FRAZIER, ASHLEY M., Ph.D. Examining Athletic Coaches' Interaction Behaviors in Conversations About Well-Being: Results of a Feasibility Trial. (2017)
Directed by Dr. Celia R. Hooper and Dr. David L. Wyrick. 157pp.

Communication is a critical skill for all people. Communication is a foundational skill of the work of athletic coaching, and the coach-athlete relationship requires some coach communication that is not limited strictly to conversations about sport performance. It is unclear whether skills developed to communicate effectively in the sport performance context carry over to other contexts.

Athletic coaches need to be able to support the overall well-being of athletes by identifying potential problems and connecting athletes to help. To do this, a critical need is to communicate effectively about well-being issues. A paucity of literature exists about the baseline communication performance of coaches in conversations about well-being, about how coaches view their role and efficacy in such conversations, and about what specific tools and methods might be used to study this. There were two overarching purposes for this study. The first was to *explore the feasibility of research* into the baseline communication performance of coaches in conversations about well-being, how coaches view their role and efficacy in such conversations, and what specific tools and methods might be used to study these issues. The second purpose was to *gather preliminary data to plan and legitimize such research.*

In order to investigate the feasibility and obtain preliminary data to address these issues, a group of athletic coaches were asked to participate in three simulated case conversations about well-being and to complete an online survey. This group was

compared to a group of health coaches who performed the same tasks. Conversational

data was coded using an adaptation of the Roter Interaction Analysis System (RIAS). A

mixture of qualitative and quantitative methods were used to analyze the resulting data,

as well as respond to "can it work?" questions about the tools, methods, and theoretical

frameworks used.

Key results include evidence for the need for institutional support to support

athletic coach participation in communication training, support for adapted motivational

interviewing as a useful framework for viewing communication behaviors in

conversations about well-being, and the utility of RIAS as a method for quickly coding

data from live or audio recordings of conversations. Preliminary data revealed that

athletic coaches are more directive, ask fewer questions, and elicit less information from

athletes. Health coaches elicited more utterances expressing concern and more

information from conversational partners. Implications for future research and practice

include evidence supporting the utility of these tools and methods, key constructs to

target in potential development of coach-specific training, as well as building institutional

support for the need for communication skills training to increase outcomes related to

conversations about well-being between athletic coaches and student-athletes.

EXAMINING ATHLETIC COACHES' INTERACTION BEHAVIORS IN

CONVERSATIONS ABOUT WELL-BEING:

RESULTS OF A FEASIBILITY TRIAL

by

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

Greensboro
2017

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March 10, 2017
Date of Acceptance by Committee

March 08, 2017
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ACKNOWLEDGMENTS

In 1997, as a Master's student in Chapel Hill, I was a graduate assistant for Dr. Celia Hooper. Later she chaired my thesis committee. How fascinating to find myself now, twenty years later, at UNCG with Dean Celia Hooper co-chairing my doctoral dissertation committee. And to have another member of my master's thesis committee, Dr. Robert Mayo, also joining us here at the table for Round 2. I've never pretended to have any idea what my future would bring, but this seals the deal.

Thank you, Dean Hooper, for teaching me to use all four frames. You are much more than a mentor to me. I am still hoping I grow up to be just like you.

Dr. Mayo, thank you for teaching me to hold my own in a room full of surgeons all those years ago, and for treating my ideas like they were interesting, then and now. Dr. Dudley, I avoided this for ten years because I was scared I couldn't do the math. Thank you for helping me understand that statistics is about telling a story, because I have a lot more faith in my language skills. Dr. Tucker, thank you for being joyful and supportive and boundlessly interested and optimistic. In everything.

Thank you to my committee co-chair and boss, Dr. David Wyrick, for running a happy shop, for always having big ideas, and for being so generous with your time, money, and experience. Thank you for making me take time to write. And thank you to all of my IPAHWsome crew for making this the first job I wanted to show up to. Sam, thank you for keeping me calm(er), being my teammate, and for always knowing the best place to buy anything. Jeff, thank you for pulling strings and giving me a push, I needed

them both. Muhsin, thank you for always helping me (us) find better ways to say it. Erin, I hope I can be like you. Not ten years younger or with less vision; I mean a smart, cool, scientist. Thanks for the weird animal videos. Lindsey, my golden sun, thank you for shining on me. Abby, I feel like you breathe out peace and serenity and I'm glad I sit near you. Nicole, thanks for telling me I needed a walk-out song. You were totally right. Vega, thanks for inspiring me to have #browgoals. Oaks, thanks for bringing the fun. Ya'll are like family.

Thank you to Dr. Alan Kamhi for teaching me to think more carefully, and to argue more effectively.

Thank you to Dr. Parker Hurley for your leadership; for showing me how to prioritize life and people above the finish, while still finishing.

Dad, thanks for telling me I was smart. I'm sorry you missed this. Mom, thanks for moving here and for making things easier for me any time you can.

Most of all, thank you to J, my sweet pea. You've done more cooking, laundry, and cleaning than is fair; you've refrained from suggesting that student wages are cramping our style; you've taken too many hikes alone. Those semicolons are just for you. I love you.

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CHAPTER I

INTRODUCTION

Overview

Athletics in American Culture and Language

Sport is ever present throughout American culture. Super Bowl Sunday is treated

as a holiday, team colors and mascots are considered legitimate home décor, and millions

of people plan their weekends around game schedules (see Higgs, 2015). With the

advent of fantasy sports, people try their hands at owning, managing, and coaching

athletic teams (Davis & Duncan, 2006). Perhaps nowhere does sports feel more

pervasive than in our language. From the boardroom to the living room, courtroom to

classroom, people communicate using sport metaphors (see Lakoff & Johnson, 2003).

Sports fan or not, most people understand what it means to be "blindsided" with a

problem, to develop a "game plan" for getting it together, to pronounce theories "way off

base," and to "roll with the punches." Even broad cultural constructs like *soccer mom* are

widely used and understood, for better or worse (S. J. Carroll, 1999; Swanson, 2009).

Just as sport concepts are ubiquitous in our collective lexicon, so is

communication a thread running through sport. Visualize, for a moment, the rousing

halftime speech, the trainer in the corner of a boxing ring, the pep talks, the locker room

reassurance in the face of defeat. A keystone skill of coaching is communication,

not only in the collective societal vision of what a coach essentially does, but formally, as well. Communication is identified as a core competency in many of the coaching models that are used to train, evaluate, and set expectations for those who coach (Mageau & Vallerand, 2003; Rhind & Jowett, 2010; Zenger & Stinnett, 2010).

Dual Mission of Education-Based Athletics

An interesting intersection of two cultural institutions is that of schooling and athletics. It is a phase of athletic culture situated between the time of youth sports, which are focused on fun and development, and professional athletics, which is focused on elite athletic performance as a career. Most American high schools embrace the education-based athletics model, where sports programs are incorporated into the secondary educational setting (Gardner, 2015). Education-based athletics have a dual mission: athletic development and competition situated within the larger academic environment of high school. To a large degree, this attitude is carried forward into the college setting. A few elite collegiate sport environments are television-friendly, income-generating machines that seem to share more commonalities with professional sports than high school. But the majority are not (see Shifflett & Hallman, 2015), and at every level of competition, higher educational institutions share a common vision of student-athletes: *students who are athletes*. That is, collegiate athletes are college students, and at least nominally their overall education is prioritized over their sport participation. (*It should be noted that the truth of this has been contested by some—see Gutting (2012)* and *Finkel, Martin, and Paley (2013) for recent examples*). There is an emphasis placed upon student-athlete academic performance and overall development as well-rounded

adults. For coaches in this sport environment, the educational mission of the institution means that there cannot be a single-minded focus on athletic achievement. For this reason, collegiate athletic departments have included a variety of student support services, including academic tutoring and advising, study halls, labs, and policies and procedures that limit the amount of time student-athletes can dedicate to sport practice and performance (NCAA, n.d.; Thamel, 2006). In recent decades, there has been increased scrutiny of the lives of student-athletes off the field or court, including a growing consensus that athletics leadership, including coaches, have a responsibility to attend to and support the overall wellness, or well-being, of student-athletes (NCAA, n.d.a).

Coach-Athlete Relationship and Communication

The relationship between coach and athlete is the site of a sizeable body of literature, which will be discussed in more detail in Chapter II. Coaches are critical figures in athletes' lives. A healthy coach-athlete relationship (CAR) is influential in guiding social as well as athletic development (Jowett, 2005), affecting both performance and well-being (Philippe, Sagar, Huguet, Paquet, & Jowett, 2011). In collegiate athletics, the population of student-athletes consists of largely young adults who are living away from home for the first time. Many coaches and athletes consider their teams a sort of family. Student-athletes cite coaches as a key figure they would turn to for help in dealing with problems (NCAA, 2016). One important aspect of the coach athlete relationship is communication. Interpersonal communication is one mediator of athlete satisfaction with their coach relationship (Sagar & Jowett, 2012). Communication is a

key aspect of coach-athlete maintenance (Rhind & Jowett, 2010) and has been cited as critical in a study of award winning coaches (Gould, Collins, Lauer, & Chung, 2007).

In recent decades, a significant amount of research has focused on the application of leadership models from business contexts to athletic coaching (see Gomes, Cruz, & Sousa, 2006; Vella, Oades, & Crowe, 2010) and the characteristics of coach leadership that are preferred by athletes (Packianathan Chelladurai, 1990; Packianathan Chelladurai & Saleh, 1980; Riemer & Chelladurai, 1998). These studies will be discussed in more detail in Chapter II. The coach-athlete relationship is a common thread throughout the coach leadership literature, with communication identified throughout as a distinguishing feature.

It is clear that communication is a foundational skill of the work of athletic coaching and that the coach-athlete relationship requires some coach communication that is not limited strictly to conversations about sport performance. It is unclear whether skills developed to communicate effectively in the sport performance context carry over to other contexts.

Communication is an Important Underlying Mechanism for Well-Being

Many aspects of our culture and society are discursive constructs (Foucault, 1982). Communication is a tool through which humans cooperate, negotiate, and form social bonds, partnerships, and agreements. Although spoken language often comes first to mind, communication also exists as writing, gesture, tone, body position, and action. Because communication often serves as an underlying or foundational behavior, it can

become invisible as a mediating force. When we do not feel well or have unmet needs, we know we need to talk to someone. But who? Is it the act of talking to someone that helps, or is it necessary that the other person responds in a certain way? Are basic skills of kindness enough? For answers to these questions, we can look to practitioners who are tasked with helping others with well-being issues primarily through conversation, a list that includes therapists, counselors, and life and health coaches, among others.

Communication Training as an Occupational Norm

Communication is a critical skill for all people. Those who work with people in a context where they have an occupational obligation to communicate effectively often receive training to do so. The educational process for most human service roles includes at least some exploration of different frameworks for how to best communicate, although the amount of training varies widely. Many work teams participate in brief seminars that group them into constructs like colors or animals to signal to their colleagues what styles of communication they prefer. There are a number of opportunities for those working in management contexts to learn to express leadership through communication. For many whose work involves helping clients manage well-being issues—from illness, to stress management, to meal planning—specific types of training are available to improve communication in this realm. An important consideration is which of these efforts result in positive outcomes. There is evidence that communication skills training relying simply on instructional guides or training manuals has little impact on the ability to affect client outcomes (Miller & Mount, 2001) and that without specific performance feedback, skills do not improve (Sapyta, Riemer, & Bickman, 2005). In an overview of a number

of systematic reviews of effective training strategies for teaching communication skills to physicians, investigators found that training sessions that were 1 to 3 days long and that implemented active learning, skills practice, and feedback were most effective (Berkhof, van Rijssen, Schellart, Anema, & van der Beek, 2011). As such, it is important that organizations intending to implement a communication training scheme invest enough time and practice to make it an effective endeavor. In order to develop widespread support and buy-in for a more extensive but more effective communication training plan, evidence is needed that current behaviors are not as effective as they could be, and that communication skills training will work.

Motivational Interviewing is an Effective Framework for Conversations About Well-Being

One evidence-based framework for communicating about well-being issues is motivational interviewing (Miller & Rollnick, 2013). Motivational interviewing is a communication style, or framework, that is designed to elicit talk about change, help resolve ambivalence to change, and support a person's intrinsic motivation to change (Rollnick, Miller, Butler, & Aloia, 2008). Motivational interviewing was originally used in therapy to treat addictions, but it has been adapted and used widely, with evidence to support its efficacy to facilitate change in a variety of settings and populations, with a variety of behaviors, and has been used effectively by a variety of care providers (Miller & Rollnick, 2013). Nolt (2014) used motivational interviewing training with athletic coaches in a small study that resulted in increased confidence in their ability to talk to athletes about alcohol. A key assumption in motivational interviewing is that the client is

responsible for deciding whether and how to change, rather than being educated, persuaded, or coerced by a care provider (Markland, Ryan, Tobin, & Rollnick, 2005). For this reason, motivational interviewing is often associated with self-determination theory (SDT). Self-determination theory posits that humans have an innate movement toward growth, integration, and resolution of psychological inconsistency (Markland et al., 2005), and that when supportive conditions of competence, autonomy, and relatedness are present, intrinsic or self-motivation is enhanced (Ryan & Deci, 2000). In other words, self-determination theory may be an underlying theoretical explanation for why the practice of motivational interviewing works. Further discussion of motivational interviewing and self-determination theory can be found in Chapter II.

To summarize, a number of professional relationships, including athletic coaching, exist where an occupational obligation is to participate in conversations about well-being with others, often others that the professional has some measure of authority or influence over. It is relatively common that some type of communication training is provided to prepare for such conversations; however, there are a wide variety of methods for training and skills to be trained. Motivational interviewing is evidence based and adaptable to many contexts.

One possibility considered for this study was to move forward in the footsteps of Nolt (2014) in examining the effectiveness of motivational interviewing training with athletic coaches. However, several factors made this a risky proposition: there is no known research that describes the baseline communication behavior and effectiveness of coaches in well-being conversations, they have a busy and unpredictable schedule that

makes them reluctant to agree to be involved in extensive training or research participation, and currently there is very little information available to convince them it is worth finding the time to do so. Evidence shows that training is most effective when it is *at least* one full day long and incorporates active practice and feedback components. This type of training requires a commitment of time, money, and effort, as well as preparation on the part of trainers. Ultimately, the decision was made to close the gap between evidence-based practice and coach commitment by gathering foundational information that will support investment in effective communication skills training with a research study that will provide descriptive, baseline communication performance data about athletic coaches in conversations about well-being. Additionally, this study will contribute evidence establishing existing discourse analysis methods and tools as appropriate for the study of the coach-athlete relationship.

Statement of the Problem

Coaches need to be able to support the overall well-being of athletes by identifying potential problems and connecting athletes to help. To do this, a critical need exists to communicate effectively about well-being issues. A paucity of literature exists about the baseline communication performance of coaches in conversations about well-being, about how coaches view their role and efficacy in such conversations, and about what specific tools and methods might be used to study this. The following section will address some of the issues related to this problem.

Strategies for Dealing with the Problem

A number of potential strategies exist for increasing the skills of athletic coaches in supporting athlete well-being. Many athletic departments use one or more of these strategies, and it is likely that the best approaches will include all of them in some way.

Providing information. A common strategy is to provide information about a variety of well-being topics—for example, checklists, educational materials, and topical speakers. Increasing knowledge about a topic is a necessary aspect of increasing self-efficacy to address it, but knowledge alone is not sufficient for developing behavioral skills like communication performance.

Providing resources. Another strategy is to develop or provide a network of resources that are available to help athletes manage well-being issues—for example, academic support, counseling, and athletic trainers. It is important that coaches are familiar with available resources and even that they build relationships with care providers in order to support continuous care, but it is also critical that coaches are able to connect athletes to the right help and support athlete motivation to follow through with accessing care and following recommendations.

Enacting policies, procedures, and protocols. In recent years, the National Collegiate Athletic Association (NCAA) has convened expert panels to develop best practices for managing a variety of well-being issues such as mental health, sexual assault, and misuse of alcohol and other drugs. Besides providing this information to member institutions, the NCAA has encouraged the development of institution-specific

action plans and crisis management protocols. These are important contributions to the overall support of a culture of care in athletic departments. However, it is critical that coaches are effective at connecting athletes to the right help and at motivating them to follow through. A protocol might indicate that a coach should "refer for counseling," but it is unclear *how* that conversation would occur in an effective way.

Communication skills training for coaches. A final strategy is to provide coaches with practical training in communication skills. As previously described, communication skills training can take place in a number of ways, with varied results. Decisions about what type of communication skills training is provided may be informed by available resources (time, money, interest) rather than evidence of effectiveness.

Athletic Coaches as a Unique Population

Athletic coaches are uniquely positioned. For a limited amount of time, four or five years at most, they will spend a significant amount of time each week with their student-athletes during one of the most significant phases of human transition, growth, and development. The student-athlete experience comes with a ready-made peer group, a recognized leader, and a high level of structure. A significant part of the job of athletic coach is to provide leadership and direction; there are components of artistry, theater, and *in loco parentis* involved. It is logical to assume that to be a successful athletic coach means having a high degree of competence in the area of communication. However, it is unknown whether the specific communication skills that lead an individual to success in coaching sport performance are similar to the communication skills that are effective in conversations about well-being.

Research with athletic coaches can be challenging. Previous studies have mentioned limited time and interest (Langan, Blake, & Lonsdale, 2013; Nolt, 2014). We also experienced this in initial recruitment efforts. Not only were coaches hesitant to volunteer to participate in research, some displayed low levels of interest in skills training at all. To athletic coaches, it may feel like suggesting communication skills training is equivalent to suggesting that they do not have good communication skills. More detailed information about perceptions of their role and skills, and their baseline communication behavior, is needed in order to develop effective recruitment methods.

The need for feasibility studies. Methodical, incremental progress is how science gets done. In recent years, there have been calls for well-designed, intentional, and informative feasibility studies (Arain, Campbell, Cooper, & Lancaster, 2010; Bowen et al., 2009; Taylor, 2007). Feasibility studies have been described in a variety of ways. Several authors refer to the United Kingdom's National Institute for Health Research Evaluation, Trials and Studies Coordination Centre (NETSCC, 2012) definition, which says that "Feasibility studies are pieces of research done before a main study in order to answer the question 'Can this study be done?'. . . used to estimate important parameters that are needed to design the main study" (Research Methods section, para. 3). Bowen et al. (2009) added that feasibility research can be useful for determining the best variables to target suitability of instruments and protocols. A distinction has been drawn between feasibility and pilot studies, in which feasibility studies have more flexible methodology, focusing primarily on estimation of parameters such as characteristics and standard deviation of the outcomes measures (Arain et al., 2010). Indications for the suitability of

feasibility research may include "there are few previously published studies or existing data using a specific intervention technique" and "the population or intervention target has been shown empirically to need unique consideration of the topics, method, or outcome in other research" (Bowen et al., 2009, p. 453). Because there is a scant literature base around the communication performance of athletic coaches, particularly their performance in conversations about well-being, it is difficult to know how to best approach studying this problem. There is a need for preliminary data and information about the potential success of designing a larger study. We are using a framework for investigating conversational analysis that has not been previously used with this population. Does a "sim case" model translate to a coach-athlete conversational dyad? Is RIAS a useful tool for analyzing the resulting data? Is there a problem in the first place? Do coaches already communicate effectively in conversations about well-being? These questions will allow us to make decisions and recommendations about specific strategies that are appropriate in this context.

Discourse analysis as a way to study language in use. Discourse analysis is the study of language as it is used (Gee, 2014). Discourse is long form language best used for examining how communication works at the level of interaction, in contrast to word length, which is best for examining sounds, or a sentence length, which is good for examining syntax. The way people speak in natural language is often agrammatical, unique, and representative of many local conditions, and reflective of a certain sense of style that may be personal, yet must be acceptable to and understood by others in social situations (Van Dijk, 1985). While there are many ways of studying discourse, including

the categorization of the themes in the content or dissecting the structure of the grammar and how it functions to make meaning, all are interested in language that exists above the sentence boundary, in language events like conversations, sermons, and journal entries. Approaches to the study of discourse are generally either descriptive in nature, describing how language works in order to understand it as a phenomenon, or critical, examining the ways in which power and other social dynamics are made real through discourse. The approach taken in this investigation adopts the descriptive framework of Gee (2011, 2014) in looking at language "as an integration of ways of saying (informing), doing (action), and being (identity), and grammar as a set of tools to bring about this integration" (2014, p. 8), although it is also true that power is a factor in most communication dyads, or pairs, so, as Gee says "all discourse analysis is critical" at some level (2014, p. 9). Discourse will be analyzed at the level of interaction, where a unit of language will be considered not only in isolation but situated within the interaction, where the reaction of the listener is considered an integral part of interpreting the message being communicated. Of interest to this research is the discourse produced in the coach-athlete communication dyad, specifically in conversations about well-being.

Discourse in simulated cases as a way to observe natural-like communication behaviors. When interested in examining language in natural conversation, it is best to collect natural conversations. In this case, we had a difficult time convincing coaches to participate in the research at all, for reasons discussed elsewhere in this chapter. Attempting to capture spontaneous conversation about well-being would have been problematic for several reasons, including the privacy of the student-athlete, predicting

when such a conversation might spontaneously occur, as well as the willingness of coaches to go to this effort; thus, collecting natural conversation samples was not possible.

Similar concerns of privacy, timing, and willingness may be found in the realm of doctor-patient communication dyads. One way communication training, assessment, and research are possible within the doctor-patient relationship is through the use of simulated cases that use standard patients as confederates. A standardized patient is trained to portray a "case," including relevant history and symptoms, in a typical doctor-patient scenario that is used to instruct, assess, or practice basic and advanced medical communication and other medical skills (Metrohealth Simulation Center, 2017). Simulation training is used extensively in medical training programs, has been found to closely approximate clinical encounters, and improves learner outcomes (Subramanian & Sathanandan, 2016). Because the use of simulation has been shown to be feasible and valid in a communication context roughly similar to the coach-athlete dyad and with another population of busy and privacy-concerned professionals, this research asked whether this method could be useful in examining the coach-athlete communication dyad.

Roter Interaction Analysis System (RIAS). Discourse analysis provides rich data about conversational language; however, it can be very time-consuming and resource intensive. One author describes the process in seven steps, including close transcription, becoming familiar with the text, coding the text, developing a working analytical framework, applying the framework, charting the data, and finally, interpreting it (Gale, Heath, Cameron, Rashid, & Redwood, 2013). Potentially, there are the

additional steps of developing and/or learning to reliably use the coding system. These

difficulties have made the use of discourse analysis limited in situations where speed and

resources are limited, and instead, many investigators use broader thematic analysis and

selected excerpts to study discourse. However, only when a conversation is studied in the

whole, with beginning, middle, and end intact, is it possible to understand the unique

contributions of each?

Because the previously described simulation training is used extensively in

medical education, so methods for analyzing the resulting conversations have originated

there as well. The Roter Interaction Analysis System (RIAS) is a software-based system

for coding dialogue. RIAS allows conversational language to be coded using an

interaction approach. RIAS is used widely to assess medical interaction across the

United States and throughout the world (Roter & Larson, 2002). RIAS is a theoretically

driven system, and a host of studies have shown that it has high levels of validity,

reliability, and sensitivity in a variety of contexts (Ong, de Haes, Hoos, & Lammes, 1995;

Roter & Larson, 2002). An often-cited advantage of RIAS over more traditional methods

for coding dialogue is that RIAS is coded directly from audio recording without the usual

intermediate step of transcribing spoken dialogue into text (Roter & Larson, 2002).

According to Roter and Larson (2002), this reduces the time burden by half or more, and

high levels of reliability and coding efficiency are possible after a weeklong training and

6-8 weeks of practice. Additionally, the RIAS software can be customized to code a

wide variety of talk through the use of sub-categories, coder notes, and content

summaries, all documented concurrently with standard RIAS coding and embedded

within the coding record. It has been adapted for use in many other settings that involve a care provider and care seeker. Although RIAS is a logical fit for analyzing coach-athlete conversations about well-being, it has not been used previously in this context.

The search for a comparison group. In order to gather information about whether training in motivational interviewing was likely to support increased performance outcomes, it was important to compare the communication behaviors of athletic coaches to that of another group. Many professionals have a great deal of training and experience in supporting well-being through talk, and they would likely show significantly better outcomes than untrained, minimally experienced athletic coaches. However, it is unreasonable to think that athletic coaches need or desire the same level of training as a licensed counselor or other mental health therapy provider. After all, the expectation is not that they will become competent to serve as therapists for student-athletes, only that they can competently participate in conversations about well-being issues where they are able to connect student-athletes to the appropriate professional to provide help or support. Important competencies for athletic coaches may be inviting a conversation about well-being issues or recognizing it when it occurs, gathering the most critical pieces of information in order to determine what type of help is needed, and encouraging student-athletes to follow through on the recommendation for help or services that is provided. As such, the group chosen for comparison was a group of college students who had recently received training as health coaches. All had a limited amount of training and experience and were not professional counselors or

therapists prior to their health coach training. Health coach training can be completed in three days, with a recommended period of practice and feedback to follow.

Purpose of the Study: Rationale and Significance

There is a scarcity of literature about the baseline communication performance of coaches in conversations about well-being, about how coaches view their role and efficacy in such conversations, and about what specific tools and methods might be used to study this. The two overarching purposes of this study were: *(a) to explore the feasibility of research into these issues* and *(b) to gather preliminary data to plan and legitimize such research.*

Discourse research requires participants who are willing to grant access and invest time into allowing for effective data collection. Communication training requires participants who are willing to invest time and effort into learning new behaviors, practicing them, and receiving feedback about their progress.

Research Questions and Hypotheses

Feasibility – "Can It Work?"

RQ1: Can we recruit coaches to participate in recorded simulated case scenarios?

H1: It will be difficult to recruit coaches to participate without buy-in from institutional leaders.

RQ2: What behaviors should be measured?

H2: We should measure skills that align with the motivational interviewing spirit and creating a therapeutic alliance—potentially number of turns, ratio of open to closed questions, directive statement frequency, rapport statement frequency, and number of information sharing responses.

RQ3: What methods and tools should be used to measure chosen behaviors?

(a) Does the RIAS capture desired behavior adequately?

H3a: RIAS or adapted RIAS will capture desired behaviors.

(b) Do sim cases and standard patient scenarios elicit the behaviors of interest?

H3b: Simulated cases and standard patient scenarios will elicit behaviors of interest.

(c) Are health coaches an appropriate and useful comparison group?

H3b: The comparison group will be appropriate and useful.

Preliminary Data

RQ4: Do athletic coaches believe that conversations about well-being are part of their role?

H4: Athletic coaches will feel uncertain about their role surrounding conversations about well-being.

RQ5: How do the communication behaviors of athletic coaches differ from those of health coaches in conversations about well-being?

H5: AC will be more directive, ask fewer open questions, and elicit less information from athlete.

RQ6: How do outcomes differ between athletic coaches and health coaches in conversations about well-being?

H6: Health coaches will have higher outcome scores than athletic coaches (with outcomes scores = 1-5 relevant pieces of information elicited during a conversation about well-being; see Chapter 3 for more information).

Rationale for Approach

Motivational interviewing (MI) has been used effectively in a number of contexts, including with athletic coaches. The athletic coaching context is difficult because of limited time and interest. A large-scale study into the effectiveness of training athletic coaches in an adapted form of MI would likely be impossible without a larger effort spearheaded at the institutional level—potentially, at the college or university level, even better, at the conference level, and ideally at the level of ultimate oversight, the NCAA or National Association of Intercollegiate Athletics (NAIA). This type of buy-in is unlikely without some preliminary data suggesting clear deficiencies or concerns in the conversations about well-being skills of coaches and decreased outcomes as compared to a sample with a minimal amount of training and experience. A feasibility approach was chosen to gather information about the potential success of recruitment, behavioral

targets, and tools intended for use, as well as preliminary data about coach beliefs,

communication behaviors, and a potential within-conversation outcome measurement.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter presents brief reviews of the substantial literature regarding the main concepts related to this research. Specifically, it includes the uniqueness of the athlete population, coach identity, coach-athlete relationship, motivational interviewing, and approaches to the study of discourse.

The Athlete as a Unique Population

The question has been raised in academics, popular media, the legal system, and the public consciousness whether student-athletes are "just" college students who happen to play a sport or whether the intersection of college student and collegiate athlete is unique and worthy of treatment as a wholly distinct population. Like most college students, student-athletes enter the college environment at a critical developmental period, with all the attendant difficulties related to transitioning from their homes and communities into a new environment that they must learn to navigate independently from their family and established peer group. In some respects, though, it seems that student-athletes are dissimilar from their non-athlete peers. Two aspects of the academic experience that have been treated as noteworthy are the *time demands* and *rigid scheduling* that student-athletes experience as compared to non-athlete students (Jolly,

2008; Watt & Moore, 2001). In order to maintain NCAA eligibility, student-athletes must enroll in a course load of no fewer than 18 hours per academic year for undergraduates (NCAA, n.d.-b). In addition to carrying a full-time academic course load, most student-athletes also train and practice between 2 and 4 hours per day (Jolly, 2008). Eighty-two percent of NCAA student-athletes report spending over 10 hours per week at sport practice, and almost half report over 10 hours per week playing their sport (J. Potuto & O'Hanlon, 2006). When in season, including traveling to compete, student-athletes may spend over 30 hours per week participating in their sport (Brown, Hainline, Kroshus, & Wilfert, 2014). Many are also required to attend daily study halls, tutoring sessions, and appointments with academic supporting and monitoring (Rubin & Moses, 2017). As such, NCAA student-athletes have more required events and activities to fit into each day. Additionally, they do not exert the level of choice and control over their schedule that most college students enjoy. Because many of their daily activities are planned for a team or the student-athlete population at large, such as competition, training, practice, clinics, and study halls, student-athletes must fit the rest of their activities and responsibilities into remaining time. This may affect their ability to choose preferred classes, participate in other extra-curricular activities, and, of course, complete the daily activities of life, such as social interaction, meals, and sleep (Jolly, 2008). As a result, student-athletes may feel that they do not have the time desired to participate as fully in university life as they would like (J. Potuto & O'Hanlon, 2006).

Student-athletes may also experience a distinct sense of isolation on campus (Rubin & Moses, 2017). Due to the time demands and rigid scheduling discussed

previously, they may have difficulty making non-sport social connections; in addition to spending in-sport time with teammates and fellow student-athletes, they may spend additional time outside of sport with the same group of people, due to schedule similarity and residential context (Jolly, 2008). Another contributing factor to their campus isolation may be faculty and student attitudes toward them. A number of studies have documented negative faculty perceptions of student-athletes, including that they are not academically qualified and are unlikely to perform well in the classroom (Engstrom, Sedlacek, & McEwen, 1995). Fellow students may also hold similar attitudes and treat them with condescension (Engstrom et al., 1995).

Student-athletes may share some aspects of college life with non-athlete students but experience them at a higher level of intensity than peers. Excessive consumption of alcohol is often associated with college students; however, a number of studies indicate that student-athletes may be at increased risk. Collegiate athletes have been found to drink more alcohol—both in the sense of drinking more often and drinking more heavily (binge drinking) than non-athlete counterparts (Zhou, Heim, & O'Brien, 2015). They are more likely to experience negative consequences as a result of drinking (Leichliter, Meilman, Presley, & Cashin, 1998). Athletes who drink weekly are at higher risk for injury (Donohue, Loughran, & Pitts, 2016). It is difficult to precisely measure the extent of alcohol use, as most studies rely on self-report, which some evidence shows may dramatically underestimate usage (Druckman, Gilli, Klar, & Robison, 2015). Increased use of alcohol is associated with a higher risk for various types of interpersonal violence.

College students are at increased risk for sexual violence, and some studies have indicated that male student-athletes may represent a higher than expected proportion of perpetrators of sexual violence (McCray, 2014), including battery and sexual assault (Crosset, Ptacek, McDonald, & Benedict, 1996). Male student athletes are more likely to show attitudes of sexual aggression and exploitative entitlement, as well as higher levels of rape myth acceptance than non-athlete peers (Boeringer, 1999; Koss & Gaines, 1993; Kroshus, Paskus, & Bell, 2015; McMahon, 2010). Hazing and other types of interpersonal violence are also well documented among student-athlete groups (see Hollmann, 2002).

Student-Athlete Mental Health and Psychological Well-Being

Rates of mental health disorders among young adults aged 18-25 are significantly higher than in the general adult population (29.9% to 20%) and twice that of adults 50 years and older (Neal et al., 2013). Prevalence among student-athletes is relatively similar to non-athletes (Kroshus, 2016). Some studies show slightly higher rates of depression, particularly after injury or concussion (Cox, Ross-Stewart, & Foltz, 2017; Kerr et al., 2014). There is likely a complex interplay of environmental variables, such as stress related to sport, dual student-athlete-role, team identity, interpersonal violence that may work with genetic factors to impact student-athlete mental health and wellness (Brown et al., 2014).

A potential advantage for student-athletes is access to a wider network of potential help. Student-athletes are in contact with a wider variety of university staff than non-athlete students; in addition to faculty, they are in contact with coaching staff,

athletic trainers, academic support services, and athletics administration. Student-athletes

are in contact with this team almost daily, which not only provides an opportunity for

early detection of issues by observant staff but also builds trusting relationships with

people who can connect them to help resources (Kroshus, 2016; Neal et al., 2013). In

addition to university student health and wellness services, student-athletes may have

access to more resources than non-athlete students if they need help—for example,

sports-specific nutrition consulting, sports medicine, sports psychology, community

mental health care providers, and even in-house mental health care, in some cases.

Despite the network of help available, low levels of help seeking for mental health

concerns are common (Kroshus, 2016), and student-athletes access mental health services

at a lower rate than non-athletes (Brown et al., 2014). Student-athletes are sometimes

unaware of the resources that are available or how to access them (Cox et al., 2017).

Without education about mental health, student-athletes may not recognize symptoms of

distress in themselves or peers. Many of the symptoms associated with mental health

disorders are not easily distinguished from the behavior associated with successful

athletes (Kroshus, 2016). Qualities such as resilience, persistence, tolerance of

discomfort, and performing under pressure are all important aspects of mental toughness.

Student-athletes may feel that their success or others' perceptions of them as successful

are closely related to these characteristics and that asking for help may indicate that they

are not "tough enough" for collegiate athletics (Brown et al., 2014). Student-athletes may

also be reluctant to seek help or confide in teammates, coaches, or sports medicine staff

because of the perceived stigma attached to mental illness. Student-athletes who have

mental health issues and compete in environments that reinforce the mental health stigma, are less likely to seek the care and resources they need.

Creating a culture where care seeking for mental health issues is as normative as care seeking for physical injuries is a paramount issue for sport and medical professionals (Brown et al., 2014). Defined as a behavior of actively seeking help from other people, psychological care seeking involves communicating with others to obtain help and support for troubling experiences (Rickwood, Deane, & Wilson, 2007). Mental health is critical to the overall health and wellness of collegiate student-athletes. Coaches can play a pivotal role in creating a team culture or environment that supports student-athlete health and wellness by encouraging them to seek out the services and care they need.

The Coach as Leader, Teacher, Friend

Historically, the dynamic between coach and athlete was studied primarily from the perspective of coach leadership; however, in recent decades, it has been recognized that the relationship is a two-way process and should be considered from a dyadic perspective (Yang & Jowett, 2016). From either perspective, communication is a foundational skill. At the core of all social interactions, language is used to shape reality through the co-construction of meaning between people (Philippe et al., 2011). As such, the role of communication has been studied for its integral role in the creation of coach leadership identity as well as within the coach-athlete relationship.

Transformational Leadership in Athletic Coaching

A review of the major coach leadership models that have been applied to the sport context finds that the interpersonal relationship between athlete and coach and the

process of influence that comes from it is an aspect of coaching that is not satisfactorily described and explored (Vella et al., 2010). The coach leadership role includes support, instruction, and guidance, and as such, positions coaches as a major influence on their athletes (Sagar & Jowett, 2012). An established model is Chelladurai's (2014) Multidimensional Model of Leadership (MML), which encompasses the interaction of coach (*leader characteristics*), athlete (*group member characteristics*), and situation (*situational characteristics*) with leader behavior types (*required behavior, actual behavior, and preferred behavior*), to determine coach behavior in varying contexts, and in which five coach leadership styles are described:

1. *Democratic – in which athlete and coach collaborate to make sport related decisions;*

2. *Autocratic – in which coaches display authority, are direct and controlling;*

3. *Training and Instruction – in which coaches aim to develop athlete knowledge and skill and improve performance;*

4. *Rewarding – in which coaches use positive feedback and show appreciation for athlete; and*

5. *Social Support Style – in which the coach serves the athlete's interpersonal needs and shows concern for well-being.*

A number of studies have found that athletes are most satisfied with their coach when the Training and Instruction, Positive Feedback, and Social Support styles are used (Chelladurai, 1990, 2014), and that the Autocratic leadership style is correlated inversely with athletes' affective learning (Billings, Butterworth, & Turman, 2012). Sagar and

Jowett (2012) noted that while the MML is comprehensive in its inclusion of situational

characteristics, there is no discussion of the *actual techniques or messages* used by

coaches to embody coach leadership styles. They examined two interpersonal

situations—losing a competition and training mistakes—for evidence of adaptive and

effective coach communicative acts. Athletes perceived coach communicative acts such

as *the expression of positive emotions*, *provision of instruction and feedback relevant to*

competition or mistake, and *encouragement or motivation*, as positive responses (to

negative interpersonal situations) which elicited positive affect in athletes (Sagar &

Jowett, 2012). Interestingly, while this study focuses on distinguishing the unique nature

of conversations about well-being from workaday coach talk about sport performance,

this literature reveals that it is important to attend to the psychological and emotional

well-being needs of athletes for optimal sport performance as well.

The Coach-Athlete Relationship

Yang and Jowett (2016) defined the coach-athlete relationship as "a social

situation that coaches and athletes create by the ways in which feelings, thoughts, and

behaviors are mutually and causally interdependent" (p. 55). This relationship has been

further described as a "complex phenomenon that influences and is influenced by

numerous variables" (Philippe et al., 2011, p. 2) and is characterized in part by ongoing

mutual care and support. The motive for the coach-athlete relationship is two-pronged,

with both *performance enhancement* and *psychological well-being* identified as central

concerns (Jowett & Poczwardowski, 2007). The quality of the coach-athlete relationship

is associated with sport performance and training satisfaction (Jowett, 2005),

achievement goals and intrinsic motivation (Adie & Jowett, 2010), passion for sport

(Lafrenière, Jowett, Vallerand, & Carbonneau, 2011), and interpersonal communication

(Sagar & Jowett, 2012).

A number of conceptual models have been proposed to describe the coach-athlete

relationship. An early model by Wylleman (2000) described the relationship as based on

interpersonal behaviors along three dimensions: (a) acceptance-rejection, which includes

positive and negative attitudes toward the relationship or interaction; (b) dominance-

submission, which reflects the adoption of a strong or weak position toward one another

in the relationship; and (c) social-emotional, which refers to the assumption of an

interpersonal and emotional role in the relationship. This model demonstrates how there

may be *complementarity* within the relationship—for example, a coach's dominance may

attract a reciprocal behavior of submission from the athlete. Likewise, the model

demonstrates *correspondence* as working when like attracts like behavior—for example,

extending emotional availability may attract reciprocal emotional availability. A

limitation of this model cited by Jowett and Poczwardowski (2007) is that it does not

explain how, when, and why these behaviors occur within the relationship between

athlete and coach. To begin to explain these factors, Jowett and colleagues developed

3+1C's conceptual model that attempts to integrate four established interpersonal

psychological constructs—*co-orientation, closeness, commitment, and

complementarity*—that operationalize and measure coach and athlete emotions, thoughts,

and behaviors within their relationship (Jowett, 2005; Jowett & Cockerill, 2002).

Components are described as such:

> *Closeness* is defined as an affective or emotional interdependence that encompasses relational properties such as liking, trusting, and respecting one another. *Commitment* is defined as the intentions of coaches and athletes to maintain the athletic relationship over time and, thereby, to maximize its outcomes. *Complementarity* refers to interpersonal behaviors of co-operation and affiliation that are underlined by mutual responsiveness, friendliness, and acceptance. *Co-orientation* refers to coach and athlete having a degree of perceptual congruence or common ground whereby they think, feel, and behave in a similar or corresponding fashion. (Philippe et al., 2011, p. 3)

Other coach-athlete relationship models by LaVoi (2004) and Poczwardowski (1997) similarly include interpersonal constructs such as closeness, connection, and care. In an effort to integrate these models, Jowett and Poczwardowski (2007) imagine three layers, where the first layer contains antecedent variables including personal characteristics, context, and relationship variables, the second layer contains relationship quality components including closeness, commitment, co-orientation, and complementarity, and the third layer contains outcome variables such as satisfaction, performance, motivation, and burnout. Between each layer lies interpersonal communication, which acts as a process that is both a result of the quality of the coach-athlete relationship and a component of the creation of it (Jowett & Poczwardowski, 2007).

Coach-Athlete Communication

The ability to play a sport well and the ability to coach a sport well are divided by a set of intangible differences, and standing tall among them is communication (Billings et al., 2012). Coaching or instruction about sport performance and skill improvement take place in a distinct environment, and it is primarily an instructional communication context (Turman & Schrodt, 2004). Clear communication not only promotes skill

development in sport but also affects learner confidence, motivation, and satisfaction, affecting the psychological and emotional well-being of athletes (Sagar & Jowett, 2012).

Communication within the coach-athlete relationship has been studied as a way to understand how the relationship develops. Philippe and colleagues (2011) analyzed language along three dimensions—*developing bonds, developing co-operation, and power relations*. Within the bond development dimension, they found a dynamic process through which the coach-athlete relationship moves from an initial functional relationship, in which the coach is seen as a teacher, toward that where personal bonds are evident, in which the relationship takes on aspects of friendship. In the cooperative dimension, the coach-athlete relationship evolves from a directive or prescriptive beginning, in which the coach makes all decisions, toward a more collaborative relationship where decisions are made jointly. Within the collaborative relationship, conversations move from strictly concerning sport performance toward more personal support and assistance. In the power relation dimension, coaches were found to move from an initially autocratic style toward a supportive role as athletes began to exert more autonomy. Importantly, the stability of the relationship was dependent on its adaptability as the coach and athlete changed and developed (Philippe et al., 2011). This view of the coach-athlete relationship as fluid, or evolving, is important in imagining how coaches might be persuaded to pursue development of highly effective communication skills.

Communication within the coach-athlete relationship has been studied as a way to understand how the relationship is maintained. Jowett and Poczwardowsi's (2007) integrated model of the coach-athlete relationship included interpersonal communication

layers in which relationship maintenance strategies are embedded. Rhind and Jowett

(2010) examined coach and athlete language for maintenance markers and found they

were characterized by the extra-sport performance components such as *openness*, in

which coaches and athletes valued disclosure of feelings, being able to talk about

anything (not sport related), and attempts to understand how the other is feeling; as well

as *support*, in which there was commitment to relationship and availability for personal

support; additional characteristics were more directly sport performance related. In total,

the investigators identified seven categories of *openness, motivation, positivity, advice,*

support, and social networks, which make up the COMPASS model of maintenance

strategies within the relationship between athlete and coach (Rhind & Jowett, 2010).

It is clear that coaches are most in harmony with their athletes when they consider

both sport performance and affective characteristics. Attending to and supporting the

well-being of student-athletes is undoubtedly a critical aspect of coaching, and is

integrated into models of effective coaching and cited in the literature related to the

coach-athlete relationship. Likewise, the importance of effective communication and

what types of communication are effective are recurring themes. Because the quality of

the coach-athlete relationship is significantly mediated through interpersonal

communication, and because athlete outcomes are positively correlated with quality

coach relationships, a clearer and more detailed view of how communication occurs

between coach and athlete is needed. Very little technical information exists about the

specific nature of the communication that takes place in conversations about well-being.

As previously described, student-athletes are a unique population with unique risks. Coaches are ideally situated for early recognition of trouble, and for connecting student-athletes to the help that is available. Further, they inhabit a position of influence in which the athlete is willing to listen, develop motivation, and adhere to a plan for accessing resources. It is important to identify a communication framework that will provide coaches with specific knowledge about how to bridge the gap between identification and referral to ensure the best outcomes for student-athletes.

Motivational Interviewing

With a broad base of evidence supporting its wide diffusion, motivational interviewing is one such communication practice. Motivational interviewing (MI) is an intervention practice used in counseling contexts that is centered on increasing an individual's intrinsic motivation to change by guiding him or her toward resolving ambivalence (Markland, Ryan, Tobin, & Rollnick, 2005). Miller and Rollnick (2013) have given a layperson's definition as "a collaborative conversation style for strengthening a person's own motivation and commitment to change" (p. 12). MI has been used effectively in many settings (Resnicow et al., 2002). Although MI was initially developed for use in addiction counseling, it has shown promise in a variety of populations and with a wide range of behavior change contexts (Markland et al., 2005). MI is considered an evidence-based practice; systematic reviews of its efficacy have shown that the effects of MI and MI adaptations are consistent and robust (Burke, Arkowitz, & Dunn, 2002; Dunn, Deroo, & Rivara, 2001; Noonan & Moyers, 1997).

A central focus of motivational interviewing is resolving ambivalence toward change. Ambivalence is considered a typical part of the change process, and the assumption it that anyone contemplating change will have some degree of ambivalence toward it (Miller & Rollnick, 2013). Although many people desire to make changes in life, they are also aware that there is a tradeoff; for example, an individual may wish to abstain from alcohol but also value the social bonding, acceptance, and excitement of spending a night out drinking with teammates. This ambivalence can create a feeling of dilemma, reducing motivation to proceed with the change process. Ambivalence and lack of motivation to change are not considered pathologies in the MI view, but rather, are normal human conditions (Markland et al., 2005). Most people have wanted to change to increase or decrease a behavior, yet lacked sufficient motivation to follow through. Resolving ambivalence is effective at helping to speed up the natural change process (Prochaska & DiClemente, 1986).

A strength of MI is its effectiveness in promoting adherence, which is the degree to which clients follow through with agreements (Miller & Rollnick, 2013). People often exhibit difficulty at adhering to treatment plans, recommendations, and other agreements due, in part, to the lack of motivation related to ambivalence that was discussed above. Lack of adherence is a barrier to successfully achieving any change and impacts both the person who wishes to make the change and others, Non-adherence can affect peers, treatment providers, and the community surrounding the client—others may be frustrated by the lack of change, the behavior that is unchanged may adversely affect others, the treatment provider may feel that they are not helping, and indirectly the cost and effort

that is going into providing help is not productive (Carroll et al., 2000). Motivational interviewing addresses adherence in two ways: first by increasing adherence to the problem and second by increasing adherence to a plan for addressing the problem (Miller & Rollnick, 2009).

Miller and Rollnick (2013) cautioned that the techniques associated with motivational interviewing should be accompanied by the underlying *spirit* of MI, "a mind-set and heart-set" (p. 14). They described four elements of the MI spirit: partnership, acceptance, compassion, and evocation. Other words used to describe the spirit of MI are *nonjudgemental, empathetic, encouraging, nonconfrontational,* and *supportive* (Resnicow et al., 2002). MI assumes that people have an innate wisdom and movement toward wholeness and growth and that if supported effectively they can and will move in that direction (Miller & Moyers, 2006). To support client autonomy in this way, care providers must control the *righting reflex*, described by Miller and Rollnick (2013) as a natural inclination to try to fix things or make them right; a belief that you should explain, convince, or persuade someone to change. Instead, the aim of MI is to engage in conversations with the client that support them finding their own ideas about and motivation to change. A foundational assumption underlying motivational interviewing is that the client is responsible for deciding whether and how to change, rather than being educated, persuaded, or coerced by a care provider (Markland et al., 2005). For this reason, motivational interviewing is often associated with self-determination theory (SDT). Self-determination theory posits that humans have an innate movement toward growth, integration, and resolution of psychological inconsistency

(Markland et al., 2005) and that when supportive conditions of competence, autonomy, and relatedness are present, intrinsic or self-motivation is enhanced (Ryan & Deci, 2000). In other words, self-determination theory may be an underlying theoretical explanation for why the practice of motivational interviewing works.

Because MI is a complex approach, it requires training, practice, feedback, and ongoing coaching to be used most effectively (Miller, Yahne, Moyers, Martinez, & Pirritano, 2004). However, it shows potential for efficacy with a wide variety of populations and types of behavior and has been adapted for use in a variety of settings. One research study trained athletic coaches in the use of MI for a brief intervention for student-athletes who use alcohol (Nolt, 2014). Coaches were more confident in their ability to conduct a brief intervention using MI after a 2-hour training. Nolt reported increased knowledge, awareness of technique, confidence (self-efficacy), and perceived increase in skills. The training provided was very short; however, as previously discussed, without strong advocacy by athletic leadership, it is unlikely that coaches would commit to the amount of time or effort required for more effective training. Nolt (2014) did not measure specific communication behaviors.

Discourse Analysis

Discourse is a term used to describe long-form or conversational language of longer than a sentence. Language is both formulaic and novel; inasmuch, two main theoretical frameworks talk about discourse: *structural* (see Grimes, 1975; Harris, 1963, 1991) and *functional* (see Goffman, 1981; Halliday & Matthiessen, 2004). From a structuralist perspective, a language text can be understood as the sum of its parts and is

best analyzed at the word, phrase, or sentence level without regard for the larger context

in which it is situated (Armstrong & Ferguson, 2010). From a structuralist standpoint,

language can be called formulaic in that consistent and rigid rules exist for combining

sounds to form words and words to form sentences. Language syntax defines acceptable

word forms and word ordering, which vary according to the specific language code used.

At the sentence level, it is simple to determine whether language is used accurately—*is it

a grammatical sentence?* —or not. However, if the question is one of meaning, as it is

from the functionalist perspective—*is this sentence offensive?* or *does this sentence

adequately describe a phenomenon?*—these rules of syntax are no longer enough.

Language is novel in that for each production of a language utterance, there is an

opportunity to create an entirely new sentence or thought that has never before been

expressed in precisely that way, and that if successful, a consumer of this language will

understand the utterance even when they have never before heard it expressed in such a

way.

Discourse analysis is a method for studying language that is used in many

disciplines (Brown & Yule, 1983). Discourse analysis is used to understand how

language works in action (Gee, 2014). Often the method is biased by the questions being

asked, by the types of discourse relevant to the questions, or by the structures or functions

best described by the tools used (Van Dijk, 1985). Quantitative methods are often used

in discourse analysis when the question involves a question of how the language code

works, for example, how many times a proposition is used. The language code is

somewhat mathematical in nature, with consistent and rigid rules for what categories of

words can appear in what place in a sentence. This type of research is more common in linguistics or computer science and the data is often collected as a corpus, for example, from literature or transcripts of spoken dialogue (Gee, 2011). In research where the primary research question involves meaning, for example, in what ways are power expressed in a conversation, qualitative methods are preferred (Van Dijk, 1985). This type of research is more common in social justice applications or identifying themes related to race, class, gender, queerness, or power in language. Such data may be collected as speeches, narratives, and natural conversation.

The way people speak in natural language is often agrammatical, unique, and representative of many local conditions and reflective of a certain sense of style that may be personal, yet must be acceptable to and understood by others in social situations (Van Dijk, 1985). Several related linguistic terms—*discourse communities, communities of practice, and dialect*—describe this phenomenon and conjure an idea that proves an important concept to our study (Swales, 1990). Although each conveys a distinct linguistic event, for our purposes, they will hang together to help us understand a central concept: *people who associate with one another have a shared style of communicating that is unique to them*. They develop specific *genres* to accommodate the unique recurring rhetorical needs of their association – for example, coaches may exchange an artifact such as a scouting report, a text devised to succinctly communicate performance information about athletes, a rhetorical situation which is common for them. A discourse community will work together to create a shared lexis (lexicon, vocabulary) that allows

them to communicate the specific concepts needed to maintain the business of their
association.

Swales (1990) described *discourse communities* as groups with a shared language
that allows members to maintain goals, regulate membership, and communicate
efficiently; the author elucidates six defining characteristics:

1. A broadly agreed set of common public goals

2. Mechanisms of intercommunication among its members

3. Utilizes and hence possesses one or more genres in the communicative
   furtherance of its aims

4. Uses its participatory mechanisms primarily to provide information and
   feedback

5. In addition to owning genres, it has acquired some specific lexis

6. A threshold level of members with a suitable degree of relevant content
   and discoursal expertise (pp. 24–27)

A *community of practice* is inclusive of these rules about language but broadens the
concept to include practices, values, and ways of being that are distinct (see Eckert &
McConnel-Ginet, 2001; Johns, 1997; Lave & Wenger, 1991). *Dialect* refers to a way of
communicating that is also specific to groups, most often cultural, social, or geographical,
but additionally includes the unique pronunciation associated with membership (Haugen,
2003). Such in-group communication styles are important in understanding how a socio-
occupational community of practice has developed around athletics in general and

coaching specifically. Similarly, a style should be evident in the discourse of health coaches. These patterns of practice are likely stable and widespread, following frameworks like those developed by Swales (1990) and Lave and Wenger (1991). By examining discourse related to conversations about well-being, a coaching style of talk may be apparent that exhibits overlap or differs between athletic and health coaches. In this space, information about how to support athletic coaches in broadening their style to best accommodate performance in this area should be apparent.

CHAPTER III

RESEARCH METHODOLOGY

There were two overarching purposes of this study. The first was to *explore the feasibility of research* into the baseline communication performance of coaches in conversations about well-being, how coaches view their role and efficacy in such conversations, and what specific tools and methods might be used to study these. The second purpose was to *gather preliminary data to plan and legitimize such research.*

In order to investigate feasibility and obtain preliminary data to address these issues, a group of athletic coaches were asked to participate in three simulated case conversations about well-being and to complete an online survey. This group was compared to a group of health coaches who performed the same tasks. A mixture of qualitative and quantitative methods were used to analyze the resulting data, as well as respond to "can it work?" questions about the tools, methods, and theoretical frameworks used.

This chapter includes a rationale for the research approach, information about the research setting and participants, description of the instruments used, and methods for data collection, preparation, and analysis.

Research Questions and Hypotheses

Feasibility – "Can It Work?"

RQ1: Can we recruit coaches to participate in recorded simulated case scenarios?

> *H1: It will be difficult to recruit coaches to participate without buy-in from institutional leaders.*

RQ2: What behaviors should be measured?

> *H2: Skills that are in alignment with the motivational interviewing spirit and creating a therapeutic alliance should be measured—potentially number of turns, ratio of open to closed questions, directive statement frequency, rapport statement frequency, number of information sharing responses.*

RQ3: What methods and tools should be used to measure chosen behaviors?

> (a) Does the RIAS capture desired behavior adequately?

> *H3a: RIAS or adapted RIAS will capture desired behaviors.*

> (b) Do sim cases and standard patient scenarios elicit the behaviors of interest?

> *H3b: Simulated cases and standard patient scenarios will elicit behaviors of interest.*

> (c) Are health coaches an appropriate and useful comparison group?

> *H3b: The comparison group will be appropriate and useful.*

Preliminary Data

RQ4: Do athletic coaches believe that conversations about well-being are part of their role?

      H4: Athletic coaches will feel uncertain about their role surrounding conversations about well-being.

RQ5: How do the communication behaviors of athletic coaches differ from those of health coaches in conversations about well-being?

      H5: Athletic coaches will be more directive, ask fewer open questions, and elicit less information from athlete.

RQ6: How do outcomes differ between athletic coaches and health coaches in conversations about well-being?

      H6: Health coaches will have higher outcome scores than athletic coaches (with outcomes scores = 1-5 relevant pieces of information elicited during a conversation about well-being).

Rationale for Research Approach

A feasibility framework was utilized for the purpose of this study; additionally, quantitative measures were used to explore preliminary data related to the research questions. Bacchetti and colleagues (Bacchetti, Deeks, & McCune, 2011) have spoken to the importance of small sample studies, calling them a value for the science dollar:

Early studies of new ideas that have undergone little or no previous research, such as the first investigation in humans or nonhuman primates, is required to bring basic discoveries from the laboratory to the clinic. These studies may lack any preliminary data and, for practical reasons, are usually small. Unfortunately, grant reviewers and regulatory committees often downgrade or reject these proposals because they may be "underpowered" or have "inadequate" sample size. Such criticisms reflect the "threshold myth", an incorrect presumption that there is a sample size below which a study is doomed. In reality, small sample sizes can have scientific merit even if they do not meet conventional requirements for statistical power, and valid sample size choices can be made for cost or feasibility reasons alone. (p. 1)

As discussed in Chapter I, well-designed feasibility studies are a critical part of determining whether a larger study can be done, answering important questions about recruitment, instrumentation, and methods, particularly in cases where there is little previous research to inform the investigator (Arain et al., 2010; Bowen et al., 2009; Tickle-Degnen, 2013). Determining the feasibility of this type of study was appropriate for the following reasons:

1. Athletic coaches were difficult to recruit due to lack of time and lack of investment in the topic—until there is evidence pointing to the need for athletic coaches to support student-athlete well-being and that a specific communication style is best suited for this type of support, participation in research or even training is unlikely to be a priority for many.

2. When coaches did agree to participate, the logistics of coordinating coach schedules with availability of conversational partners was difficult, even when conversational partners were simulation participants. Capturing a spontaneous conversation would require extensive resources in order to

monitor and record them, or coaches would need to be trained and given equipment to capture conversations as they occurred.

3. Although natural conversation would be ideal, there are issues of timing, willingness, and privacy that dissuade coaches from allowing access to natural conversations with student-athletes about well-being, even if they could be captured.

4. Even if obtaining spontaneous dialogue were possible, it would be difficult to compare natural conversations because with no standardization of topics discussed, they are too dissimilar to draw useful conclusions. Using simulated cases is common in training and research in medical schools and other health professions. This author found no evidence that simulated cases have ever been used to capture the communication behaviors of athletic coaches.

5. Sparse literature exists on the topic of measuring the communication behaviors of coaches. The RIAS has not been previously used with this population. The RIAS was developed for use in studying doctor-patient communication but has been adapted for use with other populations, including. The coach-athlete relationship is similar to relationships the RIAS is typically used with in that there is a power dynamic in the dyad; where one partner is seen as the authority or influencer, and the other partner approaches with the intention of sharing a problem and soliciting help.

6. Motivational interviewing has been used in one study with athletic coaches, but the actual communication behaviors were not measured. Motivational interviewing has been shown to be effective and efficacious in a number of other types of communication relationships where one person has a problem and the other can provide help. Information is needed to understand whether motivational interviewing is a useful communication framework for conversations about well-being between athletic coaches and student-athletes.

7. Discourse analysis is a labor intensive and time consuming process. It is important to know whether it captures the desired behaviors and provides useful and usable information. In order to do this type of research on a larger scale, a streamlined design is critical. By using a small sample containing a large amount of information, we can determine which data measurements provide the most bang for the buck.

Participants

The athletic coach sample was comprised of six coaches who were employed at a small NCAA Division III institution in central North Carolina. The sample included four male and two female coaches; three who coached male student-athletes and three who coached female student-athletes; one coached an individual sport, and five coached team sports. Inclusion criteria for athletic coaches were being currently employed as a collegiate athletic coach and being over the age of 18.

The comparison sample was made up of health coaches and was designed to include diversity in gender and amount of experience. The comparison sample included two female and two male health coaches. Health coaches were recruited from the same geographic area as the athletic coaches. Inclusion criteria for health coaches were that they had been trained as a health coach and were over the age of 18.

Data Collection Procedures

This research was approved by the Institutional Review Board at the University of North Carolina Greensboro on November 20, 2015, IRB number 15-0148.

Conversational Partner Recruitment and Training

This study was conducted using a simulated case (sim case) scenario framework, with trained confederates taking the place of student-athletes in conversations with coaches about well-being topics. Recruitment emails were sent to invite participation by UNCG graduate students who had an interest in research, especially with athletic coaches. Volunteers were almost exclusively female, and because it was important to limit variability in such a small sample, the decision was made to use all female sim case conversational partners. Prior to the beginning of data collection events, three conversational partners were selected to act as standardized cases. All were roughly similar in age to college students (athletes), and two of the three were former athletes. Each sim case conversational partner was assigned one well-being case scenario and was trained on how to behave and communicate in order to remain neutral in the simulation. Sim case conversational partners practiced scenarios in a variety of contexts, including varied levels of talkativeness, assertiveness, and focus, until they could reliably maintain

coherence in describing scenario. Sim case conversational partners represented one case throughout all data collection, with both athletic coaches and health coaches, in order to maintain consistency.

Data Collection Events

Athletic coaches who volunteered to participate were contacted via email and data collection was scheduled for a day when all six were available to participate simultaneously. During a brief meeting before data collection, athletic coach participants were briefed on logistics and procedures, and informed consent was obtained from each before data collection began (Appendix A). For all well-being conversational scenarios, athletic coaches were seated in their own office and sim case conversational partners rotated, "visiting" the office of each coach much as a typical student-athlete might. Data collection took less than 1 hour.

Health coaches who volunteered to participate were contacted via email and in person, and data collection was scheduled for a day when all four were available to participate simultaneously. Health coach participants were briefed in the same manner as athletic coaches and provided informed consent before data collection. Health coaches were seated in their own or a nearby office in familiar surroundings. Sim case conversational partners rotated to each health coach, knocking and entering offices much like a typical health coaching client might. Data collection took less than 1 hour.

Sim Case Conversational Scenarios

During data collection events, each participant engaged in 5-10 minute conversations in simulated case scenarios. Scenarios consisted of three well-being themed cases, including conversations about life skills, mental health, and interpersonal conflict. Each scenario was represented by one sim case conversational partner throughout both athletic coach and health coach data collection. Three separate conversational scenarios were used to account for warm-up time or fatigue, as well as offer more than one opportunity to observe behaviors in a complete conversation with beginning, middle, and end. Each conversational scenario occurred at first, middle, and last position to account for ordering effects. Conversational scenarios took place in two 30-minute rounds.

Conversations were recorded using an Etekcity USB voice recorder. Recorders were placed on desks or tables between the coach participant and sim case conversational partner, with neither seated more than 4 feet from the recorder. The recorders were activated previous to the first conversational scenario and ran continuously through all conversations in order to decrease disruption, ensure smooth capture of all audio, and encourage participants to forget they were there. Every conversation began with a scripted greeting and "starter phrase" in order to maintain consistency, decrease time spent in greeting rituals, and guide coaches directly into the well-being topic. After the conversational partner's scripted starter phrase, conversations were allowed to proceed naturally until a maximum of 10 minutes had passed. All conversations were stopped at 10 minutes if they had not concluded prior to the time limit. At the end of all three

conversational scenarios, each athletic coach was asked to rate the realism of the conversation on a 1-5 Likert scale, with 1 indicating "not realistic" and 5 indicating "very realistic."

Online Survey

After participating in conversational scenarios, every participant was provided with a link to an online survey and asked to complete it within 24 hours (survey text available in Appendices C and D). There were two versions of the survey; the athletic coach survey asked about perceptions, opinions, and experiences regarding communication and coaching, and the health coach survey asked about perceptions, opinions, and experiences regarding communication and coaching in abbreviated form. Five out of six athletic coaches, and four out of four health coaches completed a survey.

Measures

Sim Case Conversational Scenarios

Each of three sim case conversational partners were trained on a single scenario, representing well-being issues about life skills, mental health, or interpersonal conflict (see Table 1). Scenario topics were designed to focus on topics that are common in the college-age population and that are of concern in the student-athlete population as determined by representation in the NCAA Mind, Body, and Sport publication (Brown et al., 2014). Additionally, scenarios were designed so that none would signal the need for an emergency or crisis protocol and so that layers of depth were available to both conversational partners if coaches probed for detail. Each scenario included a narrative outline and five possible conversational outcomes: *surface issue, deep issue,*

consequences, change attempts, and *action plan* (see Appendix E for full scenario text and task instructions). The beginning of each conversational scenario was scripted with a brief greeting and starter phrase, designed to move the conversation quickly into addressing the well-being issue.

Table 1

Sim Case Conversational Scenario Components

Scenario	A	B	C
Topic	Academic/Life Skills	Mental Health/Depression	Interpersonal Conflict
Starter Phrase	*"I am so stressed out."*	*"I'm afraid I'm gonna fail out of school."*	*"Right now I feel like I hate college"*
Surface Issue	Overwhelmed, stressed out	Missed classes and late to practice	Homesick, not making friends
Deep Issue	Poor time management skills	Signs of depression, trouble getting out of bed, sleep	Harassment/bullied
Consequences	Anxiety, not getting work done	Academic probation, sport performance decreased	Thinking about leaving school
Change Attempts	Making lists	Set multiple alarms	Went to party with teammates, drank too much and threw up in front of them (only made teasing worse)
Action Plan	Possibly – refer to professional (Academic Support), suggest explore campus resources, like meditation group	Possibly - refer to professional (counseling, perhaps) for screening, enlist community support (family, team)	Possibly – refer to professional (Dean of Students), get connected to campus group (spiritual, leisure, professional), coach should engage in teambuilding,

	address directly instigators of bullying

Online Survey

A survey was deployed online using Qualtrics (*Qualtrics*, 2005), a web-based

survey tool. Both athletic coaches and health coaches were asked to complete a survey.

Athletic coach and health coach survey questions were substantially the same, with health

coaches completing an abbreviated version that did not include information about

athletics. The online survey included additional consent language, and all coaches

provided informed consent before proceeding with survey (Appendix B). Participants

entered a code to link survey data to their conversational data. The athletic coach survey

included limited demographic information, questions about perceptions of roles and

responsibilities, self-efficacy for communication generally as well as in conversations

about well-being, experience with communication training, student-athletes, and

conversations about well-being. The health coach survey included limited demographic

information, perceptions of self-efficacy for communication and conversations about

well-being, training and experience as a health coach. The full text of both surveys is

available in Appendices C and D.

Data Preparation

Sim Case Conversational Scenarios

The standard core RIAS coding system consists of 41 distinct, mutually exclusive,

and exhaustive categories, although it has been adapted extensively for many

applications, including the measurement of motivational interviewing. See Appendix F

for standard RIAS coding categories and Appendix G for the adapted RIAS coding

schema for this study. Standard RIAS for coding medical encounters allows for fine-

tuned examination of giving information and asking questions about medical, therapeutic,

psychosocial, and other specific topics; this level of detail was not needed for general

coach-athlete conversations about well-being issues. In order to code conversational

samples for this study, all categories for *giving information* were collapsed into a single

gives-other code, and all *asks* categories were collapsed into *asks open-ended* and *asks*

closed-ended questions codes. An additional adaptation was to create codes to designate

the presence of content-specific exchanges related to the conversational outcomes *surface*

issue, deep issue, consequences, change attempts, and *action plan* (see Table 2).

Table 2

Content-Specific Exchange Coding Adaptations

Content-specific exchange	Code
Surface issue	100
Deep issue	200
Change Attempts	300
Consequences	400
Action Plan	500

Each conversation was coded for an overall outcome score by assigning one point for eliciting each of these five possible conversational outcomes, allowing possible outcome scores of 0-5. Repeated elicitations or elicitations of additional variations on any one outcome were not counted as additional scoring opportunities. The intention was to explore communication strategies that took conversations beyond initial or presenting complaints toward understanding of the underlying source of the problem, toward efforts that had been attempted toward change, toward the effects of the problem on daily life, and toward actions for moving forward to change. A higher conversational outcome score is indicative of the presence of communication strategies that were successful in eliciting a more fully realized examination of the presenting problem.

The Motivational Interviewing Treatment Integrity Code (MITI) 3.1.1 (Moyers, Martin, Manuel, Miller, & Ernst, 2010) is the most common tool used to assess the fidelity with which motivational interviewing is used by practitioners. A simple single page tool, MITI is used by a trained coder to rate five global impressions as well as provide frequency counts for six behaviors. The MITI 3.1.1 was used to inform judgments about which RIAS code categories were likely targets for behaviors of interest, and RIAS codes or index scores were identified that accounted for and served as proxies for many of the communication behaviors scored using the MITI 3.1.1 (see Table 3). The objective was not to duplicate or recreate the MITI 3.1.1 using RIAS, rather to use this widely used evidence-based tool to direct attention toward behaviors that would likely be of interest in this investigation. There was less direct correspondence with the MITI 3.1.1 global ratings that characterize the MI spirit, direction, and empathy, as a

single global rating is given for the rater's overall impression of *evocation, collaboration, autonomy/support, direction, and empathy* for the entire conversation using MITI 3.1.1, whereas categories are directly coded per interaction in RIAS. An index of RIAS categories was assembled that measures similar constructs without duplicating behaviors otherwise accounted for.

Table 3

RIAS Coding Categories Correspondence with MITI Constructs

RIAS Code Category	MITI 3.1.1
Giving Information	Behavior – Giving Information
Asks for permission	Behavior – MI adherent
Counsels	Behavior – MI non-adherent
Asks Closed/Asks Open	Behavior – Question – Closed/Open
Paraphrase/Checks for Understanding	Behavior – Reflection (Simple or Complex)
Reassure/encourage/optimism + Approval + Compliment + Partnership + Legitimizing	Global – MI Spirit (Supportive) - Evocation, Collaboration, and Autonomy/Support
Disapprove + Criticism	Global – MI Spirit (Non-Supportive) - Evocation, Collaboration, and Autonomy/Support

Empathy	Global – Empathy
Transition + Orientation	Global – Direction

Additional Index (not correspondent with MITI 3.1.1)

Personal + Humor + Agreement + Backchannel	"Friendliness & Facilitation" Index

Finally, several RIAS categories were combined to represent the level of *Friendliness & Facilitation* that was present in conversation and not otherwise accounted for by other categories. Counts from each were summed to create an overall F&F index score. The categories were: *personal remarks, humor, agreement,* and *backchannel.*

A strength of RIAS is direct coding of discourse from audio files; however, in order to check coding accuracy and examine themes in conversations, text transcriptions for half of the conversations were prepared. Six randomly selected conversational samples (.20) were dual coded in RIAS using both audio samples and text transcriptions. An additional six randomly selected samples (.20) were repeat coded from the audio sample. When disagreement was found, a second listener was invited to interpret interaction. Initial intra-rater reliability was .89 for duel coded samples, and .94 for repeat coded sample. All disagreements were resolved by discussion between coder and second listener. Samples coded in RIAS from audio files were judged to be slightly more

accurate than text transcripts, due to the ability to interpret tone and utterance overlap in the audio record during coding.

After all conversational samples were coded, data was exported from RIAS into csv files and imported into SPSS. Conventions for variable naming provided by RIAS were used in preparation of data. Variables were created for index scores as described in Table 3. All behaviors were summed across the three conversational scenario samples in order to create a total frequency count of each.

Qualtrics Online Survey

Data were exported from Qualtrics in csv files and imported into SPSS. Athletic coach and health coach survey data were linked to conversational data from RIAS using participant code numbers.

<div align="center">Data Analysis</div>

Feasibility – "Can It Work?"

In order to assess the feasibility of the constructs, methods, and tools used in this study, qualitative data was organized according to areas of focus suggested by Bowen et al (2009, p. 453) that included *acceptability, demand, implementation, practicality, adaptation, and integration*; as well as overarching categorical considerations related to *process* and *resource* assessment suggested by Tickle-Degnan (2013, pp. 173-175). Table 4 describes these areas of interest.

Table 4

Feasibility Areas of Focus

Area of Interest	Questions	Outcomes
Process	To what extent do the instruments and protocols work as planned?	- Number of potential recruits - Recruitment rates - Quality of data collection procedures
Acceptability	To what extent is x (idea, process, or measure) judged as suitable, satisfying, or attractive?	- Satisfaction - Perceived appropriateness - Perceived fit, positive or negative effects
Demand	How much demand is likely to exist? To what extent is x likely to be used?	- Expressed interest - Perceived demand
Adaptation	To what extent does x perform when changes are made to account for new format or population?	- Degree to which similar outcomes are obtained in new format
Resources	Can existing resources meet the demand and burden required?	- Amount or type of resources needed - Time required to conduct all stages of protocol - Equipment/technology needed to conduct all stages of protocol - Training and staff to meet needs of data collection and coding
Implementation	To what extent can x be successfully used in defined context?	- Success or failure of execution - Factors influencing implementation ease or

		difficulty
Practicality	To what extent can *x* be carried out in this context?	- Positive/negative effect on participants
Integration	To what extent can *x* be integrated into an existing system?	- Sustainability - Costs
Expansion	To what extent can *x* be expanded to new population or setting?	- Fit with org goals and culture - Need for change disrupts core of existing product

Research Question One: Can we recruit coaches to participate in recorded simulated case scenarios?

To examine evidence related to this question, data was collected related to the *process* of recruitment to understand the *acceptability* and *demand* of participation to athletic coaches. Quantitative data included the number of coaches approached that ultimately agreed to participate; qualitative data included the time allowed for participation, characteristics of successful and unsuccessful attempts, as well as feedback from athletics coaches and intermediaries related to their thoughts about participating.

Research Question Two: What behaviors should be measured?

To examine evidence related to this question, qualitative and quantitative data were collected that assessed the utility of RIAS coding categories. The data produced by RIAS coding was examined through SPSS using the descriptive function to visually inspect the frequency distribution and variability of each behavior. Variables with no

productions of a behavior over all conversations were excluded from further

consideration. Behaviors related to those constructs measured by the MITI 3.1.1 were

combined to create evidence and logic informed index scores. Additionally, common

discourse analysis measures such as total utterance number, percentages of turns, talker

ratios, and question ratios were used to determine whether information of value was

found in such data.

Research Question Three: What methods and tools should be used to measure chosen

behaviors?

    (a) Does the RIAS capture desired behavior adequately?

Although RIAS is known to be a reliable and valid coding system in many

contexts, it has not previously been used with this population, and was adapted to more

precisely measure variables of interest in this investigation. Similarly, Motivational

interviewing is known to be a reliable and valid strategy for effective conversations about

well-being and has been used in a variety of contexts but has not been previously used in

the athletic coach population. *Process* assessment included experiential and quantitative

data related to the *adaptation* and *expansion* of this tool for this study, including the

ability of adapted coding categories to satisfactorily account for all behaviors of interest,

the perceived correspondence of coding categories to an established MI coding tool

(MITI 3.1.1), and any limitations related to this coding scheme.

(b) Do sim cases and standard patient scenarios elicit the behaviors of interest?

Established methods for collecting data were used, albeit in new applications to the population. Data was collected to examine the *process* of the sim case framework in this context and to understand the *implementation*, *practicality* and *adaptability* of this method. The use of simulated cases was examined for coach response, adequacy of representation for cases, and presence of behaviors of interest. The scenarios were examined for their ability to explore relevant issues, and the deployment in sim cases was explored for logistical adequacy.

(c) Are health coaches an appropriate and useful comparison group?

To examine evidence related to this question, data was collected related to the *process* and *resources* related to comparison group selection and recruitment to understand *practicality* and *adaptation*. Quantitative data included the differences between athletic and health coaches in outcomes, time in training, experience, behaviors, attitudes, and perceptions; qualitative data included logical arguments related to the level of expertise possible or desirable with regard to athletic coach effectiveness in conversations about well-being.

Preliminary Data

Although investigators have been cautioned that small-sample research may not have adequate power to reveal statistically significant findings and that descriptive statistics and qualitative analysis are more useful methods (Tickle-Degnen, 2013), other authors support the use of using null hypothesis significance testing in order to identify

potential variables of interest and for estimation of parameters in preparation for a larger study (Arain et al., 2010; Bacchetti, 2010). A combination of descriptive statistics, means comparison, and qualitative methods were used to explore preliminary data gathered in this investigation.

Research Question Four: Do athletic coaches believe that conversations about well-being are part of their role?

Data gathered from the online Qualtrics survey was examined to understand how athletic coaches perceive their role, perceive institutional communication of role, and perceive societal views of role with relation to attending to the overall wellness of student-athletes. With additional permission from the IRB office at UNCG, this data was compared to a larger sample of coaches who have answered these questions since the time of initial data collection for this study.

Research Question Five: How do the communication behaviors of athletic coaches differ from those of health coaches in conversations about well-being?

Data collected from sim case conversational scenarios and coded with RIAS were analyzed using IBM SPSS (IBM Corp, n.d.). Levene's test for homogeneity of variance (Levene, 1960) was used to assess all variables. In order to examine mean differences, a series of independent samples t-tests (Gosset, 1908) were used to compare coaches by type (athletic, health) on variables detailed in Table 3.

Research Question Six: How do outcomes differ between athletic coaches and health coaches in conversations about well-being?

Data collected from sim case conversational scenarios and coded with RIAS were analyzed using IBM SPSS (IBM Corp, n.d.). Levene's test for homogeneity of variance (Levene, 1960) was used to assess all variables. An independent samples *t*-test (Gosset, 1908) was used to compare performance by coach type (athletic, health) on outcome scores.

CHAPTER IV

RESEARCH FINDINGS

Demographic Characteristics

The sample was made up of six athletic coaches from a small Division III college in central North Carolina. Of the participants, two were female, and four were male. The average time spent coaching in any capacity was 10.75 years, with a range from 3 to 18 years. Primary sex of student-athletes coached was female for two coaches, male for two coaches, and both for two coaches. Half of the coaches considered their sport a "team" sport, and half considered their sport an "individual" sport.

The comparison group was made up of four health coaches from central North Carolina. Of these participants, two were female, and two were male. The average time spent health coaching was 1.38 years, with a range of 6 months to 1.5 years. The average total number of hours in formal training to be a health coach was 62.5 hours, with a range of 50 to 80 hours, with an average of four total clients each (range = 1-8).

Research Question One

Can we recruit coaches to participate in recorded simulated case scenarios?

H1: It will be difficult to recruit coaches to participate without buy-in from institutional leaders

For approximately 8 months, attempts were made to recruit athletic coach participants from a local Division I university with approximately 40 head and assistant coaches on staff (see Table 5). Working through assistant athletic directors, we asked for recruitment emails to be distributed to coaches and were allowed to speak at two all-staff meetings with 25 and 33 coaches in attendance. No responses were received to email recruitment efforts, and although three coaches expressed support for the project during face-to-face meetings, one said that he was "really tied up for time" but would "spread the word" and possibly participate in the future, and the other two ultimately did not volunteer to participate. Subsequently, the help of the faculty athletics representative was enlisted to directly ask coaches with whom a relationship existed for their participation. As a result, one head coach and one assistant coach agreed to participate, but no other coaches were available even after personal invitations. The target recruitment number was at least five participants from any one institution in order to control for variety in contexts.

Emailed requests to assistant athletic directors at two other area institutions went unanswered. After 11 months with only two potential participants identified, an informal connection was made in a social sport context. A work colleague of the investigator met an administrator from a nearby college playing in a social sport league and she agreed to use her influence within a local college to persuade six coaches to participate.

The six participating coaches were relatively responsive to communication once the process began. A time was identified that all six could participate for 1 hour,

although it took several rounds of negotiation. Once scheduled, all coaches ultimately

participated, although one got caught up in a recruiting visit and was late to begin.

Table 5

Feasibility Data Related to Research Question One

Area of Interest	Questions	Outcomes
Process	To what extent did *recruitment* efforts work as planned?	- 40+ coaches approached - Four institutions contacted, one allowed us to recruit but no participants recruited, one recruited and persuaded on our behalf - Six participants
Acceptability	To what extent is *participation in research* judged as suitable, satisfying, or attractive?	- Several asst. ADs and coaches said that it was a good idea, but did not participate or persuade participation - Negative effects perceived included too much time needed, many demands on time and this is "just one more"
Demand	How much demand is likely to exist for this	- Demand for this type of research is low, although demand for the type of

research *and the* *products of this* *research*?	training and outcomes it leads to is high - Disconnect in the groundwork needed to achieve high-level goal of improving conversations about well-being in athletic coaches

Research Question Two

What behaviors should be measured?

H2: Skills that are in alignment with the motivational interviewing spirit and creating a therapeutic alliance should be measured—potentially number of turns, ratio of open to closed questions, directive statement frequency, rapport statement frequency, number of information sharing responses.

As detailed in Chapter III, standard RIAS coding categories that were not relevant to coach-athlete conversations were eliminated or collapsed into wider categories that were inclusive of relevant behaviors. Using the MITI 3.1.1 as a guide to potentially relevant variables, a number of index scores were calculated as detailed in Table 3. The data was examined with SPSS using the descriptive function to visually inspect the frequency distribution and variability of each behavior. Additionally, common discourse analysis measures such as total utterance number, talker ratios, and question ratios were used to determine whether information of value was found in such data. Complete tables with descriptive statistics for all variables by total sample, athletic coaches, and health

coaches can be found in Appendix H. Behaviors found to be of interest and subjected to

statistical analysis are described in Table 6.

Table 6

Communicative/Interaction Behaviors of Interest

Adapted RIAS Code Category	Description
Giving Information	Statements providing information without directing behavior, neutral affect and intent
Asks for Permission	Request permission to proceed
MI Non-Adherent/Counsels	Statement that directs behavior, does not invite partnership
Asks Closed/Asks Open	Asking a closed question (invite a yes-no response) or open question (inviting more thoughtful and full response)
Check/Reflection	Restates information to check for accuracy, confirm understanding
MI Spirit Supportive	Statements showing encouragement, approval, reassurance, and partnership
MI Spirit Non-Supportive	Statement showing disapproval, criticism, complaint
Empathy	Statements recognizing emotional state

Direction	Verbal moves to transition between topics or clarify process
Friendliness & Facilitation	Rapport building talk, backchannel talk to show interest, understanding, and attention, use of humor
Athlete Talk – Express Concern	How many statements describing a concern are elicited from athlete
Athlete Talk – Gives Information	How many statements giving information are elicited from athlete
Coach Talk %	What percent of total utterances is coach talking versus athlete
Outcome Score	Coach performance as judged by eliciting layers of well-being issue $(1 - 5)$

Research Question Three

What methods and tools should be used to measure chosen behaviors?

RIAS

(a) Does the RIAS capture desired behavior adequately?

H3a: RIAS or adapted RIAS will capture desired behaviors

The RIAS tool is well established for measuring communication interaction behaviors, and has been adapted for use in measuring motivational interviewing but not previously used with athletic coaches. The RIAS was adapted to account for the presence of a variety of behaviors of interest and was examined for usability, and adequacy of capture of variables of interest. Feasibility data are described in Table 7. Process data related to RIAS included both the substantial evidence for its utility as well as the

experience of using it in this investigation. The software worked well. The developers of

RIAS at Johns Hopkins Bloomberg School of Public Health accommodated this

investigator for a three-day training, where all aspects of using the RIAS software,

including adapting it, were covered thoroughly. Additionally, the developers were

available to consult during the initial planning of study and for follow-up help after the

study was underway. Adaptation of the RIAS was possible using materials provided by

RIAS developers; the software was relatively easy to adapt by a novice user. The

adaptations to standard RIAS coding are detailed in Chapter III, specifically in Table 3

and discussion. The adapted RIAS scheme fully accounted for all interaction behaviors

encountered in conversational data. The RIAS demonstrated high functionality in

expanded context. Standard RIAS coding categories designed to assess medical

interactions were aligned with MITI 3.1.1 areas of focus to customize the scheme for this

study, and there was a logical correspondence between those behaviors of interest in

medical encounters with those, informed by MITI 3.1.1, of interest in the conversations

between coach and athlete. All behaviors of interest were satisfactorily accounted for

using the adapted RIAS coding categories.

Although RIAS developers were very helpful and the software works well to code

interaction behaviors, there is a significant demand on time, money, and human

resources. In addition to travel to Baltimore to complete three full days of training to use

the software, approximately 100 hours of practice were required for the investigator to

reach levels of intra-rater reliability recommended by the developers. This is more

practice than the estimated 60-80 hours estimated by developers (Roter, 2014). Any

potential coder would need to complete a similar amount of training and practice to reliably code data. Once an acceptable level of competence with RIAS was reached, coding of data typically took approximately 4-5 times the length of the actual audio sample. This is higher than developer estimates of 3-4 times the length. Potentially time coding will decrease as experience increased. In any case, this method is dramatically faster than the time required to prepare text transcriptions before coding, with the additional benefit of preserving tone characteristics available in audio recording.

Table 7

Feasibility Data Related to Research Question Three, Part A

Area of Interest	Questions	Outcomes
Process	To what extent does RIAS work as planned?	- RIAS works well - Training and follow-up support were excellent - Developers are helpful in suggesting ways to collect data that will utilize RIAS functions most effectively
Adaptation	To what extent does RIAS perform when changes are made to account for new format or population?	- RIAS adaptation measured behaviors and revealed those of interest - RIAS categories are mutually exhaustive and exclusive - RIAS tool worked for coding conversations even with adapted categories
Expansion	To what extent can RIAS be expanded to	- RIAS categories aligned roughly with most MITI 3.1.1 behaviors of

	new population or setting?	interest - Logical transfer from medical encounters to coach-athlete encounter, most categories obviously analogous
Resources	Can existing resources meet the demand and burden required?	- Hands-on training, follow-up practice required - Standard computers with RIAS software loaded, high quality recording equipment is cost-effective

Sim Case Method

(b) Do sim cases and standard patient scenarios elicit the behaviors of interest?

H3b: Simulated cases and standard patient scenarios will elicit behaviors of interest.

In addition to supporting use of RIAS, developers were available to consult on the research methodology that would best make use of RIAS capabilities and suggested the use of simulated cases for data collection. The sim case method and standardized patients are widely used in medical education to train and study doctor-patient communication, and conversational dyad that has many characteristics in common with coach-athlete communication, including a power dynamic where one conversational partner has information or knowledge and the other conversational partner seeks access to information or knowledge to help them deal with an issue or concern.

Data was collected to examine the *process* of the sim case framework in this context and to understand the *implementation*, *practicality,* and *adaptability* of this method (see Table 8). Process data related to the use of the sim case method indicated

that they were logistically sound in that cases moved through beginning, middle, and end in the time allotted, and that the desired behaviors and outcomes measures were elicited during the 10-minute time limit for each conversational scenario. Sim cases were adapted for common coach-athlete well-being topics including mental health, life skills, and interpersonal conflict in line with a typical simulated case developed for the medical education setting. Scenarios were developed so that layers of outcomes, from presenting problem through action plan, could be realized during the time limit. Sim cases were found to be amenable to adaptation for use in studying coach-athlete communication. Sim cases were implemented successfully in the coach-athlete context. Each of the three conversational scenarios were deployed for each participant within the time allotted by coaches, approximately 30 minutes with a maximum time of 40 minutes including transitions. Because coaches were scheduled for participation at one event, three conversational scenarios could take place at one time, with one conversational partner/scenario deployed for each of three coaches, with conversational partners rotating at the conclusion of each conversation. This did require careful planning and attention to detail. Additionally, time limits were strictly adhered to in all conversations, in order to facilitate rapid rotation between participants. Sim cases were high in practicality, with coaches rating conversations and scenarios as highly realistic, with an average rating of 4.42 on a scale of 1 = not very realistic to 5 = very realistic. The lowest rating given was 4. Narrative responses to this question include "I have conversations like this every day," and "my kids have come to me with every one of these problems just this semester."

Table 8

Feasibility Data Related to Research Question Three, Part B

Area of Interest	Questions	Outcomes
Process	To what extent does *sim case* method work as planned?	- Sim case conversations were simple to plan and day of logistics worked according to protocols - Desired behaviors and outcomes were elicited using sim case method
Adaptation	To what extent does *sim case* perform when changes are made to account for new format or population?	- Sim cases were created to align with outcomes of interest, following sim case models from medical education
Implementation	To what extent can *sim case* be successfully used in defined context?	- Approximately 30-40 minutes for each coach to participate in conversations, one hour total - Up to three coaches can participate simultaneously with three conversational partners rotating - Recruitment and training of conversational partners required careful planning
Practicality	To what extent can *sim cases* be carried out in this context?	- Coaches rated sim cases as highly realistic compared to actual coach-athlete conversations

Comparison Group

(c) Are health coaches an appropriate and useful comparison group?

H3c: The comparison group will be appropriate and useful.

To examine evidence related to this question, data was collected related to the *process* and *resources* related to comparison group selection and recruitment to understand *practicality* and *adaptation* (see Table 9). Process data related to the utility and appropriateness of health coaches as a comparison group included the logic behind their selection as newly trained and limited experience in conversations about well-being. Health coaches were shown to be highly adaptable to the investigative context, navigating the unfamiliar situations and language with ease. Health coaches also rated the realism of scenarios highly, with an average score of 4.25 on a 5-point scale, with 4 as the lowest score. In the area of resources, health coaches were found to be relatively easy to recruit, with many recent graduates of a local health coaching program available, willing to participate, and with schedules that allowed for concurrent participation. Further, the practicality of using health coaches was realized when they shared that such role-plays or scenarios are familiar and comfortable as they are common in health coach training, and even that participation was "good practice" for them. All evidence points to health coaches as an appropriate and useful comparison group.

Table 9

Feasibility Data Related to Research Question Three, Part C

Area of Interest	Questions	Outcomes
Process	To what extent do *health coaches* work as a comparison group?	- Similarity to athletic coaches potentially with minimal training and experience in conversations about well-being
Adaptation	To what extent do *health coaches* perform when changes are made to account for new format or population?	- Health coaches rated realism of scenarios highly - Health coaches adapted to the student-athlete scenarios easily
Resources	Can existing resources meet the demand and burden required for *recruitment of health coaches as participants*?	- Local health coach training program provided many recruitment targets - Health coaches were easily recruited to participate - Health coaches were willing to accommodate concurrent scheduling with relative ease
Practicality	To what extent can *use of health coaches as comparison group* be carried out in this context?	- Newly trained health coaches need practice such as that offered by participation in scenarios - Health coaches are accustomed to participating in role plays and fictional scenarios

Preliminary Data

Although investigators have been cautioned that small-sample research may not

have adequate power to reveal statistically significant findings and that descriptive

statistics and qualitative analysis are more useful methods (Tickle-Degnen, 2013), other

authors support the use of using null hypothesis significance testing in order to identify potential variables of interest and for estimation of parameters in preparation for a larger study (Arain et al., 2010; Bacchetti, 2010). A combination of descriptive statistics, means comparison, and qualitative methods were used to explore preliminary data gathered in this investigation.

Research Question Four

Do athletic coaches believe that conversations about well-being are part of their role?

H4: Athletic coaches feel uncertain about their role surrounding conversations about well-being.

Data gathered from the online Qualtrics survey was examined to understand how athletic coaches perceive their role, perceive institutional communication of role, and perceive societal views of role with relation to attending to the overall wellness of student-athletes. With additional permission from the IRB office at UNCG, this data was compared to a larger sample of coaches who have answered these questions since the time of initial data collection for this study.

All athletic coaches responding ($N = 5$) agreed that they felt that attending to the overall wellness of student-athletes is a part of their job. As to whether this is an official part of the job description, four out of five responded "no." When asked about perceptions about societal expectations shifting toward athletic coaches as responsible for student-athlete well-being, the mean of responses was 2.68 ($N = 5$) on a Likert scale where $1 =$ *no shift* and $4 =$ *significant shift*.

A larger sample of athletic coaches ($N = 49$) at a larger NCAA Division I program responded to this survey after data collection for this study was complete. Like the coaches participating in this study, almost all of them (95.74%, $n = 47$) felt that attending to the overall well-being of student-athletes was part of their job, and less than half (45.83%, $n = 48$) believed it was part of their official job description. The mean of their responses to the Likert item about societal shift was 3.16 ($n = 43$).

A similar pattern is seen in both groups of athletic coaches—they personally believe it is their job to attend to the well-being of their student-athletes and to some degree believe that society supports this aspect of their role, but they are not certain or do not believe that it is an official part of their job.

Research Question Five

How do the communication behaviors of athletic coaches differ from those of health coaches in conversations about well-being?

H5: AC will be more directive, ask fewer open questions, and elicit less information from athlete.

Data collected from sim case conversational scenarios and coded with RIAS were analyzed using IBM SPSS software, version 24 (IBM Corp, n.d.). The analysis employed a series of *t*-tests for independent groups (Gosset, 1908), with alpha set at the .05 level, two-tailed test, with two groups, and one condition; with coach type as the independent variable and interaction behaviors as the dependent variable. The null hypothesis for all tests was that athletic coach and health coach performance of interaction behaviors were

statistically equivalent in conversations about well-being. Results of *t*-tests and

descriptive statistics for interaction behaviors by coach type are detailed in Table 10.

Levene's test for Equality of Variances (Levene, 1960) was used for all variables. The

Hedge's *g* calculation (Lakens, 2013) was used to describe effect size, as it is less biased

than Cohen's *d* (Cohen, 1988) for small samples and accounts for differences in sample

size.

Table 10

Results of t-Tests and Descriptive Statistics for Interaction Behaviors by Coach Type

Outcome	Group						95% CI for Mean Difference		
	Athletic Coaches			Health Coaches					
	M	SD	n	M	SD	n		t	df
Gives Inf	40.500	17.271	6	7.750	7.890	4	11.190-54.309	3.503*	8
MIa Ask Per	0.167	0.408	6	.000	.000	4	-0.314-0.647	0.800	8
MIna Counsel	19.500	11.502	6	0.000	0.000	4	5.965-33.036	3.322*	8
Ask Closed	20.833	14.049	6	6.750	8.261	4	7.878- -4.083	1.788	8
Ask Open	15.333	5.680	6	39.500	13.204	4	-37.934- -10.400	-4.048*	8
%Open	0.453	0.133	6	0.886	0.094	4	-0.611- -0.254	-5.588*	8
Check/Reflect	5.167	3.371	6	63.500	34.952	4	-113.737- -2.929	-3.323*	3.037**
MI Spirit Supp	37.333	17.037	6	20.500	19.434	4	-9.920-43.587	1.451	8
MI Spirit NSupp	5.000	3.899	6	0.000	0.000	4	0.909-9.091	3.141*	5**
Empathy	5.500	2.074	6	14.000	10.132	4	-24.366-7.366	-1.655	3.168**

Direction	5.333	3.141	6	9.000	5.598	4	-9.967-2.634	-1.342	8
F&F	33.333	19.572	6	127.000	79.402	4	-217.217-29.884	-2.313	3.245**
A Talk-Concern	21.168	10.362	6	49.500	13.772	4	-45.834--10.833	-3.733*	8
A Talk-Give Inf	88.167	38.060	6	197.250	41.460	4	-167.685--50.481	-4.292*	8
Coach Talk %	0.561	0.060	6	0.454	0.079	4	0.007-0.207	2.462*	8
OS	9.167	0.983	6	14.500	1.000	4	-6.806--3.860	-8.350*	8

*$p < .05$.

**Satterthwaite approximation employed due to unequal group variances

Giving Information

Levene's test for homogeneity of variance (Levene, 1960) was used and confirmed that the variances in *Giving Information* were statistically equivalent (F (8) = .617, p = .455). Results for the means comparison test indicated that there was a significant difference (t (8) = 3.503, p = .008) in the mean amount of information given during conversations about well-being. On average, athletic coaches made about four times as many statements giving information in conversations about well-being than did health coaches. The effect size was assessed using Hedge's g (Lakens, 2013), with a result of g = 2.26, which is conventionally considered to be a large effect (Murphy & Myors, 2004).

MI Adherent – Asks for Permission

Levene's (1960) test for homogeneity of variance was used and confirmed that the variances in *Asks for Permission* were statistically equivalent (F (8) = 4.000, p = .081).

Results for the means comparison test indicated that there was not a significant difference (t (8) = .800, p = .447) in the mean number of times coaches asked for permission during conversations about well-being. On average, athletic coaches asked for permission about as much in conversations about well-being than did health coaches; this behavior was uncommon across both samples.

MI Non-Adherent – Counsels

Levene's (1960) test for homogeneity of variance was used and confirmed that the variances in *Counsels* were statistically equivalent (F (8) = 4.016, p = .080). Results for the means comparison test indicated that there was a significant difference (t (8) = 3.322, p = .011) in the mean amount of counseling statements made during conversations about well-being. On average, athletic coaches made 19.5 counseling statements in conversations about well-being, while health coaches made none. The effect size was assessed using Hedge's g (Lakens, 2013), with a result of g = 2.14, which is conventionally considered to be a large effect (Murphy & Myors, 2004).

Asks Closed Questions

Levene's (1960) test for homogeneity of variance was used and confirmed that the variances in *Asks Closed Questions* were statistically equivalent (F (8) = .300, p = .599). Results for the means comparison test indicated that there was not a significant difference (t (8) = 1.788, p = .112) in the mean number of closed-ended questions asked during conversations about well-being. On average, athletic coaches asked about 20 of these

questions in conversations about well-being, while health coaches asked less than seven, but the difference was not statistically significant.

Asks Open Questions

Levene's (1960) test for homogeneity of variance was used and confirmed that the variances in *Asks Open Questions* were statistically equivalent (F (8) = 1.371, p = .275). Results for the means comparison test indicated that there was a significant difference (t (8) = - 4.048, p = .004) in the mean number of open-ended questions asked during conversations about well-being. On average, athletic coaches asked 15.3 of these questions in conversations about well-being, while health coaches asked 39.5. The effect size was assessed using Hedge's g (Lakens, 2013), with a result of g = 2.61, which is conventionally considered to be a large effect (Murphy & Myors, 2004).

Percentage of Open Questions

Levene's (1960) test for homogeneity of variance was used and confirmed that the variances in *Percentage of Open Questions* were statistically equivalent (F (8) = .609, p = .458). Results for the means comparison test indicated that there was a significant difference (t (8) = - 5.588, p = .001) in the mean amount of information given during conversations about well-being. On average, about 45% of question asked by athletic coaches were open-ended, while 86% of those asked by health coaches were. The effect size was assessed using Hedge's g (Lakens, 2013), with a result of g = 3.61, which is conventionally considered to be a large effect (Murphy & Myors, 2004).

Checks, Offers Reflection

Levene's (1960) test for homogeneity of variance in the *Checks* variable was deployed, and results showed that the assumption of homogeneity of variances was violated (F (8) = 192.355, p = .000); thus, the Satterthwaite approximation (Satterthwaite, 1946) was used to account for unequal group variances. Results for the means comparison test indicated that there was a significant difference (t (3.037) = - 3.328, p = .044) in the mean number of Checks or Reflections offered during conversations about well-being. On average, health coaches made 63.5 checks or reflective statements in conversations about well-being, while athletics coaches made only 5.2. This effect was assessed using Hedge's g (Lakens, 2013), with a result of g = 2.70, which is conventionally considered to be a large effect (Murphy & Myors, 2004).

MI Spirit Supportive Behaviors

Levene's (Levene, 1960) test for homogeneity of variance was used and confirmed that the variances in the *MI Spirit Supportive* index variable were statistically equivalent (F (8) = .251, p = .630). Results for the means comparison test indicated that there was not a significant difference (t (8) = 1.451, p = .185) in the mean amount of MI Spirit Supportive behaviors exhibited during conversations about well-being. On average, athletic coaches exhibited MI Spirit Supportive Behaviors more often in conversations about well-being than did health coaches, but the difference was not statistically significant.

MI Spirit Non-Supportive

Levene's (1960) test for homogeneity of variance in the *MI Spirit Non-Supportive* index variable was deployed, and results showed that the assumption of homogeneity of variances was violated (F (8) = 22.857, p = .001); thus, the Satterthwaite approximation (Satterthwaite, 1946) was used to account for unequal group variances. Results for the means comparison test indicated that there was a significant difference (t (5.00) = 3.141, p = .026) in the mean number of MI Spirit Non-Supportive behaviors exhibited during conversations about well-being.

On average, athletic coaches used five statements that were not supportive of the MI Spirit in conversations about well-being, while health coaches made none. The effect size was assessed using Hedge's *g* (Lakens, 2013), with a result of g = 1.62, which is conventionally considered to be a large effect (Murphy & Myors, 2004).

Empathy

Levene's (1960) test was deployed to test for homogeneity of variance in the *Empathy* variable, and results showed that the assumption of homogeneity of variances was violated (F (8) = 7.311, p = .027); thus, the Satterthwaite approximation (Satterthwaite, 1946) was used to account for unequal group variances. Results for the means comparison test indicated that there was not a significant difference (t (3.168) = -1.655, p = .192) in the mean number of empathy behaviors exhibited during conversations about well-being. On average, health coaches used more empathy statements in conversations about well-being, but the difference was not statistically significant.

Direction

Levene's (1960) test for homogeneity of variance was used and confirmed that the variances in the *Direction* index variable were statistically equivalent (F (8) = 3.281, p = .108). Results for the means comparison test indicated that there was not a significant difference (t (8) = - 1.342, p = .216) in the mean amount of directive statements during conversations about well-being. On average, athletic coaches exhibited fewer direction statements in conversations about well-being than did health coaches, but the difference was not statistically significant.

Friendliness and Facilitation

Levene's (1960) test was deployed to test for homogeneity of variance in the *Friendliness and Facilitation* index variable, and results showed that the assumption of homogeneity of variances was violated (F (8) = 29.997, p = .001); thus, the Satterthwaite approximation (Satterthwaite, 1946) was used to account for unequal group variances. Results for the means comparison test indicated that there was not a significant difference (t (3.245) = - 2.313, p = .097) in the mean number of Friendliness and Facilitation behaviors exhibited during conversations about well-being. On average, health coaches used 127 of these behaviors in conversations about well-being, while athletic coaches used 33.3, but the difference was not statistically significant.

Athlete Talk – Concern

Levene's (1960) test for homogeneity of variance was used and confirmed that the variances in *Athlete Concern* were statistically equivalent (F (8) = .628, p = .451). Results for the means comparison test indicated that there was a significant difference (t

(8) = - 3.733, p = .006) in the mean amount of concerns expressed by athletes during conversations about well-being. On average, health coaches elicited almost 50 of these statements, while athletic coaches elicited 21. The effect size was assessed using Hedge's g (Lakens, 2013), with a result of g = 2.40, which is conventionally considered to be a large effect (Murphy & Myors, 2004).

Athlete Talk – Gives Information

Levene's (1960) test for homogeneity of variance was used and confirmed that the variances in *Athlete Gives Information* were statistically equivalent (F (8) = .217, p = .654). Results for the means comparison test indicated that there was a significant difference (t (8) = - 4.292, p = .003) in the mean amount of information given by athletes during conversations about well-being. On average, health coaches elicited 197 informational statements, while athletic coaches elicited 88. The effect size was assessed using Hedge's g (Lakens, 2013), with a result of g = 2.77, which is conventionally considered to be a large effect (Murphy & Myors, 2004).

Coach Talk as a Percentage of Total Talk

Levene's (1960) test for homogeneity of variance was used and confirmed that the variances in *Coach Talk* were statistically equivalent (F (8) = .481, p = .508). Results for the means comparison test indicated that there was a significant difference (t (8) = - 2.462, p = .039) in the mean amount of coach talk during conversations about well-being. On average, athletic coaches accounted for 56% of the total utterances in conversations about well-being, while health coaches accounted for 45%. The effect size was assessed

using Hedge's g (Lakens, 2013), with a result of $g = 1.59$, which is conventionally

considered to be a large effect (Murphy & Myors, 2004).

Research Question Six

How do outcomes differ between athletic coaches and health coaches in

conversations about well-being?

H6: Health Coaches will have higher outcome scores than Athletic Coaches (with

outcomes scores = 1-5 relevant pieces of information elicited during a

conversation about well-being.

Outcome Scores

Levene's (1960) test for homogeneity of variance was used and confirmed that the

variances in *Outcome Scores* were statistically equivalent ($F (8) = .094$, $p = .767$).

Results for the means comparison test indicated that there was a significant difference (t

$(8) = - 8.350$, $p = .000$) in the means of outcome scores. On average, health coaches

achieved higher outcome scores than athletic coaches by eliciting a greater variety of

types of information. The effect size was assessed using Hedge's g (Lakens, 2013), with

a result of $g = 1.59$, which is conventionally considered to be a large effect (Murphy &

Myors, 2004).

CHAPTER V

DISCUSSION

This study had two main purposes. The first was to *explore the feasibility of research* into the baseline communication performance of coaches in conversations about well-being, how coaches view their role and efficacy in such conversations, and what specific tools and methods might be used to study these. The second purpose was to *gather preliminary data to plan and legitimize such research.*

In order to investigate feasibility and obtain preliminary data to address these issues, a group of six athletic coaches were recruited from a small Division III college in central North Carolina to participate in three audio-recorded simulated case conversations about well-being and to complete an online survey. This group was compared to a group of health coaches who performed the same tasks. A mixture of qualitative and quantitative methods were used to analyze the resulting data, as well as respond to "can it work?" questions about the tools, methods, and theoretical frameworks used.

Feasibility – "Can It Work?"

The first research question addressed the feasibility of recruiting athletic coaches to participate in recorded simulated case scenarios. The hypothesis was that it would be

difficult to recruit coaches to participate without buy-in from institutional leaders, and evidence supported this hypothesis. After almost an entire year of recruitment efforts, during which a variety of departmental administrators were contacted for support, only two potential participants were identified. A number of gatekeeping statements were made that illustrated the number of such requests athletic departments need to manage, the need to protect coaches and student-athletes from being distracted by requests for time, and the perception that coaches are too busy to participate. Recruiting efforts were successful only after a personal connection was made with an athletics administrator that allowed for the opportunity to convince them that the research was undemanding, interesting, and useful. Once that person was personally invested and had some influence to persuade coaches to participate, six athletic coaches volunteered. It should be noted that 10 coaches were requested, so even with personal investment and influence, recruitment was not an easy task.

This experience was not unique; it is famously difficult to gain access to athletic coaches and athletes for research, particularly if participation requires much time or effort. Josephine R. Potuto is a law professor at the University of Nebraska and has served her university's athletic department as Faculty Athletics Representative (FAR), as well as serving national organizations for FARs and for over 10 years on NCAA Committees for Division I (Potuto, 2015). It is fair to say that she has a significant amount of experience, influence, and connection. She had this to say about the experience of administering an survey that was funded by the NCAA and was assisted by NCAA staff (Potuto & O'Hanlon, 2006).

With one exception, we approached the directors of athletics or, on occasion, a member of the faculty, at D1A universities where one or both of us knew the individual we approached. In many cases we knew this individual well. Our instinct, generally borne out by the survey returns, was that we would get greater cooperation at universities where we have a close contact... Two universities originally agreed to participate but ended up not administering the survey. In one case the facilitator encountered considerable difficulty in getting cooperation because of the timing of the school's term and finally left the university without submitting any surveys. In the other case the facilitator apparently made no contacts despite repeatedly assuring us to the contrary. (p. 3)

Perhaps the best predictor of survey rate of return was the level and visibility of support from the athletics director. For example, at an institution with a very high rate of return the athletics director sent a letter to all coaches and student-athletes asking for cooperation. Not surprisingly, the level of participation at each university also depended on the diligence and dedication of the site facilitator. (p. 4)

Some of the feedback received by on-site survey facilitators was that they had difficulty getting cooperation from coaches, the survey was too long, it was the wrong time of year, and things were too busy (Potuto & O'Hanlon, 2006). A colleague working on an initiative with athletic coaches received feedback that coaches feel like they are asked to "do stuff like this" all the time, so eventually every ask "just feels like one more thing." With such barriers, it is fortunate that coaches were recruited to participate in this research at all. In terms of the feasibility of this research, there is little doubt that recruiting enough athletic coaches to secure adequate sample size will be the most significant limitation. This experience supports the hypothesis that it is critical to find an influencer and persuader within the institution, at the least. More influential would be a campaign at the level of the conference or national organizing body.

The second research question asked what behaviors should be measured. The hypothesis was that skills should be measured that align with the motivational interviewing spirit and the creation of a therapeutic alliance. Because the RIAS scheme allowed for exhaustive coding of data, a wider net was cast to include all variables that were aligned with motivational interviewing key constructs as described in the MITI 3.1.1. Twelve distinct constructs were identified and analyzed and are detailed in Table 10. Eight of the 12 seemed to show promise during statistical analysis: *Giving Information, Counsels, Asking Open and Closed Ended Questions, Checks/Offering Reflection, MI Spirit Non-Supportive Behaviors, Athlete Talk – Express Concern, Athlete Talk – Gives Information,* and *Percentage of Coach Talk.*

The third research question asked what methods and tools should be used to measure these behaviors and examined RIAS, the sim case method, and health coaches as a comparison group. The hypotheses were that the RIAS, when adapted, would capture desired behavior, that sim cases would elicit the behaviors of interest, and that health coaches would be a useful and appropriate comparison group.

The RIAS has been used widely and adapted for use in a number of settings, including motivational interviewing, although not with the athletic coach population. Substantial evidence was found for its utility in this investigation. It was easily adaptable, captured behavior, and produced data that was flexible and precise. The only real burden related to RIAS is the significant investment of resource required—in time to be trained and develop reliable coding skills, in particular. RIAS coding skills are not something to be passed down to a group of coders in an afternoon, it would require many

hours of training and practice to get each coder up to speed, which means that either one coder is trained and has enough time to devote to coding many samples alone or the time and money needs to be invested to bring a number of coders up to speed. This has implications for study planning; there is incentive to ensure that the smallest useful amount of data needs to be coded and that time is allotted for this aspect of future research.

Sim cases are used widely in medical education to train and study doctor-patient communication. They offer a way to develop standardized scenarios that are focused on topics of interest, which allows for more focused data collection as target behaviors can be elicited in a short time as compared to searching spontaneous conversation for evidence of them. Sim cases were simple and rated highly as realistic by all coaches. By creating three scenarios, it was possible to observe the beginning, middle, and conclusion of three separate conversations and direct conversations with scripted opening, allowing coaches to address three distinct topics in a half hour. Sim cases were successful in eliciting behaviors of interest, and evidence for their adaptability, implementation, and practicality was significant for use in this population.

Health coaches were found to be a useful and appropriate comparison group. Health coaches were shown to be highly adaptable to the investigative context, navigating the unfamiliar situations and language with ease. Health coaches were easy to recruit and were willing to participate. Relatively newly trained and inexperienced health coaches likely have skills most comparable to the ideal comparison group. As discussed previously, athletic coaches do not want or need the level of training and practice

required to be professional counselors. They need basic skills in conversations about well-being to effectively bridge the gap between the recognition of a problem and connecting student-athletes with the appropriate help resources.

To review, a great deal of evidence was found to support the utility of the methods and tools used in this study. RIAS, sim case conversational scenarios, and health coaches as a comparison group were all integral to the overall success of this methodology.

Preliminary Data

Research question four asked if athletic coaches believe that conversations about well-being are part of their role. The hypothesis was that athletic coaches feel uncertain about their role pertaining to conversations about well-being. Some evidence was found to support this hypothesis. Athletic coaches involved in this study, as well as a larger group of athletic coaches who also answered survey questions, do overwhelmingly believe that attending to the overall well-being of student-athletes is part of their job. They also believe that, to some degree, the views of the public are shifting in such a way that society supports this concept, as well. There is less agreement about the official nature of their role as it pertains to well-being. Of the five coaches participating in this study, four said that attending to the well-being of student-athletes was not officially part of their job description. In the larger coach survey responses, less than half believed it was part of their official job description. This mismatch between personal beliefs about the job of coaching and perceptions of the sanction of their workplace could lead to confusion about how to prioritize time and effort. Some coaches may feel that they do

not have approval from their institution to express care for their student-athletes by becoming involved in non-sport conversations. It is perhaps unsurprising that athletic coaches are not interested in training or willing to participate in research if they do not have clear understanding of their role in relation to their student-athlete well-being and even the university as a whole. If they understand themselves as distinct from the academic and research mission of the university in supporting the whole person, then taking part in the ongoing opportunities that are available outside of athletics will not be a priority.

The fifth research question asked how communication behaviors of athletic coaches differ from those of health coaches in conversations about well-being. The hypothesis was that athletic coaches would be more directive, ask fewer questions, and elicit less information from athletes. Results of statistical analysis are available in Table 10. Statistical analysis showed significant mean differences across the following variables: *Giving Information, Counsels, Asking Open and Closed Ended Questions, Checks/Offering Reflection, MI Spirit Non-Supportive Behaviors, Athlete Talk – Express Concern, Athlete Talk – Gives Information,* and *Percentage of Coach Talk.*

In support of the hypothesis that athletic coaches were *more directive* in conversations about well-being, of interest are the variables related to Giving Information, Counsels, MI Spirit Non-Supportive Behaviors, and Percentage of Coach Talk. Athletic coaches made about four times as many statements giving information as health coaches. Although Giving Information is specifically coded for statements that provide information without directing behavior specifically, talking at length can serve a

similar purpose in prioritizing or focusing on an issue of the speaker's choice. Additionally, athletic coaches sometimes used statements showing disapproval or criticism, while health coaches did not. When paired with Counseling statements, which are directive and which athletic coaches used an average of 19.5 times in conversation as compared to none by health coaches, athletic coaches spent a significant amount of conversational time sharing their own thoughts and opinions. In fact, athletic coaches' contributions accounted for 56% of the total utterances in their conversations to the 45% of health coaches. While athletic coaches were largely filling their talk time with direction and information, health coaches used significantly more Checks/Offering Reflections. These are communicative turns that restate information to check for accuracy and confirm understanding and are often used to probe more deeply into an issue by eliciting more explanation or description from the conversational partner. Health coaches made 63.5 checks on average in conversations about well-being, while athletic coaches averaged only 5.2.

In support of the hypothesis that athletic coaches would *ask fewer questions* in conversations about well-being, of interest are the Asking Open and Closed Ended Questions variables. Closed-ended questions typically ask for specific information, and can be answered with *yes*, *no*, or a single word or phrase. While athletic coaches did ask more closed-ended questions than health coaches, the difference was not statistically significant. Athletic coaches asked about 20 closed-ended and 15 open-ended questions, versus health coaches, who asked seven closed-ended and 39.5 open-ended questions in conversations about well-being. Health coaches did ask significantly more open-ended

questions than athletic coaches; 86% of health coach questions were open ended to 45% of athletic coaches. Asking open-ended questions is associated with inviting a more thoughtful and full response. They are characterized by non-specificity and a probing intent, often beginning with *what*, *why*, *could*, or *how*. They are useful for encouraging a conversational partner to offer more information or description, which is a critical component of effective conversations about well-being.

In support of the hypothesis that athletic coaches *elicit less information* in conversations about well-being, of interest are the Athlete Talk – Express Concern and Athlete Talk – Gives Information variables. While all other variables are focused on the coding of coach interaction behaviors, these variables are focused on the other side of the conversation. Part of the way we judge an interaction is by the response elicited by each behavior. On average, health coaches elicited significantly more of both sharing of concerns and giving information. Health coaches elicited, on average, more than twice as many statements of concern, which are statements where the conversational partner shares information about something serious, worrisome, distressing, or needing attention that is a current concern. Additionally, health coaches elicited 197 informational statements, on average, as compared to 88 elicited by athletic coaches. When compared to the results of the Gives Information variable, one of the clear differences in athletic coach conversations is that they are doing more of the talking, in more directive ways, which leads to fewer statements of concern and information from conversational partners. There is evidence to support the hypothesis that athletic coaches are more directive, ask fewer questions, and elicit less information from athletes. While this data is from a

limited sample, it does show that these variables are targets of interest in future studies of athletic coach communication in conversations about well-being.

Research question six asked how outcomes differ between athletic coaches and health coaches in conversations about well-being. The hypothesis was that health coaches would have higher outcome scores than athletic coaches. Outcome scores measured how many relevant pieces of information were elicited during conversations, and scores of 0 to 5 were possible. Coaches received one point for eliciting talk about each of five layers of a well-being issue:

1. Surface, or presenting, issue

2. Deep, or source, issue

3. Consequences experienced

4. Change attempts

5. Action plan

On average, health coaches achieved significantly higher outcome scores than athletic coaches by eliciting a greater variety of types of information about a problem, supporting this hypothesis. The outcome scores imply that the differences in interaction behaviors matter; that these are not simply two equally valid styles of communicating, rather, one style is more effective in conversations about well-being. When a student-athlete approaches an athletic coach to share an issue of concern, specific behaviors can guide the conversation to a more productive end.

Is This a Big Deal?

Some people, even some athletic coaches, may believe that this is not an issue of great importance. One of the head coaches in the Nolt (2014) study told her that such conversations were "not part of what I do" (p. 54). However, there is evidence otherwise. One question in the survey completed by coaches in this study asked how often they engaged with student-athletes in conversations related to well-being. Every coach reported frequency of at least several times per month, up to daily. The same question was asked of the larger DI coach sample described previously ($N = 49$), and those coaches also reported engaging in conversations about wellness frequently, with 85% saying they had such conversations more often than once per month. Over 60% of DI coaches responding to the survey reported that they have had contact with at least one student-athlete with a mental health problem in the past 6 months; 46% reported contact with more than one and as many as six. Asked if they offered any help, 19% answered "not at all" and 8% "a little." When asked to rate their confidence in helping someone with common mental health problems—including *stress/anxiety, depression, sleep disorder, eating disorder, substance use, and suicidal tendencies*—the average response ranged from "not at all" to "a little bit," with few respondents feeling "quite" or "extremely" confident. Despite a relative lack of confidence reported in dealing with mental health problems, respondents did believe that of all institutional resources, *coaches, assistant coaches,* and *athletic trainers* were the people that student-athletes with wellness issues would most likely turn to, although *teammates* and *family* were ranked even more highly.

Conclusion

Athletic coaches are uniquely positioned to influence student-athletes, on and off the field or court. They are provided with information about how to recognize signs of distress related to mental health, sexual and interpersonal violence, alcohol and other drug use, and academic and life skills. Increasingly, institutions provide a network of resources to support students struggling with any of these issues. Building skills for effective conversations about well-being will help coaches bridge the gap between recognition of problems and connecting student-athletes to helping resources. Given the limited time and availability of athletic coaches, it may be preferable to invest available time in training these skills rather than encouraging more research participation. Identifying the most salient behaviors could make it possible to integrate research with training, using tools such as RIAS to analyze thin slices of communication behaviors to reduce the perceived burden of research participation.

This study has provided evidence to support the feasibility of research into the interaction behaviors of athletic coaches in conversations about well-being, using the tools and methods described, as well as shown preliminary data supporting the choice of interaction behaviors to target. The primary barrier to future research is the ability to effectively recruit athletic coach participants. Support at the institutional level was found to be helpful in persuading coaches to volunteer. It is likely that support at the athletic conference or national organizing body levels would be even more effective.

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APPENDIX A

CONVERSATIONAL SCENARIO CONSENT FORM

UNIVERSITY OF NORTH CAROLINA AT GREENSBORO

CONSENT TO ACT AS A HUMAN PARTICIPANT

Project Title: Conversations about well-being: A comparison of the interaction behaviors of athletic coaches and health coaches

Principal Investigator and Faculty Advisor (if applicable): <u>Ashley M. Frazier, M.S. CCC-SLP (principal investigator) and David L. Wyrick, Ph.D. (faculty advisor)</u>

Participant Name:

_____

<u>What are some general things you should know about research studies?</u>
You are being asked to take part in a research study. Your participation in the study is voluntary. You may choose not to join, or you may withdraw your consent to be in the study, for any reason, without penalty.

Research studies are designed to obtain new knowledge. This new information may help people in the future.   There may not be any direct benefit to you for being in the research study. There also may be risks to being in research studies. If you choose not to be in the study or leave the study before it is done, it will not affect your relationship with the researcher or the University of North Carolina at Greensboro.
Details about this study are discussed in this consent form. It is important that you understand this information so that you can make an informed choice about being in this research study.

You will be given a copy of this consent form. If you have any questions about this study at any time, you should ask the researchers named in this consent form. Their contact information is below.

What is the study about?

This is a research project. Your participation is voluntary. This research study is about the communication styles and skills in conversations about well-being. It will compare the communication and interaction behaviors of collegiate athletic coaches to those of health coaches when they are in conversations about similar topics, like mental health, interpersonal relationships, and life skills.

Why are you asking me?

You are being asked to participate in the study because you are a collegiate athletic coach or a health coach between the ages of 18 and 99.

What will you ask me to do if I agree to be in the study?

You will be asked to complete an online survey that will ask you questions about your perspective and experiences related to communication and conversations about well-being. If you are uncomfortable with any of the questions, you may choose not to respond. The survey can be completed on any computer connected to the internet, and should take less than 10 minutes to complete. You will be asked to enter a participant code into the survey. Your name will not be included.

You will also be asked to participate in three conversations with simulated conversation partners (actors). They will pretend to be student-athletes will a well-being issue. Each conversation will take 8-10 minutes. The entire data collection process should take less than an hour. A participant code will be used to link conversational data to the online survey. Your name will not be attached to this data, and information obtained in this research will only be reported in aggregate form – that is, as data about a group.

You can contact Ashley Frazier with any questions or concerns about this research study. Ashley can be reached by email at amfrazie@uncg.edu or by phone at 484-995-0857

Is there any audio/video recording?

The conversations between coaches and actors will be audio recorded. Because your voice will be potentially identifiable by anyone who hears the tape, your confidentiality for things you say on the tape cannot be guaranteed although the researcher will try to limit access to the tape as described below. Audio files will be uploaded into a secure storage system immediately after data collection events, and will be deleted from the device. Only the investigators will have access to the audio files.

What are the risks to me?

The Institutional Review Board at the University of North Carolina at Greensboro has determined that participation in this study poses minimal risk to participants. If you are uncomfortable with any of the survey questions, you may choose not to respond. If you are uncomfortable with the conversational scenarios, you may choose to stop your participation at any time.

If you have questions, want more information or have suggestions, please contact Ashley Frazier. Ashley can be reached by email at amfrazie@uncg.edu or by phone at 484-995-0857. You can also contact faculty advisor David Wyrick by email at dlwyrick@uncg.edu or by phone at 336-334-4501.

If you have any concerns about your rights, how you are being treated, concerns or complaints about this project or benefits or risks associated with being in this study please contact the Office of Research Integrity at UNCG toll-free at (855)-251-2351.

Are there any benefits to society as a result of me taking part in this research?

This research study may help us understand what communication styles or skills are most beneficial in conversations about well-being with student-athletes. This information could benefit coaches in understanding how to best support student-athlete wellness.

Are there any benefits to *me* for taking part in this research study?

You will receive detailed information about your communication behaviors as a result of your participation in this study.

Will I get paid for being in the study? Will it cost me anything?

There are no costs to you or payments made for participating in this study.

How will you keep my information confidential?

All data will be labeled with a code that links it together, but does not link it to you as a participant. The only connection between the code and your name is a contact list that will be password protected on a UNCG computer. All data will be maintained as electronic files stored on password protected computers in a secure computing environment. Some data will be stored on Box, which is online cloud storage at UNCG.

For more information about the security of Box storage, go to https://its.uncg.edu/Box/. Participants will not be identified by name when information is disseminated. Audio files will be destroyed after the data is analyzed, and other transcribed and coded data will be stored and maintained securely. All information obtained in this study is strictly confidential unless disclosure is required by law.

Absolute confidentiality of data provided through the Internet cannot be guaranteed due to the limited protections of Internet access. Please be sure to close your browser when you have finished the online survey so no one will be able to see what you have been doing.

What if I want to leave the study?

You have the right to refuse to participate or to withdraw at any time, without penalty. If you do withdraw, it will not affect you in any way. If you choose to withdraw, you may request that any of your data which has been collected be destroyed unless it is in a de-identifiable state. The investigators also have the right to stop your participation at any time. This could be because you have had an unexpected reaction, or have failed to follow instructions, or because the entire study has been stopped.

What about new information/changes in the study?

If significant new information relating to the study becomes available which may relate to your willingness to continue to participate, this information will be provided to you.

Voluntary Consent by Participant:

By signing this consent form you are agreeing that you read, or it has been read to you, and you fully understand the contents of this document and are openly willing consent to take part in this study. All of your questions concerning this study have been answered. By signing this form, you are agreeing that you are 18 years of age or older and are agreeing to participate, or have the individual specified above as a participant participate, in this study described to you by Ashley Frazier.

Signature: _____ Date: _____

APPENDIX B

ONLINE QUALTRICS SURVEY CONSENT LANGUAGE

UNIVERSITY OF NORTH CAROLINA AT GREENSBORO

CONSENT TO ACT AS A HUMAN PARTICIPANT

Project Title: Conversations about well-being: A comparison of the interaction behaviors of athletic coaches and health coaches

Principal Investigator and Faculty Advisor (if applicable): Ashley M. Frazier, M.S. CCC-SLP (principal investigator) and David L. Wyrick, Ph.D. (faculty advisor)

What are some general things you should know about research studies?
You are being asked to take part in a research study. Your participation in the study is voluntary. You may choose not to join, or you may withdraw your consent to be in the study, for any reason, without penalty.

Research studies are designed to obtain new knowledge. This new information may help people in the future.   There may not be any direct benefit to you for being in the research study. There also may be risks to being in research studies. If you choose not to be in the study or leave the study before it is done, it will not affect your relationship with the researcher or the University of North Carolina at Greensboro.
Details about this study are discussed in this consent form. It is important that you understand this information so that you can make an informed choice about being in this research study.

You will be given a copy of this consent form. If you have any questions about this study at any time, you should ask the researchers named in this consent form. Their contact information is below.

What is the study about?

This is a research project. Your participation is voluntary. This research study is about communication styles and skills in conversations about well-being. It will compare the communication and interaction behaviors of collegiate athletic coaches to those of health coaches when they are in conversations about similar topics, like mental health, interpersonal relationships, and life skills.

Why are you asking me?

You are being asked to participate in the study because you are a collegiate athletic coach or a health coach between the ages of 18 and 99.

What will you ask me to do if I agree to be in the study?

You will be asked to complete an online survey. The survey can be completed on any computer connected to the internet, and should take less than 10 minutes to complete. You will be asked to enter a participant code into the survey. Your name will not be included. You will also be asked to participate in three conversations with simulated conversation partners (actors). They will pretend to be student-athletes will a well-being issue. Each conversation will take 8-10 minutes. The entire data collection process should take less than an hour. A participant code will be used to link conversational data to the online survey. Your name will not be attached to this data, and information obtained in this research will only be reported in aggregate form – that is, as data about a group.

You can contact Ashley Frazier with any questions or concerns about this research study. Ashley can be reached by email at amfrazie@uncg.edu or by phone at 484-995-0857

Is there any audio/video recording?

The conversations between coaches and actors will be audio recorded. Because your voice will be potentially identifiable by anyone who hears the tape, your confidentiality for things you say on the tape cannot be guaranteed although the researcher will try to limit access to the tape as described below. Audio files will be uploaded into a secure storage system immediately after data collection events, and will be deleted from the device. Only the investigators will have access to the audio files.

What are the risks to me?

The Institutional Review Board at the University of North Carolina at Greensboro has determined that participation in this study poses minimal risk to participants.

If you have questions, want more information or have suggestions, please contact Ashley Frazier. Ashley can be reached by email at amfrazie@uncg.edu or by phone at 484-995-0857. You can also contact faculty advisor David Wyrick by email at dlwyrick@uncg.edu or by phone at 336-334-4501.

If you have any concerns about your rights, how you are being treated, concerns or complaints about this project or benefits or risks associated with being in this study please contact the Office of Research Integrity at UNCG toll-free at (855)-251-2351.

Are there any benefits to society as a result of me taking part in this research?

This research study may help us understand what communication styles or skills are most beneficial in conversations about well-being with student-athletes. This information could benefit coaches in understanding how to best support student-athlete wellness.

Are there any benefits to *me* for taking part in this research study?

You will receive detailed information about your communication behaviors as a result of your participation in this study.

Will I get paid for being in the study? Will it cost me anything?

There are no costs to you or payments made for participating in this study.

How will you keep my information confidential?

All data will be labeled with a code that links it together, but does not link it to you as a participant. The only connection between the code and your name is a contact list that will be password protected on a UNCG computer. All data will be maintained as electronic files stored on password protected computers in a secure computing environment. Participants will not be identified by name when information is disseminated. Audio files will be destroyed after the data is analyzed, and other transcribed and coded data will be stored and maintained securely. All information obtained in this study is strictly confidential unless disclosure is required by law.

Absolute confidentiality of data provided through the Internet cannot be guaranteed due to the limited protections of Internet access. Please be sure to close your browser when you have finished the online survey so no one will be able to see what you have been doing.

What if I want to leave the study?

You have the right to refuse to participate or to withdraw at any time, without penalty. If you do withdraw, it will not affect you in any way. If you choose to withdraw, you may request that any of your data which has been collected be destroyed unless it is in a de-identifiable state. The investigators also have the right to stop your participation at any time. This could be because you have had an unexpected reaction, or have failed to follow instructions, or because the entire study has been stopped

What about new information/changes in the study?

If significant new information relating to the study becomes available which may relate to your willingness to continue to participate, this information will be provided to you.

Voluntary Consent by Participant:

By completing this survey you are agreeing that you read, or it has been read to you, and you fully understand the contents of this document and are openly willing consent to take part in this study. All of your questions concerning this study have been answered. By completing this survey, you are agreeing that you are 18 years of age or older and are agreeing to participate, or have the individual specified above as a participant participate, in this study described to you by Ashley Frazier.

APPENDIX C

CONVERSATIONS ABOUT WELL BEING ATHLETIC COACH SURVEY

Q1 Please view the attached file to read the consent form for this study, which includes details about the study and your participation. After reading this document, please indicate whether you are willing to participate below.

❍ Yes, I am willing to participate (1)
❍ No, I do not want to participate in this study (2)
If No, I do not want to partic... Is Selected, Then Skip To End of Survey

Q2 The following survey questions will ask you about your communication in the context of "conversations about well-being." Well-being has been defined as "a state of health, happiness, and contentment," or "a good or satisfactory condition of existence." For the purposes of this study, we are considering well-being to be topics outside of the realm of sport performance. Your responses will be linked to your audiotaped conversational sample, but your name will not be attached to either source of data, and all results will be reported in aggregate form, that is, combined in group form with data from all coaches. Thank you for your participation.

Q3 Please enter your participant code:

Q4 How long have you been coaching athletes in any capacity?

Number of years (1)

Q5 To what extent do you think that there as been a shift in the expectations people have for collegiate coaches - that they are not just responsible for increasing a student-athlete's sport performance, but also for the development of overall student-athlete well-being?

_____ coach expectations (1)

Q6 Do you feel it is part of your job to attend to the overall well-being of your athletes?

❍ Yes (1)
❍ No (2)

Q7 Is attending to the overall well-being of your athletes part of your official job description?

❍ Yes (1)
❍ No (2)

Q8 To what extent is attending to the overall well-being of your athletes part of your departmental culture?

❍ It isn't, really (1)
❍ It is mentioned in vision/mission statements, not much more than that (2)
❍ It is a concept that is frequently mentioned, and supported through departmental policies and educational efforts, may be more prevalent on some teams than others (3)
❍ It is ever-present in departmental culture, from training, education, and policies through all levels of coaching and administration (4)

Q9 Using the scale below, indicate your skill level as it pertains to communicating about well-being with student-athletes?

_____ My skill level (1)

Q10 Which of the following well-being issues do you consider to be within your realm of responsibility as a coach?

❑ mental health (1)
❑ substance use (e.g. alcohol, tobacco, performance enhancing drugs) (2)
❑ concussion (e.g. recognition, referral, reporting) (3)
❑ injuries (4)
❑ interpersonal relationships (5)
❑ social justice (e.g. racism, sexism, oppression, discrimination) (6)
❑ bullying (7)
❑ hazing (8)
❑ sexual violence (9)
❑ eating disorders (10)
❑ academic success (11)
❑ character development (12)
❑ community engagement (13)
❑ citizenship (14)
❑ spirituality (15)
❑ financial wellness (16)

❏ other (17) _____

> Carry Forward Selected Choices from "Which of the following well-being issues do you consider to be within your realm of responsibility as a coach?"

Q11 How prepared do you feel to deal with the well-being issues you selected?

	I feel prepared to		How prepared are you to have a conversation about this issue with a student-athlete?			
	Recognize this issue (1)	Refer to Professional (2)	not prepared (1)	only if i have to (2)	somewhat prepared (3)	very prepared (4)
mental health (x1)	❏	❏	○	○	○	○
substance use (e.g. alcohol, tobacco, performance enhancing drugs) (x2)	❏	❏	○	○	○	○
concussion (e.g. recognition, referral, reporting) (x3)	❏	❏	○	○	○	○
injuries (x4)	❏	❏	○	○	○	○
interpersonal relationships (x5)	❏	❏	○	○	○	○
social justice (e.g. racism, sexism, oppression, discrimination) (x6)	❏	❏	○	○	○	○
bullying (x7)	❏	❏	○	○	○	○
hazing (x8)	❏	❏	○	○	○	○

sexual violence (x9)	❑	❑	○	○	○	○
eating disorders (x10)	❑	❑	○	○	○	○
academic success (x11)	❑	❑	○	○	○	○
character development (x12)	❑	❑	○	○	○	○
community engagement (x13)	❑	❑	○	○	○	○
citizenship (x14)	❑	❑	○	○	○	○
spirituality (x15)	❑	❑	○	○	○	○
financial wellness (x16)	❑	❑	○	○	○	○
other (x17)	❑	❑	○	○	○	○

Q12 How often do you have conversations with student-athletes about issues related to well-being?

○ Less than Once a Month (1)
○ Once a Month (2)
○ 2-3 Times a Month (3)
○ Once a Week (4)
○ 2-3 Times a Week (5)
○ Daily (6)

Q13 Please create a description of your communication style when talking to student-athletes - first, drag each statement to the appropriate category - next, rank them within the categories from most to least relevant/frequent

Often, Definitely me	Sometimes, depending on the situation	Rarely, Absolutely Not Me
_____ I am non-judgmental (1)	_____ I am non-judgmental (1)	_____ I am non-judgmental (1)
_____ I am Directive, telling them exactly what to do and how to do it (2)	_____ I am Directive, telling them exactly what to do and how to do it (2)	_____ I am Directive, telling them exactly what to do and how to do it (2)
_____ I listen and observe first to make sure I understand (3)	_____ I listen and observe first to make sure I understand (3)	_____ I listen and observe first to make sure I understand (3)
_____ I deal with the here and now (4)	_____ I deal with the here and now (4)	_____ I deal with the here and now (4)
_____ I yell or raise my voice (5)	_____ I yell or raise my voice (5)	_____ I yell or raise my voice (5)
_____ I like to talk about facts, not feelings (6)	_____ I like to talk about facts, not feelings (6)	_____ I like to talk about facts, not feelings (6)
_____ I ask a lot of questions (7)	_____ I ask a lot of questions (7)	_____ I ask a lot of questions (7)
_____ I am parental (8)	_____ I am parental (8)	_____ I am parental (8)
_____ I have a lot of experience which means I usually know what to do (9)	_____ I have a lot of experience which means I usually know what to do (9)	_____ I have a lot of experience which means I usually know what to do (9)
_____ I connect people with others who would be better suited to find a solution (10)	_____ I connect people with others who would be better suited to find a solution (10)	_____ I connect people with others who would be better suited to find a solution (10)
_____ I deal with consequences (11)	_____ I deal with consequences (11)	_____ I deal with consequences (11)
_____ I am not afraid to say something unpopular (12)	_____ I am not afraid to say something unpopular (12)	_____ I am not afraid to say something unpopular (12)
_____ I am Guiding,	_____ I am Guiding,	_____ I am Guiding,

working together with someone to figure out the best action for them (13)	working together with someone to figure out the best action for them (13)	working together with someone to figure out the best action for them (13)
_____ I am stern (14)	_____ I am stern (14)	_____ I am stern (14)
_____ I deal with possibilities (15)	_____ I deal with possibilities (15)	_____ I deal with possibilities (15)
_____ I am a friend (16)	_____ I am a friend (16)	_____ I am a friend (16)

Q14What are some of the ways you have developed your communication skills as a coach

- ❑ Learned through experience (1)
- ❑ Took cues from a role model or mentor (2)
- ❑ Had training during my coach preparation (3)
- ❑ Attended lectures or conferences about communicating (4)
- ❑ Figure it out as I go along (5)
- ❑ Worked with a communication professional to develop skills (6)
- ❑ Read books or articles about communication (7)
- ❑ Just learned about the relevant well-being issues, the communication part comes naturally (8)
- ❑ Used feedback from others to make changes (9)
- ❑ Other (10) _____

Q15 If your student-athlete had a well-being issue, who do you think they would be most likely to go to first? Please drag each statement up or down to rank them, with number 1 indicating "most likely"

_____ Athletic Director (1)
_____ Associate or Assistant AD (2)
_____ Life Skill or Academic Support Staff within Athletic Department (3)
_____ Athletic Trainer (4)
_____ Assistant Coach (5)
_____ Head Coach (6)
_____ Teammates (7)
_____ Family (8)
_____ Faculty or Professional outside of Athletics Department, including Dean of Students, Health Center, etc. (9)
_____ Strength and conditioning coach (10)

Q16What is the total number of people on the coaching and training staff for your sport?

Q17 What is the total number of people in the entire Athletics Department at your school? (You can give an estimate)

Q18 What is the approximate number of student-athletes you have regular contact and conversation with, in a formal or informal capacity?

Q19 Some people adjust their communication according to their identified gender, or the gender of the person they are communicating with. Please share some information about your gender and that of the people you communicate with.

	Male (1)	Female (2)	Both (3)
My gender (1)	O	O	O
Gender of athletes I coach NOW (2)	O	O	O
Gender of athletes I have EVER coached (3)	O	O	O

APPENDIX D

CONVERSATIONS ABOUT WELL BEING HEALTH COACH SURVEY

Q1 Please view the attached file to read the consent form for this study, which includes details about the study and your participation.   After reading this document, please indicate whether you are willing to participate below. Qualtrics consent form

❍ Yes, I am willing to participate (1)
❍ No, I do not want to participate in this study (2)
If No, I do not want to partic... Is Selected, Then Skip To End of Survey

Q2 The following survey questions will ask you about your communication in the context of "conversations about well-being." Well-being has been defined as "a state of health, happiness, and contentment," or "a good or satisfactory condition of existence." For the purposes of this study, we are considering well-being to be topics outside of the realm of sport performance. Your responses will be linked to your audiotaped conversational sample, but your name will not be attached to either source of data, and all results will be reported in aggregate form, that is, combined in group form with data from all coaches. Thank you for your participation.

Q3 Please enter your participant code:

Q4 How long have you been health coaching in any capacity?

   Number of years (1)

Q5 Using the scale below, indicate your skill level as it pertains to communicating about well-being.

_____ My skill level (1)

Q6 How often do you have conversations with people about issues related to well-being?

❍ Less than Once a Month (1)
❍ Once a Month (2)
❍ 2-3 Times a Month (3)
❍ Once a Week (4)
❍ 2-3 Times a Week (5)
❍ Daily (6)

Q7 What is the total approximate number of people you have had a health coaching conversation with?

Q8 What is the total approximate number of hours you have spent in formal training or education in health coaching communication?

Q9 What are some of the ways you have developed your communication skills as a health coach

❑ Learned through experience (1)
❑ Took cues from a role model or mentor (2)
❑ Had training during my coach preparation (3)
❑ Attended lectures or conferences about communicating (4)
❑ Figure it out as I go along (5)
❑ Worked with a communication professional to develop skills (6)
❑ Read books or articles about communication (7)
❑ Just learned about the relevant well-being issues, the communication part comes naturally (8)
❑ Used feedback from others to make changes (9)
❑ Other (10) _____

Q10 Please create a description of your communication style in conversations about well-being - first, drag each statement to the appropriate category - next, rank them within the categories from most to least relevant/frequent

Often, Definitely me	Sometimes, depending on the situation	Rarely, Absolutely Not Me
_____ I am non-judgmental (1)	_____ I am non-judgmental (1)	_____ I am non-judgmental (1)
_____ I am Directive, telling them exactly what to do and how to do it (2)	_____ I am Directive, telling them exactly what to do and how to do it (2)	_____ I am Directive, telling them exactly what to do and how to do it (2)
_____ I listen and observe first to make sure I understand (3)	_____ I listen and observe first to make sure I understand (3)	_____ I listen and observe first to make sure I understand (3)
_____ I deal with the here and now (4)	_____ I deal with the here and now (4)	_____ I deal with the here and now (4)
_____ I yell or raise my voice (5)	_____ I yell or raise my voice (5)	_____ I yell or raise my voice (5)
_____ I like to talk about facts, not feelings (6)	_____ I like to talk about facts, not feelings (6)	_____ I like to talk about facts, not feelings (6)
_____ I ask a lot of questions (7)	_____ I ask a lot of questions (7)	_____ I ask a lot of questions (7)
_____ I am parental (8)	_____ I am parental (8)	_____ I am parental (8)
_____ I have a lot of experience which means I usually know what to do (9)	_____ I have a lot of experience which means I usually know what to do (9)	_____ I have a lot of experience which means I usually know what to do (9)
_____ I connect people with others who would be better suited to find a solution (10)	_____ I connect people with others who would be better suited to find a solution (10)	_____ I connect people with others who would be better suited to find a solution (10)
_____ I deal with consequences (11)	_____ I deal with consequences (11)	_____ I deal with consequences (11)
_____ I am not afraid to say something unpopular (12)	_____ I am not afraid to say something unpopular (12)	_____ I am not afraid to say something unpopular (12)
_____ I am Guiding,	_____ I am Guiding,	_____ I am Guiding,

working together with someone to figure out the best action for them (13)	working together with someone to figure out the best action for them (13)	working together with someone to figure out the best action for them (13)
_____ I am stern (14)	_____ I am stern (14)	_____ I am stern (14)
_____ I deal with possibilities (15)	_____ I deal with possibilities (15)	_____ I deal with possibilities (15)
_____ I am a friend (16)	_____ I am a friend (16)	_____ I am a friend (16)

Q11 Some people adjust their communication according to their identified gender, or the gender of the person they are communicating with. Please share some information about your gender and that of the people you communicate with.

	Male (1)	Female (2)	Both (3)
My gender (1)	○	○	○
Gender of people I coach (2)	○	○	○

APPENDIX E

CONVERSATIONAL SCENARIOS AND TASK INSTRUCTIONS

Coach Instructions

You will have a brief conversation with each simulated "player." There will be 3 players/conversations in total. Each will last from 8-10 minutes. In order to start everyone on the same page, every conversation will begin in the same way:

- Player enters room and says "hey, Coach"
- Coach greets player and invites them to be seated
- Coach says "So what's going on?"

Each player will present you with a problem. They are looking for your help. You are welcome to do what comes naturally in this situation, and to talk or act as you normally would in a coaching situation.

We are interested in finding out how coaches typically work their way through scenarios like the ones that will presented to you. Please don't feel that there is a right way to act or right thing to say.

Conversational Partner Instructions

You will be assigned ONE scenario that you will represent in every coaching conversation (i.e. you will be discussing the same scenario over and over). Each conversation will last from 8-10 minutes. In order to start everyone on the same page, every conversation will begin in the same way:

- Player enters room and says "hey, Coach"
- Coach greets player and invites them to be seated
- Coach says "So what's going on?"

You will always respond with the "starter phrase" from your scenario. After that, the conversation is not scripted, and you should respond appropriately to the prompts given by the coach. In other words, you are NOT driving the conversation or making sure you hit all the facts in your scenario…you are waiting for the coach to take the conversation to those places. If they latch on to the first thing you say and the whole conversation stays there, that's fine. On the other hand, please do not WITHHOLD information or try to make it particularly tough. Try to respond naturally; in order to do this you'll need to know your scenario well enough before-hand. **Please practice the conversation extensively before data collection.**

Scenario A (Academic/Life Skill)

Description:

1) Surface Issue: overwhelmed, stressed out
2) Deep Issue: poor time management skills
3) Consequences: anxiety, not getting work done
4) Change Attempts: making lists
5) Action Plan: possibly – refer to professional (Academic Support), suggest explore campus resources, like meditation group

Starter phrase: "*I am so stressed out.*"

You have been feeling very stressed out and overwhelmed – balancing going to class, getting work done, attending training, practice, and competition, your social life, and maintaining daily chores like laundry, food, and rest. You find that you are tearful, exhausted, and constantly feeling like you can't remember what to do. You always feel like you are falling behind.

Underlying this is a feeling that you can't manage your time appropriately. You are unsure how to delegate your hours to getting things done efficiently.

You have tried making lists of the things you need to do. You have written out your responsibilities, but it just isn't working. You never get the list completed.

You are willing to get help.

Scenario B (Mental Health)

Description:

1) Surface Issue: missed classes and late to practice
2) Deep Issue: signs of depression, trouble getting out of bed, sleep
3) Consequences: academic probation, sport performance decreased
4) Change Attempts: set multiple alarms
5) Action Plan: possibly - refer to professional (counseling, perhaps) for screening, enlist community support (family, team)

Starter phrase: "*I'm afraid I'm gonna fail out of school.*"

You have recently begun to miss classes frequently. You just can't seem to get moving. Last week you even were late to practice, which has never happened before. A few times you've made plans with friends and then just didn't show up. You are starting to get a hard time from your friends, family, professors, and now even your coach.

Underlying this is a deep sense of apathy and hopelessness. You aren't sleeping well, and yet you can't seem to get motivated to get out of bed or off the couch. Some days you struggle even to get dressed and eat properly. You're experiencing symptoms of depression.

You have tried setting multiple alarms on your phone, but you just snooze and disable them over and over. Even reminding yourself of the consequences of missing things doesn't make you feel motivated. You are willing to get help.

Scenario C (Interpersonal)

Description:

1) Surface Issue: homesick, not making friends
2) Deep Issue: harassment/bullied
3) Consequences: thinking about leaving school
4) Change Attempts: went to party with teammates, drank too much and threw up in front of them (only made teasing worse)
5) Action Plan: possibly – refer to professional (Dean of Students), get connected to campus group (spiritual, leisure, professional), coach should engage in teambuilding, address directly instigators of bullying

Starter phrase: "*Right now I feel like I hate college*"

You looked forward to going to college, you have dreamed about it for years. But since you arrived you have been very unhappy. You aren't making friends, and you are very homesick. You go back home almost every weekend, and when you are on campus you mostly stay in your room.

Since the first week of training, you have not become close to your teammates. They started teasing you right from the start – you were raised in a rural area and have habits and beliefs that are different from theirs. They even make fun of your appearance and the way you talk. At first it seemed like they were joking, but now they are outright mean and exclude you from team activities. You feel very alone.

You tried to get to know them by going to a party with them. You are not an experienced drinker and they targeted you in a drinking game. You got very drunk and threw up on someone's couch. Your teammates made you clean it up with your own shirt, and then left you alone at the party because they said you'd get puke on their car seats. Now they call you "Hurley" and try to work your embarrassing experience into every conversation.

You want things to change, and you want to keep playing your sport. You need to find friends to connect with on campus, but you also need the team dynamic to change, and you aren't responsible for making that happen.

APPENDIX F

CODING CATEGORIES AND ABBREVIATIONS FOR STANDARD RIAS

CATEGORIES

1.	Personal	Personal remarks, social conversation
2.	Laughs	Laughs, tells jokes
3.	Concern	Shows concern or worry
4.	R/O	Reassures, encourages or shows optimism
5.	Approve	Shows approval - direct
6.	Comp	Gives compliment - general
7.	Disapprove	Shows disapproval - direct
8.	Crit	Shows criticism - general
9.	Agree	Shows agreement or understanding
10.	BC	Back-channel responses
11.	Empathy	Empathy statements
12.	Legit	Legitimizing statements
13.	Partner	Partnership statements (Physician only)
14.	SDis	Self-disclosure statements (Physician only)
15.	?Reassure	Asks for reassurance
16.	Trans	Transition words
17.	Orient	Gives orientation, instructions
18.	Check	Paraphrase/Checks for understanding
19.	?Understand	Asks for understanding
20.	?Bid	Bid for repetition
21.	?Opinion	Asks for opinion (Physician only)
22.	?Permission	Asks for permission (Physician only)
23.	[?]Med	Asks closed-ended questions-Medical condition
24.	[?]Thera	Asks closed-ended questions-Therapeutic regimen
25.	[?]L/S	Asks closed-ended questions-Lifestyle
26.	[?]P/S	Asks closed-ended questions-Psychosocial
27.	[?]Other	Asks closed-ended questions-Other
28.	?Med	Asks open-ended questions-Medical condition
29.	?Thera	Asks open-ended questions-Therapeutic regimen
30.	?L/S	Asks open-ended questions-Lifestyle
31.	?P/S	Asks open-ended questions- Psychosocial
32.	?Other	Asks open-ended questions-Other
33.	Gives-Med	Gives information-Medical condition
34.	Gives-Thera	Gives information-Therapeutic regimen
35.	Gives-L/S	Gives information-Lifestyle
36.	Gives-P/S	Gives information- Psychosocial
37.	Gives-Other	Gives information-Other

38.	C-Med/Thera	Counsels-Med condition/Thera regimen (Physician only)
39.	C-L/S-P/S	Counsels-Lifestyle/Psychosocial (Physician only)
40.	?Service	Requests for services (Patient only)
41.	Unintell	Unintelligible Utterances

APPENDIX G

CODING CATEGORIES AND ABBREVIATIONS FOR ADAPTED RIAS

CATEGORIES

1.	Personal	Personal remarks, social conversation
2.	Laughs	Laughs, tells jokes
3.	Concern	Shows concern or worry
4.	R/O	Reassures, encourages or shows optimism
5.	Approve	Shows approval - direct
6.	Comp	Gives compliment - general
7.	Disapprove	Shows disapproval - direct
8.	Crit	Shows criticism - general
9.	Agree	Shows agreement or understanding
10.	BC	Back-channel responses
11.	Empathy	Empathy statements
12.	Legit	Legitimizing statements
13.	Partner	Partnership statements (Physician only)
14.	SDis	Self-disclosure statements (Physician only)
15.	?Reassure	Asks for reassurance
16.	Trans	Transition words
17.	Orient	Gives orientation, instructions
18.	Check	Paraphrase/Checks for understanding
19.	?Understand	Asks for understanding
20.	?Bid	Bid for repetition
21.	?Opinion	Asks for opinion (Physician only)
22.	?Permission	Asks for permission (Physician only)
23.	[?]Other	Asks closed-ended questions-Other
24.	?Other	Asks open-ended questions-Other
25.	Gives-Other	Gives information-Other
26.	C-Med/Thera	Counsels-Med condition/Thera regimen (Physician only)
27.	C-L/S-P/S	Counsels-Lifestyle/Psychosocial (Physician only)
28.	?Service	Requests for services (Patient only)
29.	Unintell	Unintelligible Utterances

APPENDIX H

DESCRIPTIVE STATISTICS FOR ALL BEHAVIOR CATEGORIES

Descriptive Statistics - Total

	N*	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
Total Coach Utterances	30	160	28	188	78.47	34.370	1181.292
Total Athlete Utterances	30	194	25	219	76.10	43.145	1861.472
Ask for Opinion	30	3	0	3	.33	.802	.644
Ask Open Ended Quest	30	20	3	23	8.33	5.665	32.092
Ask for Permission	30	1	0	1	.03	.183	.033
Ask for Understanding	30	3	0	3	.30	.702	.493
Ask Closed Ended Quest	30	20	0	20	5.07	5.663	32.064
Agree/Understanding	30	42	2	44	12.90	12.941	167.472
Shows Approval	30	6	0	6	1.17	1.487	2.213
Backchannel	30	42	0	42	8.90	12.310	151.541
Check/Reflection	30	52	0	52	9.50	13.465	181.293
Counsels	30	22	0	22	3.90	5.886	34.645
Compliment	30	1	0	1	.03	.183	.033
Shows Concern	30	8	0	8	.83	1.840	3.385
Criticism	30	5	0	5	.63	1.299	1.689
Disapproval	30	4	0	4	.37	.964	.930
Empathy Statement	30	14	0	14	2.97	3.079	9.482
Gives Information	30	36	0	36	9.13	8.827	77.913
Humor/Laughs	30	12	0	12	.83	2.214	4.902
Legitimizing Statement	30	10	0	10	1.23	1.888	3.564
Orientation	30	5	0	5	.53	1.008	1.016

Partnership Statement	30	12	0	12	3.47	2.849	8.120
Personal Remarks	30	4	0	4	.97	1.129	1.275
Reassure/Optimism	30	21	0	21	4.30	4.900	24.010
Self-Disclosure	30	10	0	10	1.00	2.449	6.000
Transition Words	30	7	0	7	1.73	1.799	3.237

* N indicates number of conversations (10 coaches x 3 conversations each)

Descriptive Statistics – Athletic Coaches

	N*	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
Total Coach Utterances	18	82	28	110	66.39	20.697	428.369
Total Athlete Utterances	18	65	25	90	52.44	19.147	366.614
Ask for Opinion	18	3	0	3	.56	.984	.967
Ask Open Ended Quest	18	11	3	14	5.11	2.742	7.516
Ask for Permission	18	1	0	1	.06	.236	.056
Ask for Understanding	18	3	0	3	.17	.707	.500
Ask Closed Ended Quest	18	19	1	20	6.94	6.357	40.408
Agree/Understanding	18	18	2	20	5.61	4.629	21.428
Shows Approval	18	4	0	4	1.17	1.249	1.559
Backchannel	18	9	0	9	3.11	3.046	9.281
Check/Reflection	18	6	0	6	1.72	2.052	4.212
Counsels	18	22	0	22	6.50	6.419	41.206
Compliment	18	1	0	1	.06	.236	.056
Shows Concern	18	8	0	8	1.33	2.249	5.059
Criticism	18	5	0	5	1.06	1.552	2.408
Disapproval	18	4	0	4	.61	1.195	1.428
Empathy Statement	18	7	0	7	1.83	1.724	2.971
Gives Information	18	34	2	36	13.50	8.466	71.676
Humor/Laughs	18	12	0	12	1.11	2.805	7.869
Legitimizing Statement	18	10	0	10	1.50	2.282	5.206
Orientation	18	2	0	2	.33	.594	.353
Partnership Statement	18	11	1	12	4.17	2.662	7.088
Personal Remarks	18	4	0	4	1.28	1.227	1.507

Reassure/Optimism	18	21	0	21	5.56	5.544	30.732
Self-Disclosure	18	10	0	10	1.67	3.010	9.059
Transition Words	18	3	0	3	1.44	1.199	1.438

* N indicates number of conversations (6 athletic coaches x 3 conversations each)

Descriptive Statistics – Health Coaches

	N*	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
Total Coach Utterances	12	138	50	188	96.58	43.076	1855.538
Total Athlete Utterances	12	165	54	219	111.58	45.296	2051.720
Ask for Opinion	12	0	0	0	.00	.000	.000
Ask Open Ended Quest	12	18	5	23	13.17	5.524	30.515
Ask for Permission	12	0	0	0	.00	.000	.000
Ask for Understanding	12	2	0	2	.50	.674	.455
Ask Closed Ended Quest	12	9	0	9	2.25	2.768	7.659
Agree/Understanding	12	40	4	44	23.83	13.822	191.061
Shows Approval	12	6	0	6	1.17	1.850	3.424
Backchannel	12	41	1	42	17.58	15.751	248.083
Check/Reflection	12	47	5	52	21.17	14.966	223.970
Counsels	12	0	0	0	.00	.000	.000
Compliment	12	0	0	0	.00	.000	.000
Shows Concern	12	1	0	1	.08	.289	.083
Criticism	12	0	0	0	.00	.000	.000
Disapproval	12	0	0	0	.00	.000	.000
Empathy Statement	12	13	1	14	4.67	3.892	15.152
Gives Information	12	11	0	11	2.58	4.078	16.629
Humor/Laughs	12	2	0	2	.42	.669	.447
Legitimizing Statement	12	3	0	3	.83	1.030	1.061
Orientation	12	5	0	5	.83	1.403	1.970
Partnership Statement	12	9	0	9	2.42	2.906	8.447
Personal Remarks	12	2	0	2	.50	.798	.636
Reassure/Optimism	12	8	0	8	2.42	3.059	9.356
Self-Disclosure	12	0	0	0	.00	.000	.000

Transition Words	12	7	0	7	2.17	2.443	5.970
Valid N (listwise)	12						

* N indicates number of conversations (4 health coaches x 3 conversations each)