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Running Head: EFFECTS OF COMMUNITY SERVICE ON TEAM COHESIVENESS

THE EFFECT OF COMMUNITY SERVICE PARTICIPATION ON TEAM COHESIVENESS IN
NCAA DIVISION I WOMEN'S VOLLEYBALL TEAMS

By

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Dissertation

presented in partial fulfillment of the requirements
for the degree of

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in Educational Leadership

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EFFECTS OF COMMUNITY SERVICE ON TEAM COHESIVENESS

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Educational Leadership

The Effect of Community Service Participation on Team Cohesiveness in NCAA Division I Women's Volleyball Teams

Chairperson: Dr. Patty Kero

Despite the efforts of many to determine the best means for constructing and maintaining unified sports teams, leaders in the field continue to seek additional methods. This non-experimental quantitative analysis of NCAA Division I Women's Volleyball teams examined the value of community service participation as a team building activity. The purpose of this study was to determine the difference, if any, that exists between the amounts of cohesiveness on teams that employ different grouping strategies in community service work. Participants representing 74 different teams included a coach and a total of 442 players from those schools across the country. Mann Whitney U Tests were employed to explore team scores on the Group Environment Questionnaire and individual player perceptions of community service. Findings revealed no statistically significant differences on either measure from teams that conducted service as an entire group in comparison to those that did so in small groups or on an individual basis. Further analyses indicated a statistically significant difference in the players' perception of the value of service work to the local community when comparing teams coached by natives of the local community as opposed to those who were not. Results of the study indicated patterns of positive feelings associated with community service and its potential as a team building exercise among the student-athletes involved. Future studies should include further analysis of team cohesion as well as the role of community service in intercollegiate athletics.

Keywords: team cohesion, community service, Group Environment Questionnaire

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Dedication

I dedicate this work entirely to my family and friends. They have supported my efforts to aim for the stars in every aspect of my life despite how crazy it may seem. They have been there to lend a hand or give a hug when needed and to laugh and smile at every turn. They remind me that in any venture, I am not alone.

My family has instilled in me a love for learning that continues to grow on a daily basis and taught me that hard work and dedication carve the path to our dreams. I have been spoiled by their character and unconditional love and I marvel at the size of their hearts. Their pride in me has inspired me every step of the way and I am forever grateful for the role they play in making my life so absolutely wonderful.

Acknowledgement

Upon completion of this degree, I felt a great sense of accomplishment as well as an overwhelming feeling of gratitude. From the first day that I entered the halls of my elementary school to the time I spent in the education building on campus, I have been molded by countless incredible educators. In pursuit of my dreams, I have followed in the steps of some of the greatest teachers in the field, beginning with those in my family. Through their actions and belief in the success of my endeavors, my teachers, coaches, classmates, coworkers, friends, and family members have taught me the value of education and making a constant effort to better the world around me. I will always be grateful for their positive influence in my journey.

Earning my doctoral degree was one of the most rewarding challenges I will likely ever face. The personal growth I experienced, relationships I built, and hope for the future of education that I realized through my experiences at the University of Montana will influence my professional life indefinitely. There are a handful of special individuals who should be recognized for their priceless contributions to my learning.

I owe Susan Harper-Whalen a debt of gratitude for introducing me to Dr. Francee O'Reilly who inspired me to pursue this particular degree under the guidance of the amazing Educational Leadership faculty. Francee was an instrumental member on my dissertation committee and she taught me just how humble and real a professor can be.

Dr. Bill McCaw acted as my demanding, yet trusting coach throughout this process, stretching my intellectual abilities in classes and discussions further than I would have ever thought possible. His contributions to the thoroughness of this study were essential.

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Dr. John Matt maintained a sense of enjoyment and humor throughout my time in the program that I would not have survived without. He emphasized the practical application of material covered in class with intriguing stories and thought-provoking inquiries and I am thankful for his critical statistical eye on this paper.

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My entire committee demonstrated sincere concern for my growth and development as a scholar and for me as a person and a professional. I have the utmost respect for their expertise and was awestruck at the time and effort they put into this experience. I do not know that I would ever be able to pay them back for their priceless role in my learning and success, yet I can assure them that I will absolutely pay it forward.

Chapter One: Introduction to the Study

Throughout the history of mankind, teamwork has been cited as an essential factor in the success or failure of a group (Cornish, 2004; Covey, 1989; Larson & LaFasto, 1989; Senge, 1990). It is a human experience, existing across cultural lines and in all walks of life (Bruce & Ricketts, 2008; Cornish, 2004; Gibson & Zellmer-Bruhn, 2001; Gummer, 1996). Collaboration with others plays a vital role in moral compasses across the globe, exhibited, for example, by the Swahili Proverb which states, “A boat doesn’t go forward if each one is rowing their own way” (Walker, 2002).

Many consider teamwork to be an essential part of daily living (Covey, 1989; European Foundation for the Improvement of Living and Working Conditions, 2007; Gibson & Zellmer-Bruhn, 2001), and it has also been called upon as a solution to many of life’s challenges (Cornish, 2004; Gummer, 1996; Larson & LaFasto, 1989; Salas, Cooke, & Rosen, 2008). In difficult times, the need for unity and collaboration has been stressed by leaders; as stated by Benjamin Franklin, “We must all hang together, or assuredly, we shall all hang separately” (Keller, 1976). The concept has even served as a cornerstone of political campaigns in recent years, when “yes we can” became the slogan associated with Barack Obama’s race for the Presidential office of the United States (Bang, 2009).

The supreme value assigned to teamwork can be traced through the roots of our species (Larson & LaFasto, 1989). The role of teamwork as a determinant of success or failure has been studied, examined, and tested over thousands of years (Cornish, 2004; Larson & LaFasto, 1989; Salas, et al., 2008). An early mention of a transcendent teamwork slogan can be found in Aesop’s fable, “The Four Oxen and the Lion”:

A Lion used to prowl about a field in which Four Oxen used to dwell. Many a time he tried to attack them; but whenever he came near they turned their tails to one another, so that whichever way he approached them he was met by the horns of one of them. At last, however, they fell a-quarrelling among themselves, and each went off to pasture alone in a separate corner of the field. Then the Lion attacked them one by one and soon made an end of all four.

United we stand, divided we fall. (Aesop, n.d.)

Aesop's message has permeated a variety of fields and situations, standing the test of time while serving as a basis for many theories relating to groups (Salas, Cooke, & Rosen, 2008). As evidenced by early literature, through pressing historical times, and into current social and political realms, teamwork has functioned as a source of great inspiration, providing both direction and motivation to people in all walks of life.

According to Senge (1990), all groups can benefit from functioning as a united whole and sharing in a common vision. In *The Fifth Discipline*, Senge explained his theory of systems thinking by reminding readers that the whole always exceeds the sum of its parts. This powerful notion requires the commitment of individuals, as the vision cannot be achieved by individuals alone. Senge assessed the power of a group working toward a common goal and noted that each individual is a stronger contributor as a result of collaboration and cooperation with other group members. Through Senge's systems thinking, the power of team unity was highlighted and the ultimate value of meaningful collaboration identified.

While the importance of cooperation, solidarity, and fellowship throughout history have been acknowledged (Covey, 1989), some of the most visible and widely accepted exhibitions of teamwork are witnessed in the sports arena (Calhoun, 2007; Wooden, 1988). According to

Michael Jordan, regarded as the best individual athlete of all time (Andrews, 2001), it is not talent that wins championships, but the ability of a group to work together (Maxwell, 2007).

Basketball great Kareem Abdul Jabbar, expressed the importance of teamwork when he stated, “One man can be a crucial ingredient on a team, but one man cannot make a team” (Chang & Terry, 2007). Both athletes competed at an extremely high level, garnering numerous individual awards, but their prioritization of the team as the heralded entity in sports is unquestionable.

Competitors, along with their coaches, respect the influential value of a cohesive group. Football coaching legend Vince Lombardi explained his theory on teamwork by encouraging the following, “Build for your team a feeling of oneness, of dependence on one another and of strength to be derived by unity” (as cited by Parcon, 2007, p. 3). Lombardi voiced the shared philosophy of many coaches who believe that positive team chemistry is essential when striving for maximal success (Calhoun, 2007; Flaherty & Uldrich, 2009; Krzyzewski, 2000; Wooden, 1988). The essential nature of team unity is not supported by the personal experience of athletes and coaches alone; it is also documented in research. Studies have shown that coaches actively strive to promote cohesion in teams on a regular basis and results of such efforts are positive (Carron, Brawley, & Widmeyer, 2002).

In a quest to experience maximal success on the playing field, collegiate coaches have dedicated their careers to discovering the best means for establishing cooperative, dedicated, cohesive groups of athletes (Bloom, Stevens, & Wickwire, 2003), yet the challenge remains undiminished over time. Intercollegiate sports have grown increasingly competitive (Calhoun, 2007), forcing coaches to constantly seek new opportunities to promote team growth and development. A variety of team building methods have been utilized to realize improvements in

team cohesion including, but not limited to social, physical, and psychological bonding activities (Bloom et al., 2003).

While significant current efforts emphasize team building in intercollegiate sports, leaders in athletics would benefit from a thorough understanding of all activities that may contribute to the strengthening of their respective teams (Carron et al., 2002), including those that are not commonly utilized for such purposes. One such activity is community service. The study contained herein examined community service participation by student-athletes and its role as a potential contributor to team cohesiveness.

Statement of the Problem

According to a study conducted by Bolognese (2005), the ultimate goal of sports in the National Collegiate Athletic Association (NCAA) is to win. Athletic leaders put considerable effort towards winning through a wide variety of means (Bolognese, 2005). In relation to athletics specifically, Carron et al. (2002) cited team cohesion as the primary factor in anticipating team success. To maximize the number of wins in a season, coaches employ various team building activities (Bloom et al., 2003; Farrar, 2010; Kilty, 2000). Farrar found that among collegiate volleyball teams, teams with a winning record completed more team building activities than those with a lower winning percentage. Though research has shown such activities to be helpful in the development of winning teams, the best method for maximizing team cohesion has yet to be discovered (Carron et al., 2002; Kilty, 2000).

The benefits of community service on local communities (Budhai, 2012), on college campuses (Kelley, 2013), and on the individuals who complete the service work (Fingers, 2005; Johnson, 2013; McAllister, 2006; Walker, 1992; Westfield, 2010; Yunker, 2009) are well documented. However, it is unknown what the specific impacts of community service are on a

competitive team. In collegiate athletics, teams continuously strive to maximize team cohesion or unity (Farrar, 2010; Kilty, 2000) and the role that community service may play in terms of building essential team cohesiveness is unknown at this time.

Purpose of the Study

Salas et al. (2008) identified a general lack of understanding of the processes which build strong teams and this study strove to inform some part of the gap in the literature. A variety of social, physical, and psychological methods are employed to improve team cohesion (Bloom et al., 2003) while the pursuit of maximal team unity inspires questions about additional tactics that have yet to be utilized. This study examined a possible strategy that may heed prosperous results for teams: community service.

In a field where the value of winning games or contests has grown increasingly important (Calhoun, 2007; Denhart et al., 2009; Ferris, 2000; Lorenzen, 2010; Zimbalist, 1999), the individuals involved with intercollegiate athletics continue to seek further means for maximizing their success (Bolognese, 2005; Calhoun, 2007; Krzyzewski, 2000; Wooden, 1988). Student-athletes, coaches, and administrators are making every effort to help teams reach their goals while building cohesiveness (Bloom et al., 2003; Carron et al., 2002; Farrar, 2010; Kilty, 2000). Many collegiate athletic groups conduct service as a part of team activities (NCAA, 1999; Stahley & Boyd, 2006), and examining the role of community service as a potential team building exercise is critical.

Not all teams participate in community service work, while others conduct projects on an individual basis, in small groups, or as an entire team. The benefits associated with service work as realized by the students, campus, and local community are well-documented (Budhai, 2012; Fingers, 2005; Johnson, 2013; Kelley, 2013; McAllister, 2006; Walker, 1992; Westfield, 2010;

Yunker, 2009), but advantages for athletic teams specifically have yet to be explored. The purpose of this study was to determine the difference, if any, that exists between the amounts of cohesiveness on teams that employ different grouping strategies in community service activities.

Research Question

For the purposes of this study, the following research question was examined:

What is the difference, if any, between the amounts of team cohesiveness on NCAA Division I Women's Volleyball teams that utilize different types of groupings in community service activities?

According to Hoy (2010), a research question is capable of empirical testing and inquires about the relationship between two or more variables. In the current study, the amount of team cohesiveness on NCAA Division I Women's Volleyball teams was measured to discover the difference, if any, that exists between teams that utilize different grouping strategies in community service activities. The type of grouping utilized in community service served as the independent variable while the amount of team cohesiveness, as measured by the Group Environment Questionnaire (GEQ) developed by Carron et al. (2002), served as the dependent variable.

While addressing the problems associated with team cohesion in collegiate athletics, this study aimed to contribute to the current knowledge base in the field. Hoy (2010) suggested utilizing imagination, knowledge, and scholarship in an effort to create an interesting research question. As explained by Boudah (2011), the identification of gaps which exist in the literature assists in the formulation of a quality research question. When addressing the topic at hand, previous studies examining the impacts of community service on the participants themselves have not delineated between different types of groupings. The purpose of this study was to

determine the difference, if any, that exists between the amounts of cohesiveness on teams that employ different grouping strategies in community service activities.

Definition of Terms

Hoy (2010) explained the importance of clearly defining the constructs, concepts, and variables in any research project. He discussed the implications of validity and reliability as they relate to clearly defined variables when he stated, "...operational definitions must capture the true meaning of the constructs, that is, be valid, and they must provide a consistent and objective measurement, that is, be reliable" (p. 30). As cited by Boudah (2011), conducting reliable, valid research is paramount: "Only studies that have adequate validity or trustworthiness, as well as reliability, add to the knowledge base in education and can inform future decisions of educators" (p. 63). In an effort to contribute to the current knowledge base in educational leadership, the researcher aimed to provide exhaustive, mutually exclusive definitions for the variables that were measured. For the purposes of this study, the following definitions were used:

Community service. Any activity that is completed for the betterment of others without compensation of the participants. An activity was defined as a service project when participants contribute non-monetary assistance to any facet of a community. According to Markus, Howard, and King (1993), "Community service has many laudable purposes and outcomes-fulfilling civic responsibilities to one's community, helping persons in need, gaining an insight into one's values and prejudices, developing career interests and job skills, and so on..." (p. 417).

Community service grouping. The type of grouping utilized in community service activities served as the independent variable in this study. This variable is categorical in nature and therefore provided nominal level data (Steinberg, 2011). Each team was assigned to one of the following four categories. The first group consisted of teams that do not conduct community

service as a part of team activities throughout the year. The second group was comprised of teams that complete community service hours on an individual basis, meaning that while the service activity has been organized by someone in the athletics department, student-athletes participate in service commitments without the presence of other teammates. The third group of teams was made up of those teams that complete service work in small groups. A team was assigned to this category if community service projects are completed by more than one member of the team, but not the entire team at once. The final category consisted of teams that participate in community service activities as a whole team, simultaneously. If every member of the team is assigned to a service project at the same location and same time, that was considered whole team service. This distinction must be made to ensure that individual player absences do not negate something that is intended and completed as a team project. In addition, if players or groups of players complete service work at multiple locations, independent of one another, that type of grouping was not be deemed whole team despite the fact that each player may contribute to the same project.

Only service completed as a part of team activities or in projects that are organized by the athletics department was considered for the purposes of this study. Service work which is conducted in conjunction with other campus, local, national, or international entities was not taken into consideration. It is possible that opportunities for service work may be created through the collaboration of numerous groups (Budhai, 2012; Fingers, 2005; Johnson, 2013; Kelley, 2013; McAllister, 2006; Walker, 1992; Westfield, 2010; Yunker, 2009), but only those activities which are completed as a part of participation in intercollegiate athletics were taken into consideration.

Teams were assigned to categories as a result of each coach's response to an inquiry regarding the most commonly used grouping for community service activities. This type of grouping ensured that the responses of every student-athlete on a given team were assigned to the appropriate independent variable as a result of typical team procedures for community service participation, not individual player recollection. In this manner, team responses were able to be grouped together and assessed collectively (Carron et al., 2002) under the assignment of an individual independent variable category.

Student-athlete. A student-athlete is an individual who engages in an intercollegiate sport, maintaining the academic and athletic requirements for eligibility to compete in athletics as well as to take courses at his or her respective institution (WebLaws.org, 2013). Such individuals were also referred to as collegiate athletes or college sports participants. This population consists of those students who compete in NCAA sanctioned activities as opposed to intramural or club sports on campus.

Team cohesiveness. Team cohesiveness was defined by Carron et al. (1998) as "... a dynamic process that is reflected in the tendency for a group to stick together and remain unified in the pursuit of its instrumental objectives and/or for the satisfaction of member affective needs" (p. 213). Team cohesiveness encompasses the positive aspects of a team's interactions and describes the togetherness of a group (Carron et al., 2002).

In this study, team cohesiveness was defined by the following four constructs in combination: group integration – social, group integration – task, individual attractions to the group – social, and individual attractions to the group – task (Carron et al., 2002). These four aspects of team cohesion are based on the theoretical model established by Carron et al. They provide the four pillars of the GEQ, utilized since 1985. Studies have provided evidence to

support the validity and reliability of the GEQ as a measurement tool, thus confirming the current definition for team cohesiveness and its primary constructs (Carron et al., 2002). The amount of team cohesiveness on each team was attributed to the mean GEQ, calculated from all individual team members' scores.

Delimitations of the Study

The population for this study was comprised of the 332 NCAA Division I institutions that compete in Women's Volleyball. To control for extraneous variables relating to team cohesion, it was important to delimit the gender of the participants as well as the sport in which they compete (Kilty, 2000) for the purposes of this study. The selection of a sport and gender was important in terms of maximizing the degree to which all four groups are equivalent. Because this study aimed to investigate different groupings in community service activities and the difference in the amount of team cohesiveness, the gender of the athletes and the sport itself were not pertinent variables; it was important to maximize consistency throughout the study (Gay, Mills, & Airasian, 2009). As a result, participants consisted of the coaches and female student-athletes competing in NCAA Division I Volleyball in the 2014 season.

The definition of team cohesion assessed by the GEQ, as constructed by Carron et al. (2002), served as a pertinent theoretical model for the current study. The GEQ and the essential components of team cohesion which it aims to assess have evolved from three fundamental assumptions (Carron et al., 2002). The first is that cohesion can be measured through the perceptions of individual group members (Levine & Moreland, 1991; Zander, 1996). The second assumption is that the social cognitions each member holds about the cohesiveness of the group are related to the group as a whole (Zander, 1996). The third assumption is that both task-oriented and socially oriented concerns are integral in defining group members perceptions about

the group (Fiedler, 1967). As essential factors in the creation of the GEQ and subsequent definition of team cohesiveness, this study was delimited by the previously discussed assumptions as well.

Limitations of the Study

This non-experimental study, being quantitative in nature, utilized questionnaires with the intent of generalizing from the sample to the population. The generalizability of the results was limited by threats to validity. According to Creswell (2009), such threats raise questions about the ability of the experimenter to conclude that the independent variable affects the dependent variable and not some extraneous factor. In the current study, teams were not randomly assigned to specific conditions, making this non-experimental in design (Mertens, 2005). Because teams and leaders had determined what type of grouping to utilize with community service for a variety of reasons, intact groups were already defined by the participants themselves.

The results of this study were limited to the responses and self-perceptions as provided by survey respondents. The type of grouping utilized and amount of community service conducted by each team was assessed through information provided by coaches. Teams were assigned to a category dependent upon the type of grouping utilized in the majority of service projects conducted each year. Truthfulness of the responses as provided by student-athletes on the GEQ also limited the results of this study. Accurate responses to these survey questions were essential in order to assign the appropriate teams to the corresponding independent variable categories and to assess any difference that may exist in GEQ scores.

It is understood that a variety of factors influence team cohesion (Carron, et al., 2002; Farrar, 2010; Kilty, 2000). This research examined any difference that exists in the amounts of team cohesiveness amongst teams which utilize different types of grouping in community

service. The results of the study should not be construed to include the relationships between team cohesion and other potentially influential variables outside of community service participation.

Creswell (2009) suggested designing a study to eliminate or minimize threats to the validity, including those factors which may limit internal, external, statistical conclusion, and construct validity. Threats to internal validity are defined by Creswell as "...experimental procedures, treatments, or experiences of the participants that threaten the researcher's ability to draw correct inferences from the data about the population in an experiment" (p. 162). In the current study, differential selection may have threatened the validity of the results. According to Mertens (2005), differential selection is pertinent to research similar to this non-experimental study because the groups under study may differ initially on an important characteristic that cannot be controlled.

There were limited concerns relating to the external and statistical conclusion validity of this study. External validity was maximized through careful use of the results by the researcher in terms of generalizability to the population. As Creswell (2009) stated, threats to external validity arise when incorrect inferences are made from the sample data to other individuals or groups, other settings, and other times, either past or future. In addition, statistical conclusion validity was maximized through the appropriate use of statistical measures and assumptions (Creswell, 2009).

While the researcher strove to clearly define the variables to be measured in exhaustive, mutually exclusive terms, construct validity may have been an issue with this inquiry. According to Creswell (2009), "Threats to construct validity occur when investigators use inadequate definitions and measures of variables" (p. 164). While the researcher made every

attempt to minimize threats to construct validity, the complexity of team cohesion is understood and respected. The GEQ has been shown to accurately measure team cohesiveness, yet there is little doubt regarding the complexity of the construct itself as a multifaceted team quality (Carron et al., 2002).

Finally, as explained by Hoy (2010), obtaining objectivity in the social sciences is challenging because of the intricacies of the constructs being measured as well as the difficulty in isolating extraneous variables. By nature, this survey research was limited by the truthfulness of the responses provided by participants. In addition, assessments were based on the perceptions of student-athletes and coaches. In lieu of assessing team cohesion in terms of growth or some measure of success, such as the number of wins in a season, a measure of cohesiveness was collected through student-athlete survey responses. Dismissing the previously discussed limitations of the study would allow for generalizing the data pertaining to this research beyond the scope of the study as it was designed.

Significance of the Study

The focus on winning in collegiate athletics is seldom debated (Bolognese, 2005). As explained by Bloom et al. (2003), improvements in team cohesion help to increase the number of wins in a competitive season. As a result, coaches actively strive to maximize cohesiveness amongst team members, employing a wide variety of methods and tactics (Bloom et al., 2003; Bolognese, 2005; Calhoun, 2007; Curtin, 1987; Glass, 1999; Halpern, 2011; Hunter, 2002; Krzyzewski, 2000; Munns, 1995; Schreiner, 2013; Windsor, 2005; Wooden, 1988).

While much effort is currently expended to help build cohesion in groups of all varieties (Bruce & Ricketts, 2008), there is no guaranteed strategy for the successful development of cohesiveness. Consequently, Salas et al. (2008) suggested further examination of team building

processes and the expansion and practical application of research in the field. This study contributes to current literature relating to team cohesion and to address a gap in the knowledge base associated with different types of grouping utilized by collegiate athletics teams for community service activities.

The results of this study are of assistance to leaders in intercollegiate athletics who aim to maximize team cohesion. Athletics department personnel in higher education could benefit from understanding how the amount of team cohesiveness differs, if at all, with the utilization of different types of grouping in community service. Consequently, such individuals may be able to orchestrate community service activities amongst student-athletes that maximize the impact on team cohesiveness.

Summary

In summary, the results of this study were used to examine the difference, if any, that exists in amounts of team cohesiveness amongst NCAA Division I Women's Volleyball teams that utilize different types of groupings for community service activities. The challenges faced by leaders in intercollegiate athletics who strive to maximize team cohesion are addressed. In addition, the variety of methods employed and the amount of effort exerted to assist with the development of team cohesiveness were also discussed, setting the stage for a study about a potential means for building cohesiveness which had yet to be explored.

The subsequent chapter offers a comprehensive review of the current literature which addresses the development of team cohesiveness and related challenges as well as utilization of community service in collegiate athletics programs. As recommended by Boote and Beile (2005), a synthesis of the most pertinent, applicable studies was presented in relation to the topic at hand.

Chapter Two: Review of Literature

This study focused on issues related to team cohesion in collegiate athletics while making note of the potential benefits of community service work. In order to build a meaningful foundation for this research project, the review of literature focused on team cohesion and community service and how they relate to one another in the context of NCAA Division I Women's Volleyball. The researcher made every effort to identify applicable existing studies to form a solid background for this study.

This literature review was constructed according to the guidelines provided by Boote and Beile (2005). The authors explained that the purpose of a literature review is to synthesize the pertinent and most applicable research as opposed to providing an exhaustive summary of related topics previously studied. In Boote and Beile's "Scholars Before Researchers: On the Centrality of the Dissertation Literature Review in Research Preparation," they focused on five main criteria for the construction of an efficient review of the literature. Boote and Beile claimed that the main components to be included in a good literature review include: coverage, synthesis, methodology, significance, and rhetoric. As they explained, "A thorough, sophisticated literature review is the foundation and inspiration for substantial, useful research" (p. 3).

In an effort to heed the advice provided by Boote and Beile (2005), this literature review is an essential component of the study that serves four primary purposes. The first goal of this chapter is to inform the reader of previous research which has contributed significantly to an understanding of team cohesion, the potential means for building cohesion on a team, and the current role of community service in intercollegiate athletics. The second purpose of this section of the study is to explain the rationale behind the selection of NCAA Division I Women's Volleyball teams as the population under examination. Third, this literature review defends the

quantitative quasi-experimental design as the most appropriate method for investigating the problems associated with team cohesiveness that are experienced in athletics at the college level. Finally, the study's significance is revisited and reinforced through further description of existing knowledge in the field as well as the identification of gaps in the literature.

Defining Team Cohesion

As Creswell (2009) stated, clearly defining terms "... adds precision to a scientific study..." (p. 40). While he acknowledged that some constructs may be abstract and complex, Creswell explained that unambiguous definitions provide the basis for quality research. Whether the term being employed is synergy (Covey, 1989), teamwork (Krzyzewski, 2000), unity (Calhoun, 2007), or togetherness (Wooden, 1988), the concept remains the same. "You develop a team to achieve what one person cannot accomplish alone. All of us alone are weaker, by far, than if all of us are together" (Krzyzewski, 2000, p. 71). That union of individuals with a shared vision is ultimately powerful (Senge, 1990) and functions as an imperative aspect of the current study.

A diverse range of meanings have been ascribed to team cohesiveness across cultures worldwide, yet they all share a few common qualities (Gibson & Zellmer-Bruhn, 2001). Although each definition may differ slightly from the next, selecting the meaning that is most appropriate for a given situation is essential (Larson & LaFasto, 1989). According to Larson and LaFasto, "...an understanding of teamwork is a fundamental step in assuring our future survival" (p. 7). While this understanding may be unique to the context (Gibson & Zellmer-Bruhn, 2001), it is nonetheless a pertinent part of defining any kind of a team (Dungy, 2007).

For the purposes of this research, team cohesiveness or team cohesion was defined by Carron et al. (2002), the authors of the Group Environment Questionnaire (GEQ). They claimed

cohesion to be "...a dynamic process that is reflected in the tendency for a group to stick together and remain united in the pursuit of its instrumental objectives and/or for the satisfaction of member affective needs" (1998, p. 213). The authors applied this definition to competitive sports teams specifically, stating, "Team cohesion is the most important group variable in sports teams" (2002, p. vii). Their definition for team cohesion provides an appropriate interpretation of the variable for the context of this research due to its focus on athletic teams and its multidimensional basis.

Multiple Dimensions of Team Cohesiveness

As early as 1950, sociologists discussed the complexity and multidimensionality of group cohesiveness (Festinger, Schachter, & Back, 1950). As Carron et al. (2002) specified, cohesion is characterized as multifaceted and dynamic, maintaining both an instrumental and an affective basis. They suggested that cohesiveness should be understood as not simply a trait, but as a dynamic quality that changes over time in the context of a group. In addition, Carron et al. explained that, "All groups – musical groups, work groups, sport teams, and committees – form for a purpose. Even groups that may be considered purely 'social' in nature have an instrumental basis for their formation" (p. 5). Finally, they addressed the positive affect that is produced as a result of cohesiveness within a group, regardless of the group's purpose and personality.

In the context of this study, the most pertinent of the aforementioned qualities relating to group cohesion is its multidimensionality. In order to study cohesion amongst collegiate volleyball teams, a clear understanding of the essential components of cohesiveness is necessary. According to Fiedler's Contingency Theory (1967), task and social concerns both play an integral role in groups and in members' perceptions about the group. In the same vein, Carron et al. (2002) split the primary tenets of team cohesiveness into task and social qualities. Their

conceptual model identifies the following as the main pillars of cohesion within groups: group integration – task, group integration – social, individual attractions to the group – task, and individual attractions to the group – social. Each of these components will be defined further in subsequent paragraphs.

The quality of cohesiveness which Carron et al. (2002) labeled *group integration – task* relates to individual's feelings about the togetherness of the team as associated with the task at hand. In other words, if team members are confident in the strength of the mutual purpose of the group, that group would be said to maintain positive or proficient group integration relating to the task. This aspect of Carron et al.'s definition for cohesion is associated with Senge's (1990) support of the shared vision. According to Senge, "A shared vision is not an idea... It is rather, a force in peoples' hearts, a force of impressive power" (p. 206). Task related group integration is associated with members' collective efforts to achieve team goals while *group integration – social* deals with the closeness and bonding within a team as it functions as a social unit.

As Covey (1989) stated, relationships are essential and in teams, those social relationships serve a critical role in the overall cohesion of the group (Carron et al., 2002). Jim Calhoun, a longtime, respected collegiate basketball coach explained the supreme value of the connections and interactions amongst the players on the teams he has coached over the years (2007). He specifically cited trust in those relationships as a factor for team success and conveyed that cultivating such associations is challenging but extremely gratifying. Calhoun explained, "My job is to take a broad collection of individuals and mold them into a cohesive, unified team... Talent is important, but unity is our greatest strength" (p. 209). When addressing the relationships amongst the individuals on his team, Calhoun was referring to Carron et al.'s *group integration – social* component of cohesiveness. While the group integration constructs –

task and social – of team cohesion deal with how the group functions as the whole, the remaining aspects highlight the members' personal contributions and involvements.

Carron et al. (2002) consider *individual attractions to the group – task* to be the third essential component of team cohesiveness. This element of cohesiveness deals with each member's feelings about his or her own productivity and contributions to team goals and objectives. According to Cornish (2004), one must understand individual contributions to the overall success of a group. He emphasized that the interrelations amongst all parts of a system are critical to the system's ability to function efficiently and effectively. Carron et al. stated that as individual members gain confidence in their own contributions to the group, the togetherness of the group is impacted in a positive manner.

The last pillar of team cohesion as constructed by Carron et al. (2002) is branded *individual attractions to the group – social*. This attribute of togetherness is enhanced when individual team members maintain positive feelings about their personal acceptance and social interactions with the group. Coach Mike Krzyzewski of Duke University encouraged helping each member of a team to maximize feelings of belongingness in an effort to improve cohesion (2000). This is a process which Krzyzewski cited as an integral part of any successful season and like Calhoun (2007), he acknowledged the difficulty of creating such bonds between players. In an effort to make players on his team feel valued socially, Krzyzewski invited individuals to dinner with his family and made significant efforts to meet with players and discuss life outside of basketball. The connection that each player builds with the team in a purely social sense is extremely valuable (Calhoun, 2007; Krzyzewski, 2000; Wooden, 1988) and serves as the final component of Carron et al.'s definition of team cohesiveness.

In any study, clearly defining variables is an integral step in the scientific process (Steinberg, 2011). Due to the complexity of team cohesiveness, it is important to comprehend the four primary constructs as well as their relation to one another (Carron et al., 2002). Carron et al. explained it as such, "...accepting the proposition that cohesion is a multidimensional construct does not involve accepting the premise that all dimensions are equally present across different groups to the same extent and at the same time in a group's life" (p. 6). Certain groups may rely more heavily on the social aspects of cohesion (e. g., fraternities and book clubs) while others lean more heavily on task components (e. g., work teams and committees). As teams proceed through their life cycles, different dimensions of cohesiveness are highlighted at different times. Carron et al. also stated that, "... there is more than one factor that could cause any group to stick together and remain united" (p. 6). The same may be said for the demise of a group due to insufficiencies in any particular aspect of cohesion (Carron et al., 2002).

A Purposefully Selected Definition

Carron et al.'s (2002) definition of team cohesiveness is supported by Pescosolido and Saavedra (2012) who conducted a study examining the connections between cohesion and performance in a wide sample of groups working under different conditions. The supported definition was shown to efficiently assess cohesiveness as a quality of sports teams, specifically. While Pescosolido and Saavedra stated that, "There is no such thing as a standard cohesive group" (p. 754), the highly defined structure of teams and specifically defined context make sports teams an ideal group within which team cohesion may be measured by the four factors of Carron et al.'s definition.

In a study that is revisited throughout this literature review, Barry (2013) examined cohesion amongst collegiate men's and women's sports teams. The results of his study found a

statistically significant relationship between emotional intelligence, team cohesiveness, and team performance. In an effort to accurately assess the team characteristics under investigation within his study, Barry established functional, unambiguous definitions of each. Due to its comprehensive nature and relevance in the realm of athletics, Barry utilized Carron et al.'s (2002) explanation for team cohesion.

Clearly defining a variable goes hand in hand with measurement of that variable (Creswell, 2009; Steinberg, 2011) and as a result, selecting an instrument which accurately and comprehensively assessed the variable according to the chosen definition was essential. As stated by Carron et al., "In order to develop a suitable instrument to assess any nonobservable abstraction, it is necessary to begin with a clear understanding of that construct's basic nature" (2002, p. 7). For the purposes of this study, team cohesion, as defined by Carron et al., is discussed and measured according to their guidelines. Consequently, the GEQ served as the primary assessment tool. Its role in the selected methodology for this study is addressed in subsequent sections.

Building Team Cohesion

Coaches of various sports across all levels emphasize the importance of building team cohesiveness (Calhoun, 2007; Dungy, 2007; Flaherty & Uldrich, 2009; Krzyzewski, 2000; Wooden, 1988). According to Bloom, et al. (2003), cohesion is a desirable quality on sports teams and team building is the process for facilitating its growth. Cohesive sports teams are more successful than their less unified counterparts (Barry, 2013; Bloom et al., 2003; Bolognese, 2005; Farrar, 2010; Kilty, 2000; Pescosolido & Saavedra, 2012) and as a result, a wide variety of strategies are utilized to maximize cohesiveness (Bloom et al., 2003, Bolognese, 2005; Carron et

al., 2002; Curtin, 1987; Farrar, 2010; Glass, 1999; Halpern, 2011; Hunter, 2002; Kilty, 2000; Munns, 1995; Schreiner, 2013; Windsor, 2005).

According to Thompson (2012), there are five critical steps to take when developing, supporting, and encouraging team cohesion. Through the use of many different methods and tactics, Thompson suggested helping team members build a collective identity, making it easy for them to be close together, focusing on similarities amongst team members, putting a positive spin on the team's performance, and challenging the team. Each of these steps may be completed in a variety of means, dependent upon the specifics of the team and its characteristics as well as the specifics of the context (Carron et al., 2002; Pescosolido & Saavedra, 2012; Thompson, 2012).

Building a Collective Identity

Thompson's first recommendation is to assist the team in creating a collective identity. Tony Dungy (2007) cited collective identity as critical even amongst professional football teams. Throughout his career, Dungy explained that the most successful teams have had a clearly defined identity. He stressed staying true to who you are as a team as one of the most valuable keys to success in athletics. In much the same way that Senge's (1990) shared vision promotes maximizing the efforts of all group members, the establishment of a collective identity is an integral part of improving the group integration factors of team cohesion (Carron et al., 2002).

According to Coach Jim Calhoun (2007), a unique team identity is essential. While he explained that all teams strive for maximal cohesion, he also stressed the importance of remaining distinctive. Calhoun indicated that the best teams are those teams that are special in their own right, that stand apart for one reason or another, claiming a distinguished, collective identity.

Spending Time Together

In his second step to realizing optimal cohesiveness on a team, Thompson (2012) encouraged creating means for the members of the team to be close together. Such closeness may be accomplished through the implementation of countless tactics that also should be constructed to most appropriately fit the specifics of the team and of the context (Pescosolido & Saavedra, 2012).

According to Calhoun (2007) who employs retreats as a means for building cohesion amongst team members and the coaching staff, “Togetherness doesn’t always occur organically. It has to be cultivated” (p. 73). Krzyzewski (2000) also indicated the intentionality of such processes when he stated that, “When you first assemble a group, it’s not a team right off the bat. It’s a collection of individuals just like any other group” (p. 22). These coaches, amongst others (Dungy, 2007; Flaherty & Uldrich, 2009; Wooden, 1988) have discovered the value in finding time to allow team building processes to take place. Regardless of the chosen strategy, getting team members together is beneficial in terms of creating and maintaining cohesiveness (Barry, 2013; Bloom et al., 2003; Farrar, 2010; Thompson, 2012).

Focusing on Similarities in the Group

As Carron et al. (2002) discussed, one of the primary tenets of team cohesion is manifested through each team member’s feelings about the similarity, closeness, and bonding within the team as a whole. This aspect of cohesion relates directly to Thompson’s (2012) suggestion to focus on similarities amongst the members of the team. In the same vein, Carron et al. also indicated the importance of social acceptance to each individual. When heeding the advice provided by Thompson, a coach may be able to promote feelings of self-worth within each person on the team (Carron et al., 2002) as well as empathy for other members.

Understanding others and communicating empathy was cited by Covey (1989) as one of the seven habits of highly effective people. While sharing similar characteristics is not a necessity for expressing empathy, both behaviors are integral in building strong interpersonal bonds (Rogers, 1975). Rogers argued that empathy and congruence go hand in hand, both playing vital roles in the strengthening of any relationship:

In the ordinary interactions of life...it is probable that congruence is the most important element...Then, in my experience, there are other situations in which the empathic way of being has the highest priority...In such situations deep understanding is, I believe, the most precious gift one can give to another. (p. 9)

While differences can be appreciated and valued, helping team members to recognize their similarities and demonstrating respect for each individual's experience is a critical step in the team building process (Thompson, 2012).

Maintaining a Positive Attitude About Performance

According to Thompson (2012), maintaining a positive attitude about the performance of the team is helpful in establishing a strong, unified foundation. Efforts to put a positive spin on the execution of the group can greatly contribute to the success of that group (Covey, 1989), particularly in terms of cohesion (Thompson, 2012). As stated by Scheier and Carver (1993), not only is thinking positively important in terms of keeping a group together, but it also acts as a significant determinant in future efforts, "People who see desired outcomes as attainable continue to strive for those outcomes, even when progress is slow or difficult" (p. 26).

Carol Dweck (2006) described the value of positive thinking in her theory on mindsets. "...the view you adopt for yourself profoundly affects the way you lead your life" (p. 6). As Dweck explained in her mindset theory, there may be no influence greater than that of our own

self-perceptions and the same applies to groups. “It’s not what happens to us, but our response to what happens to us that hurts us” (Covey, 1989, p. 73).

Challenging the Team

Finally, Thompson (2012) recommended challenging the team in order to maximize cohesion. Salas et al. (2008) declared that as tasks become more complex, teams become increasingly close knit. When faced with challenges, teams must rely more heavily on the strength provided by the cohesiveness amongst the members (Dungy, 2007; Krzyzewski, 2000; Wooden, 1988) and this reliance helps to deepen the bonds that exist (Salas et al., 2008). The intensity of a situation should not be overlooked as an important variable in the intensity of the formed relationships (Thompson, 2012). For this reason, coaches have challenged teams to participate in outdoor adventures (Kilty, 2000) and ropes courses (Glass, 1999) as exercises which build cohesiveness.

Team challenges, according to Isaksen and Lauer (2002), create an ideal environment for groups to improve upon the characteristics that promote productive teamwork. They listed the following as qualities which may be tested and developed through the presentation of challenges to the group: a clear and elevating goal, results-driven structure, competent team members, unified commitment, collaborative climate, standards of excellence, external support and recognition, principled leadership, appropriate use of the team, participation in decision making, team spirit, and embracing appropriate change. While the challenges that are utilized to build team cohesion may differ from those the team faces in its primary function, the aforementioned characteristics are transferable to any situation (Isaksen & Lauer, 2002). As a result, challenging a team, in any fashion, has the potential for increasing team cohesiveness.

Katzenbach and Smith (1993) provided an additional perspective on the inherent value in challenging teams:

A demanding performance challenge tends to create a team. The hunger for performance is far more important to team success than team-building exercises, special incentives, or team leaders with ideal profiles. In fact, teams often form around such challenges without any help or support from management. Conversely, potential teams without such challenges usually fail to become teams. (p. 3)

The impact of challenge on a team, whether building cohesion on a previously established team or working to create a team, is profound (Katzenbach & Smith, 1993).

Utilizing Multiple Tactics

While Thompson (2012) provided a list of the pertinent considerations for creating, enhancing, and maintaining team cohesion, specific activities for doing so were not proposed – for good reason. Studies have suggested that the list of possible strategies for building team cohesiveness is extensive (Bloom et al., 2003, Bolognese, 2005; Carron et al., 2002; Curtin, 1987; Farrar, 2010; Glass, 1999; Halpern, 2011; Hunter, 2002; Kilty, 2000; Munns, 1995; Schreiner, 2013; Windsor, 2005) and dependent upon the unique qualities of the team itself (Carron et al., 2002; Pescosolido & Saavedra, 2012; Thompson, 2012). The research that is explicitly applicable to the realm of collegiate athletics should be addressed.

In a study which examined one particular team building strategy of a NCAA Division III football team, Hunter (2002) investigated the role that team building played in the development of team cohesiveness. The research was conducted through the use of qualitative interviews and therefore the GEQ was not utilized, though Carron et al.'s (2002) definition of team cohesion served as the theoretical model for the study. Hunter found that the examined activity

“...provides an opportunity for the players to create or build upon relationships and bond and begin to trust one another” (p. 36). He concluded that cohesion improves with the use of team building interventions and though his study focused on a single intervention, others have encouraged a variety of team building activities with the intent of enhancing cohesiveness (Bloom et al., 2003; Kilty, 2000; Salas et al., 2008).

In an investigation which followed Hunter’s (2002) conclusion about the value of team building initiatives, specific tactics for improving cohesiveness were sought by a team of researchers in Canada. Bloom et al. (2003) conducted a study with 29 collegiate head coaches from a variety of sports in a league equivalent to the NCAA. The study’s intent was to create an understanding of team building strategies specific to university sports. Through the utilization of focus group interviews, Bloom et al. discovered that there is no simple formula for the implementation of team building activities. In an effort to increase cohesion, a season-long process must be carefully designed. They stated that, “Interestingly, our coaches unanimously said there was not one place where they could acquire team building ideas. Rather, they exhausted as many sources as possible” (p. 141). As a result, Bloom et al. concluded that to maximize success, “Coaches also need to uncover as many different team building activities as possible” (p. 141). Finally, in a study which most closely mimics the selected population for the current research, Farrar (2009) explored cohesion and team building activities in women’s community college volleyball. The GEQ was selected as the most appropriate instrument for assessing team cohesiveness and the relationship between team building activities and cohesion was examined. Results of the study did not yield statistically significant results in terms of a correlation between the number of team building activities and an increase in team cohesion; however, in an analysis of other related studies as well as a critical evaluation of the researcher-

created portion of the survey, Farrar concluded that "... if the wording of her questionnaire would have been different; this outcome would have been similar to the other studies concerning consistent use of team building activities and an increase in team cohesiveness" (p. 142).

Community Service in Intercollegiate Athletics

As explained by Chalk (2008), "Institutions of higher learning have contributed to their communities for many years. Universities were founded on the strong principles of service and have continued to embrace that commitment" (p. 12). Chalk, the NCAA (1999), and Stahley and Boyd (2006) all described the inherent value of student-athlete participation in service work and noted that a significant amount of community service is completed by collegiate athletes each year. While athletes partake in such projects for a variety of reasons (Chalk, 2008; NCAA, 1999; Stahley & Boyd, 2006), community service had yet to be explored specifically as a potential team building activity.

Any means for creating, improving, and maintaining team cohesion is worthy of investigation (Bloom et al., 2003). A great number of tactics and strategies have been accepted as cohesion-enhancing activities (Bloom et al., 2003; Bolognese, 2005; Carron et al., 2002; Curtin, 1987; Farrar, 2010; Glass, 1999; Halpern, 2011; Hunter, 2002; Kilty, 2000; Munns, 1995; Schreiner, 2013; Windsor, 2005) and while community service has not been denied that title, neither has it been labeled as an efficient and effective means for increasing team cohesiveness. Identifying as many strategies as possible for building cohesion in a team is in the best interest of anyone striving to maximize the success of a group (Bloom et al., 2003). This study examined the potential of participation in community service amongst collegiate athletes as a specific cohesion-building tactic.

Although it was unknown at the time of this study whether or not community service activities impact the amount of cohesiveness on collegiate athletics teams, there is significant support for service work as a positive deed in the local communities (Budhai, 2012), on campuses (Kelley, 2013), and for the total development of the individual student-athletes (Fingers, 2005; Johnson, 2013; McAllister, 2006; NCAA, 1999; Sande, 1984; Walker, 1992; Westfield, 2010; Yunker, 2009). According to Sande, “Contemporary educational thinking strongly endorses the notion that all the resources of a community should be involved in the educational process” (p. 379). The research is lacking pertaining to any impact community service may have on the team as a whole. In heeding the advice of Salas et al. (2008), it is critical to continue to study and seek out additional procedures for enhancing team cohesion. The connections between research and practice in terms of prospective team building processes should be advanced (Salas et al., 2008). This study strove to fill a small portion of the gap in the knowledge base pertaining to community service as either an individual, partial team, or whole team activity.

Implications for Leaders

The implications of this research for leaders in higher education, including coaches, athletic directors, and university presidents, were derived from theories which have defined the field of leadership for over seventy years. Examining this study through the lens of leadership theory in addition to the literature on team cohesion and community service is an essential process. Based in theory and supported by recent research, the results of this study are valuable to campus leaders.

Central to the theoretical basis for this research are the values of relationships and mutual purposes within groups. These concepts apply to teams that strive to maximize cohesiveness

(Calhoun, 2007; Dungy, 2007; Flaherty & Uldrich, 2009; Krzyzewski, 2000; Wooden, 1988) as well as campuses that yearn for a meaningful connection with the local community (Bringle & Hatcher, 2002; Budhai, 2012; Chalk, 2008; Hoy & Miskel, 2013; Kelley, 2013; Kowalski, 2011; Vogelgesang & Astin, 2000). Aspects of transformational leadership according to Burns (1978) as supported by other theorists (Bass & Riggio, 2006; Covey, 1989; Dweck, 2006; Herzberg, 1959, Knowles, 1984; Maslow, 1943; Sande, 1984; Senge, 1990) created the basis in leadership for this study.

Transformational Leadership Lens

Transformational leadership, as defined by Burns (1978) is leadership in which "...one or more persons *engage* with others in such a way that leaders and followers raise one another to higher levels of motivation and morality" (p. 20). He explained that such leadership relies heavily on individuals' motivations and needs as well as a commitment to mutual goals. Within his theory, Burns stated that leadership is about leading people and as a result, relationships are essential. In any endeavor, considerations of the people who are involved can be an integral determinant of success or failure (Covey, 1989).

According to Burns (1978), "The small group can be one of the most solid, durable, and highly structured entities in human society" (p. 292). This notion is relevant to the topic of team cohesion, but can also be applied to the development of positive community relations, both which depend upon strong leaders. Burns described the importance of relationships across broad and specific populations, stating "The leader can be central to the cohesion and viability not only of nations and armies but of smaller, more ordinary groups" (p. 287). When leading a team, a department, or an entire campus, Burns theory may be used to formulate the pertinent guiding principles for success.

Human Needs

Central to Burns' (1978) transformational leadership is the recognition of individuals' aspirations and needs:

The essential strategy of leadership in mobilizing power is to recognize the arrays of motives and goals in potential followers, to appeal to those motives by words and action, and to strengthen those motives and goals in order to increase the power of leadership, thereby changing the environment within which both followers and leaders act. (p. 40)

In the context of the current study, such an understanding was established through the identification of players' and coaches' needs in terms of team cohesiveness and campus and community needs in relation to community service. Burns asserts that acknowledging such desires is essential. "The leader's fundamental act is to induce people to be aware or conscious of what they feel – to feel their true needs so strongly, to define their values so meaningfully, that they can be moved to purposeful action" (Burns, 1978, p. 44).

Burns is not the only theorist to highlight the inherent role of human necessities and motivations as a cause for movement, change, or growth (Bass & Riggio, 2006; Dweck, 2006; Herzberg, 1959; Maslow, 1943). As explained by Maslow's (1943) Hierarchy of Human Needs, all individuals crave the satisfaction of universally shared essentials. One of the most inspirational of those desires relates to feelings of belongingness, as defined by Maslow, "The need for social esteem, we have noted, is a powerful one" (p. 34). Herzberg (1959) identified such emotions as satisfying factors in work situations, meaning that a person is motivated by his or her ties to other individuals. However, establishing strong bonds is not the sole responsibility of one party or the other.

In order to develop feelings of belongingness, mutual efforts are required. According to Maslow (1943) "...not to be overlooked is the fact that the love needs involve both giving *and* receiving love" (p. 381). This notion is supported by the intentionality and processes of building connections on teams (Bloom et al., 2003; Bolognese, 2005; Carron et al., 2002; Curtin, 1987; Farrar, 2010; Glass, 1999; Halpern, 2011; Hunter, 2002; Kilty, 2000; Munns, 1995; Schreiner, 2013; Windsor, 2005) and within communities (Budhai, 2012; Fingers, 2005; Johnson, 2013; Kelley, 2013; McAllister, 2006; NCAA, 1999; Sande, 1984; Walker, 1992; Westfield, 2010; Yunker, 2009) that were previously addressed.

A Shared Vision

Another key component of transformational leadership applicable to this study is the adoption of a shared vision. As Senge (1990) noted, a mutual purpose is vital in guiding a group to the realization of goals and objectives. Within transformational leadership, dedication to the group cause is of utmost importance, "This commitment, which may end in martyrdom, must survive all defeats and setbacks" (Burns, 1978, p. 202). Coaches and theorists alike assign great value to the adoption and recognition of a common purpose as a key to success. Dweck (2006) explained that greatness is rarely, if ever, achieved by one person alone. Her sentiments are supported by the expertise of coaches like John Wooden (1988) who indicated the superiority of recognizing team achievements and efforts. Wooden asserted, "It is amazing how much can be accomplished if no one cares who gets the credit" (p. 104). The notion of the team operating as the priority is conveyed through Burns' theory of transformational leadership while serving as a cornerstone for this research.

The influential role of a shared vision applies to teams across numerous disciplines (Senge, 1990). Katzenbach and Smith (1993), business analysts, highlighted the difference

between teams and groups as it relates to a common purpose, stating that, “Teams are more productive than groups that have no clear performance objectives because their members are committed to deliver tangible performance results” (p. 15). This distinction is clarified further by Parker (2008) who included the establishment of a common goal in his definition of a team:

A group of people is not a team. A team is a group of people with a high degree of interdependence geared toward the achievement of a goal or completion of a task. In other words, they agree on a goal and agree that the only way to achieve the goal is to work together. (p. 13)

The value of a shared vision must not be overlooked (Katzenbach & Smith, 1993; Parker, 2008; Senge, 1990). Katzenbach and Smith (1993) identified clear performance objectives as the primary factor which separates high performing teams from their less successful counterparts. “The best teams invest a tremendous amount of time and effort exploring, shaping, and agreeing on a purpose that belongs to them both collectively and individually. This ‘purposing’ activity continues throughout the life of the team” (p. 50). Katzenbach and Smith’s research on fifty different teams within thirty companies provided compelling support for a shared vision in the business world and beyond.

In a similar vein, Isaksen and Lauer (2002) discussed the importance of what they describe as a productive goal structure. According to their research, goal structures can be cooperative, competing, or individualistic. Teams that share a vision are characterized by Isaksen and Lauer as working within a cooperative goal structure. In such groups, in order for individuals to be successful, the group must succeed. The authors explained that all members of a group are more productive when goals are communal. As explained by Isaksen and Lauer, a

shared vision contributes significantly to the environment and the interactions between team members:

In groups with cooperative goal structures, interaction among members is characterized by effective communication and exchange of information, facilitation of each others' productivity, helping, and sharing... The climate is characterized by high acceptance and support among members, high trust, decreased fear of failure, and a problem-solving orientation to conflict. (p. 79)

A variety of terms are used to illustrate the concept of a shared vision. Sociologists utilize the term "mutual purpose" (Covey, 1989), coaches the term "goal" (Calhoun, 2007; Krzyzewski, 2000; Wooden, 1988), and business analysts the phrases "clear performance objectives" (Katzenbach & Smith, 1993) and "cooperative goal structures" (Isaksen & Lauer, 2002). While the vernacular may differ, the premise is the same as was suggested by Senge (1990) - a shared vision serves as a powerful force which unites people in pursuit of a common purpose.

Meaningful to Individuals

Finally, consideration of adult learning theories also played a role in this study. Leaders interact primarily with adults to maximize team cohesiveness (Bloom et al., 2003; Bolognese, 2005; Carron et al., 2002; Curtin, 1987; Farrar, 2010; Glass, 1999; Halpern, 2011; Hunter, 2002; Kilty, 2000; Munns, 1995; Schreiner, 2013; Windsor, 2005) and build positive community relations (Bringle & Hatcher, 2002; Budhai, 2012; Chalk, 2008; Hoy & Miskel, 2013; Kelley, 2013; Kowalski, 2011; Vogelgesang & Astin, 2000).

A leader who aims to ensure intellectual stimulation and individualized consideration, as essential tenets of transformational leadership, strives to facilitate activities that are meaningful

to adults (Bass & Riggio, 2006). Knowles (1984) promoted activities which allow adults to be self-directed, intrinsically motivated, and performance-centered. Adults prefer to apply learning immediately, taking into consideration their own life experiences and the experiences of others.

Practical Applications on College Campuses

Along with its theoretical base, there are aspects relating to each of the variables in this study that are of great concern to leaders. The two variables under examination were community service and team cohesiveness; for various reasons, both may be of interest to leaders in higher education. According to recent research, an increase in either or both of those constructs on college campuses may produce substantial benefits to the institution (Clark, 2013; Denhart et al., 2009; Kelley, 2013; Martinez, Stinson, Kang, & Jubenville, 2010; Meggyesy, 2000; Perez, 2012; Sack, 1987; Schroeder, 2003; Vogelgesang & Astin, 2000; Weatherall, 2006; Zimbalist, 1999). With its simple design and straightforward inquiry, the results of this research addressed two pertinent topics in higher education. The first issue relates to building strong positive relations with the local community. Secondly, the impact of success in athletics on institutions as a whole is discussed.

Community Relations

Schools benefit from the establishment of positive relationships with the greater community (Hoy & Miskel, 2013; Kowalski, 2011). According to Hoy and Miskel (2013), community ties improve the operation of any school system. One of the best means for fostering a mutually beneficial relationship between the school and the community is through service work conducted by associates of the university (Budhai, 2012). Historically, campuses have contributed to local communities and the need for such interactions has grown increasingly valuable over time (Chalk, 2008; Kelley, 2013).

Although service-learning is fundamentally different than community service, the interactions between campus and the greater society are similar, fostering healthy relations and developing mutual respect and understanding (Vogelgesang & Astin, 2000). In a study pertaining to the impacts of service-learning, Bringle and Hatcher (2002) stated that engagement with the local community is a critical factor in the operation of institutions of higher education. The authors explained:

The emergence of service-learning in higher education and the renewed emphasis on community involvement presents colleges and universities with opportunities to develop campus-community partnerships for the common good. These partnerships can leverage both campus and community resources to address critical issues in local communities.

(p. 503)

Such opportunities must be constructed purposefully and carefully by leaders. Bringle and Hatcher established that “Campus-community partnerships will be most meaningful and enduring when individuals conclude that each is contributing in a meaningful, effective manner to activities that have a positive impact on important civic and campus outcomes” (p. 514).

Creating a valuable connection with the community is extremely beneficial to the school and consequently, is a goal which leaders strive to realize regularly (Hoy & Miskel, 2013; Kowalski, 2011). Community service by any group, including student-athletes, will help establish such a bond with the local community (Budhai, 2012; Vogelgesang & Astin, 2000). It is in the best interest of campus leaders to initiate or expand upon healthy community relations through the implementation of community service projects. While the impact of community service on the reputation of the institution and its relationship with the community are widely accepted (Kelley, 2013), issues related to team cohesion should also be addressed.

Role of Athletics on College Campuses

Not only are athletics departments capable of contributing to the positive image of a school through service work (Kelley, 2013), but intercollegiate sports are the source of a variety of benefits for the schools themselves (Clark, 2013; Denhart et al., 2009; Kelley, 2013; Martinez et al., 2010; Meggyesy, 2000; Perez, 2012; Sack, 1987; Schroeder, 2003; Weatherall, 2006; Zimbalist, 1999). When teams experience success in terms of winning contests and championships, those benefits may be enhanced (Clark, 2013; Day, 2013; Perez, 2012; Stinson & Howard, 2007; Strode, 2006; Zimbalist, 1999). According to Perez, campus gains include increasing national exposure, substantially increasing general giving to universities, sparking additional interest from prospective students, and improving the pool of prospective students. The most substantiated of those claims relate to student enrollment and external financial support (Clark, 2013; Day, 2012; Meggyesy, 2000; Perez, 2012; Sack, 1987; Stinson & Howard, 2007; Strode, 2006; Weatherall, 2006).

Recent studies have shown that successful athletics programs enhance overall enrollment (Perez, 2012; Weatherall, 2006). Those impacts are specifically measurable through a considerable increase in attendance by local students (Perez, 2012). As a result of his research, Weatherall documented the value of intercollegiate sports as an aspect of strategic enrollment plans, claiming that outcomes may be similar across all NCAA divisions. As a result of multiple cases studies at one selected level, "... the researcher concludes that a Division III college that is facing enrollment declines, or that is designing a plan to improve its selectivity and market position, should seriously explore the possibility of using intercollegiate athletics in its integrated enrollment management strategy" (Weatherall, 2006, p. 112). In addition to potentially

increasing the number of students on campus, success in athletics also effects donor contributions.

College sports serve a revenue-producing purpose (Clark, 2013; Day, 2012; Meggyesy, 2000; Perez, 2012; Sack, 1987; Stinson & Howard, 2007; Strode, 2006). As explained by Meggyesy (2000), “In commercial terms, during the last 20 years, revenue-producing college sport has exploded. NCAA member school sports revenues have increased 8000% since 1976 and NCAA revenues went from \$6.6 million in 1977-78 to \$267 million in 1997-98” (p. 25). These numbers are enhanced to varying degrees on all campuses when teams experience an increase in the number of wins and championships (Perez, 2012; Stinson & Howard, 2007; Strode, 2006). As clarified by Martinez et al. (2010), “Meta-analysis results indicate that intercollegiate athletics does have a small, but statistically significant, effect on giving” (p. 36).

The impact that athletics have on college campuses is far-reaching and can be explained as follows, “... intercollegiate athletics departments have the ability and responsibility to enhance the missions and visions of the universities they serve” (Perez, 2012, p. 199). Success in terms of wins and losses is a product of team cohesiveness (Barry, 2013; Bloom et al., 2003; Bolognese, 2005; Farrar, 2010; Kilty, 2000; Pescosolido & Saavedra, 2012). Consequently, school leaders including, but not limited to Athletic Directors and coaches, who value success in athletics may be concerned with maximizing cohesiveness. Team cohesion has the potential to be beneficial to the school as a result of success in athletics while service work provides a means for establishing more substantial connections with the local community.

The theoretical framework for the current study was established by transformational leadership and its implications (Bass & Riggio, 2006; Burns, 1978; Covey, 1989; Dweck, 2006; Herzberg, 1959, Knowles, 1984; Maslow, 1943; Sande, 1984; Senge, 1990). This study was not

simply about speculating whether or not an activity may enhance team cohesion while bettering community relations. The purpose of this study was to determine the difference, if any, that exists between the amounts of cohesiveness on teams that employ different grouping strategies in community service activities.

Conclusion

Existing literature illustrates the value of cohesiveness in team sports. While coaches acknowledge the challenges associated with establishing and sustaining cohesion amongst team members, they continue to seek new methods for enhancing cohesion. There are numerous activities that successfully contribute to building a sense of togetherness on athletic teams; however, the utilization of community service as a unifying endeavor has not yet been examined. Communities, campuses, and participants realize the benefits of community service completed by collegiate student-athletes. If, and how, such service work impacts team cohesiveness is unknown and may be of particular interest to college and university leaders.

The established methodology for the current study is based on findings in the literature. There is a substantiated need for further connections between research and practice in relation to building cohesion on teams. A widely accepted definition for team cohesiveness served as the framework for this study and determined the most effective means for assessment. In an effort to eliminate extraneous variables and select participants that employ different grouping strategies for community service, NCAA Division I women's volleyball teams were investigated.

The literature review provided a strong foundation for this research and the theoretical framework associated with transformational leadership was extensively documented. Previous studies identify the problems associated with building team cohesiveness in collegiate sports and highlight gaps in the knowledge base. The implications of existing studies indicate the need for

the current research as a potentially integral contributor to the field. Leaders in higher education striving to improve cohesiveness amongst intercollegiate athletics teams will benefit from an understanding of the results of this study.

Chapter Three: Methodology

The purpose of this study was to determine the difference, if any, that exists between the amounts of cohesiveness on NCAA Division I Women's Volleyball teams that employ different grouping strategies in community service activities. A non-experimental design was utilized to assess the differences in team cohesion between teams that do not complete community service projects and those that do so individually, in small groups, or as an entire team. A non-parametric analysis was conducted to compare the scores as calculated for the four groups.

This study strove to shed light on the problems associated with team cohesion among collegiate volleyball teams and one potential means for improving cohesiveness. While the benefits of community service have been documented in relation to local communities, university campuses, and the individuals involved, the impact on team cohesion had yet to be explored. The independent variable for this research was the type of grouping employed in community service activities and the dependent variable was the amount of team cohesiveness as measured by the GEQ.

The current chapter of the study indicates a clear connection between the issue being addressed by the research and the chosen methodology (Bloomberg & Volpe, 2008). As Bloomberg and Volpe explained:

This chapter is intended to show the reader that you have an understanding of the methodological implications of the choices you made and, in particular, that you have thought carefully about the links between your study's purpose and research questions and the research approach and research methods that you have selected. (p. 65)

As Boudah (2011) stated, the selection of the appropriate methodology is driven by the research question. Through a comprehensive understanding of the key variables in the study, a quality

research question may be developed which indicates the most applicable method of analysis (Boudah, 2011).

Careful, intentional construction of the study's methodology is essential (Bloomberg & Volpe, 2008; Boudah, 2011; Creswell, 2009; Gay et al., 2009; Hoy, 2010; Mertens, 2005). According to Creswell (2009), "For many proposal writers, the method section is the most concrete, specific part of a proposal" (p. 145). He indicated that objectivity is the result of tightly controlled design or statistical analysis and explicitly defined variables. Creswell also noted the importance of validity and reliability scores in terms of interpreting the results of a study.

Heeding the advice of Creswell (2009), this chapter will address the pertinent aspects of the study's methodology. An explanation of the research design and procedures, including a description of the sample and the population, are provided. The data collection procedures are outlined and issues relating to reliability and validity are addressed. Finally, the researcher offers an explanation of the means for data analysis including a priori and statistical assumptions as well as statements relating to the null hypothesis.

Research Design

A quantitative nonexperimental design was used to assess the differences in amounts of team cohesiveness among NCAA Division I Women's Volleyball teams as calculated by the GEQ. The assessment was conducted one time with pre-existing groups. Each team was categorized into one of four groups based on the type of grouping utilized for service work. According to Hoy (2010), nonexperimental, or ex post facto, research is systematic empirical inquiry in which the researcher does not have control of the independent variable, or the type of grouping utilized for community service activities in the current study. In essence, the

independent variable has already occurred. Without assignment by the researcher to a control or experimental group, each team belongs to a group according to the team's standard grouping procedures. These data were provided by coaches.

The problem of team cohesion was examined through the implementation of survey research, in an effort to generalize from a sample to the population (Creswell, 2009). The survey was defined as cross-sectional because data was collected only once (Creswell, 2009). Team's cohesiveness scores were determined by averaging the scores of each team member. The mean score for team cohesion as obtained for each team served as the dependent variable. Subsequent sections of this chapter develop a comprehensive understanding of the study, including the variables and data collection procedures mentioned here.

Research Question

As was previously discussed, Boudah (2011) emphasized the importance of a clearly defined research question in terms of contributing to the selection of the research design. Boudah indicated that a quality research question serves as a guide for the conduction of the study through the identification of the relationship between the variables to be examined or tested. "A good research question is clear and specific, refers to the problem or phenomena, reflects an intervention in experimental work, and notes the target population or participants" (Boudah, 2011, p. 95).

The study at hand examined the difference in team cohesiveness scores among NCAA Division I Women's Volleyball teams that employ different grouping strategies in service projects. A straightforward, concise research question was crafted to guide this inquiry. For the purposes of this study, the following research question was examined: What is the difference, if

any, between the amounts of team cohesiveness on NCAA Division I Women's Volleyball teams that utilize different types of groupings in community service activities?

Research Hypothesis

Research questions and hypotheses shape and focus the purpose of a study (Creswell, 2009). As noted by Creswell, "Testing of hypotheses employs statistical procedures in which the investigator draws inferences about the population from a study sample. Hypotheses are used often in experiments in which investigators compare groups" (2009, pp. 132-133). In this study, the researcher employed statistical tests of the null hypothesis as well as the research hypothesis. A discussion about the null hypothesis and its role in analysis is found later in chapter three.

Whereas a null hypothesis states that there is no expected effect on the dependent variable due to the independent variable, the research hypothesis indicates the expected findings (Steinberg, 2011). For the purposes of this study, the research hypothesis was as follows: Teams that utilize whole team or partial team grouping in community service activities will exhibit higher amounts of team cohesiveness than those that complete no service or do so on an individual basis.

Population

"Decisions about who will participate in your study are critical" (Boudah, 2011, p. 186). In quantitative research, one must consider the participants, the sample, and the population when designing a study (Boudah, 2011; Creswell, 2009; Hoy, 2010; Steinberg, 2011). The participants make up the sample and are the people from whom data are collected (Boudah, 2011). According to Boudah, "A population is the larger group of people to whom you wish to generalize, apply, or relate the results of your research" (2011, p.186). In this instance, the researcher hoped to generalize the results of the study to NCAA Division I Women's Volleyball

teams. In order to do so, inferential statistics were used (Steinberg, 2011). When the goal is to say something about a larger set of scores from which the smaller set of scores is drawn, inferences must be made through the appropriate use of statistical analyses. As indicated by Steinberg, “Because the sample data do not include all cases from the population, we must infer the population parameter from the sample statistic” (2011, p. 85). A discussion about the sample and participants is found in the next section. Here, the population under examination is defined.

An important aspect of the methodology of this study was the selection of NCAA Division I Women’s Volleyball teams as the population under examination. Although cohesiveness can be assessed in various types of groups (Bruce & Ricketts, 2008; Gibson & Zellmer-Bruhn, 2001; Gummer, 1996; Salas et al., 2008), Pescosolido and Saavedra (2012) encouraged the examination of cohesiveness on sports teams in particular because of their well-defined contextual factors which make cohesion measurements meaningful. Gay et al. (2009) recommended optimizing the consistency of any study by minimizing the extraneous variables. For this purpose, it was pertinent for the researcher to select a competitive level, sport, and gender, limiting the study to the established population. Barry (2013) and Kilty (2000) suggested delimiting research to include exclusively males or females in a study pertaining to team cohesiveness because of variations in results across genders. Kilty also noted the importance of electing a single sport for exploration in an effort to reduce extraneous factors.

In the 2014 season, 334 NCAA Division I schools were competing in Women’s Volleyball (NCAA, 2014). As a result, a sample size of 179 was recommended for a 5% margin of error and a 95% confidence level (Raosoft, Inc., 2004). Sample selection and characteristics will be detailed in the subsequent section.

Sample and Participants

Adhering to the suggested sample size provided by Raosoft (2004), a random sample of 179 teams was selected from the 334 NCAA Division I Women's Volleyball teams for this study. As Creswell (2009) noted, "The most rigorous method for selecting the sample is to choose individuals using a random numbers table..." (p. 148). For the purposes of this study, a random numbers generator was utilized as provided by StatTrek.com (2014) to help create a random, single stage sample. "A single stage sampling procedure is one in which the researcher has access to names in the population and can sample the people (or the elements) directly" (Creswell, 2009, p. 148). In this instance, each college or university at the NCAA Division I level with a Women's Volleyball team had an equal chance of being selected from a randomly numbered list. Responses were solicited from teams until 179 teams had been included or the entire population had been asked to participate in the research.

The head coaches and players from the respective teams as selected through the previously discussed process served as the participants for this study, while each team made up the unit of analysis. According to the National Collegiate Scouting Association (2014), women's volleyball teams at the NCAA Division I level maintain an average of 15 players on their rosters. Participation by eight players on a single team constituted a team response.

In an effort to minimize extraneous variables, teams were selected from the NCAA Division I level only. The population included colleges and universities from all 50 states, representing a broad geographical region, but a single collegiate athletic division. Although the coaches and players provided the data for this research, teams were assigned to a group according to coaches' responses and the players mean GEQ score were calculated for each team.

A more discrete description of the variables and measurement procedures will be addressed in the following section.

Variables in the Study

A clear and comprehensive understanding of the variables in any study is essential for ensuring appropriate future use of the results (Creswell, 2009; Hoy, 2010; Steinberg, 2011). As Hoy (2010) explained:

Independent variables are those that (probably) cause, influence, or affect outcomes.

They are also called *treatment, manipulated, antecedent, or predictor* variables.

Dependent variables are those that depend on the independent variables; they are the outcomes or results of the influence of the independent variables. Other names for dependent variables are *criterion, outcome, and effect* variables. (p. 50)

This study does not claim to establish a cause and effect relationship between the types of grouping utilized in community service activities and resulting amounts of team cohesiveness. In contrast, the results of this research analyze the differences, if any, that exists in group cohesion among teams that employ different strategies for completion of service work. This type of examination does not indicate a causal relationship, but allows for the comparison of multiple groups on the basis of a single measurement. A description of the independent and dependent variables assists in clarifying this distinction.

Independent variable. In the current study, the independent variable is the type of grouping utilized in community service activities. It is categorical in nature and therefore defined as nominal data. Each team in the study fit into one of the following four categories: teams that do not complete community service; teams that complete community service on an individual basis; teams that complete community service in small groups; and teams that

complete community service as a team. The assignment of teams to one of the aforementioned groups was based on coaches' responses to an inquiry about the procedures used in the majority of community service activities. A team must only be assigned to a single category and therefore, coaches selected the category that best describes the typical team procedures in the current season.

Dependent variable. The dependent variable in this study is the mean score of team cohesion as measured by the GEQ and calculated from individual player responses (Carron et al., 2002). According to Carron et al., "...cohesion – a group construct – can be assessed through the perceptions of individual group members" (p. vii). Each of the four constructs of team cohesiveness, as defined by Carron et al. were addressed through individual survey questions. Possible team cohesiveness scores for individuals and the team range from 9 to 162. The GEQ (Appendix A) and GEQ Scoring Template (Appendix B) help to illustrate the scoring rationale of the questionnaire. The dependent variable, team GEQ score, is continuous and therefore, defined as interval level data.

Data Collection Procedures

The methodology for the current research was established in an effort to best examine the problems associated with striving for optimal team cohesiveness. Carron et al.'s (2002) definition for cohesion functions as the theoretical basis for this study. As a result, the GEQ which was created through the conceptual framework of that same definition (Carron et al., 2002) served as the primary measurement tool.

Pilot Study

Prior to sending this survey to the selected coaches, a small pilot study was conducted with collegiate coaches and ex-coaches from various levels and in a variety of sports. As

explained by Boudah (2011), the use of a pilot study helps to clarify the established research protocol while also providing meaningful feedback which may identify necessary adjustments.

According to Boudah:

If you do conduct a pilot study, you should use procedures closely defined as those in your original proposal. That way, you should have the opportunity to learn as much as possible about your research problem or phenomenon and questions in addition to how you might need to revise your methods and procedures. (p. 193)

The findings of the pilot study were applied to the current research plan to ensure utilization of the most effective means of inquiry and to minimize any potential confusion on the part of the participants.

Pilot study participants indicated that the survey as established was clear and user-friendly. The researcher heeded the advice of pilot study participants in striving to keep the email to coaches as short as possible while providing appropriate informed consent language. A few small adjustments were made in the original email to reflect the suggestions made by the pilot study coaches.

Research Procedures

Upon selection, the head coach from each school was invited to participate via email with a short survey to determine the primary grouping strategy used for community service activities and the approximate amount of time dedicated to service throughout the season. Two follow up emails were sent to maximize coaches' participation if the initial email inquiry was not successful. If email inquiries were unsuccessful, coaches were contacted via phone.

In addition to inquiries of demographic information and team community service activities, coaches were also surveyed in relation to their own role in team service work. This

was an important inquiry as the value of leaders acting as role models for followers has been demonstrated over time, across disciplines (Conger & Benjamin, 1999). According to Greenleaf (1977), “A leader initiates, provides the ideas and the structure, and takes the risk of failure along with the chance of success. A leader says, ‘I will go; follow me!’ while knowing that the path is uncertain, even dangerous” (p. 29). Words, actions, and emotions of leaders are observed by followers and have an effect on the group, forming the group’s value system (Scarnati, 1999). It was unknown whether or not this premise remained the case with collegiate coaches and community service participation on teams.

As a result of the coaches’ responses, each team was assigned to the appropriate dependent variable and the link to the corresponding player surveys was sent in return. In an effort to maximize participation, the researcher made every effort to respond to coaches as quickly as possible. It was determined that player responses were more immediate when the researcher sent the reply to the coach immediately after receipt of the coach survey. Coaches were asked to forward the online survey link to all team members.

According to Mertens (2005), “The [survey] method selected depends on the purpose of the survey, the nature of the data to be collected, cost factors, and the size and characteristics of the sample” (p. 172). Due to the ability of online survey programs to tabulate results, the massive amount of data that was collected, and participants’ access to the internet, a web-based survey was selected as the most effective means for conducting this research.

Each team had its own unique link to the survey which was sent to the players through the coaches. By creating specific team links to the survey, each team’s responses were tabulated separately. Upon completion, the teams’ scores were paired with coaches’ responses. In this manner, the dependent variable (teams’ GEQ scores) was matched with the appropriate

independent variable (community service grouping strategy as provided by coaches) after the surveys were completed by the athletes.

Demographic information was collected from the players, including year in school, year of collegiate athletic eligibility, and in-state or out-of-state student status. In addition, the researcher inquired about players' sentiments toward community service activities before administering the GEQ survey. In an effort to maximize participation, the survey was crafted in a manner that participants were able to complete with ease, in very little time (Mertens, 2005). The mean GEQ score for each team was calculated according to Carron et al.'s (2002) recommendations and the data were analyzed accordingly.

The GEQ (Appendix A) consists of 18 Likert scale inquiries. Participants selected a number between one and nine corresponding with agreement ranging from strongly disagree to strongly agree with the ends of the scale labeled as such. Over time, Likert scale surveys have been used in a variety of studies, some considering the data to be ordinal level and others using the data as interval level (Allen & Seaman, 2007). While one camp of researchers claim that Likert scale data are limited to non-parametric statistical tests (Allen & Seaman, 2007; Jamieson, 2004), others would disagree (Carron, Bray, & Eys, 2010; Norman, 2010). Norman's meta-analysis of research over the past 80 years has shown that use of Likert scale data with both parametric and non-parametric tests results in accurate and useful information. The researcher acknowledges this discussion and recognizes the legitimacy of both viewpoints. For the purposes of this study, Likert scale data, the dependent variable, was analyzed at the interval level.

Ethical considerations are pertinent in the conduction of respected research, especially when working with human subjects (Gay et al., 2009). According to Gay et al., "Although ethics

and human relations are not specific sections in a research plan, both are important to consider throughout the research process... As a researcher, you have the responsibility to behave ethically and uphold the rights of study participants” (p. 106). Following the guidelines of the University of Montana Institutional Review Board (IRB) and presenting all participants with IRB consent forms served as an essential step in assuring ethical practices throughout the course of this study.

In addition to the aforementioned efforts, it was important to establish cooperative relationships with study participants (Boudah, 2011; Creswell, 2009; Gay et al., 2009; Hoy, 2010). To protect the rights of the schools and individuals in this study, the researcher strove to foster a mutually trusting relationship with all participants. Mutual respect was achieved through the researcher’s empathetic recognition and identification of a shared understanding of the roles and responsibilities of collegiate athletes and coaches. The value of the coaches’ time required to participate in the study was communicated. Players were reminded that their responses would not be shared with coaches in order to help players feel safe and comfortable in sharing truthfully. Careful consideration of the participants involved and their priorities helped to achieve and maintain cooperation and ethical execution of the research plan (Gay et al., 2009).

In the construction of the current study, it was important to acknowledge that collegiate athletes and coaches maintain stressful schedules (Hostick, 2008; Humphrey, Yow, & Bowden, 2000; O’Shaughnessy, 2011; Wilson & Pritchard, 2005; Zimbalist, 1999) and may not have much time to dedicate to this research. As a result, the researcher made every attempt to minimize the time required to participate in this study. Additionally, it was important to note the value of success in athletics (Bolognese, 2005; Denhart et al., 2009; Lorenzen, 2010; Meggyesy, 2000; Perez, 2012; Sack, 1987; Stinson & Howard, 2007; Strode, 2006; Weatherall, 2006) and to

avoid any action which may have intentionally or unintentionally jeopardized the success of the participating teams. To prevent inadvertent impacts on the teams involved in the study, the researcher clearly articulated the purpose of the study, emphasizing the examination of community service and its role in collegiate athletics, as opposed to characteristics of the team or individuals themselves.

Reliability and Validity

The researcher critically considered issues related to reliability and validity within this study. According to Creswell (2009), such considerations help to maximize the accuracy and credibility of the findings. A critical examination of the selected instrument addressed these pertinent issues.

When constructing the GEQ, Carron et al. (2002) employed a theory-driven approach, defining team cohesiveness and its basic properties as well as how it is manifested in context. According to Carron et al.:

The search for items to include in the GEQ involved three stages or phases. During the first phase, concurrently, a literature search was conducted for cohesion terms and items, and group members were used as active agents to obtain phrases and terms that could be used to represent cohesion. The second phase involved item development and content validation. In the third phase, preliminary psychometric analyses were undertaken to reduce the initial item pool. (2002, p. 12)

The creation of an accurate assessment tool is not a simple task, yet transparency in terms of construction, validation, uses, and limitations of the instrument can help to maximize its reliability and validity (Carron et al., 2002). Whether or not an instrument measures a construct with consistency is defined by the reliability of the tool (Hoy, 2010). Validity, on the other hand,

is determined by the extent to which an instrument measures the construct it is supposed to measure (Boudah, 2011). The validity and reliability of the GEQ have been tested by researchers over the last 20 years, yielding positive results in relation to both characteristics (Carron et al., 2002).

The reliability of instruments is assessed through the establishment of Cronbach alpha values which are considered acceptable at the $\alpha = .70$ level (Pallant, 2010) and while a value of .60 - .65 is labeled undesirable, it is not considered unacceptable (Everitt, 2002). For the GEQ, Cronbach alphas have been separately calculated for each of the four main constructs of team cohesiveness. According to Carron et al. (2002), the Cronbach alpha values for the GEQ have been assessed as follows: individual attractions to the group – task, $\alpha = .75$; individual attractions to the group – social, $\alpha = .64$; group integration – task, $\alpha = .70$; and group integration – social, $\alpha = .76$. In order to avoid altering the previously noted levels of reliability, it was pertinent that the researcher carefully follow all guidelines as established in the GEQ when administering the survey (Carron et al., 2002). From the calculated α values, it can be said that the GEQ is a reliable instrument for assessing team cohesiveness.

While the establishment of reliability is critical in determining the usefulness of a survey such as the GEQ, an analysis of the validity of a tool is also essential. “The cornerstone of any measurement instrument lies in its validity – the extent to which any instrument measures what it is supposed to measure” (Carron et al., 2002, p. 27). According to Carron et al. (2002), content validity, criterion validity, factorial validity, and construct validity of the GEQ have all been established through multiple demonstrations of each type of validity over time. The utilization of the GEQ as a valid instrument was only ensured through use of the survey consistent with the conceptual model for team cohesiveness (Carron et al., 2002). In other words, if a researcher

intends to employ the GEQ to assess team cohesion, he or she must accept the theoretical framework relating to cohesiveness that provides the basis for the GEQ. The GEQ has been established as a valid instrument for measuring team cohesiveness only as defined by Carron et al.

Researchers have followed the guidelines provided with the GEQ and as a result, it has been used successfully in a variety of studies over the past 20 years (Carron et al., 2002). As cited by Carron et al., one of the main issues that must be tackled when using the GEQ as an assessment instrument is determining the appropriate unit of analysis. For the purposes of this study, the intact team was used as the unit of analysis. Because each team was assigned to a category based on the type of grouping used in community service activities, the team cohesiveness score was obtained for each group as a whole. This approach weighed heavily on the assumption associated with the GEQ that is supported by Zander (1996) and Levine and Moreland (1991). The assumption states that team cohesion can be measured by individuals' perceptions (Carron et al., 2002; Levine & Moreland, 1991; Zander, 1996) and therefore, a team score can be calculated through the collection of individual responses to the GEQ. While individual scores may vary, for the purposes of this study, a team score was required. These scores made up the values of the dependent variable. Their analysis will be discussed in the following section.

Data Analysis

Creswell (2009) recommended the following essential steps involved in analyzing data. First, he suggests reporting information about the number of participants who did and did not return the survey along with a discussion of the effect of nonresponses on survey results. Next, Creswell suggested providing an analysis of the descriptive data for the independent and

dependent variables in the study. According to Carver (1993), this phase of data analysis is vital. His advice for conducting accurate analyses is, “Insist that the results always be interpreted with respect to the data first, and statistical significance, second” (1993, p. 288). Finally, Creswell recommended identifying the inferential statistics to be presented along with any computer programs that will be utilized and presenting the results in tables or figures.

Creswell’s (2009) guidelines for analysis of data were followed in the completion of this study. Following an examination of the descriptive data, inferential statistics were analyzed and presented in a logical manner. As recommended by Carver (1993) measures of statistical significance were interpreted with respect to the data itself. A clear picture of the study, within context, is presented as a pertinent aspect of data analysis.

For the purposes of this study, a Kruskal-Wallis Test was to be used to compare the GEQ scores of the four different groups. Such an analysis is conducted when one categorical independent variable with three or more categories and one continuous dependent variable are being examined (Pallant, 2010). In this case, the type of grouping strategy utilized for community service broke the sample into four distinct groups and amounts of team cohesiveness were assessed as measured by the GEQ. There were differences in the scores between the groups that was accounted for in the statistical analysis.

The Kruskal-Wallis Test is the non-parametric alternative to a one-way analysis of variance (ANOVA). As opposed to comparing mean scores however, the Kruskal-Wallis Test compares medians (Pallant, 2010). Pallant describes this process as follows, “Scores are converted to ranks and the mean rank for each group is compared. This is a ‘*between groups*’ analysis, so different people must be in each of the different groups” (p.232).

Adjustments in the proposed analysis due to the size of the sample will be discussed in the Data Collection section of Chapter Four. While the researcher intended to utilize a Kruskal-Wallis Test, a Mann-Whitney U Test was deemed most appropriate. This method is very similar to the Kruskal-Wallis Test and is employed when the independent variable is split into just two categories. An explanation of the adjustments and resulting data analysis will be provided in Chapter Four.

This study was conducted during the 2014 competitive volleyball season and as a result, win-loss records for the season were not available at the time. While there may be noteworthy insight to garner through additional analyses pertaining to win-loss records, such examinations may be employed in future studies. The purpose of this study was to determine the difference, if any, that exists between the amounts of cohesiveness on teams that employ different grouping strategies in community service activities.

A priori Assumptions

In a quantitative study, the researcher must establish predetermined critical values for the statistical analyses. This process helps to eliminate bias in the results and conclusions (Pallant, 2010; Steinberg, 2011). In the study at hand, the alpha level for determining statistical significance as well as the effect size were set a priori. For the purposes of this research, statistical significance was determined by the alpha level which is set at .05 and an eta squared set at .01 which is considered a small effect, according to Cohen (1988). Because the list of factors contributing to team cohesion is extensive (Carron, et al., 2002; Farrar, 2010; Kilty, 2000), a small effect, in relation to community service grouping strategies, was considered statistically significant in the scope of this study.

Null Hypothesis

As Steinberg (2011) noted, the null hypothesis is a statement about the results of the study which indicates that there is no expected effect on the dependent variable due to the independent variable. In the context of the current research, this would essentially suggest that the type of grouping utilized in community service work does not affect the amount of team cohesiveness. For the purposes of this study, the null hypothesis was as follows: There will be no experimentally important or experimentally consistent difference between levels of cohesiveness in NCAA Division I Women's Volleyball teams that perform community service activities through the utilization of different grouping methods.

“The null hypothesis is used for statistical purposes only. It is not what the researcher really believes to be so, and it is not what he or she expects to find” (Steinberg, 2011, p. 155). Because the null states that there is no difference between the groups, the researcher either rejects or fails to reject the null. In quantitative research, the null hypothesis is established to determine whether or not the results of a study support or refute the research hypothesis. As Steinberg explained, it is not possible to prove a null or a research hypothesis to be true. The most that a researcher can do “...is disprove the null hypothesis and thereby gain support for the research hypothesis” (2011, p. 156). In such a case, the researcher would be stating that a difference was discovered. As a result, the null hypothesis would be rejected and there would be evidence to support the research hypothesis.

Statistical Assumptions

Issues relating to statistical assumptions play an integral role in the selection of a parametric or non-parametric method of analysis. The means for selection of the appropriate test according to the data collected will be detailed in Chapter Four.

There are two assumptions that apply to non-parametric tests which warrant the attention of the researcher (Pallant, 2010). The following assumptions apply to all non-parametric analyses, including Kruskal-Wallis and Mann-Whitney U Tests. The first assumption for non-parametric methods includes the utilization of random sampling techniques. The second pertains to independent observations in which each participant cannot belong to more than one category. Additionally, the data from one participant cannot influence that of another participant in the study. Prior to data collection, the researcher met both of these assumptions.

Summary

This study was designed to examine team cohesiveness among NCAA Division I Women's Volleyball teams. The intent of this study was to assess the difference, if any, that exists in the amount of team cohesion on teams that utilize different grouping strategies for community service activities. The selected method, driven by the research question, was nonexperimental and quantitative in nature. Through the conduction of survey research involving players and coaches on teams from across the country, this study adds to the existing knowledge about team cohesiveness and a potential team building tactic or strategy.

The preceding discussion addressed pertinent issues related to the study design, illustrating a clear picture of the manner in which this research was conducted and, most importantly, the matching of the appropriate study design to the purpose of the research. Comprehensive definitions of the variables to be measured were provided along with detailed descriptions of the participants, sample, and population. The types of data and methods for collection and analysis were identified. In addition, issues pertaining to validity and reliability of the study as well as the evaluation of hypotheses were discussed. In its entirety, this chapter clarified the vital issues considered by the researcher in the construction of the study. Following

sections provide the results of the study and corresponding conclusions based on the analysis of descriptive and inferential statistics.

Chapter Four: Results

The purpose of the current study was to assess the difference, if any, that existed in the amount of team cohesion on NCAA Division I women's volleyball teams that utilized different grouping strategies for community service activities. Participation in the study required an email response by a coach or other team administrative personnel along with player responses to an online survey. Data collection occurred during the 2014 competitive season.

Analysis of the data included the conduction of numerous descriptive statistics for both the independent and dependent variables along with the analysis of inferential statistics. For the purposes of this study, results of the Mann-Whitney U Test guided the primary investigation of comparing the players' perceptions of service work and the Group Environment Questionnaire (GEQ) scores of the teams through the categorization based on the grouping method used in community service activities. The type of grouping strategy utilized split the sample into four distinct groups initially. To appropriately accommodate for the data collected, however, new categories emerged.

In order to collect demographic information on the coaches and to assign each team to the appropriate independent variable, the researcher sent an email survey (Appendix C) to the head coaches of all 334 NCAA Division I women's volleyball teams. Coaches who did not respond received a second email and, if necessary, a personal phone call in the researcher's third attempt to encourage participation. Collaborating with the educational specialist at the American Volleyball Coaches Association (AVCA), the researcher attempted to reach coaches through the AVCA listserv as well. A total of 716 head and assistant coaches from Division I schools received two email invitations via the AVCA to participate in the study through these efforts. In

all, 76 coaches replied, including two coaches who indicated that they did not want to take part in the research and three incomplete responses.

Participating coaches answered seven demographic inquiries as well as four questions pertaining to community service activities on their teams. Most importantly, coaches indicated the type of grouping utilized in the majority of the community service work conducted by their team members. Responses lead the assignment of teams to the appropriate independent variable category (teams that do not complete community service, teams that complete community service on an individual basis, teams that conduct service work in small groups, or teams that complete community service together in one group). An incomplete response occurred when the coach did not select a single grouping category for community service activities. Those coaches received follow up emails in the researcher's effort to clarify the response to that particular inquiry. If a coach did not select just one category to describe the majority of the community service activities conducted on their team, the data could not be used due to an unidentified independent variable category.

After coaches completed the email survey, the researcher replied with a link to the player survey that coaches were to forward to the members of their team. Upon receipt of a list of team email addresses, the researcher also offered coaches the option of having the link sent directly to the players. Prior to the study the researcher defined a team response as consisting of, at minimum, eight participating players from any given team. While monitoring the response rate of the players, the researcher sent two reminder emails to the coaches from teams with an incomplete response.

Due to the nature of the statistical measures employed, the unit of analysis fluctuated between the individual and the team as needed. For the descriptive statistics, the unit of analysis

consisted of individual coaches' and players' responses. To evaluate the perceptions of community service, the type of grouping utilized in service projects on a team separated individuals into categories. In analysis of the inferential statistics pertaining to GEQ scores, the team served as the unit of analysis for the primary investigation while the researcher hunted for additional patterns in individual responses. Corresponding to the type of grouping in community service work as indicated by coaches, the researcher assigned teams to the independent variable categories.

In addition to the GEQ statements evaluated by the players, the researcher included seven statements pertaining to community service that were presented with a Likert scale identical to that employed by the GEQ. These researcher-created statements provided supplemental data relating directly to the players' perceptions of community service. This information highlighted the feelings and opinions of the athletes pertaining to service work. The researcher examined the resultant data in terms of an overall score as well as each question individually.

Comparable to the exploration of players' perceptions of community service, interpretations of the GEQ arose through the assessment of the holistic measure for cohesiveness as well as through the evaluation of each individual construct of team cohesion. As discussed in previous chapters, the GEQ may be divided into sections that assess the four primary tenets of team cohesiveness. Carron, et al. (2002) identified the following as the main pillars of cohesion within groups: group integration – task, group integration – social, individual attractions to the group – task, and individual attractions to the group – social. Data were examined in relation to each of the individual constructs and will be discussed in the analyses of the descriptive and inferential statistics.

In addition to the primary investigation involving the types of service grouping utilized, GEQ scores, and perceptions of community service, the researcher conducted a multitude of additional tests to identify other patterns in the data or a lack thereof. A search for trends in the data involved the use of analyses that seek relationships between variables as well as differences between groups. The results of such tests is reported in the latter sections of this chapter.

Finally, for the purposes of this study, the researcher evaluated the null and research hypotheses through the analysis of the data. In the context of the study, the null hypothesis suggested that the type of grouping utilized in community service work would not affect the amount of team cohesiveness. In rejecting or failing to reject the null hypothesis, the researcher tested the accuracy of the research hypothesis, or expected findings (Steinberg, 2011). In this study, the primary investigator hypothesized that teams that conducted community service as a team or in small groups would score higher on the GEQ than teams that did not complete service work or did so on an individual basis.

This chapter provides the results of the data collection and analysis as described above. A discussion of the descriptive statistics relating to the independent and dependent variables, including central tendencies and variability, precedes the analysis of the inferential statistics. An evaluation of the null and research hypotheses is included with thorough explanations of all statistical measures and procedures. A variety of tables and figures are employed to illustrate the results in addition to the narrative explanations.

Descriptive Statistics

Descriptive statistics will paint a clear picture of the demographics of the sample along with a description of the independent and dependent variables, specifically the type of grouping

utilized in community service activities and measures of team cohesiveness. Additionally, assessments of players' perceptions of community service work are included.

The population for this study consisted of the 334 NCAA Division I Women's Volleyball teams for the 2014 season. In all, 74 coaches from across the country responded to the email survey and a total of 442 players responded to the online survey. In total, the researcher garnered 32 complete team responses through the data collection efforts. Teams in the sample represented schools from across the nation, competing in a variety of athletic conferences within NCAA Division I.

In terms of team cohesion, the sample embodied a diverse group of teams and individuals from a single division in collegiate women's volleyball. Overall team GEQ scores ranged from 98.75 to 142.00. The mean team score was 125.16 with a standard deviation of 12.98. These data indicated a wide spread of scores across the range of potential totals for team cohesiveness. One cannot conclude that these differences are either typical or abnormal, but in terms of the cohesive qualities of the teams involved in the study as measured by the GEQ, participating teams' scores emphasized the diversity within the sample.

Despite the differences in measures of team cohesion, participants registered similar experiences and perceptions of community service across the sample. A total of 98.65% of the participants, including coaches and players, contributed service work to their communities as a part of their athletic commitment. Not only was there a trend to complete service, but as is highlighted in Table 1, player perceptions of community service were positive across the sample as well. Scores on each measure were rated from a score of one to nine, with higher scores representing more positive sentiments toward service work.

Table 1

Descriptive Statistics of all Players' Perceptions of Community Service

| Question | Minimum | Maximum | Mean | Standard Deviation |
|--|---------|---------|-------|--------------------|
| Enjoy Community Service | 1 | 9 | 7.11 | 1.77 |
| Meaningful to Community | 1 | 9 | 7.45 | 1.69 |
| Meaningful to Player | 1 | 9 | 7.02 | 1.88 |
| Meaningful to Team | 1 | 9 | 7.01 | 1.93 |
| Service builds Cohesion | 2 | 9 | 7.44 | 1.73 |
| Wants to increase Team Service Work | 1 | 9 | 6.81 | 2.01 |
| Does not want to Decrease Team Service | 1 | 9 | 7.07 | 2.19 |
| Community Service Total | 14 | 63 | 49.97 | 10.21 |

These data depicted a sample of teams and individuals who competed at the NCAA Division I level of collegiate women's volleyball that maintained similar feelings about community service, yet comprised teams that recorded varying perceptions of team cohesiveness. As a group, they exhibited a strong tendency to conduct community service as a part of their commitment to athletics.

In the scope of this study, recognizing the general characteristics of the sample pertinent to team cohesiveness and community service participation is a valuable process. In subsequent sections, these results will be further dissected and analyzed to reveal a more complete picture of team cohesiveness and community service experiences within the population under examination.

Demographic Information

The researcher sought demographic information from coaches as well as players. Coaches provided the data pertaining to the grouping strategy utilized in community service work and the amount of service conducted each year. Participating players provided answers to

Likert style inquiries relating to their perception of community service activities and their responses to the GEQ.

Participating coaches included 70 head coaches and four assistants. The amount of coaching experience at the collegiate level as well as in current assignments among participants ranged from one year to forty years. The coaches in the study averaged 17.33 years of experience overall with an average of 9.28 years at their current school.

Participating players responded to similar demographic questions pertaining to their amount of experience in school, on the team, and as a team leader. Out of 442 respondents, 151 identified themselves as freshmen, 112 indicated sophomore status, 92 stated they were juniors, and 83 claimed to be seniors. Players indicated how many years they have been competing on their current team. Answers ranged from one to six years. There were 178 first year team members in the sample, 94 players in their second year, 91 players competing in their third year on the team, 67 fourth year participants, nine players in their fifth year, and one player who indicated that this was her sixth year on the team. Finally, the players' identified themselves as a captain or non-captain, with 366 players representing the group of non-captains and 71 recognizing their role as team captains. Tables 2, 3, and 4 illustrate these demographic characteristics of the sample.

Table 2

Players' Year in School

| | Frequency | Percent |
|----------------|-----------|---------|
| Valid Freshman | 151 | 34.16 |
| Junior | 112 | 25.34 |
| Sophomore | 92 | 20.81 |
| Senior | 83 | 18.78 |
| No response | 4 | .90 |
| Total | 442 | 100.0 |

Table 3

Players' Year on Current Team

| | Frequency | Percent |
|-------------|-----------|---------|
| 1 | 178 | 40.27 |
| 2 | 94 | 21.27 |
| 3 | 91 | 20.59 |
| 4 | 67 | 15.16 |
| 5 | 9 | 2.04 |
| No response | 2 | .45 |
| 6 | 1 | .23 |
| Total | 442 | 100.0 |

Table 4

Players' Captain Status

| | Frequency | Percent |
|-------------|-----------|---------|
| Non-Captain | 366 | 82.81 |
| Captain | 71 | 16.06 |
| No response | 5 | 1.13 |
| Total | 442 | 100.0 |

The coaches' and players' connections to the state and local community comprised an important factor when addressing the amount of community service conducted. Therefore, in addition to inquiring about years of experience, the researcher also asked coaches and players whether or not they consider themselves to be natives of the state and/or city or town in which they currently work or attend classes. Of the 74 participating coaches in the study, 22 claimed to be natives of the state in which they coach and eight indicated that they currently coach in their hometown. There were 134 player participants who stated that they attended school in their home state while 24 claimed to be natives of the city or town in which their school is housed. The figures below depict this demographic of the sample.

Figure 1

Coaches' Native/Non-native State Status

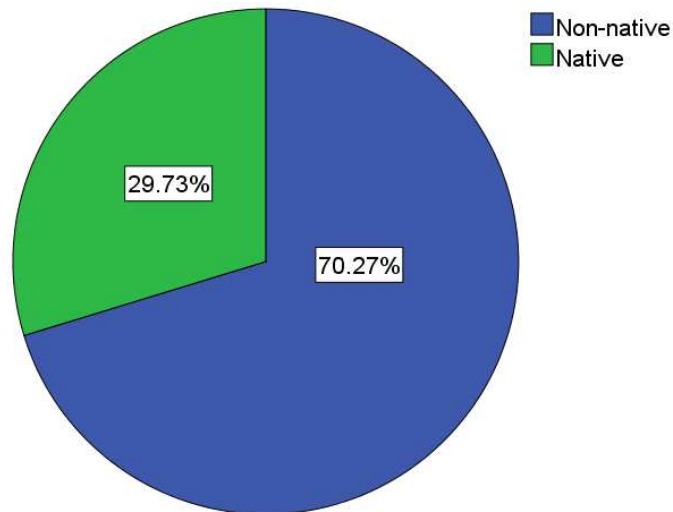


Figure 2

Coaches' Native/Non-native City/Town Status

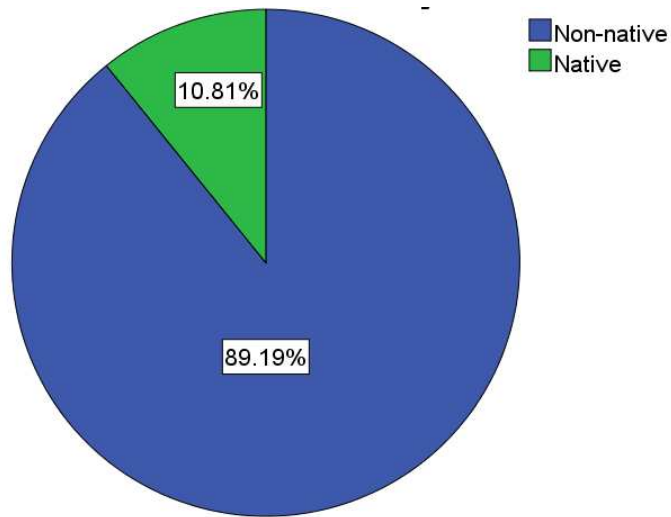


Figure 3

Players' Native/Non-native State Status

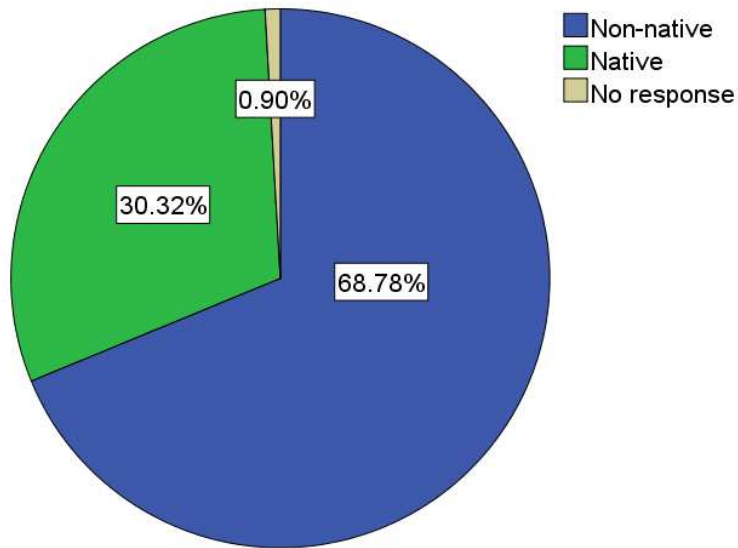
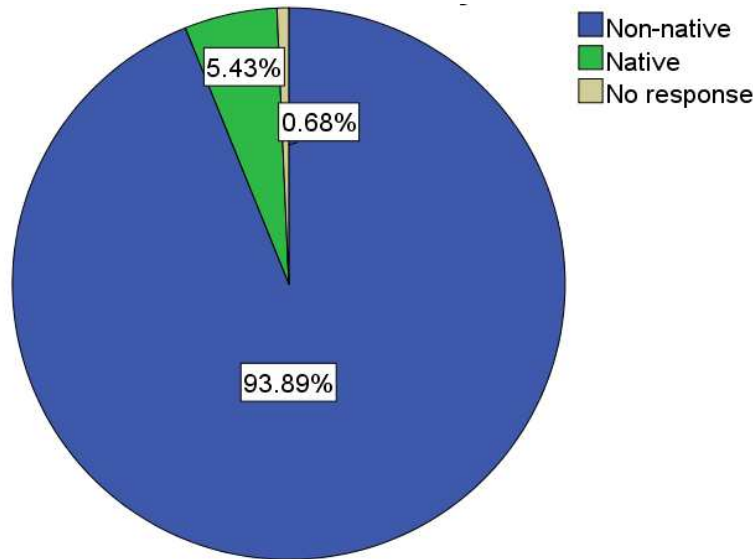


Figure 4

Players' Native/Non-native City/Town Status



Community Service Participation

In order to assure consistency in the results pertaining to each team's service participation, the surveys posed questions to the coaches (not the players) about the amount of service conducted and the grouping strategies utilized in that service work. Coaches also selected the appropriate range of hours of service that they conducted each year as well as the amount of service completed by team members. While responses to these inquiries provided ordinal level data, it is possible to note where the players or the coach conducted more or less service on any given team.

As is depicted in Figure 5, the majority of coaches indicated that their players completed 11 to 15 hours of service each year, followed by more than 20 hours, six to ten hours, 16 to 20 hours, and one to five hours, respectively. Figure 6 includes the same information regarding the amount of service conducted by the participating coaches. As indicated, most of the coaches in

the study completed six to ten hours of service each year, followed by more than 20 hours, one to five hours, 11 to 15 hours, and finally 16 to 20 hours.

Figure 5

Amount of Service Conducted by Players Annually

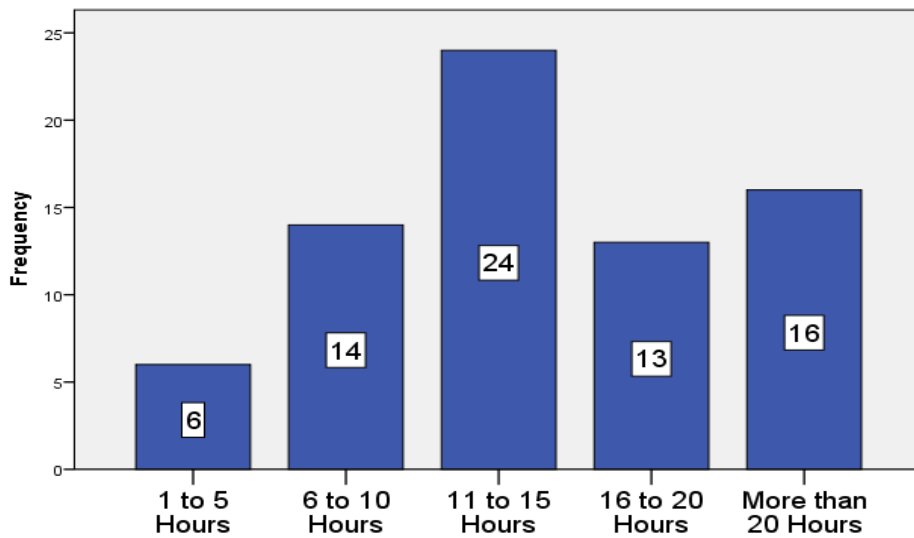
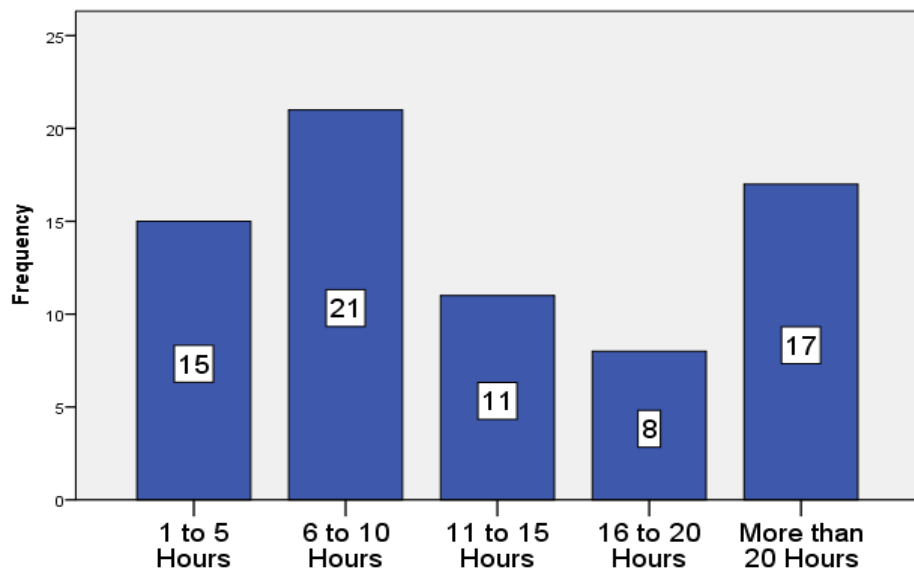


Figure 6

Amount of Service Conducted by Coaches Annually



While the preceding figures provide a general picture of the coaches' and players' time spent completing community service activities, the researcher also sought to compare the participation in service by the players on a team with that of their own coach. A comparison of the amount of service conducted by the coach and their respective team indicated that in 25 cases, the players completed more service than the coach; ten coaches reported completing more service than the players on their team; and 39 coaches did not indicate a difference in the amount of community service work. This is not to say that the amount of service was the same for the coach and players in those 39 teams, but within the options provided a difference was not specified. This information is illustrated in Table 5.

Table 5

Comparison of Players' and Coach's Service Hours

| | Frequency | Percent |
|--|-----------|---------|
| No difference in amount of service indicated | 39 | 52.70 |
| Players complete more service than coach | 25 | 33.78 |
| Coach completes more service than players | 10 | 13.51 |
| Total | 74 | 100.0 |

Finally, coaches selected the category which best described the majority of the service conducted by the players on their teams. The coaches' responses to this question resulted in the assignment of their teams to the appropriate independent variable categories. Findings categorized each team as a team that did not complete community service, did so on an individual basis, completed service work in small groups, or conducted service together as one entire group. Results indicated that of the coaches involved in the study, four of their teams did not complete service as part of their commitment to the team while eight coaches established community service opportunities for players to carry out on their own, individually. Seventeen

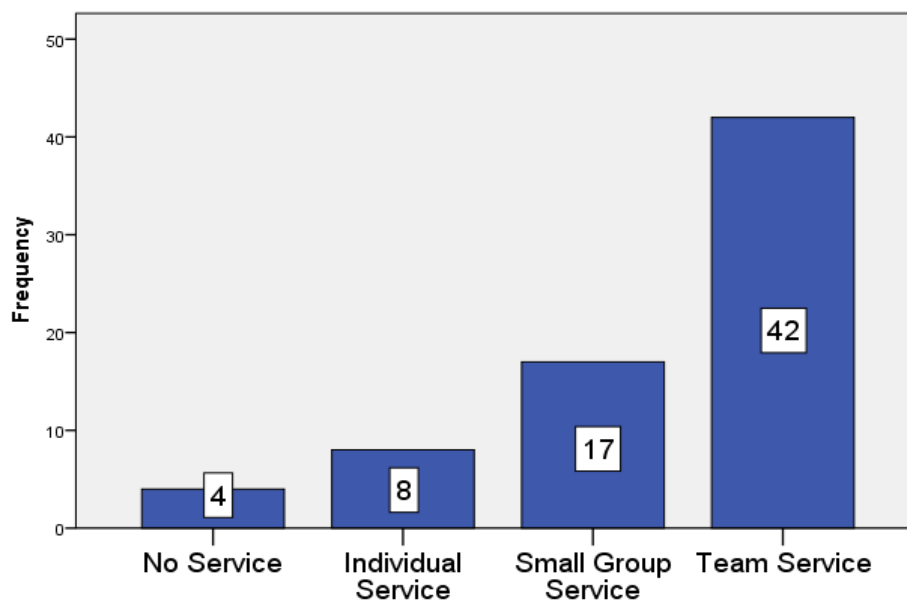
coaches stated that the members of their teams conduct service activities in small groups and 42 of the participating coaches indicated that a majority of the service work completed by their teams occurred with the entire team working together on the same project at the same time. The visual representation in Figure 7 supports the frequencies of responses portrayed in Table 6.

Table 6

Type of Grouping Utilized in Community Service

| | Frequency | Percent |
|---------------------|-----------|---------|
| No Service | 4 | 5.41 |
| Individual Service | 8 | 10.81 |
| Small Group Service | 17 | 22.97 |
| Team Service | 42 | 56.77 |
| No Response | 3 | 4.05 |
| Total | 74 | 100.0 |

Figure 7

Type of Grouping Utilized in Community Service

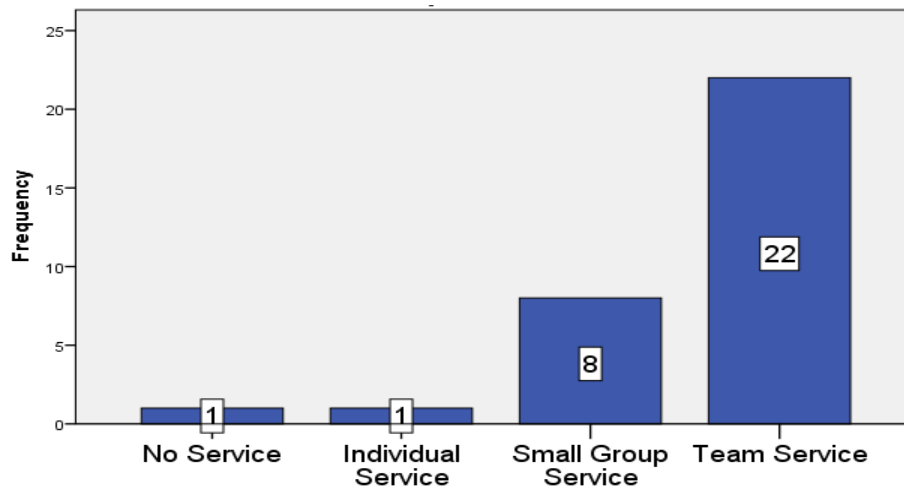
Inferential Statistics

The preceding paragraphs explained the descriptive statistics associated with the collected data. The material in this section relates to the inferential statistics conducted. According to Steinberg (2011), “With its inferential use, a statistic is used to draw conclusions about the characteristics of a larger group from which the sample was drawn” (p. 148). In terms of sampling, the researcher aimed to include enough participants from NCAA Division I Women’s Volleyball to generalize the findings across all 334 teams in the division. The 32 complete team responses received did not represent a large enough portion of the sample to allow for the generalization of the results back to the entire population of 334; however, it was possible to generalize the results across the 74 teams whose coach participated in the initial stage of the study. Consequently, the researcher made adjustments in the selected statistical measures and the generalizability of the results.

Sample Size and Implications

In this study, the population under examination included the 334 NCAA Division I Women’s Volleyball Teams in the 2014 season. According to Raosoft (2004), as indicated in Chapter Three, 179 teams comprised the ideal sample size for a study of this population. While 516 individuals (74 coaches and 442 players) contributed to this research, only 32 teams participated in a manner defined as complete. According to participating coaches, the average number of players on the roster was 15.13. The required eight player responses therefore, would constitute a majority of the team. Of the teams that provided a response to the coach email along with at least eight player responses, one team did not complete community service, one team did so on an individual basis, eight teams conducted service work in small groups, and 22 teams worked as an entire team when completing community service projects.

Figure 8

Type of Service Grouping in Complete Team Responses

Due to the small sample sizes, particularly in the categories pertaining to no service and individual service, the researcher followed the recommendation by Creswell (2009) and adapted the proposed data analysis as follows.

Specific qualities of the data determine the appropriate means for analysis (Pallant, 2010). The researcher originally planned to employ a Kruskal-Wallis Test in order to compare the GEQ scores obtained by teams within each of the four community service grouping categories. Two of the four categories consisted of one complete team each and consequently, a Kruskal-Wallis Test was deemed inappropriate. Resultant adjustments to the statistical analyses were as follows.

Data indicated that the group of teams that regularly participated in community service as an entire team greatly outnumbered the other three groups (no service, individual service, and small group service). As a result, the researcher combined two of the smaller groups and eliminated one entirely from inferential analyses. The following categories remained intact for further analysis: teams that completed community service together as one unit and teams that

completed service utilizing any other grouping method. The group eliminated from the inferential analyses included one team and the 21 individuals on that team that did not complete community service as a part of their athletic participation. Subsequent analyses therefore, included 421 individual player responses and 31 complete teams. All of the individual participants and teams conducted some amount of community service. In total, 300 individuals and 22 complete teams comprised the category of teams that worked as one unit on service projects. The group of teams that completed service individually or in small groups consisted of 121 individual players and nine complete teams. Following is the description of the tests employed to conduct the primary analyses of the data belonging to the two categories just described.

Although the researcher deemed the conduction of a Kruskal-Wallis Test inappropriate means for analysis of the data collected in this study, the techniques employed still assessed the difference between groups. Instead of examining four groups which suggests the use of an analysis of variance or a Kruskal-Wallis Test (Pallant, 2010), two distinct groups remained intact. With two groups, the conduction of a parametric t-test or the non-parametric Mann-Whitney U Test is appropriate for examining the difference between two independent groups on a continuous measure. As suggested by Pallant, non-parametric techniques are more useful than their parametric counterparts "...when you have very small samples and when your data do not meet the stringent assumptions of the parametric techniques" (p. 213). As a result, Mann-Whitney U Tests comprised the analysis of both the GEQ and players' perceptions of community service, a determination discussed further in subsequent sections.

Management of Non-responses

Part of the procedure for analyzing the results of this study included the management of non-responses. As stated by Pallant (2010):

When you are doing research, particularly with human beings, it is very rare that you will obtain complete data from every case. It is important that you inspect your data file for missing data... You also need to consider how you will deal with missing values when you come to do your statistical analyses. (p. 211)

The researcher addressed two different considerations pertaining to missing data for the purposes of this research. The management of coaches' and players' non-responses required separate procedures.

As previously discussed, coaches' responses that did not result in the assignment of their team to a single independent variable category could not be used in the analyses. This information was central to the analysis of the data and could not be managed unless corrected. The remainder of the data collected from coaches were only utilized in analyses of counts or frequencies and therefore, other data missing from coaches did not impact the results.

Players' missing data resulted in the pairwise exclusion of cases (Pallant, 2010). Exclusion of responses only occurred in cases of missing data required for specific analyses, yet that data remained intact for other analyses for which the necessary information existed. The analysis of player data often included summing responses to Likert scale inquiries in different categories and thus, a missing response resulted in the miscalculations of that player's total score for the given category. The researcher excluded such data from the analysis.

Mann-Whitney U Test

The inferential analyses of these data included the comparisons of two different groups of participants on continuous variables. In both cases, the two groups were teams that conducted community service individually or in small groups and those that completed service work as an entire team. The two different continuous variables were the scores obtained through the assessment of players' perceptions of community service activities and the GEQ.

As discussed by Pallant (2010), a vital decision the researcher must make is the selection of a parametric or non-parametric technique for assessing the results of a study. While the independent samples t-test is the parametric method used to compare the mean scores of two different groups, the Mann-Whitney U Test provides the non-parametric alternative for the comparison of two groups. Pallant's advice guided the determination of the appropriate technique made by the researcher.

Pallant (2010) discussed the difference between parametric and non-parametric statistics as follows:

The word 'parametric' comes from the word 'parameter', or characteristic of a population. The parametric tests (e.g. t-tests, analysis of variance) make assumptions about the population from which the sample has been drawn. This often includes assumptions about the shape of the population distribution (e.g. normally distributed). Non-parametric techniques, on the other hand, do not have such stringent requirements and do not make assumptions about the underlying population distribution (which is why they are sometimes referred to as distribution-free tests). (p. 213)

Steinberg (2011) further explained that non-parametric tests are suited for extremely small sample sizes because, "Even a distribution that is inherently normal will not acquire a symmetric

shape until there are a sufficient number of scores” (p. 370). Non-parametric tests are not based on a probability distribution for a population parameter and therefore, parameters such as the mean and standard deviation are irrelevant (Steinberg, 2011). Due to the small sample size, which pertains to the analysis of the GEQ and the absence of a normal distribution for the perceptions of community service, the researcher considered the utilization of non-parametric most applicable to the data.

The appropriate test for the type of data collected in this study was the Mann-Whitney U Test. Pallant (2011) described the function of the Mann-Whitney U Test:

Instead of comparing means of the two groups, as in the case of the t-test, the Mann-Whitney U Test actually compares medians. It converts the scores on the continuous variable to ranks across the two groups. It then evaluates whether the ranks for the two groups differ significantly. As the scores are converted to ranks, the actual distribution of the scores does not matter. (p. 227)

An important factor in the selection of the Mann-Whitney U Test was the consideration of the assumptions that must be met for a non-parametric test. Those assumptions include random sampling and independent observations (Pallant, 2010), both met through the established data collection procedures.

Player Perceptions of Community Service

The proposed analysis for this study specifically included only an examination of the type of grouping utilized in community service activities and amounts of team cohesiveness. Upon collecting the data, the researcher determined that an assessment of player perceptions of community service could provide valuable insight. In addition to the primary analysis of the

Mann-Whitney U Test relating to amounts of team cohesiveness, a similar statistical analysis addressed perceptions of community service.

Individual scores illustrated the player perceptions of community service in relation to the type of grouping utilized in community service activities. In addition to examining the overall score for perceptions of service, the researcher analyzed each question independent of the others. Each player's responses comprised data points within one of the two established categories. The analysis included 421 participants, 300 of those participants belonging to teams that conducted service work as one group and 121 members of teams that completed community service in small groups or individually.

The analysis of the Mann-Whitney U Test revealed that there was no statistically significant difference between the two groups in terms of players' responses to each of the seven inquiries pertaining to community service or in the total combined scores. As shown in the following table, the median responses for both groups to the seven community service statements and the combined scores from all measures were similar across the categories.

Table 7

Median Values for Questions Pertaining to Perceptions of Community Service

| Question | Team Service | Individual or Small Group Service | Total |
|--|--------------|-----------------------------------|-------|
| Enjoy Community Service | 7.00 | 7.00 | 7.00 |
| Meaningful to Community | 8.00 | 8.00 | 8.00 |
| Meaningful to Player | 7.50 | 7.00 | 7.00 |
| Meaningful to Team | 8.00 | 8.00 | 8.00 |
| Service builds Cohesion | 8.00 | 8.00 | 8.00 |
| Wants to increase Team Service Work | 7.00 | 8.00 | 7.00 |
| Does not want to Decrease Team Service | 8.00 | 8.00 | 8.00 |
| Community Service Total | 52.00 | 51.00 | 52.00 |

Note. Grouping Variable: Type of Community Service Grouping Utilized

The researcher conducted analyses of each of the individual questions pertaining to community service along with total scores for players' perceptions, revealing unique differences and levels of significance as illustrated in Table 8. Overall, a Mann-Whitney U Test revealed no statistically significant difference in players' perceptions of community service of members of teams that completed team service (Md = 52.00, n = 300) and members of teams that conducted individual or small group service (Md = 51.00, n = 121), $U = 15800.50$, $Z = -.02$, $p = .99$, $r = .001$.

Table 8

Mann-Whitney U Test Results for Questions Pertaining to Perceptions of Community Service

| Question | Mann-Whitney U | Z | p |
|--|----------------|-------|-----|
| Enjoy Community Service | 16258.00 | -.18 | .86 |
| Meaningful to Community | 15602.50 | -.89 | .38 |
| Meaningful to Player | 15265.50 | -1.15 | .25 |
| Meaningful to Team | 16129.00 | -.31 | .76 |
| Service builds Cohesion | 16249.00 | -.11 | .91 |
| Wants to increase Team Service Work | 14746.50 | -1.75 | .08 |
| Does not want to Decrease Team Service | 14445.00 | -1.89 | .06 |
| Community Service Total | 15800.50 | -.02 | .99 |

Note. Grouping Variable: Type of Community Service Grouping Utilized; significant at the $p < .05$ level.

As explained by Pallant (2010), because the sample size was larger than 30, the above table provides a correction for ties in the z value.

In addition, although an effect size statistic was not provided by the Mann-Whitney U, an approximate value for r , or the effect size, was calculated (Pallant, 2010). As Creswell (2009) stated, the effect size indicates the strength of a relationship between variables. This is a measure that is left to the interpretation of the researcher and future investigators; however, its meaning in combination with a case that lacks statistical significance is of little value.

Finally, it is important to note that while the differences in player perceptions of community service across different grouping strategies were not statistically significant, there were differences nonetheless. As exhibited in Tables 7 and 8, there is little difference between the scores obtained by the two groups on most of the items as well as the overall score for perceptions of community service. It is worth noting however, that the difference on one of the items was consistent and may warrant further examination.

On the question pertaining to players' desire to conduct more team service, the players on teams that conducted a majority of their service work in small groups and individually scored higher than their counterparts that completed projects as an entire team. There was a difference in the median of 1.00 at the $p = .08$ level. This inquiry indicated the greatest difference that existed between the responses of the two groups and may have depicted a trend in perceptions worth recognizing.

Analysis of the Group Environment Questionnaire

In contrast to the analysis of individual player perceptions of community service, the unit of analysis for the GEQ was the team. The mean scores obtained from the players on each team comprised the dependent variable values for this study. The overall team GEQ score piqued the interest of the researcher originally, yet the analysis of the data broken down into the four main constructs of team cohesion according to Carron, et al. (2002) provided a more comprehensive look at team cohesion. The definition of team cohesion and its constructs eliminated the need to analyze individual questions on the GEQ. Carron, et al. indicated which questions pertain to the score obtained for each of the constructs and consequently, the researcher calculated sub scores totals for each of the constructs and for the GEQ overall.

The results of the Mann-Whitney U Test revealed no statistically significant difference in the individual measures of the GEQ or the total GEQ scores among teams that complete community service as an entire team and those that complete service work individually or in small groups. As is depicted in the following table, the medians for both groups within all four of the constructs of the GEQ and the total GEQ score are similar.

Table 9

Median Values for Each Construct of the GEQ

| Type of Grouping Utilized in Community Service | Individual Attractions to the Group – Social | Individual Attractions to the Group – Task | Group Integration – Social | Group Integration – Task | Total GEQ Team Scores |
|--|--|--|----------------------------|--------------------------|-----------------------|
| Team Service | 38.61 | 29.05 | 25.50 | 33.31 | 125.95 |
| Individual or Small Group Service | 38.44 | 28.75 | 28.38 | 33.67 | 126.00 |
| Total | 38.44 | 28.89 | 25.80 | 33.56 | 126.00 |

Although findings included separate comparisons for each of the constructs of the GEQ, the total GEQ score served as the focal point for this analysis. Results indicated that the total GEQ scores for team service (Md = 125.95, n = 22) and individual or small group service (Md = 126.00, n = 9), indicate a lack of a statistically significant difference at $U = 91.00$, $Z = -.35$, $p = .73$, and $r = .06$. These data are illustrated in Table 10.

Table 10

Mann-Whitney U Test Results for Group Environment Questionnaire Scores and Sub Scores

| | Individual Attractions to the Group - Social | Individual Attractions to the Group – Task | Group Integration – Social | Group Integration – Task | Total GEQ Team Score |
|----------------|--|--|----------------------------|--------------------------|----------------------|
| Mann-Whitney U | 98.50 | 78.00 | 86.50 | 98.00 | 91.00 |
| Z | -.02 | -.91 | -.54 | -.04 | -.35 |
| P | .98 | .36 | .59 | .97 | .73 |

Note. Grouping Variable: Type of Grouping Utilized in Community Service; significant at the $p < .05$ level.

As is noted in Tables 9 and 10, the differences between the groups on all measures were not statistically significant and while the groups' scores were not identical, the differences were slight. Consequently, overall scores of team cohesion were very similar.

Hypothesis Testing

As Creswell (2009) noted, "Quantitative hypotheses...are predictions that the researcher makes about the expected relationships among variables" (p. 132). For the purposes of this study, the researcher formulated a research and a null hypothesis. Following is the research hypothesis, or what the researcher expected to find: Teams that utilize whole team or partial team grouping in community service activities will exhibit higher amounts of team cohesiveness than those that complete no service or do so on an individual basis. In contrast, the null hypothesis for this study stated: There will be no experimentally important or experimentally consistent difference between levels of cohesiveness in NCAA Division I Women's Volleyball teams that perform community service activities through the utilization of different grouping methods. The analysis of these data required an evaluation of both hypotheses.

There is a complex relationship between the null and the research hypothesis. Because they stand in opposition to one another although not always in direct opposition, an indication of support for one indicates disagreement with the other (Steinberg, 2011). In cases where the null hypothesis is rejected, there is often evidence to support the research hypothesis. Conversely, if the researcher fails to reject the null, such data support the notion of rejecting the research hypothesis. In the case of either the null or the research hypothesis, it is not possible to prove either to be true. According to Hoy (2010), "Total verification of relations and final proof are impossible. Thus, science seeks to falsify rather than to verify. There are no absolute truths or laws in the social sciences" (p. 19). In terms of hypothesis testing in this study, only the null

hypothesis could be evaluated statistically; however, this evaluation could be used to infer support or lack of support for the research hypothesis.

Due to adjustments in the statistical analyses because of the sample size, the data proved insufficient for purposes of an independent evaluation of the research hypothesis. The four independent variable categories which were established a priori and transformed into just two distinct groups upon collection of the data resulted in the annulment of the research hypothesis. The researcher had hoped to examine teams that conducted service work in small groups or as an entire team in comparison to those that completed service individually or not at all. Because there was only one team in each of the latter categories, the researcher eliminated the category for teams that did not complete community service and the team that claimed to conduct service work on an individual basis was combined with the teams that utilized small groups. In doing this, the researcher compared teams that completed service work individually or in small groups with those that worked as an entire team on community service projects. While the adjustment was inevitable and purposeful, it eliminated any means for evaluating the research hypothesis other than through the evaluation of the null.

In research, the null hypothesis plays a substantial role in statements made in relation to statistical significance. As explained by Steinberg (2011) and discussed in Chapter Three, one can only reject or fail to reject a null hypothesis. The null is simply a statement which implies that there is no expected effect on the dependent variable due to the independent variable. Various statistical measures evaluate the accuracy of such statements. In this study, the null hypothesis testing included searching for a difference in levels of team cohesiveness according to the type of grouping utilized in community service activities. The selected statistical technique to determine an effect, or lack thereof, was the Mann-Whitney U Test. As previously illustrated,

the results of the Mann-Whitney U Test supported the null hypothesis. The findings were not deemed statistically significant and therefore, these data failed to reject the null hypothesis, providing evidence in opposition of the research hypothesis. Findings did not indicate an effect on team cohesiveness in relation to the type of grouping employed in community service.

Additional Statistical Analyses

Upon calculation of the previously discussed analyses, which revealed a lack of statistical significance, the researcher conducted a number of additional analyses in search of trends in the data. A description of the tests conducted in the investigation is provided in this section. The findings of the analysis deemed statistically significant will be discussed in detail while Table 11 includes a list of the tests that did not reveal statistical significance.

Table 11

Additional Analyses Lacking Statistical Significance

| Independent Variable | Dependent Variable | Statistical Analysis |
|---|---|---|
| State native/non-native status of coach | Player perceptions of community service, including 7 sub scores | Mann-Whitney U Test |
| State native/non-native status of players | Player perceptions of community service, including 7 sub scores | Mann-Whitney U Test |
| City/town native/non-native status of players | Player perceptions of community service, including 7 sub scores | Mann-Whitney U Test |
| Captain status of player | Player perceptions of community service, including 7 sub scores | Mann-Whitney U Test |
| Hours of service completed by players | Player perceptions of community service, including 7 sub scores | Kruskal-Wallis Test and follow up Mann-Whitney U Tests with a Bonferroni adjustment |
| Hours of service completed by coaches | Player perceptions of community service, including 7 sub scores | Kruskal-Wallis Test and follow up Mann-Whitney U Tests with a Bonferroni adjustment |

| | | |
|---|---|---|
| Comparison of service hours – no difference indicated, players complete more, or coach completes more | Player perceptions of community service, including 7 sub scores | Kruskal-Wallis Test and follow up Mann-Whitney U Tests with a Bonferroni adjustment |
| Total years coaching experience | Hours of service completed by coaches and players | Preliminary analyses for correlation |
| Total years coaching experience | GEQ, including all 4 sub scores | Preliminary analyses for correlation |
| Total years coaching experience | Player perceptions of community service, including 7 sub scores | Preliminary analyses for correlation |
| Years coaching at current school | Hours of service completed by coaches and players | Preliminary analyses for correlation |
| Years coaching at current school | GEQ, including all 4 sub scores | Preliminary analyses for correlation |
| Years coaching at current school | Player perceptions of community service, including 7 sub scores | Preliminary analyses for correlation |
| Academic year in school | Player perceptions of community service, including 7 sub scores | Kruskal-Wallis Test |
| Academic year in school | GEQ, including all 4 sub scores | Kruskal-Wallis Test and follow up Mann-Whitney U Tests with a Bonferroni adjustment |
| Year on current team | Player perceptions of community service, including 7 sub scores | Kruskal-Wallis Test and follow up Mann-Whitney U Tests with a Bonferroni adjustment |
| Year on current team | GEQ, including all 4 sub scores | Kruskal-Wallis Test and follow up Mann-Whitney U Tests with a Bonferroni adjustment |

The parameters of the particular test and the data examined determined the selection of each of the analyses utilized above. As Pallant (2010) noted, “Once you have determined what you have and what you want to do, there is often only one choice” (p. 103). The brief explanation of the purpose of each statistical technique provided below indicates its means for investigation of relationships or differences existing between the variables.

The researcher applied the Mann-Whitney U Test when searching for differences between two independent groups on a continuous variable. The calculations comprising such a test provided the researcher with a p-value. If this value was not less than or equal to the .05 established a priori, the result was not considered statistically significant. Again, the Mann-Whitney U Test is a non-parametric measure utilized in these instances due to the lack of a normal distribution on player perceptions of community service.

The researcher employed a Kruskal-Wallis Test when comparing more than two groups; such data render the Mann-Whitney U Test useless. The Kruskal-Wallis Test serves the purpose of comparing three or more groups in relation to a continuous measure. The output of such an analysis provides a p-value that can be compared to the level of significance determined before conducting the research. In this case, some of the relationships examined revealed statistical significance while others did not. When the findings of a Kruskal-Wallis Test were statistically significant, the researcher executed follow up procedures as described by Pallant (2010):

If you obtain a statistically significant result for your Kruskal-Wallis Test, you still don't know which of the groups are statistically different from one another. To find this out, you will need to do some follow-up Mann Whitney U tests between pairs of groups (e.g. between the youngest and oldest age groups). To control for Type 1 errors, you will need to apply a Bonferroni adjustment to the alpha values...

Bonferroni adjustment involves dividing the alpha level of .05 by the number of tests you intend to use and using the revised alpha level as your criteria for determining significance. (p.235)

Table 11 includes analyses that did not indicate statistical significance as result of the Kruskal-Wallis Test alone as well as those determined insignificant after the conduction of follow up analyses.

Finally, as suggested by Pallant (2010), the researcher generated scatterplots as preliminary analyses for correlations. Six of the aforementioned examinations included dependent and independent variables continuous in nature. In such instances, a correlational analysis was recommended (Pallant, 2010). Consequently, the creation of a scatterplot allowed for the examination of the distribution of the data. In all six of the cases investigated above, the data points did not indicate a linear or curvilinear relationship and, thus, further correlational analyses were unnecessary.

While the completed statistical tests above did not indicate significance, the results of one analysis did reveal statistically significant findings. The analysis assessed player perceptions of community service in relation to whether or not the coach claimed to be a native of the city or town in which the school was housed. The overall score for perceptions of community service as well as the sub scores for each inquiry comprised the dependent variable. The independent variable broke the sample into two categories – native or non-native city/town status of the coach. Data required the administration of the non-parametric Mann-Whitney U Test to test for a difference in the two groups due to the unequal sample sizes and a distribution not determined to be normal.

As illustrated in Table 12, a statistically significant difference in the player perceptions of the meaningfulness of service to the community existed when comparing players that are coached by natives of the city or town with non-natives of the city or town in which the school is located. On all other measures, the findings did not reveal a statistically significant difference.

Table 12

Mann-Whitney U Test Results for Questions Pertaining to Perceptions of Community Service

| Question | Mann-Whitney U | Z | p |
|--|----------------|-------|------|
| Enjoy Community Service | 7175.50 | -1.52 | .13 |
| Meaningful to Community | 6882.50 | -1.96 | .05* |
| Meaningful to Player | 6945.00 | -1.83 | .07 |
| Meaningful to Team | 7087.50 | -1.64 | .10 |
| Service builds Cohesion | 8128.00 | -.26 | .80 |
| Wants to increase Team Service Work | 8018.00 | -.37 | .71 |
| Does not want to Decrease Team Service | 7863.00 | -.61 | .54 |
| Community Service Total | 7415.50 | -1.85 | .07 |

Note. Grouping Variable: Coach city/town native/non-native status; Significant at the $p < .05$ level.

A Mann-Whitney U Test indicated a statistically significant difference in players' perceptions of the meaningfulness of service to the community on teams with coaches that are city/town natives (Md = 8, n = 44) and non-natives (Md = 8, n = 379), $U = 6882.50$, $Z = -1.96$, $p = .05$, $r = .10$. According to Cohen (1988), $r = .10$ represents a small effect.

An examination of the median, mean, and standard deviation determined the direction of the difference for the two categories. These data are presented in Table 13.

Table 13

Median Values of Players' Perceptions of the Meaningfulness of Service to the Community

| Coach city/town native/non-native status | N | Median | Mean | Standard Deviation |
|--|-----|--------|------|--------------------|
| Non-native | 379 | 8.00 | 7.39 | 1.71 |
| Native | 44 | 8.00 | 7.93 | 1.34 |
| Total | 423 | 8.00 | 7.45 | 1.69 |

The table above highlights the direction of the difference. While the median scores are the same, due in part to the Likert scale structure of the inquiries, the mean values help to paint a more comprehensive picture of the distribution of the data. As indicated, scores were higher amongst players coached by a native of the city or town in comparison to their counterparts whose coaches identify another locale as their hometown.

Outside of the analyses of the primary variables in this study, the researcher conducted numerous additional calculations. The majority of these additional statistical analyses indicated a lack of experimentally consistent or experimentally important relationships or differences between variables and groups; however, such data are pertinent nonetheless. An investigation of players' perceptions of community service yielded a statistically significant difference. While each readers take on results is valued (Carver, 1993), most statistical analyses and measures of significance require interpretation to provide meaningful application and hence, Chapter Five provides the implications of the previously illustrated analyses.

Summary

This chapter presented the findings of this research and related statistical analyses. The researcher provided a variety of descriptive statistics in narrative form as well as visual displays. A critical analysis of the sample size and its implications on the results of the study emerged and the investigator provided an explanation of the procedures for managing non-responses. A discussion of the roles and purposes of parametric and non-parametric statistical techniques preceded the results of the inferential analysis according to the Mann-Whitney U Test for comparing two independent groups. Additional analyses identified other trends in the data, or lack thereof.

In summary of the findings related to the primary variables under investigation, among teams that completed community service individually or in small groups in comparison with those that conducted entire team service work, there was no statistically significant difference in the amounts of team cohesiveness or perceptions of community service. Consequently, the findings failed to reject the null hypothesis.

As discussed in the review of literature, common threads traverse the world of leadership and span a variety of fields. As a result, interpretations of these findings may vary greatly from one arena to the next. The researcher will address the implications of the investigation and any trends in the data along with practical applications and suggestions for future research in the following chapter.

Chapter Five: Conclusions and Recommendations

Albert Einstein is quoted as having once said, “The more I learn, the more I realize how much I don’t know and the more I want to learn” (Wolf, 1999, p. 21). This sentiment is reiterated by the world of research. Scientific research, according to Hoy (2010), “... is a dynamic process of experimentation and observation that produces a set of interconnected principles that in turn generates future experimentation, observation, and refinement” (p. 19). Researchers constantly seek the truth, answering questions by systematically evaluating them (Boudah, 2011). It is important to remember that because knowledge is ever-evolving (Hoy), even a small contribution can open numerous doors and begin to shed light on the unknown.

Research of any kind is challenging, but there are great challenges specific to studies of human behavior (Hoy, 2010). Depending on the inquiry, the employment of a variety of methods assists in objectively studying a phenomenon. While research efforts provide extremely valuable information to the social sciences, “The bottom line is that objectivity in the social sciences is more difficult...” (Hoy, 2010, p. 4). Despite its challenges, objective research in the social sciences is no less important than in any other field and the results of such studies no less valuable.

The study at hand involves a quantitative examination of an issue in the social sciences. It was developed to help to fill a small gap in the current literature through the execution of a carefully and purposefully constructed plan. In previous sections, the researcher addressed the problem, explored existing literature, established a detailed description of the methodology, and presented the results. This chapter aims to address the findings of the data collected in relation to the challenges of the study. The significance of the results and implications pertaining to the field of leadership are illustrated. The researcher provides practical applications with

recommendations for future studies. In summary, a brief overview of the study's purpose, significance, methodology, and pertinent results brings closure to the discussion.

Challenges of the Study

As explained above, a number of challenges face researchers in any field and particularly those aimed at investigating human behavior. In the current study, the researcher encountered obstacles relating to construct definition, the use of different instruments, and the logistics of the time period for data collection. All of these challenges influenced the results of the research and garnered the attention of the critical eye.

As was discussed in Chapter Two, team cohesion is extremely complex (Carron, et al., 2002; Festinger, et al., 1950). The inability to control for extraneous variables which often characterizes a social science investigation (Creswell, 2009) compounded the challenges associated with assessing cohesiveness along with the non-experimental structure of the study (Mertens, 2005). Differences existed in the intact groups which may have impacted the results, but most importantly, the researcher could not control for the unequal sample sizes that emerged in the data collection processes.

As was discussed in Chapter Four, sample size played an integral role in the determination of the appropriate means for analysis. While a sample of 74 coaches and 442 players denoted a large sample size overall, the categories pertaining to the type of grouping utilized in community service did not receive equal representation. Among the 516 total participants, only 32 teams reported enough data to entail complete participation. Consequently, the researcher administered inevitable changes in the pre-established statistical analyses. According to the data, such changes included adjusting categories and utilizing non-parametric calculations in place of their parametric counterparts.

One of the most substantial issues impacting the results of this study was the timing of the data collection process. Because the Group Environment Questionnaire (GEQ) is a questionnaire which must be administered in the midst of a team's season, soliciting responses from teams was challenging. While the researcher made every attempt to build a relationship with the coaches, their time was limited. Coaches who responded to the efforts of the researcher may have been more interested in assisting the researcher than those that did not.

It is quite possible that the coaches who responded shared some characteristic or opinion that would make them a part of a unique sample within the entire population of 334. As a result, it is only possible to generalize the results of this study from the sample back to the population of teams represented by the original 74 coaches who responded to the invitation. Any generalizations made beyond this point, therefore pertain only to those 74 teams and coaches within NCAA Division I Women's Volleyball for the 2014 season.

Pallant (2010) stated, "In most research projects it is likely that you will use quite a variety of different types of statistics, depending on the question you are addressing and the nature of the data that you have" (p. 102). In the study at hand, the researcher conducted multiple analyses in search of trends within the data and therefore, statistical conclusions covered a wide range of analyses. Throughout the process, the researcher carefully interpreted the data, mindful of the limited generalizability. The following sections discuss the resultant appropriate conclusions as they pertain to practical applications.

Implications for Leaders

The results of this study did not reveal statistical significance in the primary investigation and although the data required the adjustment of the proposed analyses, there were numerous implications for leaders, which should be mentioned. In this section the researcher will discuss

the amount of time spent doing service, general perceptions of community service, and the differences between levels of team cohesiveness and perceptions of community service among the two categories which divided the sample.

As exhibited in the results, only one coach out of 74 reported that team members did not complete community service as a part of their athletic commitment. Evidence within the existing literature suggested that conduction of service work may be the norm (Chalk, 2008; Stahley & Boyd, 2006), however it is important to note that a staggering 98.65% of the sample including the teams and coaches, completed service work as a part of their participation in volleyball.

To remain on par with their competitors in terms of community relations (Bringle & Hatcher, 2002; Budhai, 2012; Chalk, 2008; Hoy & Miskel, 2013; Kelley, 2013; Kowalski, 2011; Vogelgesang & Astin, 2000), coaches within the sample may want to maintain some plan for community service activities. In addition, it was most common for the coaches to report an average of 11 to 15 hours of service for each player on the team each season and six to ten hours of service work for the coaches themselves. With an average of 15.13 players on each team, the amount of time being spent contributing to communities across the population is substantial and has also been proven to be worthwhile (Bringle & Hatcher, 2002; Budhai, 2012). In addition, the majority of both players and coaches did not claim to be natives of the state or city in which their school is located, indicating that regardless of their origin, participants were willing to contribute to the local community.

Leaders in any field may find these data intriguing. While the results of the study were not statistically significant, leaders may want to consider means for optimizing the value of the time spent completing service projects. According to the players in this study, 97.86% of whom complete service in small groups or with their entire team, there is general agreement with the

statement pertaining to the effectiveness of community service as a team building activity. On a scale of one (corresponding to strongly disagree) to nine (corresponding to strongly agree), the players' agreement with the statement, "I feel that community service is an effective way to build team unity or cohesion" was positive. According to the 401 players who conducted service with their entire team or part of their team, scores ranged from two to nine. The mean score was calculated at 7.44 with a standard deviation of 1.74. This is not to say that findings revealed an increase in cohesion amongst teams that conducted service in general, but the players that completed service, primarily with their teammates, indicated that they felt such efforts were worthwhile in terms of cohesion.

Coaches employ as many means as possible in striving to build unity among team members (Bloom, et al., 2003). While players indicated the perceived team building value inherent in service work, the results indicated the perceived value of community service in general to coaches regardless of the amount of service their teams did or did not conduct each year. One must be reminded of the fact that analyses of these data occurred with 73 out of 74 coaches whose teams completed service and 421 out of 442 players who conducted such work as a part of their athletic commitment. The unequal sample sizes may have illustrated a trend in NCAA Division I Women's Volleyball to include community service participation as part of players' commitment to the team, but they may also have been indicative of a bias in the response rate. Without further investigation it was not possible to determine whether or not coaches responded to the survey because they comprised a unique sample of coaches who fit a certain demographic within the entire population. Consequently, generalizations were limited to those teams whose coach responded to the original email inquiry.

Often leaders' actions can greatly influence their followers and thus, the survey collected data on the amount of service conducted by coaches with their team members. According to Conger and Benjamin (1999) the leader's position as role model for followers should not be overlooked. One could presume that on teams in which the coach participates in service activities, it is likely that team members follow and that the perceptions of those followers may be impacted by the leader's role as a participant. Findings revealed that on 52.70% of the teams in the study, the coach did not indicate a difference in the amount of service conducted compared to the athletes. In short, it was more common than not for coaches to indicate that they worked side by side with their athletes in community service endeavors. This characteristic of the coaches within the sample may have influenced the player perceptions of service work.

Leaders act as role models in a variety of fields (Conger & Benjamin, 1999) and consequently, may influence the attitudes and opinions of their followers in relation to numerous activities – including those involving community service work. In this sample, a coach working with players was more often the rule than the exception and general perceptions of community service were positive. In order to explain the underlying circumstances of those positive feelings, further studies should be conducted.

Although there was no reference for the player perceptions of community service in this study in comparison to other groups or previous research, trends emerged in the data that should be highlighted. Across the board, median responses for both groups on all of the questions ranged from a score of seven to a score of eight. On a scale of one to nine, the survey asked players to which degree they agreed or did not agree with a statement. Responses corresponding to greater numbers on the scale indicated more positive perceptions of community service work. Therefore, it was safe to say that there was a trend within the sample of positive perceptions

about community service maintained by players who completed service with their teammates as well as those who conducted service in small groups or individually. The researcher evaluated each question independently in terms of trends in the differences and similarities between the two categories.

Although statistical significance was not discovered in relation to the differences between the groups, it was important to note that differences existed within the sample. As illustrated in Table 11, on five of the seven questions and in the combined scores, findings indicated minimal difference between teams that completed community service in small groups or on an individual basis as compared to those teams that conducted service work as an entire team. Player responses to the following statements were similar across the categories:

1. I enjoy the community service activities in which our team participates.
2. I find our community service activities to be meaningful for the local community.
3. I find our community service activities to be meaningful to me, personally.
4. I find our community service activities to be meaningful to our team.
5. I feel that community service is an effective way to build team unity or cohesion.

However, on the final two statements relating to perceptions of community service, there were consistent differences between the two groups:

6. I wish we would complete more community service activities as a team.
7. I wish we would complete fewer community service activities as a team.

The table below illustrates this difference. While the Mann-Whitney U Test revealed no statistically significant difference at the $p = .05$ level in the players' responses to these particular statements, at $p = .08$ and $p = .06$ respectively, there was a difference, as indicated below.

Table 14

Median Values of Players' Perceptions of Community Service

| Type of Community Service Grouping Utilized | | Wants to increase Service Work | Does not want to decrease Service Work |
|---|----------------|--------------------------------|--|
| Team Service | N | 283 | 287 |
| | Median | 7.00 | 8.00 |
| | Mean | 6.68 | 6.92 |
| | Std. Deviation | 2.059 | 2.266 |
| Individual or Small Group Service | N | 117 | 114 |
| | Median | 8.00 | 8.00 |
| | Mean | 7.06 | 7.36 |
| | Std. Deviation | 1.940 | 2.070 |

In both groups of participants, the responses to the final two statements reflected a positive sentiment towards service work, yet the group that completed service in small groups or on an individual basis ranked higher on both. In other words, players on teams that complete service projects in small groups or individually indicated that they are more likely to want to complete more service as a team than the players who already complete service with all of their teammates. Additionally, data show that the same group is less inclined to want to do less community service as a team. Combined, these statements implied that players who did not complete community service work with their entire team would enjoy more work with their whole team or may even prefer that type of grouping over the type of grouping utilized in past experiences.

Complementing the patterns described above, the researcher conducted an additional 12 tests to further examine the attitudes and behaviors associated with community service. Findings

in 11 of the 12 tests did not reveal a statistically significant trend. In other words, the perceptions of community service amongst players and the amount of service completed were not significantly impacted by other variables in the exploration.

An exception to such findings existed in the difference of perceptions about the meaningfulness of service to the community held by players coached by individuals who were from the local city or town and those who were not. The results of the Mann-Whitney U Test indicated that players whose coaches who were natives of the local community were more likely to agree with the statement, "I find our community service activities to be meaningful to the local community" than players coached by individuals who were not native to the city or town in which their school was located.

As recommended by Thompson (1993), an interpretation of the effect size here brings increasing value to the interpretation of the data overall. At $r = .10$, the effect size is small (Cohen, 1988), yet depending on the intended application, may be enough to be considered vital. In the context of this study, it is likely that unanalyzed factors other than the origin of the coach may play a role in impacting player perceptions of community service. From this analysis, it was possible to conclude that the origin of the coach in combination with his or her statements and behaviors may slightly impact the perceptions of players regarding the value of service to the local community. It is not possible to state that the coach's native/non-native status caused this difference between the groups, but the test results uncovered a statistically significant difference which should be highlighted. A consideration of the types of service and how coaches approach and administer community service work may reveal more practically applicable data. Because this study did not explore the coaches' other behaviors pertaining to service work, no other conclusions can be made at this point.

In terms of practical information for coaches, athletic directors, and campus leaders, this study brings to light a few potential conclusions that may be of interest. With the amount of service conducted by players and coaches alike, it is in the best interest of the individuals, team, campus, and community to support such efforts and to work to maximize the benefits. Natives and non-natives of the state and local communities are willing to contribute to service projects, feeling that their efforts are worthwhile. When determining the most effective and efficient means for grouping participants for community service work, it may be best to examine the possibility of working as an entire team, especially if one of the goals is to maximize the positive feelings toward the experience as a whole.

Recommendations for Future Studies

This chapter opened with a discussion relating to the construction of knowledge and the value of inquisition in science. While this study revealed findings that may be useful to leaders and athletic coaches in particular, it serves as a stepping stone in the quest to fully understand team cohesion as well as the role of community service in groups. The following recommendations apply to further exploration as well as to new studies which have been inspired by the results and findings of this research.

Further exploration of the variables with the current sample would help provide substantial data to the field. Analyses utilizing either qualitative or quantitative techniques would allow for further investigation of the reasons explaining why players feel so positively about community service. Delving into the specific type of service activities conducted may shed light on trends not revealed in this research. Although the GEQ had to be administered during the season, an analysis of this data pertaining to win/loss records may also provide a new

perspective and interesting insight especially considering the emphasis on winning in collegiate athletics (Bolognese, 2005; Farrar, 2010; Lorenzen, 2010; Strode, 2006; Zimbalist, 1999).

Numerous studies could be conducted to build upon the findings of this research. As expressed in the review of literature, studies have shown that statistical analyses of teams and athletes may vary greatly across sport, type of team structure, gender, and competitive level (Barry, 2013; Kilty, 2000). Accounting for such adjustments in the demographics of the population, the following paragraphs identify a variety of plausible future studies.

In terms of replication, studies involving athletes at different levels may provide additional insight into the perceptions of community service as well as levels of team cohesiveness in relation to the type of grouping utilized in service work. The data collected may be vastly different or lend itself to patterns similar to this study if one were to investigate high school or professional teams. Furthermore, an examination of collegiate teams in NCAA Divisions II and III or the NAIA may produce results of interest to leaders based on the characteristics of each Division or organization. While the aforementioned variations exist just within the realm of women's volleyball, there numerous additional populations to which this study could be applied.

As Hunter (2002) noted, teams utilize a variety of team building tactics in the world of sports with different outcomes dependent upon the sport itself. A comparison of the results including independent (i.e. wrestling or track and field) and interdependent sports (i.e. basketball or rugby) would contribute to the findings of this research. Volleyball teams, competing in an interdependent sport may indicate a variety of differences pertaining to team cohesion in comparison to independent as well as other interdependent sports teams. Such data could be beneficial to leaders in different sports.

A comparison across genders may reveal information that is also useful to leaders in the field. In a study of collegiate athletes, Barry (2013) cited differences in GEQ scores which were attributed to gender. Specific to this study, an examination of the findings with a replicated study in men's volleyball may be of particular interest to coaches. Controlling for as many extraneous factors as possible to conduct a comparison across genders could contribute to the current knowledge of team cohesiveness.

While Carron et al. (2002) indicated that competitive sports teams provide an ideal setting for the examination of group cohesiveness, the expansion of this study beyond athletics may prove useful. The professional world and various cultures value team cohesion as a pertinent quality of successful groups (Gibson & Zellmer-Bruhn, 2001; Larson & LaFasto, 1989). In the business world in particular, the application of team science (originating in athletics), is used to maximize efficiency and effectiveness (Calhoun, 2007; Gummer, 1996; Krzyzewski, 2000). While the teams in different arenas may function by vastly different means, the contribution to studies on team cohesion would be of value across the board. In the same manner as sports research influences the field of business, coaches and leaders in schools may utilize information discovered in a variety of disciplines.

In addition to similar studies conducted with different populations, a consideration of the future studies inspired by this research includes, but is not limited to, exploring the role of coaches as models for service work, conducting or creating a pre- and post-test assessment for measuring the impact of team building events or activities, and an in-depth examination of the motivation behind coaches' organization of such events.

In this study, the researcher intended to touch upon the coaches' potential for acting as a role model in terms of civil service through the inquiry pertaining to coaches' participation in

community service. As stated by Greenleaf (1977), leaders should function as role models, an aspect of leadership documented across disciplines (Conger & Benjamin, 1999; Scarnati, 1999), but not thoroughly explored in relation to athletic coaches and their contributions to communities. A qualitative examination in follow up to these data may provide valuable insight for the population at hand even if conducted in diverse settings. An investigation of coaches as role models from the responses to this study alone did not provide sufficient data for a comprehensive understanding.

As mentioned in the previous section, a deeper understanding of the coaches' management of service work along with behaviors and attitudes conveyed to players would help to clarify the results of this study. In particular, an examination of any differences that exist in the coaches' actions and perceptions dependent upon whether or not they consider themselves to be natives of the local community would be useful in evaluating the data gathered here. Further analyses of such differences is suggested to provide a better explanation for the difference that exists in the players' perceptions of the meaningfulness of service to the community itself. Resultant data may offer more practical means for influencing athletes' perceptions of service work.

Future studies employing different techniques for data collection and the use of a new instrument could prove valuable to practitioners. Because the GEQ was administered one time with the participants, isolating the type of grouping utilized in community service projects as a contributing factor to team cohesion was challenging. The development of a valid instrument which measures the impact on cohesiveness specific to a single event or activity would be beneficial to future researchers as well as leaders. An assessment of team cohesion which is executed in a pre-and post-test format would also prove useful in terms of isolating community

service work. The challenge associated with either of these studies would be leaders' desires to produce long term effects on team cohesion which may be difficult to measure. Regardless of the challenges, a qualitative analysis of the variables in the current study is recommended.

To garner a more complete understanding of community service within the world of college sports, the researcher suggests an in-depth examination of the motivations associated with service projects. While it is understood that individuals, campuses, and communities benefit from the initiation of service efforts (Budhai, 20012; Fingers, 2005; Johnson, 2013; Kelley, 2013; McAllister, 2006; NCAA, 1999; Sande, 1984; Walker, 1992; Westfield, 2010; Yunker, 2009), existing literature acknowledges that such projects serve a variety of purposes in athletics (Chalk, 2008; NCAA, 1999; Stahley & Boyd, 2006). In either a follow up study to the current research or a different examination entirely, an analysis of the motivation for the establishment of community service work in collegiate sports may provide worthy insight to leaders. To realize maximal benefits for the individuals, team, campus, or community from the time contributed by coaches and athletes, one would need to be more informed of the ultimate goal and purpose of the projects.

Finally, expansion of this study to include participating teams' win/loss records as an influential variable may reveal meaningful findings for practitioners. Future studies should explore any relationship that may exist between teams' winning percentages and their scores on the variables measured in this study, particularly measures of team cohesiveness and perceptions of community service. Such analyses should take into consideration teams' overall records upon the conclusion of the season as well as their record at the time of participation in the study.

Although the current findings contributed to the field of leadership, particularly in NCAA Division I Women's Volleyball, these data provided only a glimpse into the community service

conducted by collegiate athletes across the country and any impact it may have on team cohesion. As noted, numerous implications for future studies would assist in broadening the current understanding. Fitting the characteristics of all scientific inquiries (Hoy, 2010), this study sheds light on a subject which had been rarely, if ever examined, while inspiring multiple directions for future research.

Summary

Much like the teaching profession, coaching has often been described as both a science and an art. Taking on the role of a coach is a multifaceted challenge as explained by Stewart (2013):

At no time in history have the expectations of coaches been greater than now. Gone are the times when coaching was a coach's only responsibility. Today, coaches are expected to know their sport, be great teachers, understand and apply complex risk-management regulations, individualize their approaches to athletes, be good communicators, and survive the challenge of ever-demanding parents. (p. 34)

As leaders, coaches tackle a variety of challenges, yet as Coach Calhoun (2002) expressed, there is nothing more gratifying than to help mold of a group of individuals into one cohesive unit.

While a vast array of methods are utilized to build strong, unified teams, there is still no consensus on the best practice (Kilty, 2000). Studies show that cohesive teams are more successful and consequently, efforts are made to maximize team-building opportunities at every turn (Bloom et al., 2003). One possible means for improving unity that has yet to be explored was within the realm of community service work. This study aimed to determine the difference, if any, that exists between the amounts of cohesiveness on teams that employ different grouping strategies in community service activities. Under the guise of the established study parameters,

the researcher did not discover a statistically significant trend in the data suggesting an effect on cohesiveness due to the type of grouping employed in service work.

The conduction of a qualitative analysis included a single-stage survey assessment of players and coaches within NCAA Division I Women's Volleyball. The researcher utilized the GEQ to provide the primary analysis of team cohesion and self-constructed inquiries to gauge player perceptions of community service.

The findings of this study supported existing research indicating a substantial amount of service conducted by collegiate athletes each year. While within the population at hand, few additional trends emerged, there is evidence supporting the role of coaches as influential in terms of players' perceptions of service.

The researcher made a variety of recommendations for future studies in the field while indicating practical implications for coaches, athletic directors, and campus leaders. Although the findings of this study provided a valuable insight for practitioners, they also indicate a need for continued investigation.

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Appendix A

Group Environment Questionnaire

Group Environment Questionnaire (GEQ)

Name: _____ Team: _____ Date: _____

This questionnaire is designed to assess your perceptions of your team. There are no wrong or right answers, so please give your immediate reaction. Some of the questions may seem repetitive, but please answer ALL questions. Your personal responses will be kept in strictest confidence.

The following statements are designed to assess your feelings about YOUR PERSONAL INVOLVEMENT with this team. Please CIRCLE a number from 1 to 9 to indicate your level of agreement with each of these statements.

1. I do not enjoy being a part of the social activities of this team.

| | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Strongly Disagree | | | | | | | | Strongly Agree |
2. I'm not happy with the amount of playing time I get.

| | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Strongly Disagree | | | | | | | | Strongly Agree |
3. I am not going to miss the members of this team when the season ends.

| | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Strongly Disagree | | | | | | | | Strongly Agree |
4. I'm unhappy with my team's level of desire to win.

| | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Strongly Disagree | | | | | | | | Strongly Agree |
5. Some of my best friends are on this team.

| | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Strongly Disagree | | | | | | | | Strongly Agree |
6. This team does not give me enough opportunities to improve my personal performance.

| | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Strongly Disagree | | | | | | | | Strongly Agree |
7. I enjoy other parties rather than team parties.

| | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Strongly Disagree | | | | | | | | Strongly Agree |
8. I do not like the style of play on this team.

| | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Strongly Disagree | | | | | | | | Strongly Agree |
9. For me, this team is one of the most important social groups to which I belong.

| | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Strongly Disagree | | | | | | | | Strongly Agree |

The following statements are designed to assess your perceptions of YOUR TEAM AS A WHOLE. Please CIRCLE a number from 1 to 9 to indicate your level of agreement with each of these statements.

10. Our team is united in trying to reach its goals for performance.
- | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Strongly Disagree | | | | | | | | Strongly Agree |
11. Members of our team would rather go out on their own than get together as a team.
- | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Strongly Disagree | | | | | | | | Strongly Agree |
12. We all take responsibility for any loss or poor performance by our team.
- | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Strongly Disagree | | | | | | | | Strongly Agree |
13. Our team members rarely party together.
- | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Strongly Disagree | | | | | | | | Strongly Agree |
14. Our team members have conflicting aspirations for the team's performance.
- | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Strongly Disagree | | | | | | | | Strongly Agree |
15. Our team would like to spend time together in the off season.
- | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Strongly Disagree | | | | | | | | Strongly Agree |
16. If members of our team have problems in practice, everyone wants to help them so we can get back together again.
- | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Strongly Disagree | | | | | | | | Strongly Agree |
17. Members of our team do not stick together outside of practice and games.
- | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Strongly Disagree | | | | | | | | Strongly Agree |
18. Our team members do not communicate freely about each athlete's responsibilities during competition or practice.
- | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Strongly Disagree | | | | | | | | Strongly Agree |

Appendix B

GEQ Scoring Template

GEQ

The GEQ is a general, rather than situation specific, measure of cohesiveness in sport teams.

Administration

Should be completed independently, away from distraction, and not immediately before or after a game.

Scoring

| Individual Attractions to the Group-Social (ATGS) | | Individual Attractions to the Group-Task (ATGT) | |
|--|-------|--|-------|
| Item# | Score | Item# | Score |
| 1* | | 2* | |
| 3* | | 4* | |
| 5 | | 6* | |
| 7* | | 8* | |
| 9 | | | |
| Sum | | Sum | |
| Mean | | Mean | |
| | | | |
| Group Integration-Social (GIS) | | Group Integration-Task (GIT) | |
| Item# | Score | Item# | Score |
| 11* | | 10 | |
| 13* | | 12 | |
| 15 | | 14* | |
| 17* | | 16 | |
| | | 18* | |
| Sum | | Sum | |
| Mean | | Mean | |

(*) Items are reverse scored.

Each factor is summed and then an average taken for individuals, and then the team.

Appendix C

Coach's Email Survey

Dear Coach _____,

I am a doctoral candidate at The University of Montana and I am writing to ask for your assistance with a research project about team unity and community service among NCAA Division I Women's Volleyball teams. I have coached at the collegiate level myself and I have constructed this study in a manner that will not waste your time. I understand that you are busy and I greatly appreciate any help you may be willing to give me in completing this study.

Participation in this study would require your response to ten questions and your players' responses to an online survey that will take approximately five minutes. The player survey will be administered on surveymonkey.com and results will be tabulated electronically.

Upon receipt of your response, I will send you a link to the online survey for players. I am asking for coaches help either in forwarding the survey link to all players or in acquiring a list of email addresses to send the survey myself. I will do whatever you think might be most successful.

All of the data collected – from coaches and players – will be kept confidential and anonymous. The survey will ask a few demographic questions regarding players' experience and perceptions of community service participation as well as the Group Environment Questionnaire – a survey which has been used for over 30 years to measure team cohesion on sports teams. I have attached a copy of the player survey for your information.

Collecting this data is an integral part of my doctoral dissertation. I will be surveying 179 teams across the country to complete my research. I am willing to send the results to any interested participating coaches.

Please let me know if you have any questions regarding this research. I have garnered the approval of The University of Montana Institutional Review Board (IRB), ensuring ethical research procedures and processes. To return your survey with your responses, please simply reply to this email, include the original text, and add your responses to the following questions:

Name of school:

Position of the individual responding to these questions (please select one):

Head coach ____ Assistant coach ____ Other ____

Years of collegiate coaching experience including this season:

Years at this school:

Are you a native of the state in which you currently coach:

Yes ____ No ____

Are you a native of the specific city or town in which you currently coach:

Yes ____ No ____

Number of players on the team this season:

Do the players on your team participate in community service as a part of their athletic commitment/team participation?

Yes ____ No ____

If so, please indicate which category best fits the **majority** of the activities in which student-athletes on your team complete (please select one):

____ Players do not complete any community service as a part of their membership on this team

____ Players complete community service hours individually – someone who works with

Volleyball establishes these opportunities and players complete the work individually

____ Players complete community service activities in small groups, but not as an entire team

____ Each member of the team is assigned to complete community service activities at the same time and same place as the rest of the team – service work is completed by the whole team, together

Approximate number of hours per year (from the beginning of one season to the beginning of the next) that each team member will contribute to community service activities (please select one):

1-5 hours ____ 6-10 hours ____ 11-15 hours ____ 16-20 ____ More than 20 hours ____

Approximate number of hours per year (from the beginning of one season to the beginning of the next) that you will contribute to community service activities with your team (please select one):

1-5 hours ____ 6-10 hours ____ 11-15 hours ____ 16-20 ____ More than 20 hours ____

Your time and participation in this study is much appreciated. Thank you.

Cara Cocchiarella

Doctoral Candidate

Educational Leadership

The University of Montana – Missoula

406.360.9720

Dr. Patty Kero

Committee Chair

Educational Leadership

The University of Montana – Missoula

406.243.5623

Appendix D

Player Survey

Role of Community Service in Collegiate Athletics

You are invited to participate in a research project about the impact of community service participation on team cohesiveness in NCAA Division I Women's Volleyball teams. There are no right or wrong answers to the questions contained in this survey and your identity will not be linked to your responses. The researcher is not seeking to study you or your team, rather the purpose and role of community service in collegiate athletics. This online survey should take about 8-12 minutes to complete. Participation is voluntary, and responses will be kept anonymous to the degree permitted by the technology being used.

You have the option to not respond to any questions that you choose. Participation or nonparticipation will not impact your relationship with The University of Montana. Submission of the survey will be interpreted as your informed consent to participate and that you affirm that you are at least 18 years of age.

If you have any questions about the research, please contact the Principal Investigator, Cara Cocchiarella, via email at cara.cocchiarella@gmail.com or the faculty advisor, Dr. Patty Kero at patty.kero@umt.mso.edu. If you have any questions regarding your rights as a research subject, contact the UM Institutional Review Board (IRB) at (406) 243-6672.

* By selecting the "next" button below, you are agreeing to the following statement:
I have read the above information and agree to participate in this research project.

Role of Community Service in Collegiate Athletics

Thank you for participating in this survey. You will be asked to answer questions about your team as well as your personal experiences on your current team. Your responses will be kept completely anonymous. The information you provide will not be shared with your coaches, teammates, or anyone else associated with your team and/or school.

Please keep in mind that there are not right or wrong answers to any of these inquiries. Your input will contribute to a study about unity and community service activities on NCAA Division I Women's Volleyball teams. Your participation in this study is greatly appreciated. If you have any questions regarding your participation in this study, please feel free to contact me.

Thank you and best of luck with your athletic and academic endeavors!

Cara Cocchiarella
Doctoral Candidate
Educational Leadership
The University of Montana – Missoula
406.360.9720

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Role of Community Service in Collegiate Athletics

Demographic Information

Year in school:

- Freshman
- Sophomore
- Junior
- Senior

*** Which school do you currently attend? Note: some schools may be listed by nicknames.**

How many years have you been on this team including the current season?

- 1
- 2
- 3
- 4
- 5
- 6

Are you a team captain this season?

- Yes
- No

Are you from the state in which you currently attend school?

- Yes
- No

Are you from the city/town in which you currently attend school?

- Yes
- No

