DOES GENDER INFLUENCE THE PATIENT-CLINICIAN RELATIONSHIP?

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Does Gender Influence the Patient-Clinician Relationship?

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ABSTRACT

Athletic trainers commonly work with athletes of the opposite gender yet it is not fully understood if gender may influence these interactions. The purpose of this study was to determine the extent that gender influences comfort, communication, and trust in the athlete and athletic trainer relationship. A 26-item survey containing Likert based questions and open-ended and a trust instrument were distributed in athletic training rooms to analyze comfort, communication, and trust. Comfort, communication, and trust were significantly lower when working with athletic trainers of the opposite gender. Athletes reported trust and communication as the most valued aspect of the relationship with their athletic trainer. Despite lower perceived scores, 150 out of 178 participants reported no preference for the gender of their athletic trainer. Athletic trainers should understand that athletes may experience a decrease in comfort, communication, and trust when working with athletic trainers of the opposite gender.

Key Words: Comfort, Trust, Communication, Athletic Trainer

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CHAPTER 1. INTRODUCTION

Relationships are one of the foundational interactions between individuals or groups of individuals. In the last decade, an increase in attention has been given to the relationship between patient and clinician. Many allied health professions such as nursing and psychotherapy have evaluated the patient-clinician relationship,[1, 2] however, athletic training is lacking research into the patient-clinician relationship in the athletic training room setting between athletes and athletic trainers. Gaining more insight on the patient-clinician relationship will help athletic trainers understand what characteristics are important to enhance the relationship. There are many factors that may influence the patient-clinician relationship but one factor that has not been thoroughly evaluated is gender.

Research at the Division I and II setting has shown that gender has the ability to influence the relationship between clinicians and patients. Division I and II college athletes who perceive their athletic trainers as valuable are more likely to be satisfied with their treatments.[3] Similarly, Division I college athletes who are satisfied with their athletic trainer are more likely to trust their athletic trainer which can lead to a better relationship.[4] Many athletic trainers at the Division III and NAIA level work with athletes of the both genders but little is known how this may influence the patient-clinician relationship. If gender negatively influences the relationship, then patient satisfaction may be at risk.

In the NCAA Division I collegiate athletic training setting, Drummond et al. found that athletes report higher comfort levels being treated by an athletic trainer of the same gender during gender sensitive conditions.[5] An example of a gender sensitive condition is an injury to the genitals. There has been no research showing the influence gender has on communication between the athletic trainer and patient in the collegiate setting.[6] However, in the primary care

clinic setting, gender has been shown to have a negative effect on communication,[7] so it is plausible that gender may negatively influence communication in athletic training as well. Lastly, David et al. developed a trust instrument to measure the level of trust between patients and clinicians and they did not find gender to be a negative influence on trust.[8] However, in the process of defining trust, many athletes used aspects of communication to define trust[8] which suggests that trust and communication may be linked. Currently, comfort, communication, and trust are the most common aspects of the patient-clinician relationship studied in athletic training.

However, there has been no research performed on the patient-clinician relationship using Division III and NAIA athletes. Because Division III college athletes have different needs, they may have different responses to being treated by an opposite gender athletic trainer.

Purpose of Study

The purpose of this study is to determine if gender influences comfort, communication, and trust in the athlete and athletic trainer relationship in the Division III and NAIA college settings.

Research Questions

1. Do athletic trainers' genders have an influence on athletes' comfort with athletic trainers?
2. Do athletic trainers' genders have an influence on athletes' communication with athletic trainers?
3. Do athletic trainers' genders have an influence on athletes' trust of athletic trainers?

Definition of Terms

Gender- Gender is the physical characteristics of an individual, as well as the behavioral, emotional and social characteristics of an individual.[9]

Sex- Sex is the biological and physiological characteristics of an individual. [9]

Comfort- Comfort is a basic, necessary human need required in a relationship.[1,10] As it applies to this research, comfort is being in a state of physical and mental ease and free from pain or constraint[1,11] in the presence of physician, clinician or athletic trainer.

Communication- The exchange or expression of information, thoughts, ideas, and opinions.[6,7]

Trust- Trust is the athlete having confidence that the athletic trainer has the patients' best interests in mind and any provided therapy will benefit the patient in their return to activity.[8]

Importance of Study

There is currently limited research examining how gender influences the various characteristics of the athletic trainer and athlete relationship, specifically comfort, communication, and trust. The research previously completed has predominately been performed on NCAA Division I athletes with few on Division II athletes. However, there is no research on Division III or NAIA athletes. Determining the role that gender plays can help athletic trainers better understand the patient-clinician relationship, specifically at the Division III and NAIA athletic setting, and make adjustments if their gender imposes a threat.

Limitations

1. Questions may ask sensitive information which may make participants hesitant to answer honestly.
2. Self-reported bias may influence results.
3. Social acceptability bias may influence results.

Delimitation

1. NCAA Division III and NAIA athletes were chosen to study.

CHAPTER 2. REVIEW OF LITERATURE

Purpose of Study

The purpose of this study is to determine whether or not gender is an influence on the patient-clinician relationship. If gender is found to influence this relationship in any manner, the next question this work addresses is whether or not this influence is harmful to relationships between athletes and athletic trainers. Furthermore, if gender is found to influence this relationship negatively, what solutions are available?

Research Questions

The three research questions, then, are as follows:

1. Do athletic trainers' genders have an influence on athletes' comfort with athletic trainers?
2. Do athletic trainers' genders have an influence on athletes' communication with athletic trainers?
3. Do athletic trainers' genders have an influence on athletes' trust of athletic trainers?

The significance of these research questions are centered on the relationship between athletes and their athletic trainers. It follows that if the relationship is negatively influenced, then there is an increased risk of athlete dissatisfaction.[3] Thus, determining the role that gender may play can first help athletic trainers better understand athletes and then second, help athletic trainers make adjustments if their genders pose a threat to the relationship between them and the athletes they serve.

Introduction

Both athletic training professionals and researchers historically use a disease-orientated methodology.[12-17] However, there has been a push since 2000 to adopt an evidence-based medicine approach in athletic training.[18-22] Adopting an evidence-based medicine approach,

through the utilization of patient-orientated outcomes[18], allows for an increase in patient-centered care. In the traditional medical setting, patient-centered care is linked to an increase in patient satisfaction, better treatment adherence, and better outcomes.[23, 24] The benefits of increased treatment adherence and better outcomes may also hold true in athletic training but have not been closely examined. However, in athletic training, a correlation has been found between athletes' reports of treatment satisfaction and athletes' reports of high perceptions of athletic trainers and willingness to listen to athletic trainers.[3, 18] Having a high perception and willingness to listen are both components of a positive relationship. Therefore, in order to receive these benefits of patient-centered care in athletic training, a positive relationship between athletic trainers and athletes should be established since a positive relationship has already been linked to increased satisfaction.[3, 18]

Components such as gender [2,5,7,25-28], comfort[2,5,25], communication[6,7,29], and trust[8,30], have all been shown to have an influence on the athletic trainer-patient relationship. Drummond et al. examined the influence gender has on the patient-clinician relationship, specifically examining NCAA Division I athletes.[5] They proposed that athletes are more comfortable and prefer athletic trainers of the same gender.[5] The athletic training literature does not specifically examine athletic trainer gender in relation to communication or trust in the relationship. Therefore, in order to help increase athlete satisfaction, as well as possibly treatment adherence and better outcomes, the relationship between athletes and athletic trainers needs to be further examined.

Patient-Centered Care

The ultimate goal of any clinician, regardless of setting, is high quality of care. The Institute of Medicine lists patient-centered care as one of six ways to improve the quality of care a patient receives.[31] In order for care to be patient-centered, the clinical choices should be

directed by the needs and preferences of the patient as well as be respectful and accepting of the patient's differences.[31] When properly carried out, providing patient-centered care results in the clinician creating an environment that promotes working with the patient to develop their treatment instead of an environment that does not permit this type of alliance.

According to Stewart et al. there are six key components to patient-centered care: 1) The patient and physician must explore the patients illness together including the patients thoughts, ideas, and feelings about being ill, 2) the physician must make an effort to understand the patient as a whole, 3) both patient and physician must find common ground regarding management, 4) the physician must incorporate an intervention into the visit, 5) the relationship between patient and physician must be enhanced, 6) and the patient-centered approach must be realistic.[24] Stewart et al. recognized the enhancement of the relationship between patients and physicians as one of the key components to patient-centered care, however, they failed to list what can be done to enhance this relationship.[24]

One of the key components to patient-centered care is establishing and enhancing the patient-clinician relationship.[24] Patient-centered care is linked to high levels of treatment adherence, patient satisfaction, and increased outcomes.[23,24] Establishing rapport can increase the likelihood of the clinician having a positive influence on patient interactions and lead to enhanced patient satisfaction.[30] Therefore, when first dealing with a patient, it is important that the clinician establish rapport.[30] Rapport is created when the patient and clinician develop a close relationship that allows them to understand one another and allow communication to flow freely.[32] Establishing rapport can also lead to creating trust and confidence between patients and their clinicians.[30] Ultimately, the patient-clinician relationship can be strengthened if a sense of trust and confidence is created between patient and clinician. This is of significance since

patients who have a positive relationship with their clinician are more likely to be satisfied with their treatment.[3, 4]

Despite the many benefits of patient-centered care, there are some issues. While the focus of patient-centered care is patient satisfaction, the clinician may be put into difficult situations while carrying out a patients' care. Optimal patient-centered care requires a healthy balance between patient satisfaction and patient improvement, while making sure neither is neglected. Consider a situation where a clinician prescribes a treatment, who, knowing it may not be the best option available, but does it at the patient's request to satisfy them.[33] This creates a situation in which patient satisfaction conflicts with best practice. There is also a possible situation where the patient is cured of their condition or illness but is not satisfied with their treatment process.[33] This creates a situation where patient health improvement conflicts with patient satisfaction.

Gender

For the purpose of this project, the word gender was chosen to describe an individual rather than the word sex. Gender could possibly play a role in the relationship between the patient and clinician and should not be confused with sex. Sex refers to the biological and physiological characteristics that define men and women.[9] Gender, however, refers to not only physical characteristics but also behavioral, emotional and social characteristics.[9] Therefore, in a patient-orientated care model, gender is a more appropriate term because gender does not identify an individual solely on his or her biological and physiological characteristics. Gender helps identify the patient as a whole, which allows the clinician to respect and appreciate the values and beliefs of the patient.

Patient-Clinician Relationship

The definition of patient-centered care demonstrates the need for enhancement of the relationship between clinicians and patients to provide patient-centered care.[20,24,31,33] A positive relationship between patient and clinician is the basis of successful clinical medicine.[34,35] The majority of research into the patient-clinician relationship has taken place in the clinical or hospital setting using physicians and their patients. Key components of the relationship between clinicians and patients are communication, respect, confidentiality, honesty, trust,[34] gender, and comfort.[2,5,7,25] A positive patient-clinician relationship has been linked to relief of hopelessness for the patient, higher satisfaction rates, better adherence, and improved health outcomes.[34] The patient-clinician relationship is important and can play a significant role in the healing process. The patient-clinician relationship can also have an effect on how patients perceive their clinician. Also, establishing a good working relationship with patients has been linked to a decreased chance of a malpractice suit.[36] Spending more time with patients, educating patients more often, laughing and using more humor, and facilitation of patients' thoughts and opinions have all been linked to fewer malpractice suits.[36]

When examining the influence of gender on the patient-clinician relationship in the primary care setting, it is suggested that patients prefer clinicians of the same gender when given a choice.[2,7] However, when the nature of the visit is instrumental and technical in nature, such as surgery or anesthesia, there is no preference for the clinician to be the same gender.[2] This may lead one to conclude that this preference for clinicians of the same gender is due to the feeling of less embarrassment and the feeling of more comfort when talking with someone of the same gender.

Since a positive relationship is important in providing quality care, it is important to understand what to do if one of the key components is missing or deterred from the relationship due to gender. For the purpose of this project, the influence of gender on comfort, communication, and trust will be used to investigate the relationship between athletes and athletic trainers.

Comfort

Comfort is the condition of well-being, contentment, and security[1,10] as well as being in a state of physical ease and free from pain or constraint.[1,11] When clinicians interact with their patients, they should always make an effort to keep the patient in a state of comfort.[37] If the health care professional is unable to have the patient in a state of physical comfort, free from physical pain or anguish, it is even more important to make sure the patient is in a state of mental comfort, feeling at ease or content.[37] Subsequently, it is important to consider that comfort is multi-dimensional and may mean different things to different people.[38] An open line of communication between patients and clinicians may help eliminate uncomfortable situations.

Communication

Communication is the exchange or expression of information, thoughts, ideas, and opinions.[38] While communication may seem straight forward, there is more to communicating than just verbal cues.[6] Communication is multifaceted and involves physical contact, professionalism, listening skills as well as proper verbal skills.[6] If proper means of communication are not established, it can hinder the care process by inhibiting symptom disclosure[7] and possibly more. In the clinic setting, patients are more willing to disclose intimate and sensitive symptoms to their physician if their physician is of the same gender or if they find their clinician attractive.[7]

The issue with symptom disclosure due to gender demonstrates the need for proper communication. There are four parts of good therapeutic communication[30]: 1), the clinician must provide clear and well-organized ideas to the patient, 2) they must be fully present during the exchange and not allow their mind to wander from the present situation, 3) the clinician must be a good listener and listen with the whole self and then clarify any unclear information, 4) and a sense of trust must be developed.[30] Developing trust involves conveying that the patient is worth listening to and has important information regarding the situation, does not make the patient feel "dumb", as well as conveying the values of expertise and confidentiality.[30]

Trust

Trust is crucial to the patient-clinician relationship.[39] When good communication and rapport is established between clinicians and patients, trust can also begin to be established.[30] Trust is the athlete having confidence that the athletic trainer has the patients best interests in mind and any provided therapy will benefit the patient in their return to activity.[8] If trust can be established, then even in uncomfortable and vulnerable situations, the patient hopefully will understand that the clinician has their best interests in mind. Trust in a physician has also been associated with better perceptions of health and better treatment outcomes.[40] Diabetic patients improved more when they reported high levels of trust in their treating physician when compared to diabetic patients that reported lower levels of trust in their physician.[40] It is also crucial that clinicians determine methods to increase the amount of trust in the patient-clinician relationship. Patients who had the option to choose their physician, were able to have a long relationship with their physician, and those who showed high levels of trust in the managed care organization all reported higher levels of trust with their physician.[41] In the primary care setting, gender was not found to be an influence on trust in the patient-clinician relationship.[41]

Athletic Trainers and College Athletes

The majority of research providing insight to the relationship between patients and clinicians has been looked in a traditional sense of medicine: doctors[7,32,40,41], nurses[1,37], and surgeons[2] in the clinic or hospital setting. In the ever-growing medical field, athletic trainers are being utilized in more settings such as clinics, industrial, high schools, and most commonly colleges.[42]

The number of athletic trainers is slowly increasing[42], however the number of student-athletes is increasing as well. Between the two major collegiate governing bodies, NCAA and NAIA, 460,000[43] and 60,000[44] student-athletes respectively, compete each year. The total number of athletic trainers at colleges and universities is 7,970 creating a large inequality between the number of athletes and athletic trainers.[42]

The number of male and female athletic trainers is similar, with there being a slight tilt in recent years towards female athletic trainers (53%).[42] This near even split of athletic trainers by gender could create more situations where athletic trainers are working with teams of the opposite sex.[5,26] If gender is as an issue that can be an influence on the relationship between general medicine practitioners and their patients, gender should be considered a possible influence between athletic trainers and patients as well. This influence can especially be seen in patients when injuries become intimate in nature.

Athletic Trainer-Patient Relationship

There is little research examining the patient-clinician relationship in athletic training. The little research that has been performed has looked at satisfaction[3, 4], gender[2, 5, 25, 26], comfort[5, 25, 26], communication[6], and trust.[8] This research has also predominately been performed on NCAA Division I athletes.

Satisfaction

Unruh et al. suggested that Division I college athletes in high profile sports such as football, basketball, and baseball, are more satisfied with their athletic trainer than those competing in low profile sport such as swimming, tennis, and track.[3] Unruh did not find gender of athletic trainer to be an influence on satisfaction[4]. However, gender of athletes did influence satisfaction scores, with female athletes reporting lower overall satisfaction scores.[3, 4] Since gender of athlete affected satisfaction scores, there is a possibility that gender of the athletic trainer could affect satisfaction scores as well. Understanding the relationship between satisfaction and gender may help strengthen the patient-clinician relationship. If the relationship is strengthened, it can be expected that it would lead to a less likely chance of receiving a malpractice suit, just as higher patient satisfaction leads to less malpractice suits for physicians.[36]

Comfort

As with satisfaction, there is little research examining comfort. Recently, Drummond et al. suggested that Division I college athletes are more comfortable dealing with athletic trainers of the same gender for sex specific conditions and injuries, those dealing with testes, penis, scrotum, vagina, pregnancy, and menstruation.[5] O'Connor et al. came to the same conclusion for Division I football players.[25] For male athletes there is little change in comfort being treated by a female athletic trainer when injuries were not of a sex specific nature.[5] However, O'Connor et al. did find that that NCAA Division I football players were more comfortable discussing depression to female athletic trainers.[25] Female athletes still reported more comfort when being treated by a female athletic trainer for non-sex specific injuries.[5] It is interesting to note that, while feeling more comfortable when being treated by an athletic trainer of the same gender for sex specific injuries and conditions, there were still lower comfort scores reported for both males

and females.[5] This demonstrates the need for more research into the patient-clinician relationship, specifically gender. In addition, more research should evaluate gender specific conditions.

Drummond et al. examined the perceived comfort levels of athletic trainers during treatment of opposite gender athletes.[26] They found that just as athletes may experience discomfort during treatment, athletic trainers might also experience some degree of discomfort.[26] This is especially true for the treatment of sex specific conditions, as mentioned above, and sex specific regions of the body. Both male and female athletic trainers report feeling more comfortable when performing evaluations on athletes of the same gender.[26] The most common reason athletic trainers felt more comfortable during treatments was experience.[26] As expected, athletic training students, who have very low experience levels, report lower comfort scores during treatment of athletes of the opposite gender.[26] The athletic training students preceptor or supervisor should make sure to teach the student what is proper and what is not when dealing with athletes of the opposite gender, set a good example for the student to follow, and make sure the athletic training student is not placed in a situation where they are not comfortable. However, there is little evidence in athletic training to guide how sex specific issues should be handled, making it difficult for preceptors to make sure that athletic training students are taught properly. Therefore, by strengthening the relationship between athletes and athletic trainers, the athletic trainer or athletic training student providing treatment may also experience less discomfort.[26]

Communication

Communication between athletic trainers and athletes has also been examined to determine what makes good communication.[6] Communication qualities that athletes appreciate are ability to establish rapport, provide clear explanation of injuries, and professionalism.[6] While

good verbal skills are essential, touch is a vital part of nonverbal communication.[6] There is essential touch, which occurs frequently between athletic trainers and athletes during treatments and evaluations of injuries, and non-essential touch, which can be a pat on the back or high five after a difficult rehab session.[6] Athletes appreciate nonessential touch, so it is important that athletic trainers learn when it is appropriate to use this kind of touch.[6]

While gender has not been shown to affect communication between athletic trainers and athletes[6], gender has been shown to effect symptom disclosure between general practitioners and their patients.[7] Therefore, gender may affect communication of symptoms between athletic trainers and athletes, which could interfere with the treatment process. Athletes have also used aspects of communication to define trust[8], communication may play a role in the development of trust.

Trust

David et al. developed a trust instrument to measure trust between athletes and athletic trainers.[8] In the process of developing the trust instrument, they provided a definition of trust directly related to athletic training. Specific to athletic training, trust is the athlete having confidence that the athletic trainer has the patient's best interests in mind and any provided therapy will benefit the patient in their return to activity.[8] David et al. also found that communication and trust might be interlinked. When athletes were asked to provide a definition of trust, aspects of communication were commonly used.[8] When testing her instrument, she found that gender did not influence trust between athletic trainers and their patients. However, since communication can be negatively influenced by gender in other realms of medicine[7], gender may still be an influence on trust since communication and trust seem to be linked.[8]

There have been no research studies that directly look at how gender influences trust in athletic training, if gender influences trust at all.

Gender has been linked to negative influences on communication[6,7,30] in non athletic training settings and comfort in both athletic training and non athletic training settings.[5,26] Aspects of communication were used to describe trust[8,39], which may lead to the conclusion that gender could have an influence on trust as well. While there is limited evidence to support the claim that comfort, communication, and trust are negatively influenced by gender, there is a possibility that they are interrelated. It stands to reason then, that if only one of the afore mentioned elements of a relationship are negatively influenced by gender, it could have a negative influence on the whole relationship.

Summary

Ample amounts of research have gone into the physiological aspects of injuries but there needs to be more emphasis placed on the relationship between athletic trainers and athletes. Relationships between clinicians and patients can be complicated and misunderstandings can lead to decreased quality of care. It is important in athletic training that quality of care is maintained. Therefore, the more that is understood about the relationship between athletic trainers and athletes, the more complications and misunderstandings can be avoided and good relationships can be established.

The extent of how gender affects the relationship between athletes and athletic trainers has not been well studied even though there are countless interactions between athletes and athletic trainers of the opposite gender every day. With a push in patient-centered care in the majority of health care professions, athletic training needs to follow. Patients have shown a preference for same gender physicians[2], and results of comfort surveys may suggest the same is

true for college athletes as well.[5] It is not clearly understood how gender may affect comfort, communication, and trust. Gaining a better understanding of the extent the relationship, if at all, is affected by gender is the first step in making sure the athlete receives premium care. If the influence gender has is better understood and better relationships can be created, there is a chance that there will be an increase in patient satisfaction.[3]

CHAPTER 3. METHODOLOGY AND PROCEDURES

The purpose of this study is to determine if gender influences comfort, communication, and trust in the athlete and athletic trainer relationship in the Division III and NAIA college settings. Gaining more insight on the relationship between athletes and athletic trainers will help athletic trainers better understand what characteristics are important and needed in the relationship. It will also help athletic trainers if gender becomes a setback during treatment. This chapter explains in depth: the experimental design, the participants, the instrument, data collection, and analysis procedures.

Experimental Design

A cross-sectional survey design was used. Dependent variables were comfort, communication, and trust. The independent variable was gender.

Participants

A sample of NCAA and NAIA athletes were recruited from colleges in the Upper Midwest to participate in this study. Inclusion criteria was the participant had to have competed in NCAA Division III (DIII) or NAIA athletics and have interacted with an athletic trainer within the last six months. Both males and females over the age of eighteen were recruited. Based on similar studies, approximately 200 completed surveys were expected.[5, 25]

Instrument for Data Collection

Two surveys were used to collect data. A Gender Influence Questionnaire (Appendix A) was developed using both open-ended and closed-ended questions to answer the research questions. The items in the survey were developed through a detailed literature review and anecdotal evidence gained through experience as an athletic trainer. Item wording was based on guidelines suggested by Dillman, Smyth, and Christian.[45] Once the survey was developed, five

content experts reviewed it using a content expert guideline sheet (Appendix C) and revisions were made based on their comments. Three content experts were selected for their experience as athletic trainers while two experts were selected based on their experience as collegiate athletes.

The survey contained 26 items pertaining to perceived comfort, communication, and trust of athletes when working with athletic trainers of both genders. The survey is divided into five sections. The first section of the survey was a demographic section. Sections two through four contained questions using a Likert Scale. Scores were rated between one and ten, with a rating of one being strongly disagreed, a rating of five being neutral, and a rating of ten being strongly agreed. The second section was used to determine baseline ratings for comfort, communication and trust before gender is introduced. The third section of the survey asked questions pertaining to perceived comfort, communication and trust while being treated by athletic trainers of the opposite gender while the fourth section asked the same set of questions, but while being treated by athletic trainers of the same gender. Participants were asked to give a rating of perceived comfort, communication and trust using a non-sensitive area such as the ankle, knee, and shoulder and then again using a sensitive area such groin, penis, testicles, vagina, or breast. The final section of the survey included six open-ended questions to gain additional insight on how gender may influence the relationship.

The second survey was a trust instrument (Appendix B) developed by David,[8] which was attached to the Gender Influence Questionnaire. The trust instrument contained 32 items divided into two sections: 1) demographics section and 2) questions assessing components of trust. Participants were asked to rate their current healthcare experience for each component of trust using one of four response options: “Never/A few times,” “Occasionally,” “Often,” and “Always.” A total trust score was then calculated from the components of trust.

Data Collection

Consent from the university institutional review board was obtained prior to collection of data (Appendix D). Proper consent from each college and university selected was also obtained prior to data collection. Prior to beginning the survey, participants had the opportunity to ask questions and then completed the informed consent (Appendix D). A paper and electronic version of the survey were used for data collection. A member of the research team went the athletic training room of each university and recruited participants. At the completion of the survey, the participants had the option to provide their email address for a chance to be entered into a drawing for a $25.00 gift card.

Data Analysis

Ordinal data obtained from the surveys were evaluated with descriptive statistics. The open-ended questions were analyzed using grounded theory.[46,47] Reoccurring ideas were categorized into themes and overall patterns were developed based on the themes.[48] The Gender Influence Questionnaire was evaluated for internal consistency using Cronbach's alpha. The trust instrument was totaled for a total trust score. The total trust score was correlated to the importance of trust on the Gender Influence Questionnaire. An independent t-test was also used to determine if there was a difference in total trust score between participant genders.

CHAPTER 4. MANUSCRIPT

Abstract

Context: Athletic trainers commonly work with athletes of the opposite gender, yet it is not fully understood how gender may influence these interactions. **Objective:** The purpose of this study was to determine if gender influences comfort, communication, and trust in the athlete and athletic trainer relationship. **Design:** A cross-sectional survey design was used to collect data. The dependent variables were comfort, communication, and trust while the independent variable was gender. **Setting:** Three Division III and NAIA athletic training rooms in the Upper Midwest. **Participants:** A total of 178 collegiate athletes were used. **Intervention:** A 26-item survey containing Likert based questions and open-ended questions regarding the patient-clinician relationship and a trust instrument were distributed in the athletic training room. **Main Outcome Measure**: A repeated measures ANOVA was used to analyze Likert scale items and open ended question responses were categorized into common themes using grounded theory techniques. **Results:** There was a significant difference for perceived comfort, communication and trust when working with an athletic trainer of the opposite gender as compared to working with one of the same gender. Despite lower perceived scores, 150 out of 178 participants reported no preference for the gender of their athletic trainer when asked directly. Athletes reported trust and communication as the most valued aspect of the relationship with their athletic trainer. **Conclusions:** Athletic trainers should understand that athletes may experience a decrease in comfort, communication, and trust when working with athletic trainers of the opposite gender. However, a majority of athletes do not have a preference as long as a strong relationship can be developed.

Key Words: Comfort, Trust, Communication, Athletic Trainer

Introduction

The relationship between individuals or groups of individuals is one of the foundational societal interactions. In the last decade, the attention to the relationship between patient and clinician has increased and allied health professions, such as nursing and psychotherapy, have evaluated the patient-clinician relationship.[2,37] However, athletic training is lacking research on the patient-clinician relationship. In the clinic setting, it has been suggested that patients prefer to have a physician of the same gender.[2,41] Having a clinician of the same gender allows for easier communication between patient and clinician in addition to the patient feeling more comfortable during examination.[2] Patients are also more willing to disclose symptoms to physicians of the same gender.[41] If patients are not comfortable or unable to communicate effectively with their clinician then patient care may be at risk.

Athletic trainers commonly work with athletic teams of the opposite gender so it is important to understand if gender influences the relationship between athletic trainers and athletes. While it has not been determined if athletes have a gender preference while working with an athletic trainer, athletes in the Division I athletic setting have reported a decrease in comfort when working an athletic trainer of the opposite gender.[5,25] This difference is primarily seen when the injury is intimate in nature.[5,25] When the injury is not intimate, males report little to no change in comfort, whereas females report slightly less comfort.[5] Since there is a decrease in reported comfort by athletes, it would suggest that there may be a preference for working with an athletic trainer of the same gender, but no definitive conclusions can be made. This research also does not provide us with suggestions to increase comfort.[5,25]

Another issue that physicians face is the possible withholding of symptoms or injuries by patients when working with physicians of the opposite gender.[41] This could be due to the afore

mentioned decrease in comfort when working with a physician of the opposite gender. It is unclear if withholding of symptoms occurs in athletic training, but if it does it could impede the quality of care an athletic trainer is able to provide. In an effort to increase the effectiveness of communication, Spangler and Blankenship surveyed both athletes and athletic trainers for what they thought effective communication entailed.[6] Establishing rapport, providing clear explanations, and maintaining professionalism were the foundations of effective communication according to the athletes questioned.[6] Nonverbal skills such as touch were also viewed as an effective means of communication.[6] Unfortunately, they did not examine how gender or type of injury effects communication.[6] If the results are similar to comfort, where working with the opposite gender and working with an injury that is intimate in nature causes a decrease in effective communication, it can make it difficult for athletic trainers to provide quality care.

One aspect of a relationship that may decrease the amount of discomfort and increase poor communication is trust. Trust has not been shown to be influenced by gender in the primary care setting, but it has been linked to better treatment outcomes and better relationships with health care providers.[41] In an effort to examine trust in athletic trainers and their patients, David et al. developed a trust instrument.[8] While defining trust, they found that aspects of effective communication found by Spangler and Blankenship[6] were used to define trust, suggesting that trust and communication may be linked.[8] It is unclear how gender may influence trust specifically in athletic training because trust has not been directly examined.

All previous research on the patient-clinician relationship has been performed in other health care settings or at the NCAA Division I or II college level; however, this does not consider athletes at other competition levels. Therefore, the purpose of our research was to evaluate whether comfort, communication, and trust decrease when working with an athletic

trainer of the opposite gender at the NCAA Division III (DIII) and NAIA level. A secondary purpose of our study was to gain insight from athletes into key characteristics of a good patient-clinician relationship. Through better understanding of these key characteristics, the potential for athletic trainers to establish good patient-clinician relationships with athletes.

Methods

Participants

A convenient sample of 178 (110 males and 68 females) NCAA and NAIA athletes from colleges in the Upper Midwest participated in this study. Inclusion criteria was that the participant had to have competed in DIII or NAIA athletics and have interacted with an athletic trainer within the last six months. For participant demographics see Table 1 and Figure 1.

Table 1. Participant Demographics

Group	Male (n=110)	Female (n=68)	Total
17-21	61	48	109
21-23	47	20	67
24+	2	0	2
First year	24	17	41
Sophomore	36	14	41
Junior	26	21	47
Senior	24	15	39
Other	0	1	1

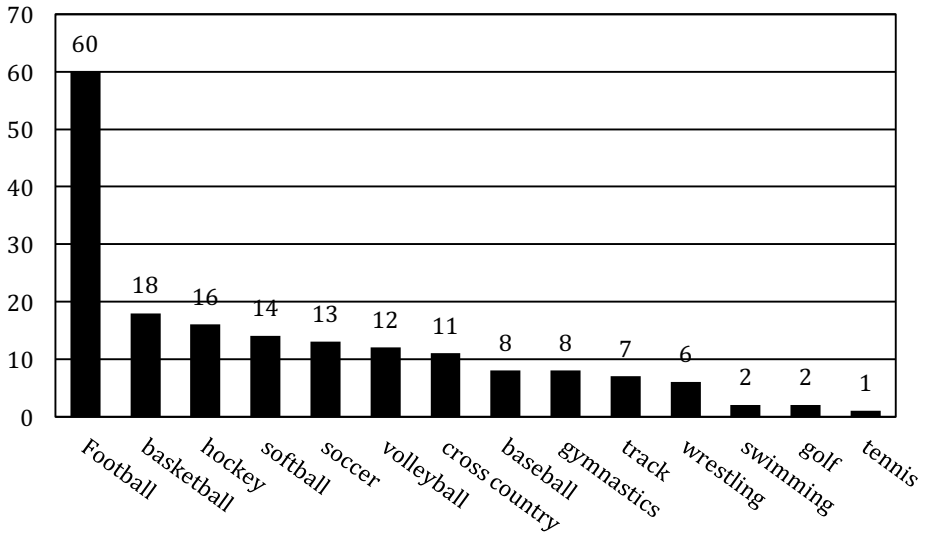

Figure 1. Sport Distribution

Instrument

Two surveys were used to collect data. The Gender Influence Questionnaire was developed by the research team and contained a demographics section, six open-ended questions and fifteen closed-ended questions. The closed-ended questions pertained to comfort, communication, and trust as scored on a Likert Scale, with a rating of one being "strongly disagree" and ten being "strongly agree." The items in the survey were developed through a detailed literature review and anecdotal evidence gained through experience as an athletic trainer. Once the survey was developed, it was validated by five content experts who reviewed it using a content expert guideline sheet and revisions were made based on their comments. Three content experts were selected for their experience as athletic trainers while two content experts were selected based on their experience as collegiate athletes.

The second survey was a trust instrument developed by David,[8] which was attached to the Gender Influence Questionnaire. The trust instrument contained 32 items divided into two sections: 1) demographics section and 2) questions assessing components of trust. Participants

were asked to rate their current healthcare experience for each component of trust using one of four response options: “Never/A few times,” “Occasionally,” “Often,” and “Always.” A total trust score was then calculated from the components of trust.

Procedure

Consent from the university institutional review board (IRB) was obtained prior to collection of data. Consent from each college or university selected was also obtained prior to data collection. A member of the research team went to the athletic training room of each university and recruited individual participants. Prior to beginning the surveys, participants had the opportunity to ask questions, and if interested then completed the informed consent. Both research surveys were available online or on paper. At the completion of the surveys, the participants had the option to provide their email addresses for a chance to be entered into a drawing for a $25.00 gift card.

Statistical Analysis

Ordinal data obtained from the surveys were evaluated with descriptive statistics. A repeated measures ANOVA was used to find differences in Gender Influence Questionnaire based on gender and injury type. The independent variable was gender while the dependent variables were comfort, communication, and trust. The total trust score was correlated to the importance of trust on the Gender Influence Questionnaire. An independent t-test was also used to determine whether there was a difference in total trust scores between participant genders. The open-ended questions were analyzed using grounded theory techniques.[46,47] Open-ended responses were coded and then categorized into common themes.[48]

Results

Quantitative Analysis

A total of 178 college athletes completed the Gender Influence Questionnaire and 96 completed the Trust Instrument. Mean values were calculated for all three variables for both same and opposite gender conditions (see table 2 and 3). Comfort ($F(1,175)=99.081$, $p=.000$), communication ($F(1,174)=74.943$, $p=.000$), and trust ($F(1,175)=20.526$, $p=.000$) all had significant differences between the general injury condition and the sensitive injury condition at the $p=.01$ level.

Table 2. Mean Perceived Comfort, Communication, and Trust Scores for the Opposite Gender Condition

Condition	Total	SD	Male	SD	Female	SD
Comfort + General	9.54	.85	9.57	.81	9.50	.91
Comfort + Sensitive	7.49	2.14	7.85	2.02	6.93	2.21
Communication + General	9.45	.88	9.43	.93	9.49	.80
Communication + Sensitive	7.81	2.12	8.01	2.13	7.49	2.07
Trust + General	9.59	.78	9.55	.84	9.66	.66
Trust + Sensitive	8.84	1.64	8.85	1.64	8.82	1.66

Table 3. Mean Perceived Comfort, Communication, and Trust Scores for the Same Gender Condition

Condition	Total	SD	Male	SD	Female	SD
Comfort + General	9.67	.69	9.60	.77	9.79	.53
Comfort + Sensitive	8.95	1.32	8.91	1.38	9.01	1.23
Communication + General	9.62	.75	9.54	.83	9.74	.56
Communication + Sensitive	9.15	1.19	9.18	1.19	9.09	1.19
Trust + General	9.71	.61	9.64	.70	9.82	.42
Trust + Sensitive	9.42	1.00	9.37	1.04	9.50	.94

Perceived comfort ($F(1,175)=6.663$, $p=.011$) was significantly lower in females compared to males when working with an athletic trainer of the opposite gender. There was no significant interaction between males and females for communication or trust. There was also no significant interaction between grade level of participants for any of the variables. The difference between the gender conditions and the variables of interest are displayed in Table 4.

Table 4. Mean Calculated Differences Between the Same and Opposite Gender Athletic Trainer Conditions

Condition	Total	SD	Male	SD	Female	SD
Comfort + General	0.13	.77	0.02	.72	0.29	.81
Comfort + Sensitive	1.47	1.98	1.08	2.00	2.09	1.80
Communication + General	0.17	.74	0.12	.79	0.25	.66
Communication + Sensitive	1.34	1.81	1.17	1.88	1.60	1.67
Trust + General	0.11	.58	0.08	.61	0.16	.54
Trust + Sensitive	0.58	1.48	0.53	1.56	.68	1.35

A total of 96 participants completed the trust instrument. The trust scores were totaled with the mean score being 168.48 +/- 23.28. The maximum trust score was 192 and the minimum trust score was 89. The total trust score was not significantly correlated to the athlete's value of comfort, communication, or trust. There was also no significant difference in total trust score between genders.

Qualitative Analysis

When asked if participants had encountered an uncomfortable situation while working with an athletic trainer opposite gender, 131 responded negatively, while 20 responded positively. The most common uncomfortable situations encountered by these 20 athletes were injuries to the groin (*n*=5), the athletic trainer being "awkward" (*n* =4). the amount of force generated by the athletic trainer (*n* =3), stretching position (*n* =2), and asking for feminine hygiene products (*n* =2). Only 5 of the 20 that responded positively felt the situation could have been avoided.

There were many responses when asked if there was anything that could be done to improve care during treatment of intimate areas. The common themes found were clear communication (*n* =51), act professional/professionalism (*n* =25), avoid awkwardness/act normal (*n* =23), nothing/unsure (*n* =21), drape/cover area (*n* =10), and private exam area (*n* =8).

When participants were asked if they had a preference on the gender of their athletic trainer, a large portion responded they had no preference (*n* =150/178). Only 24 participants responded that they had a preference on the gender of their athletic trainer. The participants also reported that there was no difference between communication with athletic trainers of either gender (*n* =135/178). There was a reported decrease in communication for 28 of the 178 participants. Unfortunately, only 10 of these 28 participants provided reasoning for the decrease in communication. The most commonly given reason was that athletic trainers of the same gender are better able to understand their pain and symptoms.

Participants were asked what they value in the relationship with their athletic trainer. The themes found were trust (*n* =82), good communication (*n* =53), knowledgeable/smart athletic trainer (*n* =40), professionalism (*n* =35), athletic trainer uses proper care/best practice (*n* =27), and honesty (*n* =26). Other themes that did not receive as many references were caring (*n* =25), approachable/friendly (*n* =24), understanding/empathy (*n* =18), rapport/getting to know athlete (*n* =16), easy to get along with (*n* =10), and funny/sense of humor (*n* =10).

Discussion

We wanted to explore the role gender plays in the patient-clinician relationship at the DIII and NAIA collegiate levels. As previous research suggested,[5,25] we also found perceived comfort to be significantly higher when working with an athletic trainer of the same gender. In addition, we also found communication and trust to be significantly higher when working with an athletic trainer of the same gender. However, when asked if athletes had a preference for the gender of their athletic trainer, 84% of athletes responded that they did not have a preference. This is conflicting to Kerssens et al[2] who found that patients in the clinic setting preferred physicians of the same gender. A potential reason for this difference may be due to athletes

interacting with athletic trainers more often than patients may interact physicians. Still, it may be beneficial to have athletic trainers of both genders available in case athletes may feel more comfortable working with as same gender athletic trainer.

Comfort

The results of this study are consistent with Drummond et al.[5] They reported that NCAA Division I athletes had less comfort when working with athletic trainers of the opposite gender than when working with athletic trainers of the same gender,[5] which is consistent with the DIII and NAIA sample. We also found that female athletes were less comfortable when working with male athletic trainers than male athletes were when working with female athletic trainers. Both male and female athletes were less comfortable when the area of the body treated was considered intimate. These two findings are consistent with previous research in athletic training.[5,25,26] It should be noted however, that even when working with athletic trainers of the same gender, all athletes reported less comfort when the treatment dealt with an intimate area of the body. This mirrors what O'Connor et al[25] found. Therefore, athletic trainers may benefit by: 1) recognizing that all athletes experience less comfort when working with an intimate area of the body and 2) implementing strategies to minimize discomfort.

The current research in conjunction with previous research established that athletes experience less comfort during a gender sensitive injury. However, strategies to alleviate these uncomfortable situations have not determined.[5,25,26] In our research we sought to more fully understand how to minimize discomfort for athletes. Many solutions were suggested by athletes to help increase comfort. The most common suggestion was having the athletic trainer clearly communicate what was occurring, or going to occur, during evaluations and treatments. One way to apply this information is for athletic trainers to explain exactly what they are doing and why it

is necessary prior to touching the patient. Another proposed solution was for athletic trainers to conduct themselves professionally at all times. According to the National Athletic Trainers' Association code of ethics, there are four principles to maintaining professionalism: 1) Respecting the rights, welfare, and dignity of others, 2) obeying all laws and regulations set by athletic training governing bodies, 3) maintaining and promoting high standards, and 4) avoiding behavior that negatively promotes athletic training or that may be considered a conflict of interest.[49] Athletes also noted that if athletic trainers makes gender sensitive injuries awkward or don't act normal during evaluation and treatment, the situation becomes uncomfortable. One athlete reported that the athletic trainer should "Treat [gender sensitive injuries] like any other injury and don't make it awkward. If you are awkward, then it'll be awkward for me," while another said "Don't be awkward. Treat [gender sensitive injuries] like any other injury unless treated person is uncomfortable." Many athletes reported that athletic trainers should avoid awkward behavior but, unfortunately, all failed to describe what they considered awkward behavior. Another notable response from a participant was "It's only weird when the [athletic] trainer is uncomfortable... Make sure that [athletic trainers] are comfortable in the situation." With this in mind, we suggest that athletic trainers act as they would with a non-intimate area of the body even though athletic trainers may experience discomfort working with athletes of the opposite gender.[26]

Communication

Since there is no previous research examining the effect gender has on communication, we cannot place our findings in the context of established knowledge. Overall, communication received significantly higher scores when athletes worked with athletic trainers of the same gender as compared to athletic trainers of the opposite gender. These results suggest that

communication may be worse when athletes work with athletic trainers of the opposite gender. In addition, participants of both genders reported lower communication when treated by athletic trainer of either gender for an injury of intimate nature. This is possibly (and most probably) due to embarrassment of talking about a sensitive area of the body. However, when asked if communication differed when working with athletic trainers of the opposite gender, 76% of athletes said they communicated the same whereas only 16% said they communicated differently. When communication was reported differently, athletes commonly felt someone of the same gender was able to understand their injury better such as this participant reported: "I think it is similar but just for some certain female issues I tend to be more comfortable telling a female because they can understand the situation better." This is similar to what has been found for physicians and their patients.[2] It may be beneficial then for athletic trainers to focus on the components of effective communication found by Spangler and Blankenship.[6] They suggested that athletes appreciate: 1) rapport, 2) clear explanations of injuries, 3) professionalism, and 4) nonverbal skills such as touch.[6] Athletic trainers can use these facets of effective communication to ensure that quality communication can be established with athletes of both genders. Athletes also reported communication to be the second most valued aspect in a relationship with athletic trainers they work with, as well as being the most commonly suggested solution to alleviating uncomfortable situations.

Trust

Trust appeared to be the most important factor in the patient-clinician relationship as it was the most common quality referred to by athletes. Although all three constructs suffered in opposite gender patient-athletic trainer scenarios, trust did not suffer to the degree that comfort or communication did. This finding contrasts that of some of the early literature that found that

trust did not suffer at all when patients were cared for by opposite gender physicians.[41] One potential explanation for the difference between trust in the primary care setting and athletic training room setting could be the lack of understanding athletic trainers' education and scope of practice. Trust was also mentioned in response to several of the open ended questions. For example, trust in athletic trainers was seen as a solution to making a situation more comfortable. As one participant put it an uncomfortable situation could be avoided "just by building up trust between the athlete and trainer." Trust was also mentioned by nearly half of the participants as a quality they value in their relationships with athletic trainers. For this reason, it appears that trust is needed in the patient-clinician relationship, but it is not clear how to effectively develop trust. In fact, establishing trust may also lead to better health outcomes and a more positive view of individual health.[40] Future research is needed to determine the most effective methods of developing trust between patients and clinicians.

Patient-Clinician Relationship

A secondary goal of this research was to improve the patient-clinician relationship in athletic training. In an attempt to gain a better understanding of the patient-clinician relationship, we asked athletes what they value in a relationship with athletic trainers. As noted previously, trust was mentioned by nearly half of participants as something they value in the patient-clinician relationship. Therefore, an effort should be made by athletic trainers to develop trust with their patients. Communication, knowledge, and professionalism are other qualities that athletes feel are important to have in the patient-clinician relationship. Qualities that were mentioned less often, but still may be beneficial for clinicians to practice were approachable, attentive, and easy-going with athletes. Clearly, the number of qualities athletes value demonstrates the complexity of the patient-clinician relationship and how it may vary among patients.

Limitations

Participants were asked to provide perceived levels of comfort, communication, and trust which may have been influenced by self-report bias or social acceptability bias. Several of the questions pertained to sensitive information which may have the answers that participants provided. Availability of participants due to time restraints limited the number of Trust Instruments that were completed. This could have influenced the results of the total trust score and whether it was correlated to items on the Gender Influence Questionnaire. Lastly, all colleges used served as clinical sites for athletic training education programs. Participants may have thought about athletic training students rather than athletic trainers when answering questions. Athletic training students also increase the ability of the staff to provide athletic training services which may have influenced the results. Future research at colleges without athletic training programs would be needed to determine if this affected results.

Future Research

This study provided many interesting findings that need more research. We found that comfort is decreased when working with an athletic trainer of the opposite gender, as well as determining the same is true for communication and trust in NCAA DIII and NAIA athletes. Future research should determine if this also holds true in the clinical setting and the secondary setting where patients may not see their athletic trainer as often. Future research is also needed to determine the best methods for developing comfort, communication, and trust. Lastly, future research is needed to help explain why, despite reporting lower comfort, communication, and trust, athletes do not a preference for the gender of their athletic trainer.

Conclusion

The primary goal of this research was to determine if gender influenced the patient-clinician relationship. A secondary goal of improving the patient-clinician relationship through better understanding of aspects of the patient-clinician relationship. Thought better understanding of the patient-clinician relationship, athletic trainers may be able to increase satisfaction, adherence, and treatment outcomes of athletes they work with[34] and thus develop long lasting patient-clinician relationships.

A large majority of surveyed athletes reported no preference for the gender of their athletic trainers despite having reported lower comfort, communication, and trust with athletic trainers of the opposite gender. Another interesting finding was that athletes reported communication to be the same despite having reported lower communication scores. Two core qualities that athletes value are trust and communication. There were many additional qualities that athletes valued, which demonstrates the complexity of the patient-clinician relationship. In an attempt to improve lower comfort, communication, and trust, we propose several strategies for athletic trainers to utilize, such as communication, professionalism, and normal conduct during gender sensitive injuries. Nevertheless, while research can provide insight into the overall patient-clinician relationship, it remains important for athletic trainers to use appropriate judgment for individual patient-clinician relationships.

CHAPTER 5. DISCUSSION

The purpose of this study was to determine the extent that gender influences comfort, communication, and trust in the patient-clinician relationship in NCAA Division III (DIII) and NAIA college setting. The research question for this study was: Do athletic trainers' genders have an influence on athletes' comfort, communication, and trust with athletic trainers? A validated survey was used to find a significant decrease in perceived comfort, communication, and trust in DIII and NAIA athletes when they worked with athletic trainers of the opposite gender. We hypothesized that all three variables would decrease with athletic trainers of the opposite gender. Therefore, we also asked a series of open ended questions to provide more understanding of the patient-clinician relationship.

Comfort

Comfort is the only characteristic of the patient-clinician relationship that has been directly examined in relation to gender.[5,25,26] Previous research has primarily been performed using NCAA Division I (D1) athletes which can make generalizing findings to all athletic populations difficult.[5,25,26] Athletes may feel differently about their bodies and athletic trainers due to athletic scholarship, available college resources, motivation for competition, among other possible factors. However, the results for DIII and NAIA athletes were parallel to the results in DI athletes.[5,25] Division III and NAIA athletes reported lower comfort scores when working with athletic trainers of the opposite gender. We also found that female athletes were less comfortable when working with male athletic trainers than male athletes were when working with female athletic trainers. Both male and female athletes were less comfortable when the area of the body treated was considered intimate. These two findings are consistent with previous research in athletic training.[5,25,26] Although it should be noted though, that even when working with athletic

trainers of the same gender, all athletes reported less comfort when the treatment dealt with an intimate area of the body, mirroring what O'Connor et al[25] found. Therefore, athletic trainers may benefit by: 1) recognizing that all athletes experience less comfort when working with an intimate area of the body and 2) implementing strategies to minimize discomfort.

We determined that athletes experience less comfort during gender sensitive injuries, as well as with athletic trainers of the opposite gender. However, strategies to alleviate these uncomfortable situations have not been documented.[5,25,26] In this research, we sought solutions to minimize discomfort for athletes. Clear communication from athletic trainers of what is occurring, or going to occur, during evaluations and treatments was the most suggested solution to alleviate discomfort. Another aspect of clear communication that athletes felt important was athletic trainers should be able to explain their injury or condition and treatment in a manner that is easy to understand, also known as patient education. Proper patient education is also a known component of trust.[8] One way to apply this information is for athletic trainers to explain exactly what they are doing and why it is necessary, using terminology that athletes are able familiar with, prior to touching the patient. Another suggested solution by the athletes for discomfort was for athletic trainers to maintain professional conduct at all times. According to the National Athletic Trainers' Association code of ethics, professionalism includes 1) respecting others, 2) obeying regulations, 3) maintaining high standards, and 4) avoiding potential conflict of interests.[49] Professionalism is easiest to maintain when a strictly professional patient-clinician relationship is upheld.

It is known that athletic trainers may experience discomfort when working with athletes of the opposite gender, especially during gender sensitive injuries.[26] Athletes noted that when they sensed athletic trainers working with them were uncomfortable, it made the situation

uncomfortable. One athlete reported that athletic trainers should "treat [gender sensitive injuries] like any other injury and don't make it awkward. If you [athletic trainers] are awkward, then it'll be awkward for me," while another said "don't be awkward. Treat [gender sensitive injuries] like any other injury unless treated person is uncomfortable." Many athletes reported that athletic trainers should avoid awkward behavior but, unfortunately, all failed to describe what they considered awkward behavior. Another response from a participant was "it's only weird when the [athletic] trainer is uncomfortable... Make sure that [athletic trainers] are comfortable in the situation." With this in mind, we suggest that athletic trainers act as they would with a non-intimate area of the body even though athletic trainers may experience discomfort working with athletes of the opposite gender.[26]

The most common reason for athletic trainers' discomfort with the opposite gender that has been previously established is lack of experience.[26] One possible method to address this is during clinical education. It is important for student athletic trainers to be exposed to working with athletes of the opposite gender during their clinical experience. By emphasizing this exposure during the clinical education process, preceptors will hopefully be able to provide guidance for working with athletes of the opposite gender, as well as control to which situations athletic training students are exposed. This exposure will also allow athletic training students to become more comfortable during early stages of their career.

Communication

A Likert-scaled analysis of communication revealed similar results to comfort. Perceived communication was significantly higher with athletic trainers of same gender. On the other hand, communication was lower during a gender sensitive injury with both genders of athletic trainers' genders, possibly due to embarrassment of talking about a sensitive area of the body. These

results could suggest that communication would be different when communicating with athletic trainers of the opposite gender. However, when asked if communication differed when working with athletic trainers of the opposite gender, an unanticipated 76% of athletes reported they communicated the same whereas only 16% reported they communicated differently. When the communication was reported to be different, it was commonly due to athletes feeling that athletic trainers of the same gender were able to understand them better such as one participant who reported: "I think [communication] is similar, but just for some certain female issues I tend to be more comfortable telling a female because they can understand the situation better." It may be beneficial for athletic trainers to consider the components of effective communication as used by Spangler and Blankenship.[6] Athletes tend to appreciate rapport, clear explanations of injuries, professionalism, as well as nonverbal skills such as touch.[25] By incorporating these components in the practice of athletic trainers, effective communication between patient and clinician can be established and maintained.

Trust

Trust appeared to be the most important factor in the patient-clinician relationship because it was commonly referred to by athletes. Trust decreased when working with athletic trainers of the opposite gender for both injury conditions. This is contrary to what McMuray[41] found in the primary clinic setting and to what David[8] found in the athletic training setting. However, the difference in level of trust for both injury conditions was less than for comfort or communication. This may suggest that trust does not suffer as much as comfort or communication. Trust was mentioned in response to several of the open ended questions. Being able to trust athletic trainers while working with them was seen as a solution to make a situation less uncomfortable. As one participant stated, an uncomfortable situation can be avoided "just by

building up trust between the athlete and [athletic] trainer." Trust was also mentioned by nearly half of all participants as something they value in their relationships with athletic trainers. Due to this, it appears trust is needed in the patient-clinician relationship. Therefore, emphasis should be placed on developing trust between athletic trainers and athletes. However, it is not yet clear how to effectively develop trust. Future research is needed to determine the most effective methods of developing trust between patients and clinicians.

Patient-Clinician Relationship

Despite showing signs of preference for athletic trainers of the same gender during the Likert-scaled questions, 84% of athletes responded that they do not have a preference for the gender of their athletic trainers. This supports David et al,[8] who suggested that athletes do not have a preference for the gender of their athletic trainer based off trust. However, this is opposite of what was found by Kerssens et al[2] who found that patients in the clinic setting preferred physicians of the same gender. These contrasting results may be due to patients seeing their physician less than athletes see their athletic trainer throughout the course of a year. This more frequent interaction may lead to more opportunities to develop a better relationship between athletic trainers and athletes. However, this preference should not be assumed for all athletes as more research needs to be completed to see whether athletes at other NCAA DIII and NAIA institutions or athletes in other athletic training settings report similar preferences.

A secondary goal of this research was to determine methods to improve the patient-clinician relationship. In an attempt to gain a better understanding of the patient-clinician relationship, we asked athletes what they value in patient-clinician relationships with athletic trainers. As noted previously, trust was mentioned by nearly half of participants as something they value in a relationship. Therefore, an effort should be made by athletic trainers to develop

trust with their patients. Communication, knowledge, and professionalism are also qualities that athletes value in the patient-clinician relationship with athletic trainers. Other qualities that were mentioned less often but still may be beneficial for clinicians to practice were approachability, attentiveness, and easy-going. These results demonstrate that athletes value many qualities and display the complexity of the patient-clinician relationship and how it may vary among patients.

The results from this question also show qualities that can be taught to athletic training students to help them flourish during clinical rotations and in their careers. Core qualities that athletic trainers should possess are good communication, approachability, trustworthiness, knowledgeable, and professionalism. Teaching athletic training students during clinical education what qualities they need to possess while working as an athletic trainer allows them to improve aspects in which they may be deficient in.

Athletic Training Education

This research, in conjunction with past research, could provide information on the patient-clinician relationship to incorporate into athletic training textbooks. A brief review of several athletic training education textbooks demonstrates the need for more research examining the patient-clinician relationship in athletic training.[50,51,52] Other disciplines, such as physical therapy and nursing, have entire textbooks dedicated to the patient-clinician relationship.[53-57] However, to our knowledge, no such textbooks exist specifically for athletic training. Having chapters or an entire textbook could provide both athletic trainers, as well as athletic training students, a foundation to building better patient-clinician relationships. The text used to prepare athletic training students for future careers provides detailed explanations of injuries, evaluations, treatments, and administrative duties, but scarcely addresses the patient-clinician relationship. One text details the athletic trainers' role in providing social support to athletes by:

1) listening carefully, 2) projecting a caring image, 3) explaining injuries clearly, 4) communicating with athletes, and 5) helping athletes return to competition.[14] The current research supports that athletes value these items in a relationship with athletic trainers. However, this text does not include key components that athletes value in the patient-clinician relationship such as trust, knowledge, professionalism, and approachability.[50] By excluding these items from athletic training textbooks, athletic training students may not realize that athletes value these items, which could make it difficult to develop good patient-clinician relationships. Other athletic training textbooks fail to clearly acknowledge the patient-clinician relationship between athletes and athletic trainers.[51,52]

We also examined common athletic training textbooks to see how they address comfort when working with athletes of the opposite gender or working with gender sensitive injuries. After searching, we were able to find few suggestions in the texts to increase comfort during evaluations or treatments.[50-52] Athletic training students may learn methods to increase comfort during clinical assignments, but that may not occur if: 1) the student is not taught properly by their preceptor, or 2) they do not get adequate experience working with athletes of the opposite gender, or 3) they do not get adequate experience working with gender sensitive injuries. These items should be addressed in the classroom so that athletic training students are more prepared for their clinical experiences and more prepared to work with athletes of the opposite gender and gender sensitive injuries. This research has begun to find strategies to increase comfort such as clearly communicating, acting professionally and normally, draping the area, and providing a private exam room. However, more research is needed to fully understand alleviating uncomfortable situations.

Limitations

Participants were asked to provide perceived levels of comfort, communication, and trust which may have been influenced by self-report bias or social acceptability bias. Several of the questions pertained to sensitive information which may have the answers that participants provided. Availability of participants due to time restraints limited the number of Trust Instruments that were completed. This could have influenced the results of the total trust score and whether it was correlated to items on the Gender Influence Questionnaire. Lastly, all colleges used served as clinical sites for athletic training education programs. Participants may have thought about athletic training students rather than athletic trainers when answering questions.

Future Research

This study provided many interesting findings that need more research. We found that comfort is decreased when working with an athletic trainer of the opposite gender, as well as for communication and trust in NCAA DIII and NAIA athletes. Future research should determine if this is also true in the clinical setting and the secondary setting where patients may not see their athletic trainer as often. Future research is also needed to determine the best methods for developing comfort, communication, and trust. Lastly, future research is needed to help explain why, despite reporting lower comfort, communication, and trust, athletes do not a preference for the gender of their athletic trainer.

Conclusion

The primary goal of this research was to determine if gender influenced the patient-clinician relationship. A secondary goal was improving the patient-clinician relationship through better understanding of aspects of the patient-clinician relationship. Through better

understanding of the patient-clinician relationship, athletic trainers may be able to increase satisfaction, adherence, and treatment outcomes of athletes they work with.[34, 41]

A large majority of surveyed athletes reported no preference for the gender of their athletic trainers despite having reported lower comfort, communication, and trust with athletic trainers of the opposite gender. Another interesting finding was that athletes reported communication to be the same despite having lower communication scores. In an attempt to improve lower comfort, communication, and trust, we proposed several strategies for athletic trainers to utilize such as communication, professionalism, and normal conduct during gender sensitive injuries.

Athletic trainers need to know what qualities athletes value in order to develop lasting patient-clinician relationships. Two core qualities that athletes value are trust and communication. There were many other qualities mentioned but with less frequency that athletes value, which demonstrates the complexity of the patient-clinician relationship. Nevertheless, while research can provide insight into the patient-clinician relationship, it remains important for athletic trainers to use appropriate judgment about what individual athletes prefer.

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APPENDIX A. GENDER INFLUENCE QUESTIONNAIRE

Please answer these questions as honestly as possible.

1. What year in college are you?
    a. First year
    b. Sophomore
    c. Junior
    d. Senior
    e. Other
2. What sport do you play? _____
3. What gender to you identify with?
    a. Female
    b. Male
4. Have you worked with an athletic trainer of the opposite gender?
    a. Yes
    b. No
5. How many athletic trainers have you worked with more than once?
    a. 1
    b. 2
    c. 3
    d. 4
    e. 5 or more
6. What is your age?
    a. 17-20
    b. 21-23
    c. 24+

Please answer the following questions honestly and to the best of your ability for each scenario.

Please circle the number that best represents your level of agreement while being treated by an athletic trainer.

1. It is important for me to be comfortable while working with an athletic trainer.

1	2	3	4	5	6	7	8	9	10
Value Least				Neutral			Value Most		

2. It is important to be able to communicate well with the athletic trainer I am working with.

1	2	3	4	5	6	7	8	9	10
Value Least				Neutral			Value Most		

4

1	2	3	4	5	6	7	8	9	10
Value Least				Neutral			Value Most		

Please circle the number that best represents your level of agreement while being treated by an athletic trainer of the <u>opposite gender</u>.

1. I am comfortable being treated by an athletic trainer of the **opposite gender** for an injury to the ankle, knee, wrist, shoulder, or head.

1 2 3 4 5 6 7 8 9 10
Completely Disagree Neutral Completely Agree

2. I am comfortable being treated by an athletic trainer of the **opposite gender** for an injury to the groin, reproductive organs, or other sensitive area.

1 2 3 4 5 6 7 8 9 10
Completely Disagree Neutral Completely Agree

3. I communicate well with an athletic trainer of the **opposite gender** during an injury to the ankle, knee, wrist, shoulder, or head.

1 2 3 4 5 6 7 8 9 10
Completely Disagree Neutral Completely Agree

4. I communicate well with an athletic trainer of the **opposite gender** during an injury to the groin, reproductive organs, or other sensitive area.

1 2 3 4 5 6 7 8 9 10
Completely Disagree Neutral Completely Agree

5. I trust an athletic trainer of the **opposite gender** during an injury to the ankle, knee, wrist, shoulder, or head.

1 2 3 4 5 6 7 8 9 10
Completely Disagree Neutral Completely Agree

6. I trust an athletic trainer of the **opposite gender** during an injury to the groin, reproductive organs, or other sensitive area.

1 2 3 4 5 6 7 8 9 10
Completely Disagree Neutral Completely Agree

Please circle the number that best represents your level of agreement while being treated by an athletic trainer of the <u>same gender</u>.

1. I am comfortable being treated by an athletic trainer of the **same gender** for an injury to the ankle, knee, wrist, shoulder, or head.

1 2 3 4 5 6 7 8 9 10
Completely Disagree Neutral Completely Agree

2. I am comfortable being treated by an athletic trainer of the **same gender** for an injury to the groin, reproductive organs, or other sensitive areas.

1 2 3 4 5 6 7 8 9 10

Completely Disagree Neutral Completely Agree

3. I communicate well with an athletic trainer of the **same gender** during an injury to the ankle, knee, wrist, shoulder, or head.

1 2 3 4 5 6 7 8 9 10

Completely Disagree Neutral Completely Agree

4. I communicate well with an athletic trainer of the **same gender** during an injury to the groin, reproductive organs, or other sensitive area.

1 2 3 4 5 6 7 8 9 10

Completely Disagree Neutral Completely Agree

5. I trust an athletic trainer of the **same gender** during an injury to the ankle, knee, wrist, shoulder, or head.

1 2 3 4 5 6 7 8 9 10

Completely Disagree Neutral Completely Agree

6. I trust an athletic trainer of the **same gender** during an injury to the groin, reproductive organs, or other sensitive area.

1 2 3 4 5 6 7 8 9 10

Completely Disagree Neutral Completely Agree

Please answer the following questions honestly. If you do not feel comfortable answering the question you may pass onto the next question.

1. Have you encountered a situation where the gender of your athletic trainer has been an issue during treatment? (example: uncomfortable, uneasy, awkward, embarrassing) If yes, please explain.

2. If you answered yes to question 1. Was there something that could have been done differently to avoid the issue?

3. What can be done during treatment of intimate areas (groin, reproductive organs, breasts) by opposite gender athletic trainers to make the experience more comfortable?

4. Do you communicate differently with athletic trainers of the opposite gender? If yes, how? Is communication better, worse, or the same?

5. What qualities do you value most with the relationship between you and your athletic trainer?

6. Do you have a preference for an athletic trainer of the same gender? Why or why not?

APPENDIX B. PATIENT-AT TRUST INSTRUMENT

Please answer the following demographic information.

1. How long, in years, have you been participating in collegiate athletics?

2. What is your biological sex?
   Male Female

3. What sport do you play?

4. Approximately how many injuries (whole number) have you had in your collegiate athletic career?

5. On a scale from 0 to 10, 0 being no pain and 10 being that you think you may die, how severe was your worst injury?

6. What is your age (in years)?

7. Please describe the quality of your relationship with your athletic trainer with one of the following terms:
   Great Average Okay Terrible

8. I trust my athletic trainer with my healthcare.
   Never/A few times Occasionally Often Always

Please think about your current healthcare experience and compare it to the ideal experience when answering the questions below about trust.
Please identify how often your athletic trainer has:

1. …verbally communicated well.
   Never/A few times Occasionally Often Always

2. …worked well within your sport.
   Never/A few times Occasionally Often Always

3. …acted in a respectable manner.
   Never/A few times Occasionally Often Always

4. …communicated well through writing.
   Never/A few times Occasionally Often Always

5. …explained your injury with terms you understand.
   Never/A few times Occasionally Often Always

6. …given positive feedback when you completed your rehabilitation.
   Never/A few times Occasionally Often Always

7. …provided you with targeted feedback at different stages of your rehabilitation.
   Never/A few times Occasionally Often Always

8. …has had your best interest in mind.
   Never/A few times Occasionally Often Always

9. … listened to your input.
   Never/A few times Occasionally Often Always

10. …worked to build a good relationship with you.
    Never/A few times Occasionally Often Always

11. …been approachable.
    Never/A few times Occasionally Often Always

12. …been patient.
    Never/A few times Occasionally Often Always

13. …explained your treatment with terms you understand.
    Never/A few times Occasionally Often Always

14. …been confident about their decisions.
    Never/A few times Occasionally Often Always

15. … treated you in a pleasant manner.
    Never/A few times Occasionally Often Always

16. …been happy to see you.
    Never/A few times Occasionally Often Always

17. …developed a plan that was specific to you.
    Never/A few times Occasionally Often Always

18. … been confident when engaged in “hands-on” care.
    Never/A few times Occasionally Often Always

19. …made a good decision when making a referral to another health care provider.
    Never/A few times Occasionally Often Always

20. …provided a comfortable environment.
    Never/A few times Occasionally Often Always

21. …been available in person when you needed him/her.
    Never/A few times Occasionally Often Always

22. …been available via phone call when you needed him/her.
    Never/A few times Occasionally Often Always

23. …been available via text when you needed him/her.
    Never/A few times Occasionally Often Always

24. My athletic trainer's treatment approach was successful.
    Never/A few times Occasionally Often Always

25. I have heard positive information about my athletic trainer.
    Never/A few times Occasionally Often Always

26. I have given other athletes positive information about my athletic trainer's performance.
    Never/A few times Occasionally Often Always

APPENDIX C. CONTENT EXPERT GUIDELINES

Effect of athletic trainer gender on athlete's perceived level of comfort, communication, and trust.

The purpose of this project is to determine if gender of athletic trainer has an influence on the comfort, communication, and trust of the athlete. Our main goals for the project are to:

1. Identify and assess athletes' level of comfort when working with athletic trainers of the same and opposite gender.
2. Identify and assess athletes' communication with athletic trainers when working with athletic trainers of the same and opposite gender
3. Identify and assess athletes' level of trust when working with athletic trainers of the same and opposite gender
4. Identify possible solutions if gender is found to have a negative influence on percevied comfort, communication, or trust.

Please review each of the following questions for the following:

Clarity	Relevance
4 = Clear	4 = Relevant
3 = Somewhat Clear	3 = Somewhat Relevant
2 = Somewhat Unclear	2 = Somewhat Irrelevant
1 = Unclear	1 = Irrelevant

Clarity- When you read the question you have an understanding of the content and intent. Are there words you do not understand? Does the question make sense?

Relevance- The question has meaning in relation to the study's research purpose and the research questions.

Please provide additional suggestions/comments for all multiple-choice questions that receive a score of 3 or below in the areas of clarity and/or relevance.

Segment 1-Demographic Data
Directions: Please select the response that best describes you.

7. What year in college are you?
    a. First year
    b. Sophomore
    c. Junior
    d. Senior
    e. Other
8. What sport do you play? _____
9. What is your gender?
    a. Female
    b. Male
10. Have you worked with an athletic trainer of the opposite gender?
    a. Yes
    b. No
11. How many athletic trainers have you worked with more than once?
    a. 1
    b. 2
    c. 3
    d. 4
    e. 5 or more

Please evaluate Section 1 (Above)- Demographic Data as a whole for the following information. Comments regarding specific questions should be listed in the comment box below. When providing comments, please include the number of the question you are referencing.

<u>Additional questions to consider:</u>

Are there any important questions missing?

Do any of the questions not make sense?

Can we make any of the items better? How?

Please feel free to make any additional comments that you feel will help with the instrument development.

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Overall content for this section				
Additional Comments				

Segment 2-Value of comfort, communication, and trust:

Please circle the number that best represents your level of agreement while being treated by an athletic trainer.

1. I value being comfortable while being treated by an athletic trainer.

1 2 3 4 5 6 7 8 9 10

Value Least Neutral Value Most

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Additional Comments				

2. I value being able to communicate well with the athletic trainer I am working with.

1 2 3 4 5 6 7 8 9 10

Value Least Neutral Value Most

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Additional Comments				

3. I value being able to trust the athletic trainer that I am working with.

1 2 3 4 5 6 7 8 9 10

Value Least Neutral Value Most

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Additional Comments				

Please evaluate Section 2 (Above)- Value of comfort, communication, and trust for the following information. Comments regarding specific questions should be listed in the comment box below. When providing comments, please include the number of the question you are referencing.

<u>Additional questions to consider:</u>

Are there any important questions missing?

Do any of the questions not make sense?

Can we make any of the items better? How?

Please feel free to make any additional comments that you feel will help with the instrument development.

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Overall content for this section				
Additional Comments				

Segment 3- Level of comfort, communication, and trust while working with an athletic trainer of the opposite gender.

Please circle the number that best represents your level of agreement while being treated by an athletic trainer of the opposite gender.

1. I am comfortable being treated by an athletic trainer of the opposite gender for an injury to the ankle, knee, wrist, shoulder, or head.

1 2 3 4 5 6 7 8 9 10
Completely Disagree Neutral Completely Agree

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Additional Comments				

2. I am comfortable being treated by an athletic trainer of the opposite gender for an injury to the reproductive organs or other sensitive area.

1 2 3 4 5 6 7 8 9 10

Completely Disagree Neutral Completely Agree

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Additional Comments				

3. I communicate well with an athletic trainer of the opposite gender during an injury to the ankle, knee, wrist, shoulder, or head.

1 2 3 4 5 6 7 8 9 10

Completely Disagree Neutral Completely Agree

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Additional Comments				

4. I communicate well with an athletic trainer of the opposite gender during an injury to the reproductive organs or other sensitive area.

1 2 3 4 5 6 7 8 9 10

Completely Disagree Neutral Completely Agree

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Additional Comments				

5. I trust an athletic trainer of the opposite gender during an injury to the ankle, knee, wrist, shoulder, or head.

1 2 3 4 5 6 7 8 9 10

Completely Disagree Neutral Completely Agree

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Additional Comments				

6. I trust an athletic trainer of the opposite gender during an injury to the reproductive organs or other sensitive area.

1 2 3 4 5 6 7 8 9 10

Completely Disagree Neutral Completely Agree

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Additional Comments				

Please evaluate Section 3 (Above)- Level of comfort, communication, and trust while working with an athletic trainer of the opposite gender for the following information. Comments regarding specific questions should be listed in the comment box below. When providing comments, please include the number of the question you are referencing.

<u>Additional questions to consider:</u>

Are there any important questions missing?

Do any of the questions not make sense?

Can we make any of the items better? How?

Please feel free to make any additional comments that you feel will help with the instrument development.

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Overall content for this section				
Additional Comments				

Segment 4- Level of comfort, communication, and trust while working with an athletic trainer of the same gender.

Please circle the number that best represents your level of agreement while being treated by an athletic trainer of the same gender.

1. I am comfortable being treated by an athletic trainer of the same gender for an injury to the ankle, knee, wrist, shoulder, or head.

1 2 3 4 5 6 7 8 9 10
Completely Disagree Neutral Completely Agree

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Additional Comments				

2. I am comfortable being treated by an athletic trainer of the same gender for an injury to the reproductive organs or other sensitive areas.

1 2 3 4 5 6 7 8 9 10
Completely Disagree Neutral Completely Agree

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Additional Comments				

3. I communicate well with an athletic trainer of the same gender during an injury to the ankle, knee, wrist, shoulder, or head.

1 2 3 4 5 6 7 8 9 10

Completely Disagree Neutral Completely Agree

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Additional Comments				

4. I communicate well with an athletic trainer of the same gender during an injury to the reproductive organs or other sensitive area.

1 2 3 4 5 6 7 8 9 10

Completely Disagree Neutral Completely Agree

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Additional Comments				

5. I trust an athletic trainer of the same gender during an injury to the ankle, knee, wrist, shoulder, or head.

1 2 3 4 5 6 7 8 9 10

Completely Disagree Neutral Completely Agree

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Additional Comments				

6. I trust an athletic trainer of the same gender during an injury to the reproductive organs or other sensitive area.

1 2 3 4 5 6 7 8 9 10

Completely Disagree Neutral Completely Agree

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Additional Comments				

Please evaluate Section 4 (Above)- Level of comfort, communication, and trust while working with an athletic trainer of the same gender for the following information. Comments regarding specific questions should be listed in the comment box below. When providing comments, please include the number of the question you are referencing.

<u>Additional questions to consider:</u>

Are there any important questions missing?

Do any of the questions not make sense?

Can we make any of the items better? How?

Please feel free to make any additional comments that you feel will help with the instrument development.

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Overall content for this section				
Additional Comments				

Segment 5- Open Ended Questions

Please answer the following questions honestly. If you do not feel comfortable answering the question you may pass onto the next question.

1. Have you encountered a situation where the gender of your athletic trainer has been an issue during treatment? (example: uncomfortable, uneasy, awkward, embarrassing) If yes, please explain.

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Additional Comments				

2. If you answered yes to question 1. Was there something that could have been done differently to avoid the issue?

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Additional Comments				

3. What can be done during treatment of intimate areas (groin, reproductive organs, breasts) by opposite gender athletic trainers to make the experience more comfortable?

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Additional Comments				

4. Do you communicate differently with athletic trainers of the opposite gender? If yes, how? Is communication better, worse, or the same?

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Additional Comments				

5. What qualities do you value most with the relationship between you and your athletic trainer?

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Additional Comments				

6. Do you have a preference for an athletic trainer of the same gender? Why or why not?

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Additional Comments				

Please evaluate Segment 5 (Above)- Open ended questions for the following information. Comments regarding specific questions should be listed in the comment box below. When providing comments, please include the number of the question you are referencing.

<u>Additional questions to consider:</u>

Are there any important questions missing?

Do any of the questions not make sense?

Can we make any of the items better? How?

Please feel free to make any additional comments that you feel will help with the instrument development.

Clarity	1 Unclear	2 Somewhat Unclear	3 Somewhat Clear	4 Clear
Relevance	1 Irrelevant	2 Somewhat Irrelevant	3 Somewhat Relevant	4 Relevant
Overall content for this section				
Additional Comments				

Additional Question:

1. If you were only participating (versus critiquing) this survey, how long do you think this survey would take you to complete?

   0-5
   6-10
   11-15
   16-20
   21-25
   26-30
   Over 30 min

2. Is the order of the items appropriate? Does it seem logical?

Any Additional Comments:

APPENDIX D. INFORMED CONSENT

North Dakota State University
Department of Health, Nutrition, and Exercise Science
Campus Address
NDSU Dept.
PO Box 6050
Fargo, ND 58108-6050
701.231.

How Does Gender Influence the Patient-Clinician Relationship?

Dear Participant:

My name is Matt Saemrow. I am a graduate student in post-professional athletic training at North Dakota State University, and I am conducting a research project to help athletes feel more comfortable while being helped in an athletic training room. It is not truly understood how the gender of an athletic trainer affects the comfort level of the athlete they are working with. It is our hope, that with this research, we will learn more about making athletes as comfortable as possible while being treated by an athletic trainer of the opposite sex.

Because you are an athlete at a Division III or NAIA institution, you are invited to take part in this research project. Your participation is entirely your choice, and you may change your mind or quit participating at any time, with no penalty to you.

It is not possible to identify all potential risks in research procedures, but we have taken reasonable safeguards to minimize any known risks. These known risks include: loss of confidentiality, and emotional or psychological distress.

You are not expected to get any immediate benefit from being in this research study. However, future benefits to yourself and others potentially include better quality of health care and increased levels of comfort, communication, and trust while being treated by an athletic trainer.

It should take about 10 minutes to complete this survey about your perceived levels of comfort, communication, and trust while being treated by an athletic trainer of the same sex and of the opposite sex. The survey is electronic and will be automatically submitted at the completion of the survey. You will be entered into a drawing for a gift card should you choose to provide an email address. The odds of winning are dependent on the number of participants that choose to provide an email to be contacted. Estimated odds are 1 in 25.

We will keep all research records that may possibly identify you private. Your information will be combined with information from other people taking part in the study and we will write about the combined information that we have gathered. You will not be identified in

these written materials. We may publish the results of the study; however, there will be no identifying factors that can be linked to you.

If you have any questions about this project, please contact me at matthew.saemrow@ndsu.edu or 507-491-6709 or contact my advisor at Shannon David at shannon.david@ndsu.edu.

You have rights as a research participant. If you have questions about your rights or complaints about this research, you may talk to the researcher or contact the NDSU Human Research Protection Program at 701.231.8995, toll-free at 1-855-800-6717, by email at ndsu.irb@ndsu.edu, or by mail at: NDSU HRPP Office, NDSU Dept. 4000, P.O. Box 6050, Fargo, ND 58108-6050.

Thank you for your participating in this research.

APPENDIX E. IRB CONSENT

NDSU NORTH DAKOTA STATE UNIVERSITY

October 5, 2015

Shannon David
Health, Nutrition & Exercise Sciences

Re: IRB Certification of Exempt Human Subjects Research:
Protocol #HE16071 , "How Does Gender Influence the Patient-Clinician Relationship?"

Co-investigator(s) and research team: Matt Saemrow, Nicole German, Brent Hill

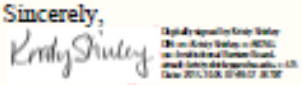
Certification Date: 10/5/2015 Expiration Date: 10/4/2018
Study site(s): Concordia University and Gustavus Adolphus College
Sponsor: FAR0019127 - Master of Athletic Training Program

The above referenced human subjects research project has been certified as exempt (category # 2) in accordance with federal regulations (Code of Federal Regulations, Title 45, Part 46, Protection of Human Subjects). This determination is based on the original protocol submission with revised consent (received 10/2/2015).

Please also note the following:
- If you wish to continue the research after the expiration, submit a request for recertification several weeks prior to the expiration.
- The study must be conducted as described in the approved protocol. Changes to this protocol must be approved prior to initiating, unless the changes are necessary to eliminate an immediate hazard to subjects.
- Notify the IRB promptly of any adverse events, complaints, or unanticipated problems involving risks to subjects or others related to this project.
- Report any significant new findings that may affect the risks and benefits to the participants and the IRB.

Research records may be subject to a random or directed audit at any time to verify compliance with IRB standard operating procedures.

Thank you for your cooperation with NDSU IRB procedures. Best wishes for a successful study.
Sincerely,



Kristy Shirley, CIP, Research Compliance Administrator

For more information regarding IRB Office submissions and guidelines, please consult http://www.ndsu.edu/research/integrity_compliance/irb/. This Institution has an approved FederalWide Assurance with the Department of Health and Human Services: FWA00002439.

INSTITUTIONAL REVIEW BOARD
NDSU Dept 4000 | PO Box 6050 | Fargo ND 58108-6050 | 701.231.8995 | Fax 701.231.8098 | ndsu.edu/irb

Shipping address: Research 1, 1735 NDSU Research Park Drive, Fargo ND 58102

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