- Skills for closing the session cont'd
- Skills in other sections of the interview
    - Initiating the session
        - Attentive listening

        - Screening
        - Agenda setting
    - Information gathering
        - Signposting
        - Exploring the patient's ideas and concerns
        - Addressing the patient's feelings, thoughts, and emotions
        - Discussing psychosocial issues
- Skills for closing the session cont'd
    - Explanation and planning
        - Information giving
        - Involving patients in explanation and planning
        - Check for patient understanding
        - Ask for patient's questions
- Video Clips
    - Closing the session
    - Closing the session II
    - Child Interview