University of Nevada, Reno

How Can the Stages of Peck’s Community-Making Model be Identified and Predicted for a Collegiate Basketball Team Over the Course of Consecutive Seasons?

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Counseling

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DOCTOR OF PHILOSOPHY

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Abstract

The purpose of this study was to explore how Peck’s (1987) stages of Community-Making could be identified and predicted for a collegiate basketball team over the course of consecutive seasons by exploring Cohesion, Flow, and athletic performance. The study utilized a repeated measures longitudinal survey design with the members of a Division I collegiate level female basketball team (N = 13) during the athletic seasons of 1999/2000 and 2000/2001. Participants completed both the Group Environment Questionnaire (Carron, Brawley, & Widmeyer, 2002) and the Flow State Scale -2 (Jackson & Eklund, 2003) pre and post competition at several times over the course of the athletic seasons, respectively. Furthermore, athletic performance statistics were collected for the athletic seasons. The data in this study was analyzed using descriptive data analysis, trend graphs, correlational analyses, and regression analysis by way of discriminant analysis. The researcher examined the data analyses and looked for evidence of the stages of Community-Making over the course of the season via the constructs of Cohesion, Flow, and athletic performance. Given the constructs of Flow State, Cohesion, and performance, the researcher determined that the team experienced the stage of Emptiness/Community during the nine-game winning streak. Attributable to the literature (Peck, 1987) regarding the characteristics of a group in Pseudo-Community, the team for this study most likely experienced a stage of Pseudo-Community during the first four games of the season. Considering the dynamic and recursive nature of an athletic season, the researcher determined that the team may have in fact experienced a stage of Chaos both concurrently and subsequent to Pseudo-Community. In effect, it was
determined that the team experienced an optimal experience during the nine-game winning streak. Due to data limitations and the sample size it was not possible to predict what would occur for a second season. However, a three stage model of team development was proposed contiguous the team’s nine-game winning streak. There is a great deal that is not fully understood about the concept of team development, but suggestions are made for further research into this fascinating phenomenon.
Dedication

I dedicate this dissertation to my family, especially…

to my Mom for her willingness to rearrange and remodel the house to support my
dissertation wall, for her unyielding love and support, her unremitting dedication
in the kitchen so as to nourish me during this arduous experience, and for instilling
in me the drive to work hard;

to my Dad for his unequivocal patience, understanding, and love, willingness to
make several roundtrips to and from school, acquiescence to the constant
remodeling and rearranging, knowing when not to ask about how my dissertation
was coming along, and instilling in me the value of commitment;

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encouragement;

to Apollo for understanding when I was unable to take him on walks, and just
being my buddy when I required a good snuggle.
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Chapter 1

Introduction

Have you ever looked up at the sky and witnessed a group of geese flying north or south for winter in a “V” formation? Have you ever wondered why they do that? Mears & Voehl (1994) explained as each bird flaps its wings, uplift is created for the birds flying immediately behind. This is much like the peloton drafting in the sport of cycling. The draft provides a turbulent wake, which actually makes a vortex. This vortex creates a low pressure area behind the cyclist, which allows the cyclist directly behind the frontrunner an advantage. The same thing holds true for the birds. According to Mears & Voehl (1994), by flying in a “V” formation the whole flock can fly at least 71% further than if they were flying alone. Perhaps those who share a common direction can get where they are going faster and easier if they work together. Mears & Voehl (1994) further stated that whenever a goose falls out of formation it feels the resistance of trying to go it alone and quickly returns back to the “V” in order to take advantage of flying with the group. If people had the good judgment of geese, perhaps we would choose to work with those who are going in the same direction as ourselves. Mears & Voehl (1994) further noted the inherent teamwork in geese, as when the lead goose gets tired he rotates back in the “V” and another goose takes point. Sharing the group’s workload pays dividends. Furthermore, perhaps when the geese are honking from behind, they are encouraging those up front to keep up the hard work. Mears & Voehl (1994) reported that when a goose weakens or falls behind, two geese will fall back to help the goose down to safety and stay with him until he is ready to fly again.
Suppose if we all knew what the geese know, then we would help each other out in a similar fashion. This story is just an example to illustrate the value of membership in a group, teamwork, and unity among members. Among the lessons here is that those sharing a common direction and sense of Community can get where they are going more quickly and easily because they travel on the thrust of one another. Furthermore, there is strength, power, and protection in numbers when traveling in the same direction as others with whom we share a common goal.

Over the past few decades, organizations, including sport and business, are increasingly using groups and teams to accomplish organizational goals. Many people used the words team and group interchangeably, but there are actually several differences between a team and a group in real world applications. For example, a team's strength depends on the commonality of purpose and interconnectivity between individual members, whereas a group's strength may come from sheer volume or willingness to carry out a single leader's commands. The success of a group is often measured by its final results, while a team’s success is often measured by the process used to arrive at those results.

Over the past few decades the use of teams in the workplace has expanded dramatically in response to competitive challenges. For example, 82% of companies with more than 100 employees reported using teams (Gordon, 1992). Additionally, in 1993, 68% of Fortune 1000 companies reported using work teams and 91% reported the use of employee participation groups, as compared to 28% and 70% respectively in 1987 (Lawler, Mohrman, & Ledford, 1995). After examining reported data on over 55,000 U.S. production workers, Capelli and Rogovsky (1994) found that one of the skills
required by new work practices is the ability to work as a team. Because of the increased use of teams in all arenas academics have increasingly selected group dynamics, team processes, and team development as important areas for research to better understand the group and team process.

Understanding group processes enable leaders and coaches to implement strategies for achieving goals with their groups and teams more effectively. Select features of a group’s dynamics, such as Cohesion and Flow, provide an increased understanding of how groups can be more effective at developing over time and reaching the optimal stages of productivity. Additionally, the need to study how a team—more specifically, a sport team—develops over the course of their time together is an important step in the process of improving teamwork and overall performance outcome.

*Group and Team Development*

Professional research on group development often involves the examination of group activities and how they change over the course of a group’s time together. According to Ocker (2001) a direct link exists between the development of a team and its performance in delivering a high quality product. Therefore, investigating the developmental process of teams over time can give organizations, coaches, and administrators insight into the team’s style and how and when they can intervene. In this way, interventions may be developed and implemented to facilitate an increase in performance. In order to effectively determine a team’s developmental status, a group development model must be chosen for comparison purposes.
Several developmental models have been proposed over the years. Each model has a unique way to explain the dynamics of group development. The periods of time during which a particular set of activities occur in a group are referred to as stages or phases of group development (Miller, 2003). For some researchers (Bales & Strodtbeck, 1951; Lacoursiere, 1980; Mann, Gibbard & Hartman, 1967; Tuckman, 1965; Tuckman & Jensen, 1977), group development is a linear progression with each phase or stage resulting in a higher developmental position. Other researchers (Gersick, 1988; McGrath, 1991; Peck, 1987; Yalom, 1975) see group development as being nonlinear and even cyclical throughout the stages or phases of the group’s existence. However, recently there has been criticism (Chang, Bordia, & Duck, 2003) suggesting that group development is instead a combination of the two.

Tuckman’s (1965) model of group development has been championed as being the most widely used group development model (Gladding, 1995; Johnson & Johnson, 2003; Posthuma, 2002). However, the model has recently received criticism for its generalizability outside of the context of therapy (Cassidy, 2007). Tuckman’s four-stage model (1965) (Forming, Storming, Norming, Performing) was created as a result of the integration of more than 50 articles on the subject into one all-encompassing model. Later Tuckman and Jensen (1977) reviewed research conducted on the 1965 model and determined that a fifth stage was needed; consequently, they added Adjourning. The model generally referenced in group development literature is Tuckman's 1965 model. Consistent with previous literature, the adjourning stage will not be considered in this study. Following is a brief description of the model.
The first stage is known as the Forming stage. This is where a group goes through a period of pseudo-cohesiveness, where the members all present to get along and be in agreement with one another. The group then moves to a stage of Storming, where hostility emerges as a result of members no longer wanting to act as if everything is copasetic and instead wanting to share their individual differences and opinions, which “serve as resistance to group influence” (Tuckman, 1965, p. 396). After the Storming stage, members then transition into a stage of Norming, where Tuckman (1965, p. 396) indicates “resistance is overcome” and the process of the group can be described as an increased cohesiveness in which members start to define their roles as a part of the group, as opposed to being independent. Lastly, in the Performing stage, the group moves into a place where all members work together with the minimum amount of emotional interaction.

Tuckman’s major contribution to the group development literature came from his distinct description of interpersonal and task activities. Tuckman (1965) proposed that groups advance through the interpersonal stages of Forming, Storming, Norming, and Performing, as well as through the task activities with the same linearity.

Cassidy (2007) suggests that Tuckman’s model may not be as clearly applicable to groups outside of therapeutic context due to its categorical or distinct stages of Storming and Norming. Cassidy (2007) argued that Tuckman’s model labels conflict as a stage rather than considering the factors or concerns which drive the conflict. For example, Jehn and Mannix (2001) examined the dynamic nature of group conflict and its relationship to team performance. The study showed significant variations between high and low performing teams in their timing of different types of conflict engagement.
Consequently, Jehn and Mannix (2001) concluded that team conflict must be examined as a dynamic rather than static process. Other theorists have suggested that developmental processes are considerably more complex than can be captured by hierarchal forms such as Tuckman's (Gersick, 1988; McGrath, 1990, 1991; Miller, 2003; Poole, 1981, 1983; Seeger, 1983).

Until research is conducted to identify the correct group development model for certain environments, we must rely on models which partially explain the dynamic occurring within a group of interest. However, by assuming a model which may not explain the group development behaviors of a particular population, harm could be done to the team, resulting in poor performance. For example, it could be harmful to a sport team to use a linear model like Tuckman’s (1965) model to explain the developmental process of a sport team. The development of a sports team has been explained as nonlinear, whereby the team jumps between the normal stages of development with no certain formula. For that reason, it is important that research be conducted in an attempt to find an appropriate team development model which explains the unique team dynamic for a sport team. To this end, Peck’s Community-Making model (1987) might be a more suitable model to describe the unique developmental process that occurs in a sport team.

Community-Making

“In and through Community lies the salvation of the world”

Scott M. Peck (1987, p. 17)

Scott M. Peck (1987) introduced the stages of Community-Making for the reason that he believed communities, like individuals, are unique, and groups that are assembled
deliberately to form themselves into communities characteristically go through certain stages in the process. Given the suggestion that sport is a unique entity, then a unique approach to the developmental process of a sport team should be considered. For the purposes of this study the process of Community-Making is being likened to the process a sport team goes through over the course of their time together. Peck (1987) proposed four stages of Community-Making in the order of Pseudo-Community, Chaos, Emptiness, and Community. However, unlike Tuckman (1965) Peck (1987) does not insist that Community development occurs by formula. Rather, he suggests that certain communities or groups, for example those in crisis or any other temporary formation may skip over one or more stages. However, Peck (1987) indicated that the stages presented are the “natural, usual order of things” (p. 86), but cannot account for all the different group purposes.

According to Peck (1987), and similar to Tuckman’s stage of Forming, the natural response of any new group that seeks to become a true Community is to fake it. In other words, there is a honeymoon period to each new group, where members come together and both consciously and subconsciously hide their individual differences and opinions in an effort to keep the waters calm and everyone happy. This stage is what Peck refers to as Pseudo-Community. Naturally a new team would wish to create an environment of camaraderie and Cohesion where everyone is welcome and worthy of being a member of the team. Peck (1987) suggests this attempt at Pseudo-Community is neither malicious nor evil; rather it is often an unconscious process whereby people want to like and be liked to avoid premature conflict. An example in sport would be when a team meets the first day of preseason and everyone acts as though they like everyone and there are no
differences to be expressed. According to Peck the essential dynamic of Pseudo-Community is conflict-avoidance, which customarily leads to the disregarding of individual differences.

According to Peck (1987), the second stage, Chaos, occurs when the individual differences find their way out into the open. The Chaos is usually a result of erroneous attempts by members to smooth things over. Chaos is similar to Tuckman’s Storming, stage; yet, Peck (1987) is concerned with the antecedents of Chaos, as opposed to suggesting it is a distinct and finite stage in the developmental process. However, Chaos is an “essential part of the process of Community development” (Peck, 1987, p. 91). Unfortunately, unlike Pseudo-Community, Chaos does not disappear once it is acknowledged because now individual differences are out in the open and instead of trying to hide them, members try to eliminate them. This stage is marked by a time when the superficial Cohesion (Pseudo-Community) starts to crumble due to the individuals fighting for their roles and voicing their opinions for who deserves what. At this point Chaos ensues. The stage of Chaos is a time for fighting and struggle. However, that is not its real purpose. An example in sport would be when the coach assigns positions as either a starter or bench player. At this point individuals no longer require there to be harmony among everyone; instead, dissention and interest in the self becomes prevalent. As Peck states, Chaos is necessary and serves a productive purpose once the team is able to “fight gracefully.” Even in the most fully developed and successful teams, there are times when a fight or struggle is necessary, but it’s the way in which the team fights that matters. However, according to Peck (1987), attempts to organize a group cannot lead to true Community because “organization and community are incompatible” (p. 93). Even
though Chaos is uncomfortable and unproductive and appears to be a step backwards from Pseudo-Community, it does in fact provide the opportunity for the truth to surface, making Chaos a productive place to be. Peck believed “fighting is far better than pretending you are not divided. It’s painful, but it’s a beginning” (1987, p. 94). With that said there are two avenues out of Chaos: (1) reorganize back to Pseudo-Community, or (2) enter into the third stage of “Emptiness.”

Depending upon the level of Cohesion and commitment to the group as a whole, the chosen avenue will be one of regression back to the safe Pseudo-Community or forward to a vulnerable stage of Emptiness. This is one of the points at which Peck and Tuckman separate. Peck is concerned with the deep intrapersonal process that occurs in a team. According to Peck (1987), this is a commitment to the team as a whole, where they empty themselves of the barriers of communication. An example in sport is when each individual lets go of their need to measure their performance against each other. This is a time for the individual athletes to let go of their egos and accept their role as a part of a team instead of as an individual. This is a time when members let go of their preconceptions and need to control the situation. This stage is characteristic of a high level of group Cohesion and synergy. Without letting go of some of the control, a group cannot truly reach Community.

A similar state would be one of Flow, as described by Jackson & Csikszentmihalyi (1999). The state of Flow as experienced by athletes involves a complete immersion in the task at hand and a clear focus and commitment to the group goal, while letting go of concerns of self.
Community is the fourth stage of the developmental process. In and through Emptiness is where true Community is possible. However, according to Peck, there are times when a group will fall out of Community. Like Tuckman’s (1965) Performing stage, Community is a time when the group is acting as a unit rather than as individuals.

Like most group development models, the first, second, and final stages are reasonably similar. However, there appears to be a shift in the stage preceding the final stage. At the Emptiness stage of the Community-Making model, a unique and awesome group dynamic occurs which cannot be overlooked. At this point a group becomes a team and a team becomes a true Community. This experience of Community-Making and resulting rewards are very similar to the concept of Flow. Flow has been termed as an optimal experience, much like the experience of Community. For example, Phil Jackson, the former coach of the World Basketball Champions the Chicago Bulls, describes Flow in his book *Sacred Hoops* (1995) as a psychological sync between the players. This synergy is much like the harmony required for the experience of true Community. Jackson (1995) stated:

The most effective way to forge a winning team is to call on the players’ need to connect with something larger than themselves (p.5)… If a player is out of sync psychologically with everyone else, the team will never achieve the harmony needed to win a championship. (p.18)

*Flow State and Performance*

Researchers have been interested in the study of optimal human functioning, which Csikszentmihalyi (1975) describes as Flow. As described by Csikszentmihalyi
(1990), Flow is the experience of total immersion and focus on a specific task. It is this state that keeps the doctoral student plugging away at her literature review, while forgetting to eat or take a break. The same experience of total immersion is what keeps the marathon runner running past their pain and fatigue on their journey towards optimal performance. While in a state of Flow a pilot can make a transatlantic flight and report that it felt like only an hour. Without moments of Flow, we would be without moments of pure enjoyment and exceptionality. According to Csikszentmihalyi (1990), any person can experience Flow in any situation as long as the essential ingredients of Flow are present. However, most common experiences of Flow occur when the activities are fairly challenging, creative, and dynamic. In and through Flow is where we can achieve our optimal level of functioning. Flow can occur for anyone during any activity as long as certain elements are in place. However, among the most recent research, Flow has been described in terms of athletes and their physical competition in sport. Athletes have reported such feelings of autonomy, control, confidence, and enjoyment while in Flow (Csikszentmihalyi, 1990; Jackson, 1992, 1996; Jackson & Csikszentmihalyi, 1999).

There has been considerable research on Flow state, both cross-culturally and internationally, suggesting that Flow is a universal phenomenon. The depth of research is comprised of over 8,000 interviews and over a quarter million questionnaires. Jackson (1992) is credited with being instrumental in taking Csikszentmihalyi’s work on Flow state to the sport setting. Jackson and Csikszentmihalyi (1999) have examined each of the nine dimensions of Flow with regard to sport. These nine dimensions make up the nine separate subscales used in the original Flow State Scale (FSS) (Jackson & Marsh, 1996) and the revised Flow State Scale-2 (FSS-2) (Jackson, 2000). Each dimension is important
in its own capacity; however, Csikszentmihalyi was resolute that individuals who are in the mindset of Flow experience the following components: Challenge-skills balance (CS), Action-awareness merging (AA), Clear goals (CG), Unambiguous feedback (UF), Concentration on the task at hand (CT), Sense of control (SC), Loss of self-consciousness (LS), Transformation of time (TT), Autotelic experience (AE) (Jackson & Csikszentmihalyi, 1999, p. 16).

To achieve a state of Flow is considered ideal, and if this could be better understood and facilitated, then performers might choose to put themselves in the best position to achieve an optimal performance. The desire for athletes to continually improve seems endless. Therefore, a better understanding and ability to apply the knowledge necessary for improvement is critical for the researcher, sports psychologist, athlete, coach, and the administration. Being able to augment performance consistency (Flow) is one thing, but there are other factors operating at a much deeper level which may perhaps make the attainment of Flow more challenging. The makeup and degree of Cohesion among team members could have an impact on the individual athlete and a team’s ability to enter into Flow and experience an optimal performance. While there is evidence supporting the existence of Flow experienced by team sport athletes (Jackson, 1992, 1995), very little is known about the influence of team dynamics, such as Cohesion, on the Flow experience. Jackson (1996) collected qualitative data on the interaction among teammates, and it was found that the positive interaction between teammates helps individuals attain Flow. The strength of this relationship remains unclear. However, it has also been reported that a “team Flow” experience exists (Cosma,
Examination is needed to gain an understanding of whether the team’s level of
Cohesion and an individual’s experience of Flow relates to a team’s overall performance.

**Cohesion and Performance Relationship**


Teamwork is the essence of life. If there’s one thing on which I'm an authority, it's how to blend the talents and strengths of individuals into a force that becomes greater than the sum of its parts. My driving belief is this: great teamwork is the only way to reach our ultimate moments, to create the breakthroughs that define our careers, to fulfill our lives with a sense of lasting significance. All of us are team players, whether we know it or not. Our significance arrives through our vital connections to other people, through all the teams of our lives. . .

Our best efforts, combined with those of our teammates, grow into something far greater and far more satisfying than anything we could have achieved on our own…

HOWEVER—teamwork isn't simple. In fact, it can be a frustrating elusive commodity. That's why there are so many bad teams out there, stuck in neutral or going downhill. Teamwork doesn't appear magically, just because someone mouths the words. It doesn’t thrive just because of the presence of talent or ambition. It doesn’t flourish simply because a team has tasted success. (pp. 15-16)

As seen from the literature, team Cohesion is one factor of team dynamics that has an overall positive relationship with performance. Cohesive teams can achieve
spectacular and amazing things. The way players interact has a tremendous impact on the way a team performs. As Sugarman (1999, p. 202) cited “(As Hall (1960) put it, “The fittest to survive and succeed are those able to find their strength in cooperation, able to build teams based upon mutual helpfulness, and responsibility for one’s fellow teammates.” As reported by several researchers (Carron, Colman, Wheeler, & Stevens, 2002; Mullen & Cooper, 1994; Paskevich, Estabrooks, Brawley, & Carron, 2001; Wann, 1997; Williams & Widmeyer, 1991), teams with higher Cohesion perform better. Carron et al (2002) found through a meta-analysis of studies examining the Cohesion-performance relationship that a significant positive to large relationship exists. Because Cohesion is a multidimensional construct, there are several factors which need to be considered when evaluating the Cohesion-performance relationship.

Cohesion, like group stages, is a multidimensional construct involving forces of attraction, or repulsion to the group, as well as forces to remain in the group. Leaders and coaches who are able to understand the development of Cohesion can therefore gain insight into specific strategies that aid them in creating a positive and effective group environment. In accordance with their definition of Cohesion, the definitive model of Cohesion was developed by Widmeyer, Brawley, & Carron (1985), which has been used as the basis for most of the Cohesion literature in sport and exercise psychology to date. The model consists of two general perception areas. The first area of perception is known as group integration (GI), which is an individual group member’s perception of the level of togetherness and bonding within the group. The second area of perception is known as individual attraction to group (ATG), which is an individual member’s desire to remain in the group. The two areas each have two levels: the group’s task orientation (GI-T and
ATG-T), which is described as the desire of a group to achieve a group goal, and the social orientation (GI-S and ATG-S), which is the desire of the group through bonding to create and embrace social relationships within the group. This model was the foundation for one of the most widely used measures of sport group specific Cohesion, the Group Environment Questionnaire (GEQ) (Widmeyer, Brawley, & Carron, 1985), which will be described in greater detail in Chapter III (Methodology).

The study of sport Cohesion and its relationship to team performance has produced a myriad of interacting variables over the years (Carron, 1993). Cohesion has proven to be a complicated dynamic within the development of a team. Among the complex interchange of relationships, Carron (1982) indicated “team factors.” According to Carron (1982), the variable of team factors includes the group task characteristics. In other words, it is the desire for group success and team stability. This factor was labeled as one of the variables that appears to affect the relationships within an athletic team (Carron, 1993). Over the last few decades researchers have examined these factors as being both antecedents and consequences to the development of Cohesion and its influence on athletic performance (Brawley, 1990; Berardinis, Barwind, Flaningam & Jenkins, 1983; Carron, 1988; Carron, 1993; Carron & Chelludurai, 1981; Carron & Spink, 1993; Widmeyer, Brawley & Carron, 1985; 1992; Williams & Widmeyer, 1991; Yukleson, 1993).

While there is ample research concerning group development and ample research concerning the concept of Cohesion, little work focused on levels of Cohesion as a constant function throughout the developmental stages. Before Cohesion was accepted as both multidimensional and dynamic, several researchers regarded Cohesion as a one-
dimensional construct that emerges within a single phase of group development, as in Tuckman’s (1965) third stage of Norming. Although, as seen from a review of the literature on group development, Cohesion is reported as serving a role throughout the developmental stages of a team (Kipnes & Joyce, 1998; Wheelen, 2005). However, there has been little research conducted on the dynamic presence of Cohesion throughout the developmental stages of an athletic team and how Cohesion may serve as an antecedent to, or consequence of, performance outcome. Additionally, investigation into the interaction of Cohesion and other group dynamic factors, such as Flow state within a team’s development, may provide important information as to when a team is at its prime to perform its best.

Statement of Purpose

The purpose of this study was to investigate how the stages of Peck’s Community-Making model could be identified and predicted for a collegiate basketball team over the course of consecutive seasons, by exploring Cohesion, Flow, and athletic performance.

Scope of Study

This study was delimited to female collegiate basketball athletes at an NCAA (National Collegiate Athletic Association) Division I level program in the western region of the USA. As such, the results might not be applicable to team athletes of a different gender, ages, geographic area, or sports other than basketball. The research population selection criteria are described in the “Methodology” section of Chapter III. Participation was strictly voluntary.
Definitions

For the purpose of this research, terms were defined and operationalized in the following way:

*Community-making* is defined as the four stage process a group goes through during the course of its life. The four stages of Community-Making are as follow:

*Pseudo-Community* is commonly the first stage of any new group (Peck, 1987). In this stage, members pretend, both consciously and unconsciously, to be in total agreement and harmony with one another, whereby they cover up their differences by acting as if the differences do not exist. Pseudo-Community can never directly lead to Community. An example of a group in this stage may be a college basketball team coming together during the first preseason practice when all the athletes are excited and anxious to get started and learn what their eventual role on the team will be. Naturally, a new team would wish to create an environment of camaraderie and Cohesion where everyone is welcome and feels worthy of being a member of the team. Despite the different levels of scholarship each athlete was awarded or not awarded, the disparate utterances of playing time each individual received from the coach during recruitment, and what each person feels he/she is worthy of, each athlete proceeds to act as though the playing field is level. For the purposes of this study, Pseudo-Community will be operationally defined as the above.

*Chaos* is the second stage of the Community-Making model. In this stage members start venting their differences in opinions and disagreements with each other.
This stage is described as a time of Chaos and conflict, when people in the Community realize the differences simply cannot be ignored any longer (Peck, 1987). Chaos from the outset looks counterproductive. However, it is an essential step towards achieving true Community. An example of a group in this stage would be when the same basketball team mentioned above moves closer to their regular season play, positions and playing time are starting to be determined. This is the time when that superficial Cohesion (Pseudo-Community) starts to crumble due to the individual athletes fighting for their positions and voicing their opinions as to who deserves what. At this point Chaos ensues because each player is no longer concerned with making everyone happy but with ensuring their own position on the team. For the purposes of this study, Chaos will be operationally defined as the above.

*Emptiness* is the third stage of Community-Making. After Chaos comes Emptiness. According to Peck (1987) this stage is when members learn to empty themselves of their egos and other related factors that prevent them from fully progressing to a state of true Community. Emptiness is a tough step because it involves each individual letting go of a certain part of themselves in order to create room for the birth of a new being; Community. An example of a group in this stage may be when a number of the athletes on the basketball team bring with them a whole constellation of expectations and preconceptions about what type of player they are, how much playing time they should get, or how others on the team should regard them. This in effect inhibits them from experiencing the true nature of the process and their fellow teammates. According to Peck (1987) all members of the group must be willing to fail in order to make themselves vulnerable to each other. Once each member of a group has
given up trying to control the outcome, they have opened themselves up to the group as a whole. An example of this in sport may be when an athlete recognizes that their role on the team may be as a bench player, one who comes in to relieve a fellow teammate time and again. Once this athlete stops trying to control the circumstances and accepts their role on the team, then he/she is not truly emptying themselves of their personal barriers. There are many times when athletes believe that they should be getting more playing time or that they are not being treated fairly, and these beliefs act as barriers in the process of reaching true Community and true Cohesion. For the purposes of this study, Emptiness will be operationally defined as the above.

*Community* is the result of a group having worked through Emptiness (Peck, 1987). The members in Community are in complete empathy with one another. There is a great deal of understanding and toleration. Members are able to relate to each other and, when conflict arises, members are able to fight with grace. In Community, the goals are clear and motives are never questioned. There is a true consensus among the members. For example, a basketball team may have a goal to win their conference, which requires a day by day evaluation of where everyone is and how everyone is feeling about the goal. For the purposes of this study, Community will be operationally defined as the above.

*Team vs. Group:* the words ‘team’ and ‘group’ are often used interchangeably. Webster’s Dictionary defines a group as ‘a number of individuals assembled together or having some unifying relationship.’ Kormanski and Mozenter (1987) indicated that teams are different from groups in that they possess four essential elements: goals, interdependence, commitment, and accountability. Therefore, depending upon the level of the elements describes above, it is assumed that a team can be a group, but a group is
not necessarily a team. For the purpose of this study, all the groups evaluated in the
literature with regard to sport will be referred to as teams, since teams are what constitute
the groups in sport.

*Stage vs. Phase:* According to the Webster’s New College Dictionary, a ‘stage’ is
a “period, level or degree in a process of development, growth, or change” while a
‘phase’ is “any of the stages or forms in a series of cycles as changes, as in
development.” As can be seen, the definitions are fairly interchangeable; therefore, they
will be used interchangeable throughout the paper, as applicable to each form used by the
researcher.

*Cohesion* is defined as a dynamic process, which 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. Widmeyer, Brawley, and Carron’s
(1985) model of Cohesion identified four dimensions (discussed at length in the
‘instruments’ section), Group Integration - Task, Group Integration – Social, Individual
Attraction to Group – Task, and Individual Attraction to Group – Social.

*Group Integration – Task (GI-T):* the individual’s perceptions of the degree of
unity that the group possesses surrounding the aspects of the task at hand.

*Group Integration – Social (GI-S):* the individual’s perceptions of the degree of
unity that the group possesses regarding social aspects.

*Individual Attraction to Group – Task (ATG-T):* the individual’s perceptions of
his/her personal involvement in task aspects of the group.

*Individual Attraction to Group – Social (ATG-S):* the individual’s perceptions of
his/her involvement in social aspects of the group.
Flow State (Flow) is the state in which individuals are so involved in an activity that nothing else seems to matter. The state of Flow is comprised of nine different dimensions (CS: Challenge-Skills Balance, AA: Action-Awareness Merging, CG: Clear Goals, UF: Unambiguous Feedback, CT: Concentration on the Task, LSC: Loss of Self Conscious, PC: Paradox of Control, TT: Transformation of Time, and AE: Autotelic Experience). These nine dimensions (discussed at length in the ‘instruments’ section) are functions of Flow as a construct measured using the Flow State Scale (FSS) (Jackson & Marsh, 1996), which is specifically designed to be used with athletes. Brief definitions of the nine dimensions are as follow:

*Challenge-skills balance (CS):* refers to a performer’s skill level being met by a challenge that is greater, but not excessively.

*Action-awareness merging (AA):* refers to the sensation an athlete feels when he/she is at one with their movements.

*Clear goals (CG):* when the performer has a clear idea and understanding of the goals.

*Unambiguous feedback (UF):* refers to the performer receiving clear and consistent feedback with regard to their performance, both internally and externally.

*Concentration on the task at hand (CT):* refers to the performer’s ability to be completely focused on the necessary cues and information specific to the task.

*Sense of control (SC):* refers to the performer’s level of confidence and self-efficacy that they are able to control everything they do without excessive effort.
Loss of self-consciousness (LS): refers to the performer’s ability to be completely focused on the here and now and everything pertinent to the task. Additionally, the performer would not be concerned with their own well being.

Transformation of time (TT): for someone experiencing Flow, time generally flies by; hours pass by like minutes, or minutes like seconds. Nevertheless, the opposite can also occur where a person in Flow feels as though he/she has all the time in the world, and there is no pressure or clock.

Autotelic experience (AE): is an activity that is intrinsically rewarding. Furthermore, it is an activity that is rewarding in and of itself and is performed for the experience derived from rather than any external reward.

Athletic Performance was measured both for the individual athlete and for the team as a whole. Individual athletic performance is measured by individual player game statistics. The following athletic performance measures will be operationally defined for the purposes of this study:

Field goal attempt: are charged to a player every time she shoots the ball within the three point boundary line.

Field goal made: are charged to the player for each successful shot within the three point boundary line, when the ball enters the basket from above during play. Field goals are worth two points.

Three-point field goal attempt: are charged to a player every time she shoots the ball beyond the three point line.
*Three-point field goal made:* are charged to the player for each successful shot beyond the three point boundary line, when the ball enters the basket from above during play.

*Free throw made:* an unguarded shot made from the foul line by a player whose opponent committed a personal or technical foul; it is worth 1 point.

*Free throw attempt:* an unguarded shot taken from the foul line by a player whose opponent committed a personal or technical foul.

*Offensive rebound:* a rebound of a team's own missed shot.

*Defensive rebounds:* are credited to a player each time she retrieves a live ball immediately following a field goal attempt or a free-throw attempt that is missed by an opponent.

*Total rebounds:* are the total offensive and defensive rebounds.

*Personal foul:* contact between players that may result in injury or provide one team with an unfair advantage; players may not push, hold, trip, hack, elbow, restrain or charge into an opponent; these are also counted as team fouls.

*Total points:* are the total points scored.

*Assist:* is the last pass to a teammate that lead directly to a basket. Any assist is credited to the player tossing the last pass leading directly to a field goal.

*Turnover:* when the offense loses possession through its own fault by passing the ball out of bounds or committing a floor violation.

*Blocked shot:* the successful deflection of a shot by touching part of the ball on its way to the basket, thereby preventing a field goal.
**Steal:** when a defender gains possession of the ball from an offensive player, either from the pass or dribble.

**Game outcome (win/loss):** is whether the team secured a win or a loss at the end of the game.

**Win Score:** the calculation of an individual’s performance to be used to determine an athlete’s productivity relative to their preceding performance (Berri, Schmidt, & Brook, 2006). The win score calculation involves the individual’s performance measures of Total points; Rebounds; Steals; Assists; Blocked shots; Field goal attempts; Turnovers; Free throw attempts; and Personal fouls.

**Group Development or Team Development** will be used interchangeably for the purposes of this study. Both group and team development is portrayed as a series of stages or phases through which groups gradually and explicitly get ready to perform, and then perform, their tasks. Moreover, while theoreticians are at variance on many points, for the purposes of this study, it will be assumed that teams are dynamic, passing through several stages or phases as they develop.

**Limitations and Delimitations**

This study was delimited to female collegiate basketball athletes at an NCAA (National Collegiate Athletic Association) Division I level program in the western region of the USA. As such, the results might not be applicable to team athletes of a different gender, different ages, different level of competition, or sports other than basketball. The research population selection criteria are described in the “Methodology” section of Chapter III. Participation was strictly voluntary.
Limitations. It is assumed that all participants in this study responded truthfully and accurately to all questions. Anonymity was guaranteed in an effort to encourage honesty.

Based on a thorough review of the related literature, no other studies were found that examined the Community-Making model as a group development model within the context of sport. Furthermore, no studies were found to have examined the Flow state, Cohesion, and performance of an intact team over the course of a season. Therefore, this presents a basic limitation that suggests only tentative conclusions may be drawn from the data.

Measuring Flow state and Cohesion, as with measuring any subjective experience, relies entirely on self-report. Therefore, it is difficult to measure such complex and personal experiences and put them in quantitative terms. According to the literature, the most valid and reliable quantitative measure of Flow state is the Flow State Scale-2 (FSS-2) (Jackson & Eklund, 2002). This instrument has been used post performance and has been determined to be useful in the athletic setting without interrupting an athlete’s performance. This study will ascertain quantitative methods of measurement. The FSS-2 (Jackson & Eklund, 2002) that will be used in this study is a revised version of the original Flow State Scale (FSS) (Jackson & Marsh, 1996). This researcher will use this scale to perhaps provide further validation.

Additionally, the Group Environment Questionnaire (Carron, Brawley, & Widmeyer, 2002) has been championed as the most valid and reliable measure of group Cohesion in sport to date.
A limitation that will impact the generalizability of the results is the testing protocol. The time between the pre and post competition data collection may have had an impact on the participant’s answers.

Overview of the Remaining Chapters

The remaining chapters include the following: Chapter II is comprised of the review of literature and professional research of group development, Flow state, Cohesion, and performance in both general and sport settings. An in depth description of the Community-Making model will be presented to provide the reader with a better understanding of this study. Chapter III will describe the methodology to be used in this study, including sampling procedures, instrumentation, and statistical methods. Chapter IV will present the findings of the study. Lastly, Chapter V will present a discussion of the findings for this study.
Chapter II

Review of Literature

The interest in group development came about in the early 1950s as a result of the group dynamic work being done. There was agreement that, in order to maximize the benefits of groups and teams, methods that improve the ability of all groups and teams to work together must be investigated. Therefore, the first step in the process of improving teamwork is to model team development and understand the dynamics of a successful team. It is only after team development is understood and defined that improvements can be created. According to Ocker (2001), a direct link exists between the development of a team and its performance in delivering a high quality product. Therefore, investigating the developmental process of teams over time can give all interested parties insight into the team’s style and how and when they can intervene. In this way interventions may perhaps be developed and then implemented to facilitate an increase in performance. Therefore, in order to effectively determine a team’s developmental status, a group development model must first be chosen for comparison purposes.

Several developmental models have been proposed over the years. Many attempts have been made to summarize the vast amount of group development literature and, by the late 1970s, it was accepted that common trends can be observed across groups in general (e.g., Lacoursiere, 1980; Tuckman, 1965). Within the group development literature, each model has its own unique way of explaining the dynamics of group development.
For some researchers (Bales & Strodtbeck, 1951; Lacoursiere, 1980; Mann, Gibbard & Hartman, 1967; Tuckman, 1965; Tuckman & Jensen, 1977), group development is a linear progression with each phase or stage resulting in a higher developmental position. Other researchers (Gersick, 1988; McGrath, 1991; Peck, 1987; Yalom, 1975) explain group development to be nonlinear and even cyclical throughout the stages or phases of the group’s existence. However, there has been recent criticism suggesting that group development is rather a combination of the two, linear and non-linear (Chang, Bordia, & Duck, 2003). Thus, until research is conducted to identify the correct model of group development for certain groups, we must rely on those that partially explain the dynamic occurring within a group of interest.

Group Development Research

As previously discussed, there are different types of groups. Therefore, the process of group development can go about its life cycle several different ways. Researchers have examined groups for significant changes over the course of the group and categorized these changes as stages or phases (eg., Peck, 1987; Tuckman, 1965). Some of the theories and models of group development are applicable only to specific groups while others have been labeled as applicable to groups in general, such as Tuckman (1965). The research that has examined the stages and phases of groups over the course of the group’s life is of interest in this study. Therefore, a description and critique of a select few models will be presented. In an effort to conceptualize the existing literature on group development, the models will be described for use with specific groups or groups in general, and as either linear or non-linear models.
Models of Group Development

As mentioned above, the research on group development models can be divided into separate categories depending on whether the models were designed to be applied only to specific types of groups (Bales & Strodtbeck, 1951; Bennis & Shepard, 1956, Bion, 1948, 1961; Fisher, 1975; and Mann, Gibbard & Hartman, 1967) or generalizable to all groups (McGrath, 1991; Tuckman, 1965; Tuckman & Jensen, 1977; and Lacoursiere, 1980). Group development models can also be described as either linear (Bales & Strodtbeck, 1951; Lacoursiere, 1980; Mann, Gibbard & Hartman, 1967; Tuckman, 1965; Tuckman & Jensen, 1977) or non-linear (Gersick, 1988; McGrath, 1991; Peck, 1987).

Linear Models of Group Development

The linear models describe a group as following a natural progression between stages, while the more contemporary non-linear models explain a group as going through several ups and downs throughout their time together, which results in shifts in interpersonal relationships (Weinberg & Gould, 2006). For the purposes of this study, a brief description of a few select models will be presented.

**Bales & Strodtbeck’s model (1951)**. Bales & Strodtbeck (1951) were notable as the first to systematically study the notion of group development. Bales and Strodtbeck (1951) introduced the linear progressive phase study to be used with short term, decision-making/problem solving groups. The model has three phases: Orientation, Evaluation, and Control. During the Orientation phase, the members spend time exploring the task by
identifying ground rules and by determining what information might be needed to solve the problem. During the Evaluation phase, the individual members express their personal opinions and attitudes. Lastly, in the Control phase, members come to agreement and attempt to alleviate the previous tensions experienced in the Evaluation phase. According to Bales and Strodtbeck (1951), as the group progresses through the three phases, positive affect increases while negative affect decreases, even more so as the group gets closer to the completion of the task.

_Bennis & Shepard’s model (1956)._ Bennis and Shepard (1956), Bion (1961), and Mann et al. (1967) studied group development through observation of training and therapy groups. Bennis and Shepard’s (1956) work, which built upon the work of Bion (1948, 1961), was mainly done with training groups (also known as T-groups), where they identified two main phases, each containing three sub-phases. The first phase is the Dependence Phase, which includes Dependence-Flight, Counter-dependence-Flight, and Resolution-Catharsis. The second phase is the Inter-dependence Phase, which includes Enchantment-Flight, Disenchantment-Fight, and Consensual Validation. Within the dependence phase, the group as a whole searches for a common goal which leads to the group splitting in to three separate groups; dependents, counter-dependents, and independents. After the dependence issues are resolved the group moves into the interdependence phase, where the members start off in the Enchantment-Flight with high spirits and enjoyment. But before long, members enter the Disenchantment-Fight and become dissatisfied and start to question the goals of the group. Lastly, in the Consensual-Validation phase, members finally accept one another and start to withdraw from the group as it comes to an end.
Unlike the aforementioned models (Bales & Strodtbeck 1951; Bennis & Shepard, 1956; and Bion, 1948, 1961), which are specific models of group development used with short term, decision-making/problem solving groups and therapy groups, Tuckman (1965) and Tuckman & Jensen’s (1977) created general models of group development, which are theoretically applicable to all groups. Tuckman’s (1965) model is one of the most applied and influential models some use to describe the developmental process of most groups and the only model used to describe sport teams. For the purpose for this study, Tuckman’s model will be discussed at length.

_Tuckman’s Model (1965)._ Tuckman (1965) first developed his four-stage linear model of group development (Forming, Storming, Norming, and Performing) by integrating more than 50 articles on the subject into one all-inclusive model. Tuckman proposes that, over time, groups develop through four hierarchical stages. Later Tuckman and Jensen (1977) reviewed research conducted on the 1965 model and determined that a fifth stage was needed. Consequently, they added “Adjourning.” Tuckman and Jensen (1977) provide a model that is widely accepted and understood in the field of group work (Gladding, 1995; Posthuma, 2002), for work with therapy groups, organizational groups, and T-groups. Johnson and Johnson (2003) referred to the model as “the most famous sequential-stage theory” (p. 28), and Burn (2004) called it the “best-known sequential stage theory of small group development” (p. 165)” (Fall & Wejnert, 2005, p. 315).

Tuckman’s four stages can be described in rather simple terms. A short description of each stage will be presented (Forming, Storming, Norming, and Performing).

The first stage is known as the ‘Forming’ stage. This is where a group goes through a period of artificial Cohesion, where the members all portray to get along and be
in agreement with one another in order to orient themselves to the task. During this stage, members conceal their individual differences and feelings in an effort to keep the waters calm.

The group then moves to a stage of ‘Storming,’ where hostility emerges as a result of members wanting to share their individual differences and opinions, which “serve as resistance to group influence” (Tuckman, 1965, p. 396). During this stage, a sort of emotional Chaos and intra-group conflict ensues.

After the Storming stage, members then transition into a stage of ‘Norming,’ where Tuckman (1965, p. 396) indicates “resistance is overcome” and the process of the group can be described as an increased cohesiveness in which members start to define their roles as a part of the group as opposed to being autonomous. During this stage, members start to open up to one another. Tuckman (2001) indicates that harmony is critical in this stage.

Lastly, in the ‘Performing’ stage the group moves into a place where all members work together towards the task with the minimum amount of emotional interaction. Tuckman (2001, p. 66) describes the process that takes place as “constructive action.”

Tuckman (1965) proposed that groups advance through the interpersonal stages of Forming, Storming, Norming, and Performing, as well as through the task activities, with the same linearity.

Tuckman’s (1965) model has without doubt received the most attention across all types of group development literature (Cassidy, 2001; Cissna, 1984; and Smith, 2005). However, Cassidy, (2007) recently reviewed and critiqued the existing models of group development, specifically Tuckman’s (1965) model and its applicability to groups outside
of the therapy context and concluded that Tuckman’s model may not be as clearly applicable to groups outside of therapeutic context due to its definite or distinct stages of storming and norming.

*Criticism of Tuckman’s Model of Group Development*

Although Tuckman’s (1965) model has been heralded as the most vigilant analysis of group development (Worchel, Coutant-Sassic, & Grossman, 1992) and is considered one of the most widely used models (Johnson & Johnson, 2003), Tuckman doesn’t place sufficient importance on the intragroup process that occurs when a group transitions between stages. Cassidy (2007) argued that Tuckman’s model labels conflict as a stage rather than considering the factors or concerns that drive conflict. According to Campbell, Flynn, & Hay (2003), linear models such as Tuckman’s are concerned with predicting when groups will experience Chaos and exhibit increased levels of Cohesion, rather than examining why Chaos occurs and when Cohesion may be high or low at a given time.

For example, Peck (1987) postulates in his Community-Making model that there are several personal and collective processes that need to occur in order for a group to truly become a Community, which he describes an optimal productive entity. Tuckman (1965) describes a group at its optimal productive state as in a stage of performing. Tuckman (1965) proposes that his third stage, Norming, involves a group attempt to establish norms about roles, tasks, and appropriate behavior. In his review, Tuckman found this stage to be most characterized by the presence of group Cohesion. In norming, the members of the group may finally understand its task, or else one dominant member
of the group may persuade the other members that their vision is the best and everyone follow. However, Pecks’ third stage of Emptiness consists of all the team members letting go of their individual agendas to allow something to emerge from the group as a whole that may be unexpected and highly innovative. Peck’s stage promotes the consensual solution as opposed to a singular solution.

Tuckman proposes his fourth stage, Performing is achieved when group members clearly understand the goals and tasks and become highly productive as a unit. At this developmental phase, group members have become not only resourceful but have established a high level of communication towards achieving group goals. Although Tuckman’s (1965) seminal work has been labeled as the “most useful” (Johnson & Johnson, 2003, p. 29) of the sequential theorists, some criticisms have elicited further investigation of developmental stage theory. One of the major drawbacks to Tuckman’s research is the use of psychotherapy and T-groups as his units of analysis during his 50 group studies because these types of groups place greater importance on personal or interpersonal growth, as opposed to group growth or performance.

In psychotherapy or T-groups, the members exist in order to assist individuals with personal growth. There is no final group product or an evaluation based on how a group may perform as a whole. Therefore, the consideration of a different model of development is needed to account for how the group performs as a whole verses how each individual performs within the group. For the purpose of this study, the Community-Making model of Peck (Peck, 1987) will be discussed at length as to how it is an appropriate model with regard to describing both the inter and intrapersonal developmental process that takes place in unique long term groups, such as sport teams.
Because the team performance is of primary importance for an athletic team, a model that places importance on the aggregate process is ideal.

**Peck’s Community-Making Model**

“In and through Community lies the salvation of the world”

Scott M. Peck (1987, p. 17)

Perhaps in and through Community lies the attainment of a championship. How is it that some teams with extreme talent lose? How is it that those teams with very little talent manage to win? Organizational theorist Gozdz (1992) believes that purposive organizations are centered on the concept of Community. “An organization acting as a Community is a collective lifelong learner, responsive to change, receptive to challenge, and conscious of an increasingly complex array of alternatives.” (p. 108). A true Community provides a protective place for its members and an environment conducive to growth. Much like the Community-Making model put forth by Peck (1987), Gozdz (1992) explains a Community as a group of people who get together because of their common purpose and dedication to breaking the barriers of communication and achieving a profound level of interconnectedness. Perhaps this is similar to what attracts individuals to join a sport team.

Scott M. Peck (1987) developed a model for moving individuals and groups through a series of stages (Pseudo-Community, Chaos, Emptiness, and Community), whereby individuals and groups learn to identify and go beyond their personal perceptions in service of the collective transformation. Peck introduced the stages of Community-Making for the reason that he believed that communities, like individuals,
are unique and groups that are assembled deliberately to form themselves into communities characteristically go through certain stages in the process in a unique manner. Given the suggestion that sport is a unique entity, then a unique approach to the developmental process that exists in a sport team should be considered (Weinberg & Gould, 2006). For the purposes of this study, the process of Community-Making is being likened to the process a sport team goes through over the course of its time together.

Peck (1987) proposed his four stages of Community-Making in the order of: Pseudo-Community, Chaos, Emptiness, and Community. However, unlike Tuckman (1965), Peck (1987) does not insist that Community development occurs by formula. Rather, he suggests that certain communities or groups in crisis or any other temporary formation may skip over one or more stages or regress back to one or more of the stages (non-linear) several times during the life of the group. However, Peck (1987) indicates that the stages presented are the “natural, usual order of things” (p. 86), but cannot account for all of the different group purposes. Also, Peck suggests there are three essential criteria that must exist for true Community to exist. Community must be inclusive, all members must be committed to the group, and the group must make all decisions by consensus. The Community-Making model (Peck, 1987) will be the model of interest for this study due to its contemporary non-linear approach. A description of the stages of Community-Making will be presented.

**Stages of Community-Making**

As pointed out, there are several different group compositions, which also suggests that groups come together for all sorts of different reasons and purposes.
However, while in line with most other group theorists, Peck suggests there are irrefutable stages a group must go through to experience a truly cohesive and productive Community. Yet, Peck proposes the third stage of his Community-Making model (Emptiness) to be the most crucial and intense stage of Community development. The four stages of Community-Making (Pseudo-Community, Chaos, Emptiness, True Community) will be presented.

_Pseudo-Community._ According to Peck (1987) the natural response of any new group that seeks to become a true Community is to fake it. In other words, there is a honeymoon period to each new group, whereby members come together and both consciously and subconsciously hide their individual differences and opinions in an effort to not make waves and keep everyone happy (so it seems). This attempt is what Peck refers to as “Pseudo-Community,” which never works. Counselor educator Joan England (1992) describes the people in this stage as “pretenders.” Peck describes the Pseudo-Community stage as an attempt by the group to “purchase Community cheaply by pretense” (1987, p. 88). Peck (1987) further suggests that this attempt is neither malicious, nor evil, and is rather an unconscious process whereby people want to like and be liked to avoid premature conflict. According to Peck, the essential dynamic of Pseudo-Community is conflict-avoidance, which customarily leads to the disregarding of individual differences and the appearance of high levels of Cohesion. It is natural to seek harmony in a new environment. Therefore, everyone tends to put their best foot forward and be on their best behavior. Nevertheless, we know from our own personal experiences in groups and on teams that this honeymoon period comes to an end and, according to Peck, usually ends in conflict.
Chaos. The second stage of the Community-Making process is “Chaos.” Chaos is explained by Peck (1987) as the time when those individual differences that were being held captive finally surface. England (1992) further explains Peck’s second stage as a time when members feel threatened by anyone who thinks differently from them. During this stage members focus on trying to fix one another as opposed to accepting one another (England, 1992). Chaos is generally a result of erroneous attempts by members to smooth things over. However, Chaos is an “essential part of the process of Community development” (Peck, 1987, p. 91). Unfortunately, unlike Pseudo-Community, Chaos does not disappear once it is acknowledged because now individual differences are out in the open, and instead of trying to hide them, members try to eliminate them. The stage of Chaos is a time for fighting and struggle. However, that is not its real purpose. As Peck states, Chaos is necessary and serves a productive purpose once the team is able to “fight gracefully.” Even in the most fully developed and successful teams, there are times when a fight or struggle is necessary. The way in which the team fights is what really matters. Peck expresses that a group must fight with grace if their ultimate goal is to enter into a true Community.

Since Chaos is often times uncomfortable, a group leader or coach will react to the conflict and intervene with team building exercises or attempts at organization, such as team events and meetings. This type of organization is intended to control and remedy the Chaos. However, according to Peck (1987), attempts made to organize a group cannot lead to true Community, because “organization and Community are incompatible” (p. 93).
Even though Chaos is uncomfortable, ostensibly unproductive, and appears to be a step backwards from Pseudo-Community, it does in fact provide an opportunity for both truth and creativity to emerge, thus making Chaos not such a negative place to be. Peck believed “fighting is far better than pretending you are not divided. It’s painful, but it’s a beginning” (1987, p. 94). With that being said, there are two avenues out of Chaos; either return safely back to Pseudo-Community, or endeavor to make the trek into and through “Emptiness.” This brings us the next stage.

*Emptiness.* Change is difficult, especially when it requires intrapersonal transformation. The stage of Emptiness is described by Peck (1987) as “the bridge between Chaos and Community” (p. 95). Other researchers (Campbell, Flynn, & Hay, 2003; Hock, 1999) have termed this bridge as ‘chaordic.’ Hock (1999) uses the term chaordic to describe the point between Chaos and order, as a structure which blends characteristics of both Chaos and order. In other words, chaordic blends the elements of competition and cooperation. Tuckman (1965) describes this place as simply the shift between his stages of Storming and Norming. Peck goes a step further and describes Emptiness as the emptying of oneself; including one’s personal barriers to communication. Such barriers include ideas, assumptions, beliefs, preconceptions, motives, and any other introjections that have made someone an impervious stone wall (Peck, 1987). Peck believes Emptiness is characterized by a state of questioning. In the pursuit for Community, the team must question themselves. For example, they may ask themselves, “I wonder to what extent I value myself as a person, based on the amount of playing time I am awarded?” Asking the self such questions is crucial to the process of
emptying. Until we start to doubt our own doubts, then we cannot truly succeed in emptying ourselves of our barriers to communication.

People often get stuck in the stage of Emptiness because of a lack of deep questioning (England, 1992). According to Peck (1987), the shift isn’t as straightforward as other researchers portray, such as Tuckman. A brief description of a few of the most common barriers (Expectations and Preconceptions and the Need to Control) to communication and Emptiness as indicated by Peck (1987) are as follows.

According to Peck (1987), we all bring with us into any new situation a set of preconceptions. Preconceptions may include things such as: biases, ideals, prejudices, and expectations. However, most of the time those preconceptions are falsely rooted. As human beings, it is our nature to want things to fit our expectations, which is not necessarily always a bad thing but it is typically destructive when trying to build a Community or create a cohesive team. According to Peck, a true Community is inclusive and pluralistic. Not until we are able and willing to let our preconceived notions go and empty ourselves of the need to fit everyone and everything in to our own pre-defined pretty little boxes, are we really able to hear and experience others. The ability to let our guard down and leave our judgments at the door is easier said than done. Therefore, Emptiness takes time, which lends further support that a Community takes time to build. This brings us to the next barrier of communication, the need to control.

A common trait of human beings is to try and control the situation, so as to decrease the amount of potential anxiety and discomfort. According to Peck (1987), the need for humans to control is rooted in the fear of failure. All members of a group must be willing to fail individually, in order to make themselves vulnerable to one another.
Once each member of a group has given up trying to control the outcome, they have enabled themselves to open up to the group as a whole. In sport, some athletes attempt to control their environment in several ways. For example, superstitious behavior is one attempt athletes make towards a sense of control. According to Rotter (1966) locus of control (LOC) is the degree to which people report a sense of personal control. Locus of control has been labeled as either internal or external (Rotter, 1966). An individual with an internal LOC believes an event occurs as a result of their own behavior. Conversely, an individual with an external LOC believes that an event is the result of chance, luck, or other people. Superstitious behaviors have been used to decrease anxiety, increase confidence, and cope with uncertainty (Neil, 1980). Also, superstitions are used to give the illusion of control in an uncontrollable situation (Matute, 1994). The sport environment may be perceived as uncontrollable and may lead to elevated anxiety for athletes, coaches, and spectators. Superstitious behaviors and rituals are thought to reduce anxiety (Womack, 1979) and create a sense of control in a high-stress, uncertain situation (Matute, 1994). Peck would categorize superstitious behavior as a barrier to emptying. Another example of an athlete’s need to control is the use of steroids or other performance enhancing substances. Albeit extreme and dangerous, the use of illegal substances is one method an athlete engages in to control their performance and environment. Again, the use of illegal substances to enhance performance is another barrier to truly letting go of erroneous attempts to control.

When a group initiates their entry into Emptiness, a few of the members begin to share their vulnerabilities, defeats, failures, doubts, fears, and inadequacies. Once this process has started, others will likely follow, because the environment is perceived as a
safe place. According to Peck (1987), this is when “members begin to stop acting like they had it all together” (p. 101). In and through Emptiness is where the real transformation of a collection of individuals into a true and productive Community takes place. Peck (1987) describes this transformative process as little deaths of the individuals and the group as a whole, and the re-birth of a Community. The process of Emptiness in the Community-Making model is what distinguishes Peck from other group development theoreticians. Peck places great emphasis on the inter/intrapersonal process that occurs amongst the team members. Peck describes Community as something more than the sum total of the individual members.

Community. Provided a team makes it successfully through the previous stages of the process, then the final stage is Community. According to Peck (1987), a Community is a place where there is true inclusiveness, commitment, and consensus among all members. With those three ingredients, an ordinary group of people who successfully become a Community can do extraordinary things. However, the work doesn’t stop once Community is reached. Once any group has made it to Community, there are things, which need to be done in order to maintain Community. Maintaining Community requires the constant revisiting of group goals and decisions over the lifespan of the group. According to Gozdz (1992), many organizations will experience brief episodes of Community, until they are unable and willing to hold on any longer. Gozdz (1992) explains this breakdown as a lack of discipline and commitment. Gozdz (1982) states:

There is an illusion that once a sense of Community occurs within an organization it will remain constant. This is not the case. The sense of Community or
Flow State is repeatedly lost. It can be deliberately regained at even greater levels of organizational maturity, but only when sustaining Community is seen and accepted as a path to developing mastery. This path is Community as a discipline. (p. 114)

Inevitably a team in Community will frequently fall back to stages of Chaos and Pseudo-Community during changing events. Therefore, a team must work harder to maintain that state of Community. Unfortunately, this is where teams fall apart, due to the amount of work needed to re-empty themselves and adjust to the changing demands and a general lack of commitment to the Community itself. Peck (1987) suggests that communities that are not deliberate in learning how to empty and re-empty themselves are most likely “pseudocommunities.”

In Peck’s opinion, Community differs from Pseudo-Community (fake Community) in terms of superior communication. To reach Community, all members must commit to communicate with each other on a genuine and deep level. Genuine communities may experience long periods of time free from conflict. But that is because they have learned how to effectively deal with conflict rather than avoid it. According to Peck (1987), pseudo-communities are conflict avoiding, whereas genuine communities are conflict resolving. Once the benefits of Community have been experienced, the desire and drive to achieve that state is often greater (Peck, 1987).

The Community-Making model (Peck, 1987) seems to account for the unique orientation to a collective effort that is natural for membership on a sport team. As described earlier, what attracts a member to join a sport team is inherently different from what brings someone to become part of a work group. The high degree of task
interdependence and the commitment to the combined effort is what Peck describes as essential to achieving Community. England (1992, p. 84) further indicates that “the kind of individualism that acknowledges our interdependence is the kind of individualism that makes real Community possible.” Unless each member of a group believe that each member is important and crucial to the accomplishment of the task, then the movement into Community will be difficult, if not impossible.

As mentioned earlier, the majority of group developmental models are described in terms of stages or phases. There appears to be a grand narrative within the literature, which suggests that a common developmental pattern exists during a group’s time together, notwithstanding the variation in the number and names of the stages. The general agreement has been that there are four stages/phases of group development (La Coursiere, 1974; Peck, 1987; Tuckman, 1965; Yalom, 1975). Following will be a discussion of the literature with regard to the characteristics expected to exist in each stage/phase. Also, there will be a discussion of how those characteristics apply to groups in general and then more specifically to a sport team.

*Stages of Team Development*

*Stage I Characteristics*

As referenced by several group theoreticians and researchers, the first stage of group development can be described in terms of the following characteristics.

*Groups in general.* Clearly, throughout the literature the first stage is explained as an orientation to both the task and the social group as a whole (Bales & Strodtbeck, 1951;
An individual’s behaviors are driven by the desire to be accepted by others and to avoid conflict. Through orientation, members make attempts to make sense of the task in terms of how it relates to them personally. Members also attempt to determine both the social and personal boundaries relative to the group task. In this stage, the objective is for members to come together to get a feel for one another and the group as a whole, whilst keeping the waters calm (Bales & Strodtbeck, 1951; Peck, 1987; Tuckman, 1965).

Another characteristic of this first stage is the member’s concern with how they will relate to the authority figure (leader or coach) of the group (Bennis & Shepard, 1956). Members are often anxious about how they will fit in with other group members and their eventual role within the group. Tuckman (1965) refers to this stage as forming. Peck (1987) refers to this stage as Pseudo-Community, due to the overt and superficial display of conformity (Cohesion) present. According to most group development theorists, the level of Cohesion present during the initial phase of a group is expected to be high because of the desire to get along with everyone. This is a comfortable stage to be in, but the avoidance of self-expression and conflict often translates to getting nowhere fast.

The following figure (figure 1) is a modified version of a figure presented by Singer, Hausenblas, & Janelle (2001), which illustrates the dynamic nature of group properties over the course of a group’s development. As mentioned above, group Cohesion is reportedly and apparently high at the onset but, diminishes over time as the motivational basis changes. During the stage of Pseudo-Community, many of the same characteristics indicated by other group development researchers exist. However, Peck
(1987) emphasizes that there is a more intrapersonal process present, which should not be ignored.

*Figure 1.* Adapted version of the Group Development Continuum from R. N. Singer, H.A. Hausenblas & C. M. Janelle (Eds.), Handbook of Sport Psychology (2nd ed., p.474). Copyright 2001 by John Wiley & Sons, Inc.

*Sport teams.* Previously the distinction between what constitutes a group and a team was made in an effort to provide the rationale that teams cannot be approached or explained in the same terms as a group can, particularly a sport team. A sport team has been described as a unique composition of individuals (Weinberg & Gould, 2003, 2006). In an interactive sport, such as basketball, all the players know they are interconnected and dependent upon one another to perform. Athletes understand that it is the quality of their collective effort (both task and social) that determines the final result (performance), success or failure. Conversely, on a co-active team, players are not as reliant upon other players to perform. In an effective interactive team, each member knows that he/she is dependent on the other members for achieving the final result. This means that team
members have an interest in helping each other when and where they can. Yet, it is important to bear in mind that the interest can be at a social and/or task level.

For example, a team may exhibit high levels of Cohesion related to the task (performance goal), but low Cohesion related to the social aspect of the team. Provided that each member is committed to the task (attainment of goal), then the social nature of the team may not have a great deal of impact on the final result. MacCoun (1996) reviewed several military and civilian studies of Cohesion and concluded that task Cohesion, rather than social Cohesion, drives group performance (MacCoun, 1996). MacCoun (1996) also pointed out that when social Cohesion is too high, deleterious consequences may result. For example, consequences may include: extreme socializing, groupthink (the failure of a highly cohesive group to engage in effective decision making), insubordination, and revolt. However, like all groups, a sport team develops over time. According to Singer et al (2001) the properties of a team (i.e., Cohesion and Flow) are dynamic, develop over time, and become more stable as the team works through the stages of development. Therefore, high levels of social Cohesion may serve an initial purpose and appear as productive.

For example, early in any team’s life, the membership usually consists of new members and the motivational basis to join the team tends to govern the early interactions of the members. Thus, a new sport team tends to have a task-oriented motivational basis (e.g., competition, winning, participation goals, and fitness goals). It is this task orientation that draws members to join the team in the first place. Therefore, a high level of task related Cohesion may be sufficient to perform well.
The group development of a sport team looks very different from the group development of a work group or counseling group for the reason that a strong task motivational base exists for all members at the beginning. Task motivation may perhaps be enough to get the desired result in sport. Conversely, in a counseling or task group, a greater level of social Cohesion may be required to supplement the possible low task motivation. Most athletes who decide to join a team do so with a genuine interest to perform and participate in a competitive task with others who are there for the same purpose. Hence, orientation to the task may not require as much time for a sport team.

Some characteristics of a sport team in the initial stage of development would be comprised of team members establishing boundaries for behaviors and group interaction and defining roles, norms, and objectives. For example, the team workouts/practices at the start of a new season (preseason) tend to be unrefined as teammates become familiar with one another, compete for positions, and learn how to communicate with each other. A further example of a team in this stage would be a college basketball team coming together during the first preseason practice. Initially, there is an almost daily change in positions, for example, starters and non-starters. During the first few preseason practices, athletes are excited and anxious to get started and learn of their eventual roles on the team. With this excitement and curiosity comes the desire to fit in and get along with the other members of the team. Naturally a new team would wish to create an environment of camaraderie and Cohesion where everyone feels welcome and worthy of being a member of the team. Therefore, high social Cohesion is the ostensible characteristic at this stage. However, though it may appear that Cohesion is high among members, it is likely ersatz. It is important to recognize that Cohesion has two dimensions: task and social. Social
Cohesion is generally the type of Cohesion that is initially based on pretense. The level of task Cohesion may be more authentic because of the task motivational basis of sport.

As mentioned above, Cohesion is purportedly and artificially high because all members want to fit in and get along with everyone while they are getting a feel for the environment, although, there are exceptions to this. This can be seen when sport teams have members on the team from the previous season. Those members whom were members of the previous team may have already worked through the preliminary developmental stages and achieved a true level of Cohesion with each other. However, new membership almost always shakes up a team and forces the team back to an earlier stage of development. The new members require the same developmental opportunity as preceding members. While new members search for how they will fit in on the new team, they will naturally conceal some of their differences and opinions until they get a better feel and sense of trust from the team as a whole. This hesitation for new members to share their true thoughts and selves with the group is often an effort to integrate. This suppression occurs despite the different levels of scholarship each athlete was awarded or not awarded, the disparate utterances of playing time each individual received from the coach during recruitment, and what each person feels he/she is entitled. Each athlete proceeds to “act” as though the playing field is level, knowing full well it is not.

Also, at the beginning stages of any new team, members endeavor to determine important structural characteristics. Among those characteristics are group rules, roles, and norms. Structure can begin to surface as early as the first meeting.

For instance, the first team meeting is usually a time when all the team rules are discussed. Most teams have some sort of contract and set of rules, whether it is between
the coaches and athletes or among the athletes themselves. To accelerate a team’s development, a team contract is generated to institute procedures and roles in an effort to move a team more quickly into a performing stage (Community). This process of generating team rules and a team contract can, in fact, help jump-start a team’s collaborative efforts by immediately focusing the team members on a clear-cut goal and code of behaviors. Within this process, team members must communicate and negotiate with one another to identify the level and quality of play they all wish to reach. Additionally, team rules and contracts help guide the team towards an expected level of team participation and accountability that everyone is equally comfortable with.

Successful team performance depends on personal *individual accountability*. In a team environment, individuals are usually effectively motivated to maximize their own rewards and minimize their own costs. However, conflicts can arise when individualistic motives or behaviors disrupt team-oriented goals. For instance, conflict can stem from an unequal division of resources. When team members believe they are receiving too little playing time, they sometimes reduce their effort and don’t train as hard. A further example would be when some members of the team shirk their responsibilities because they feel as though they are not getting back what they are contributing. As a result, some individual team members may take on extra responsibilities while other team members may reduce their own efforts or withdraw from the team completely. These behaviors may provoke anger, frustration, or isolation amongst the team, resulting in a dysfunctional team with low social Cohesion and perhaps poor performance. However, with a pre-emptive and well-formulated team contract, such problems can usually be avoided.
Team contracts provide clear consequences and rewards for certain behaviors. Therefore, when a member of the team breaks the contract, then the course of action is clear and consensual. As mentioned earlier, a true Community is comprised of a team of all leaders, where everyone is included and there is global commitment and consensus (Peck, 1987). When a team mutually discusses the consequences of certain behaviors early on, there is less of an opportunity for members to feel personally attacked. Without a team contract in place early in a team’s life, serious harm can be done to the developmental process of the team. Once a team has reached a stage of Chaos, such contracts provide a flotation device so the team doesn’t feel as though they are in crisis without a plan.

Other structural characteristics determined within the first stage of a team’s development are roles. For a sport team, roles are somewhat predetermined, depending upon the level of competition. For the purposes of this study, the collegiate level of competition will be discussed. For more competitive teams, some players come with a sense of what their role will be. For example, a college football program will recruit a quarterback to join the team. That quarterback may not know their playing status (starter or non starter), but he is fairly secure he will not be the place kicker or part of the special teams. Conversely, one may come to a team with the idea that he will be the starting quarterback, only to find out he is fighting for the position with two other quarterbacks. With that being said, clarity of one’s role may not become apparent until later in the season as the coach gets to observe the individual in action.

Lastly, team norms are typically determined in the first stage of a team’s development. According to Weinberg and Gould (2006), a group norm is an agreed upon
level of performance, pattern of behavior, or belief. Usually norms are established early on in the life of a team. Depending upon whether the team is an inaugural team or an extant team, norms are established accordingly. Each norm carries with it specific expectations that team members are expected to abide by. Norms can be perceived as either relevant or irrelevant. For example, freshman on a college basketball team may be expected to carry all of the equipment out to practice for the veterans. At first glance, this may appear to be unfair or without purpose or function. However, its purpose is often to initiate new players on to the team as a sort of “rite of passage.” There are other norms that may exist on an extant team, which may create a bit of discord in the beginning but may end up facilitating the team chemistry in the future. A further example is when rookies are expected to interact with veterans in a certain way, so as to exercise some degree of veneration. Any deviation from the expected behaviors may result in informal consequences. An additional example would be if one player decided to stay late after practice to do extra training with the coach. It may appear to the other players that the player is trying to gain an advantage and that may be perceived as violating a group norm. Some teams believe that all practices and workouts should be done as a team and those done outside of the team are not accepted.

While the previous examples of norms appear as punitive, there are also positive norms. For example, a soccer team may institute a tradition of having a pre-game meal at the coach’s house before every game or having a team dinner the night before a game. This type of norm is intended to foster an effective team climate and social Cohesion.

Team climate is one of the factors known to facilitate an optimal experience (Flow) in sport (Jackson, 1995: Jackson & Csikszentmihalyi, 1999). Researchers have
been interested in the factors that help, disrupt, and prevent Flow. Because Flow has been linked to an athlete’s optimal experience (performance) in sport, those factors that influence the attainment of an optimal experience are of great interest. Since Flow state is of interest in this study, Flow will be discussed in terms of how it may look in terms of the different stages of Community-Making. For example, Jackson & Csikszentmihalyi (1999) postulate that there are nine dimensions necessary for Flow to occur for an individual. However, not all nine are critical. Consequently, the attainment of Flow for a team may be possible without all nine dimensions. It should be understood that Flow is a process much like the process of team development. It is the co-mingling and experiencing of several factors in unison that makes Flow occur. However, what isn’t fully understood are which and, to what degree, each of the nine dimensions are necessary for a team to enter into a Flow state.

Jackson (1995) determined that, through qualitative data, the factors most associated with helping Flow occur for individual athletes were “positive team play” and “positive interaction among teammates.” The factors most associated with preventing Flow were “negative team play” and “negative interaction among members.” Lastly, the factors most associated with disrupting Flow were “problems with performance” and “problems with interaction among teammates and coach” (Jackson, 1995). Jackson (1995) further concluded that the most significant dimensions of Flow were the autotelic experience, concentration on the task, action-awareness merging, and the paradox of control. Perhaps for a team to collectively enter into Flow, the most significant dimensions of Flow would be associated with those factors dealing with the collective team. Jackson & Marsh (1996) described a nine-factor model of Flow for individual
athletes. Perhaps teams also experience the nine factors, but those factors more applicable to the team experience are more salient in a collective state of Flow and include autotelic experience (AE), clear goals (CG), total concentration on the task (CT), sense of control (SC), and loss of self-consciousness (LS).

For example, in the Pseudo-Community stage of development, a sport team may report a high level of Flow because the members convey a high level of Cohesion. Cohesion (positive interaction among teammates) is among the most significant factors that help Flow occur. Cohesion can be associated back to the dimensions of: clear goals, total concentration on the task, sense of control, loss of self-consciousness, and autotelic experience. As a team, a collective goal, task concentration, sense of control, loss of ego, and enjoyment are necessary for a team to perform as one. In all probability, the individual athletes will still experience Flow across the nine factors, but the team will most likely experience Flow with regard to the more relevant collective dimensions of Flow.

During the preliminary stage of a team, Flow may be reported as high because of the apparent Cohesion and task motivation. A team in Pseudo-Community may experience an optimal experience (Flow) because of the novelty and excitement present in a new situation. However, Flow may also be reportedly low because members may recognize the forged levels of Cohesion and their anxiety about performing in comparison to their teammates. Taking into account that most of the nine dimensions of Flow must be present in order for Flow to occur, then the dimension of loss of self-consciousness would not be present, nor would the dimension of total concentration on the task. An example of an exception to this would be a veteran player entering their
senior year with complete focus and concentration on how he/she wants to perform. Perhaps it is possible for select players to emerge from a team state of Pseudo-Community, into a state of Flow. For example, an individual athlete’s definition of success may be different that that of the team. The individual may have goals related to their personal performance, while the team goals are collective. For example, a swimmer that is part of a relay team may want to set a personal record, although the team’s goal is to win the relay.

Essentially, from an outsider looking in, a team in the first stage of development may appear to be highly cohesive and content. However, this is often a pretense. Once individual differences are encouraged to surface, the team almost instantly moves into the second stage, which is characterized by conflict.

*Stage II Characteristics*

The second stage of development can be described in terms of the following characteristics.

*Groups in general.* Throughout the group development literature, the stage following the initial stage of development is often one of conflict. According to researchers (Bales & Strodbeck, 1951; Bennis & Shepard, 1956, Bion, 1948, 1961; Fisher, 1975; Gersick, 1988; and Mann, Gibbard & Hartman, 1967; McGrath, 1991; Peck, 1987; Tuckman, 1965), all groups inevitably go through a stage of Chaos. This stage occurs as a result of members withholding their true opinions and feelings for the benefit of preserving Cohesion. There comes a point in each group where individual expression is necessary. Distinctive of this stage is when the group Cohesion and unity
displayed in the Pseudo-Community stage is challenged as group members attempt to differentiate themselves from each other. For example, a first fight may occur among football players during a practice scrimmage. However, that individual expression occurs by means of group members becoming hostile towards one another as a means of expressing their individuality and resisting the formation of group structure. The lack or sizeable decrease of Cohesion present is the ultimate feature of this phase. Naturally, there are issues that polarize the group and lead to conflict. Theodorson (1953) describes this stage as members seeking autonomy and their individual rights.

Group researcher Tuckman (1965) refers to this stage as storming, while Peck (1987) refers to this stage as Chaos. Both describe this stage as a lack of Cohesion and intense rebellion towards structure. However, Tuckman seems to place importance on storming as a distinct stage occurring only after the forming stage (Cassidy, 2007). Peck (1987), on the other hand, describes Chaos as a dynamic and compulsory process a group must go through to become open to one another. Peck (1987) suggests that Chaos can occur several times throughout the developmental process. Furthermore, Peck is more concerned with the causes of conflict, as opposed to Tuckman’s focus on predicting when it will occur.

Sport teams. As with any other group, conflict is prevalent within a sport team. Conflict within a sport team can occur on several different occasions and for several different reasons throughout the course of a team’s life together. As common as high levels of social and task Cohesion are during the initial stage of a team, Chaos inevitably follows. As mentioned above this stage is evident towards the beginning of a season while routines, rules and norms are being established and instituted. Yet, this conflict can
also occur later in the season even after a team has advanced from Pseudo-Community. Examples include: (a) when a team starts losing after a winning streak or a key player gets injured; (b) when playing status and positions are determined; (c) at the beginning of a new season, when new players join a pre-existing team or the coaching staff changes, conflict may emerge; and (d) the addition or loss of a member during a season often shakes up the chemistry of the team and causes discord.

Often times, as a result of losing or a key player getting injured, certain player’s responsibilities and roles are redefined, which can lead to an increase in tension between players, coaches, and teammates. For example, as the same basketball team mentioned previously moves closer to their regular season play, positions and playing time start to be determined. At this point, the superficial social Cohesion (Pseudo-Community) starts to crumble due to the individual athletes fighting for their positions and voicing their opinions for who deserves what. The team may start to both psychologically and physically subdivide into sub teams. Some examples of sub teams may be the starters and the reserves, or the rookies and the veterans. As athletes start competing for positions, conflict inevitably arises because the players are no longer concerned with making everyone happy and existing as a unit. Rather, their positions on the team are threatened and self preservation is what really matters.

At this point, the initial enthusiasm for the preseason and the novelty of everything new begins to fade, while practices become tedious and painful. The outward display of harmony (social Cohesion) is no longer a priority. Rather, the mood becomes survival of the fittest. Pat Riley describes this state as “The Disease of Me.” In his book *The Winner Within*, Riley (1993) wrote how his former team, the Los Angeles Lakers, let
their egos interfere and cause one of the fastest falls in the history of the NBA. The Lakers were chosen to win the title for the second consecutive season, but resentment, together with competitiveness and conflict, consumed the team. Riley described how his players were arguing over who deserved what. As a result, the Lakers turned their focus from working as a team to working as individuals. Consequently, they lost in the first round of the playoffs that year. This is when Riley declared, “The Disease of Me leads to the Defeat of Us.”

Keeping in mind that a sport team’s development is not a simple linear event, teams often circle back into earlier phases. Inherent in sport is the fact that each new year provides the opportunity for new players to join a pre-existing team. For example, a member of the coaching staff may leave the team in the middle of the season and that would likely cause the whole team to start its development process all over again. The extant team may have ended the preceding season in the idyllic state of Community, but the addition or loss of members may force that team back in to a state of Chaos. With that being said, it would make sense that Chaos might be expected at the start of a new season, even though a high level of Cohesion is anticipated. Chaos is inevitable. If veteran members want the team to survive and succeed, they will need to actively welcome new members to the team and assist them in discovering exactly what the goal of the team is all about. This may take a little time, but it is necessary so as to ascend to a greater stage of team development.

However, as previously mentioned, Chaos is not always a bad place to be. Peck (1987) suggests that conflict is the progenitor of change. People generally resist change because of how challenging it is to alter their behaviors and viewpoints. If Chaos didn’t
exist, then presumably people would not be compelled to challenge themselves to a new level. In sport, a state of Chaos may be the exact thing that the team needs in order to advance towards a new level of performance. An example of a team that attempts to avoid conflict rather than face conflict is a team that wins a few and loses a few games, yet doesn’t adjust their tactics. Conversely, a team that wins some and loses some may decide that they must make changes to the lineup or game plan. Such changes are always difficult. When the star forward has consistently been putting up only 10 points per game as opposed to their average 28 points a game, something needs to change. However, there are teams that try to endure the deficit in hopes that the player and team will rise up sooner than later. This would be an example of conflict avoidance. Dealing with the Chaos straight on is a sign that vitality still exists in the team. A team without fight is a team without drive.

Another example of Chaos being productive is when a younger player steps up their performance and poses a threat to a veteran starter. As discussed earlier veterans may feel threatened by incoming players. Again, there are two ways to deal with this. One way is to ignore the conflict; the other way is to face it directly. For example, a veteran player may have never felt compelled to take their performance to the next level, until their position was challenged. This is an example of how Chaos can be beneficial. Conceivably, a team can perform well in Chaos, dependant upon how they decide to approach it.

An example in sport history would be the 1980 Olympic gold medal winning U.S. ice hockey team. This result is heralded as one of the most indelible achievements in sport. However, the team had low social Cohesion and constant Chaos, as the team was
made up of college rivals. The players and coaching staff fought and argued. The coach Herb Brooks created conflict in an effort to make the team hate him, instead of each other. This is an example of using conflict to achieve amazing results. How Brooks approached the conflict on his team is an example of conflict management. Without well managed conflict, it would be difficult to sustain a high level of performance.

Conceivably, the optimal state of Flow can occur in the midst of Chaos as well. As mentioned earlier, Flow theoretically occurs at the confluence of nine situational dimensions. Conflict doesn’t appear to favor optimal performance because of the high level of discord present. However, in the case of the US ice hockey team, it could be argued that the team emerged out of Chaos into a Flow state. Some teams that face adversity will split apart at the seams; other teams that face adversity will stand strong together, knowing that the race is not always won by the fastest runner, but by the one who keeps on running. Adversity reveals character or lack thereof. Perhaps a team state of Flow is more dependent on the dimensions of Flow related to task Cohesion. Examples of those dimensions related to task Cohesion are challenge-skill balance, total concentration on the task, clear goals, loss of self-consciousness, and sense of control. In other words, if the Flow dimensions more related to the task aspects of the sport are high, then Flow state is more likely to occur. With that being said, in and through Chaos an optimal experience is possible.

There are numerous ways Chaos can surface during the life of a sport team. However, only a few have been discussed. What’s important to consider is that Chaos can be both debilitating and favorable. Depending on how the team responds to the circumstances will determine how they will perform. As Peck (1987) stated, Chaos is not
always such a bad place to be. According to Peck (1987) there are only two ways out of Chaos, to reorganize back to the safety of Pseudo-Community; or to progress into the vulnerable and difficult stage of interpersonal relations.

Stage III Characteristics

The third stage of group development can be described in terms of the following characteristics.

Groups in general. As evident throughout the group development literature, the natural progression from a stage of conflict is to enter into a stage of openness and willingness to work together. What exactly happens during that succession is the mystery. However, researchers have agreed upon certain characteristics that are apparent in this stage. What seems to transpire in this stage is the resolution of conflict, leading to the formation of Cohesion. The apparent task within this stage seems to be one of communication (Bales & Strodtbeck, 1951; Bennis & Shepard, 1956, Bion, 1948, 1961; Peck, 1987; Tuckman, 1965, 2001). Communication leads a team that avoids conflict to a team that can resolve conflict. Communication at this stage must include the sharing of personal opinions and the acceptance of those different from one’s own. Tuckman (1965) termed this stage as Norming. Tuckman (1965) describes the characteristics of this stage as “the reduction of the conflict, resolution of the polarized issues, and the establishment of group harmony in the place of disruption” (p. 392). In other words, this is the “make up” stage in which group, as opposed to individual, norms and values surface.

Peck (1987) describes the third stage of his Community-Making model as Emptiness. According to Peck, Emptiness is not only the most difficult stage, but the
most crucial. Emptiness is a concept derived from Zen Buddhism that also translates as “open mindedness.” When we are able to transcend our personal and unique life experiences, we are then able to join others at the convergence of what we have in common. Through Emptiness, we open up space in ourselves for the company of others.

Peck (1987) further describes Emptiness as the bridge between Chaos and Community. Analogous to other models of group development in the third stage, Peck describes the Emptiness stage as a time when group members must open up and communicate their personal values and opinions with other members, at the risk of becoming vulnerable and even exiled from the group. However, unlike other group development researchers, Peck is highly concerned with both the inter/intra-personal process of emptying as opposed to the content and the result. Peck states that emptying is the active commitment by each member to purge themselves of their personal barriers to communication for the benefit of the group as a whole (Peck, 1987). The constant fear of what others will think, the need to please other people, and the desire to be noticed, are all attempts of the ego to prevent one from succeeding. The ego doesn't like risk taking or being vulnerable. Emptiness is conceptualized as a letting go of the self-centered desire for comfort. In other words, in and through Emptiness is where egos are lost and communities are made.

Furthermore, throughout the literature, there seems to be a general consensus about what takes place during the final stage of a group’s development (ie., fourth stage). According to researchers (Bales & Strodbeck, 1951; Bennis & Shepard, 1956, Bion, 1948, 1961; Fisher, 1975; Gersick, 1988; and Mann, Gibbard & Hartman, 1967; McGrath, 1991; Peck, 1987; Tuckman, 1965), those groups that successfully navigate
their way through the previous stages of group development enter into a productive working stage. Optimal group performance occurs during this stage.

Characteristic of this stage are such things as complete focus on the task or the problem, the use of group process to work on tasks and test new ideas, being able to develop alternative solutions to problems, and a concern for group termination. During this final stage, there is increased task activity and the group focuses both on the task and the individual’s roles within the group, rather than socio-emotional activity. Another common characteristic in the final stages of group development is an increase in Cohesion (Peck, 1987; Tuckman, 1965; Yalom, 1975). As noted in the stage preceding the final stage, Cohesion truly develops and stabilizes as a result of openness. During the final stage is where Cohesion serves its major function, optimal performance.

Despite the increase in productivity and inherent Cohesion present in the final stage of development, the literature further suggests that groups go through a sort of regression as the end of the group approaches. According to Tuckman (1965), as the group approaches its terminal phase, members show anxiety about separation. Therefore, members break their bonds of affection and stop interacting with each other. As a result, Cohesion decreases. Conversely, Peck (1987) suggests that closure depends largely upon what the group’s reasons and ultimate goals for assembly were from the start. Peck claims that a group in true Community doesn’t necessarily abandon their Community because the end is near. Rather, Peck describes the groups primary task as no more than to simply “enjoy the experience” (1987, p. 104). When the task has been completed, then the closure process begins.
Paradigmatic of an athletic team is the fortuity for rejoining. The termination piece in the final stage is not equal for a sport team as it is for a work or therapy group. Instead, an athletic team often has the opportunity to play with each other the following season. Also, a sport team may be nearing the end of its time together while in a postseason tournament (playoffs). In sport, the task is not over, nor does adjourning begin until after the final whistle blows. Therefore, Tuckman & Jensen’s (1977) fifth stage of adjourning isn’t of concern in this study.

As evident throughout the literature, researchers have agreed that a group must work through the third stage (working stage, norming stage, or Emptiness stage) so as to perform at an optimal level. However, for the purposes of this study, the researcher would like to propose that the third and fourth stages (Emptiness and Community) are one in the same, instead of two distinguishable stages. Researchers (Peck, 1987; Tuckman, 1965) postulate that group development happens in four distinct stages. However, for the employment of the Community-Making model to sport, the third and fourth stages may perchance be indistinguishable. The premise behind this assertion is based on the concept of Flow state. The setting necessary for Flow state to occur subsumes many of the same criterion required for Emptiness to happen. As opined by Peck (1987), Emptiness is the state in which an individual has decided to let go of control and fully experience the moment with their whole self, limitations and all. Flow state has also been described as a state of optimal experience involving total absorption in a task, and creating a state of consciousness where optimal levels of functioning occur (Csikszentmihalyi, 1975, 1990). According to Peck (1987), the fourth and final stage of the Community-Making model is Community. Peck describes the group to be a
Community because they can perform at their optimal level due to the required criterion of Emptiness having been met. Therefore, for the purposes of this study, the third and fourth stages of Peck’s Community-Making model (Emptiness and Community) will be expressed as one simultaneous and even real-time process, instead of two separate stages occurring at different periods of time. This leads us to the final stage of Community-Making in sport.

_Sport teams._ As mentioned above, this final stage of the Community-Making model will be presented as both the stages of Emptiness and Community due to their ostensible interrelatedness. This stage of Community development (Emptiness and Community) is seemingly where an athletic team truly separates itself from a group of individuals. According to Peck (1987), Emptiness is the crucial stage that a group must go through to perform at its best. Perhaps, Emptiness is the state each individual player must achieve before he/she can truly perform at their full potential, thereby enabling the team to perform at its optimal level. However, given that social Cohesion is not as important as task Cohesion, perhaps, a sport team doesn’t need to empty at such a socio-emotional level to reach optimal performance. Peck (1987) further characterizes Emptiness as a willingness to fail and be vulnerable in the eyes of others. Some athletes possess a fear of failure and go to great lengths to conceal their limitations. For instance, an athlete’s use of illegal substances is one way an athlete attempts to hide one’s fears and vulnerabilities.

According to Peck (1987), the process of emptying cannot take place unless _all_ members decide to let their guard down and relinquish the need to control and fix themselves and one another. In the case of steroid use, Emptiness may take place over a
longer period of time for a given athlete. Being that the only way into a genuine Community is into and through Emptiness, a team must go through the process of emptying to perform within the realm of Community (Peck, 1987). However, for a sport team, the process of Emptiness can most certainly occur on the court or on the field of play during a competition in real-time. In this instance, it would be difficult to discern where Emptiness begins and ends. Consequently, the result of Emptiness occurring on the field of play would perhaps be an optimal performance (result of Community). For example, a basketball team that manages to click together on the floor might possibly perform at an increased level. The movement from Emptiness to Community might occur in a matter of minutes. In this case, the bridge between Emptiness and Community would be apparently dissimilar from that of a work group or therapy group.

What does the process of emptying look like on a sport team? According to Peck (1987), the process of emptying is akin to the transition from “rugged individualism” to “soft individualism.” In sport, the identity of an athlete is often one that resembles the appearance of rugged individualism. For example, most athletes must rest on their own laurels and effort to arrive on the team in the first place. However, the personal success and singular existence must relent to the team as a whole at some point for the individual to become part of the team.

The journey into Community requires the ability to communicate and covenant on a deep inter and intrapersonal level. Depending upon what type of sport, an athlete may feel a greater sense of existential awareness. For example, in a co-active sport such as golf, a player may feel alone and as if he/she cannot rely on anyone or anything outside of them self. However, in a more interactive sport, such as basketball, an athlete may feel
more inclined to let go of a certain degree of their independence for the benefit of the team.

In Emptiness, Peck (1987) also emphasizes the need for the individuals to be able to celebrate one another’s differences as willingly as the similarities. However, this is a very difficult goal to accomplish because the thought of allowing others to see who you truly are is fearsome. This goes back to when we were young. Early on in life, people are encouraged to individuate and become independently strong. Therefore, people fear the notion of surrendering one’s individualism. Yet, the premise of rugged individualism is the very core of many troubles today. Rugged individualism encourages people to hide their weaknesses and failures, to be ashamed of their limitations, and to endeavor for excellence without the help of others. This ideology would hardly work within a team environment, let alone a Community.

On the contrary, soft individualism is based on the idea that people cannot entirely and honestly be themselves until they are able to share their weaknesses, imperfections, incompleteness, inadequacies, and general lack of self control. This kind of softness allows those barriers (eg., ego, preconceptions, expectations, need to control) that have been built up to protect ourselves from discomfort and failure, to assuage so we can join with others as well as permit others to join with us. This ideology (soft individualism) is more in line with the philosophy of team sport. This paradox is what makes Emptiness such a conceptual conundrum. In order to individuate, it is essential to truly become oneself. In order to successfully reach Community, we must truly become ourselves. However, the acknowledgement and acceptance of our inherent interdependence is the
very way we can truly reach genuine Community. Therefore, the move from rugged to
soft individualism is necessary for Emptiness to occur.

An example of moving from individuation towards interdependence in sport is
when a star player renounces their self-serving desire to occupy the limelight and shares
it with other teammates. For some players, the very thought of letting go of an
opportunity to shine is threatening. Too often individuals sacrifice the sense of
Community for the freedom of individuality. However, on a team this ideology would not
yield the best result. Peck suggests that a Community is a group of individuals who have
become committed to communicating deeply and honestly with each other, whose
relationships transcend their pretense of self-control. In sport, one of the biggest barriers
to reaching true Community is the ego.

For instance, the Romanian Soccer Team in the 2008 European Championships
had to win the game to clinch their seed in the tournament quarterfinals. Romania’s key
player (Mutu) had the opportunity to score the game winning goal in the final minutes of
play on a penalty kick. He missed. Mutu was outwardly and justifiably disappointed that
he had failed. With four minutes to go in the match, he decided to take himself out of the
game because he was unable to let his feelings go and perform. This is an example of the
quintessential team player. Mutu could have decided to remain in the game and try to
redeem himself, but he and his teammates recognized that he was unable to perform at
the psychological level necessary. This example epitomizes the Romanian team’s ability
to be introspective on a deep level. In the throws of the competition and the stress of the
circumstances, the team was still in touch with itself and was able to make a difficult
decision that was in the best interest of the team. The team was conscious of one
another’s moods and states of mind. A sport team in a state of Emptiness should be able to contemplate and understand one another on a very deep level. Peck (1987) illustrates this stage of Emptiness as a place where we must be willing to place the wellbeing of the whole (team) over personal interest. As a result, the stage of Emptiness is a time of self sacrifice.

As mentioned earlier, some of the barriers to communication, which inhibit entry into a Community are: (a) expectations and preconceptions, and (b) the need to control and fix. For instance, some barriers necessary to overcome in the Emptiness stage may be when several athletes on a basketball team enter with a whole constellation of expectations and preconceptions about what type of player they are, how much playing time they will or should get, or how others on the team should regard them. According to Peck (1987), these expectations operate as barriers that inhibit someone from truly experiencing their fellow teammates and the true nature of the process.

An example of a sport team emptying themselves of barriers to communication is when they shed their individual pursuits and egos. For example, Michael Jordan, one of the greatest basketball players of all time, declared that he must fail in order to achieve success. Jordan stated that "the reason I succeed is because I have failed over and over in my life". Jordan sacrificed personal glory for the benefit of the team.

Another barrier to Community is the need to control and fix one another and the situation. Athletes, like all people, attempt to manipulate situations in hopes of achieving a desired outcome. However, according to Peck the desired outcome or optimal performance cannot be achieved through control. The need to control in order to achieve the desired outcome is somewhat rooted in the fear of failure (Peck, 1987). As mentioned
above in the Michael Jordan example, one must be willing to fail on a personal level in order to succeed at the team level. This is also reflected when an athlete recognizes and accepts their role on the team as a bench player, one who comes in to relieve a fellow teammate time and again.

Being a bench player can often times breed animosity and resentment. Once this athlete suspends the need to try and control the circumstances and instead accepts their role on the team, then he/she is not truly emptying themselves of their personal barriers to communication. Frequently, athletes believe that they should be getting more playing time or that they are not being treated fairly. Such beliefs impede the process of reaching earnest Cohesion and ultimately true Community. The transformation of a collection of individuals (group) into a true Community requires small deaths in many of the individuals, although; it is also a process of group death that propels that same collection of individuals into a resurgence of true Community.

Characteristic of this stage is a genuine level of Cohesion. Because of the openness and trust present, the environment is seen as a safe place, and conducive to personal sacrifice. The level of Cohesion in this stage would likely show an increase from the Chaos stage. However, it is possible that the process of emptying is so discomforting that a certain level of Chaos may remain. Dependant upon what takes place during the process of emptying, two teams can present very differently. The level of Cohesion in this stage would perhaps be comparable to the level of Cohesion in the first stage of development (Pseudo-Community). However, in Pseudo-Community, the apparent high level of Cohesion is based on pretense, as opposed to a more authentic level of Cohesion.
experienced during a state of Emptiness. The level of Flow is perhaps the more significant factor during the stage of Emptiness.

Once Cohesion is authentic and related to the team task, the stage is set for a state of Flow to occur. As mentioned earlier, the ability to achieve Flow in sport can result in a greater sense of personal enjoyment and success (Jackson, 1995). Flow is such an enjoyable experience that is often motivates individuals to grow and perform at their optimal levels. Also, Emptiness has been described as the crucial state a group must go through to reach their full potential (Community). Emptiness and Flow state may exist in unison. Without emptying, Community cannot be reached and, without Community, optimal experience is unattainable. Since Flow in sport is described as an optimal experience, perhaps, Flow would be elevated during a state of Emptiness.

Athletic teams spend a lot of time together on and off the field, which ends up contributing to the opportunity for emptying to take place. For instance, in college sports, the team practices together every day, travels together to games, eats meals together while on the road, spends time together as roommates, and goes to the training room together to nurse injuries. The amount of time a competitive sport team spends together is unlike that of any other group. During this time together, the occasion to share on a deep and meaningful level presents itself several times throughout a season. The process of emptying on a sport team surely occurs in a much different way than that of a work group, therapy group, or a task group. For example, a team that travels two thirds of their season together has many opportunities on a bus, plane, or sitting in an airport to communicate on a deep level, not to mention the time spent during double days (pre-season).
Preseason camp is an arduous and taxing time for all athletes. Some are away from their family and friends for the first time; resulting in homesickness. The sheer physical and emotional exhaustion experienced during double days creates an unequivocal opportunity to bond on an extraordinary level. During preseason, teams often spend 24 hours together for several weeks. A typical day consists of team breakfast, early morning fitness (6:00am), morning practice, training room, team lunch, afternoon practice, video/chalk talk, team dinner, and sleep. This experience is comparable to the experience and mentality of a recruit training team in the military. Such teams train together, live together, deploy together, and fight together. This design for Cohesion provides positive peer pressure, reinforces core values, and results in increased fighting power. Therefore, the experience of preseason in sport can provide an opportunity for a team to come together, empty together, and overcome together.

Some would argue that this sort of mentality requires a certain degree of exclusion and aggression that are not encouraging of Community (Peck, 1987). The very nature of sport lends itself to be competitive. Most individuals who decide to participate in sport are competitive. Peck (1987) suggests that Community cannot be competitive because Community should have no enemies. However, because sport attracts competitive personalities and fosters competition among other teams; the spirit of competition is expected and can be both honest and peaceful. An example of this would be a team with good sportsmanship.

According to the Merriam Webster Online Dictionary (2008), sportsmanship is “the conduct (as fairness, respect for one's opponent, and graciousness in winning or losing) becoming to one participating in a sport.” While this definition seems to get at the
root of sportsmanship, something seems to be missing. Compulsory to good sportsmanship is also a fairness and respect for one’s teammates. A team with good sportsmanship exemplifies all the essential characteristics of a Community put forward by Peck. On the other hand, a team that has poor sportsmanship and takes pleasure in humiliating or bullying each other or another team would in theory, not be able to achieve Community. This may be the reason the Community-Making model has not been extended to team development in sport. Peck was perhaps, unable to make reference to sport as a venue for Community-Making because of the inherent competitiveness and perceptible aggression. Interestingly, the Latin root for the verb “to compete” is “competere,” which means “to seek together” or “to strive together.” The very etymology suggests that competition is cooperative and more in accordance with Community than Peck thought.

Further support for sport as an appropriate venue for Community development would be the fact that competitive sports are governed by consensual codified rules that are collectively agreed upon by the participants. Violating these rules is considered to be unfair competition. Therefore, sport, in theory, is an optimal place for Community-Making to take place. Peck (1987) suggests that groups assembled deliberately to form themselves into communities have a greater chance of making it to Community. Participation in sport is deliberate and each athlete who joins a sport team desires to be part of a team.

Again, the criteria for true Community are that it be inclusive, all members be committed to the team as a whole, and all decisions be consensual (Peck, 1987). The discussion so far has affirmed the ability of a sport team to be inclusive of all members.
Also, the commitment of all members to the team is determined from the outset, by means of joining a sport team in the first place, and signing team rules and contracts. Finally, the criteria of consensus can be satisfied when all members decide to communicate and own their individual roles on the team. A consensual commitment to the overall goal of playing together as a team is what makes a sport team successful. This suggests the very nature and venue of sport is accommodating to Community. While, Peck did not refer to sport in his discussion of Community-Making, this researcher would like to extend the model to sport. As mentioned earlier, the stages of Emptiness and Community are more the same than separate experiences. Instead of the belief that one stage must occur before the other, this researcher offers that they are, instead, co-existing. One cannot exist without the other. Emptiness cannot subsist without Community and Community cannot subsist without Emptiness.

As for the increase in team productivity and focus on the task, sport teams have been noted as experiencing a team Flow (Cosma, 1999). Gozdz (1992) has likened the concept of Flow (Csikszentmihalyi, 1975, 1990) to the experience of Community. When everything is clicking and seems to be falling into place, that’s when a team is experiencing an optimal performance. After making it successfully through the previous three stages, Community is possible. However, there are also times when a team may be in the zone (Flow) and something happens to shake up the system. A team in Community should be able to respond to the situation better than if they were in an earlier stage of development (eg., Chaos). For example, a basketball team may have made their journey into Community and are performing at their peak, when the team is offset by a losing streak. As mentioned earlier, losing results in the shifting of positions and the
reorganization of responsibilities. A further example is when the star player suffers a season ending injury and the chemistry of the team is altered. In both cases, the team must be able to respond to the circumstances and change according to the overall group goal.

The decision to maintain Community must be a team decision. Therefore, when something happens to upset the system, then the entire team must agree to be committed to doing whatever it takes to maintain Community. Luckily, once a team has successfully made it to the stage of Emptiness and Community, the team is more apt to resolve the Chaos, endeavor through Emptiness, and enter back into Community again. The same thing holds true for the optimal experience of Flow. For example, once an athlete has experienced Flow state, he/she is more suitable to attain that state again.

A Community will frequently fall back in to Chaos or even Pseudo-Community throughout the process of its time together. With each regression, the team will have to re-empty. This is the point when many groups founder. However, athletic teams are unique in the sense that the ultimate goals (e.g., team membership and winning) are favorable to all, and the acknowledgment is for the team as a whole. In the case of a basketball team having experienced a nine game winning streak that lead to winning their conference; that team most likely experienced Community. So when the team falls out of Community, their ability to attain Community again will be greater, due to their commitment to the team and their prior experience with Emptiness and Community. No Community can expect to never falter. However, what a true Community does do, because it is an introspective body; is recognize its weaknesses when they occur and quickly take appropriate measures to heal itself. Indeed, the longer a Community can
maintain itself, the more efficiently they can recover. On the contrary, those teams that never learn to be introspective by way of Emptiness do not become Community in the first place and will eventually crumble. A Community without Emptiness doesn’t exist. In the state of Community, it is possible for sport teams to perform at their peak, to create moments of brilliance on and off the field, and to have life changing experiences.

Summary

As referenced by Gozdz (1992) the experience of Community-Making is likened to a state of Flow that comes and goes over the course of a team’s time together. Flow has been expressed as an optimal experience, much like the experience of Community. In and through Community comes communication, collaboration, strength, acceptance, unity, and optimal performance from the team as a whole. Peck (1987) proposed that until a group empties itself, it cannot act as a Community. If through Community, all the ingredients of Emptiness exist and, in and through Emptiness, all of the characteristics of Flow state exist, then perhaps they are all interrelated and occur in unison rather than separate. For the purposes of this study, the first and second stages of the Community-Making model (Pseudo-Community and Chaos) are described as applicable to the development a sport team goes through. However, for the purposes of this study, the third and fourth stages of Peck’s Community-Making model are instead treated as one in of the same. Peck’s (1987) model appears to be the most appropriate model to describe the unique developmental dynamic that occurs on an athletic team. However, even Peck’s model has its limitations. Therefore, the Community-Making model will be modified and
extended to custom fit the distinctive process an athletic team goes through over the
course of a competitive season, both on and off the field.

There has been an absence of literature examining the developmental phases or
stages a sport team goes through. Over the course of history, coaches, athletes, and sport
psychologists have shown a fascination for the connection between athletic performance
and such factors as team Cohesion and the state of optimal performance (Flow).
Successful teams have often attributed their success to high levels of team Cohesion,
which has resulted in Cohesion often being cited as the most central and crucial element
in the development of a team of people working together (Zander, 1975). However, due
to a recent increase in the research regarding Cohesion, Cohesion is no longer lauded as
the sole predictor of athletic performance and positive group development (Carron,
Spink, & Prapavessis, 1997; Carron, Coleman, Wheeler, & Stevens, 2002).

The empirical literature surrounding sport as a ‘dynamic group’ has provided
several models, concepts, and theories concerning the variables that affect sport
Cohesion, group process, and development. However, very little has been done to
investigate how sport teams develop and how factors such as Cohesion and Flow state
may influence or be influenced by this process. Researchers (Carron, 1982; Weinberg &
Gould, 2003, 2006) have agreed that becoming a team is an evolutionary process, which
is both dynamic and continual. However, this process has not sufficiently been studied in
the sport setting. The following section will provide a discussion of the literature
concerning the constructs of Flow and Cohesion. For the purposes of this study, both will
be discussed in reference to sport and how they are both influential in the athlete’s
subjective experience and performance.
Part II

What is Flow?

Since the 1990s, researchers have examined a psychological construct related to the positive aspects of human experience. This construct is currently known as Flow. In 1975, a Hungarian researcher named Mihalyi Csikszentmihalyi (pronounced Chick-Sent-Me-High-EE) developed the concept of Flow after examining people while engaged in autotelic (self-motivating) activities such as playing chess, rock climbing, surgery, and dancing. Csikszentmihalyi coined the term Flow subsequent to observing individual’s total involvement in their activities and noting their descriptions of their experiences. Csikszentmihalyi can be referred to as the founding father of the measurable concept of Flow. However, he wasn’t the first to recognize the concept for humans to seek happiness and optimal experiences out of life. Philosophers such as Aristotle were concerned with the same concept; that more than anything men and women seek happiness.

During Csikszentmihalyi’s doctoral research he probed deeper into the concept of Flow using a group of male artists. Csikszentmihalyi concluded that the painters enjoyed the experience and the process of painting regardless of the outcome. This suggests that optimal experience can occur notwithstanding the outcome.

Flow has been referred to as a desirable state that promotes personal growth (Csikszentmihalyi, 1988) and enhances self-esteem (Wells, 1988). Susan Jackson, the foremost researcher of Flow in sport, describes the Flow state as “a valued experience and source of motivation for any individuals undertaking physical activity, whether it be high-level competitive sport or a fitness endeavor” (1996, p. 76). According to Jackson,
being able to achieve Flow during participation in physical activity can result in a greater sense of personal enjoyment and success. Furthermore, once Flow is experienced, even once, athletes can often be motivated to initiate further attempts at re-creating this positive subjective state. This motivation is similar to the attempts to achieve true Community.

In general, Flow is an enjoyable psychological state that arises when there is a perceived balance between one’s competencies (skills) and the demands of the task (challenge). Flow is defined as a state of “optimal experience” involving total absorption and commitment in a task and a state of consciousness in which optimal levels of functioning occur (Csikszentmihalyi, 1975, 1990). Flow is used to concisely depict the expressed sense of the seemingly effortless movement quality of this experience (Jackson, 1996; Kimiecik & Jackson, 2002). As defined by Jackson and Csikszentmihalyi (1999), Flow is:

- a state of consciousness where one becomes totally absorbed in what one is doing, to the exclusion of all other thoughts and emotions… Flow is a harmonious experience where mind and body are working together effortlessly, leaving the person feeling that something special has just occurred… Flow lifts the experience from the ordinary to the optimal. (p. 5)

Furthermore, Flow refers to the individual’s perception of the experience instead of the actual physical variables present.
Dimensions of Flow

As a result of a compilation of both qualitative and quantitative research methodologies Csikszentmihalyi and others have produced a large amount of information with regard to Flow. Jackson & Csikszentmihalyi (1999) have suggested there are nine characteristics or dimensions comprising the experience of Flow. Each dimension is important in its own capacity. However, Csikszentmihalyi was resolute that individuals whom are in the mind-set of Flow experience the following components:

1. Challenge-skills balance (CS)
2. Action-awareness merging (AA)
3. Clear goals (CG)
4. Unambiguous feedback (UF)
5. Concentration on the task at hand (CT)
6. Sense of control (SC)
7. Loss of self-consciousness (LS)
8. Transformation of time (TT)

A brief description of each dimension follows:

Challenge-skill balance (CS). This first dimension is one of if not the most important dimension of the Flow experience. According to Jackson & Csikszentmihalyi (1999), without a balance between the perceived challenge and skill level, the person will experience a less than desirable state, perhaps either boredom or anxiety. According to Csikszentmihalyi & Csikszentmihalyi (1988), a person should feel as though he/she has
something to do and that he/she is competent enough to do it. Basically, Flow requires a person to perceive that themselves as able to meet the challenge with their skill level. If the CS balance is not present, then the person risks either boredom with the task, anxiety, or indifference. Therefore, an optimal experience is not possible. This CS balance is the “golden rule of Flow” (Jackson & Csikszentmihalyi, 1999, p. 16).

**Action awareness merging (AA).** This dimension of Flow is described as the mind and body working in unison. According to Jackson & Csikszentmihalyi (1999), this component of Flow is dependent upon all of the other components. AA can only occur when a person becomes completely immersed in the activity. Additionally, this mind and body fusion does not require any effort, because this experience can only occur when an individual is at the confluence of CS balance and total absorption in the activity. For example, a rower once explained the feeling of the ore becoming an extension of their own arm, and a basketball player indicated that he/she felt as though he/she merged with the team in much the same way a leg is a branch of the body, and “when he/she shoots a basket, the arc of the ball toward the hoop is like an extension of their mind and will” (Jackson & Csikszentmihalyi, 1999, p. 19). This unified state of consciousness, which is a result of the merging of action and awareness, is quite simply the most telling aspect of the experience of Flow.

**Clear goals (CG).** Within this dimension of Flow, the person knows in advance what is required of them. For example, athletes and coaches often use goal setting as a way to help them get to where they want to go. According to Jackson & Csikszentmihalyi (1999), in order for a person to enter into Flow, clarity and knowledge of what is to be expected is essential. This doesn’t necessarily mean that a person can’t handle a curve
ball; however, it does mean that, for the most part, the person knows what he/she is up against. There are several ways an athlete can go about facilitating this mind-set. For example, visual imagery is used by athletes as a tool to rehearse their performance ahead of time. A basketball player might visualize themselves at the free throw line and the feeling of all their senses. The athlete may imagine what it would feel like for their heart to be pounding at 160 beats per minute, the feeling of the sweat dripping down the side of their face, their legs shaking from the last sprint down court, hearing the roar of the crowd, the sound of the ball bouncing on the floor, the sound and feel of their own breath, the smell of the warm sweat, and the taste of their own saliva. The more a person visualizes themselves in a situation and how he/she would feel and what he/she would do, the more likely he/she will be prepared to perform. Having a plan before being faced with a task minimizes the need to think and divert attention from the moment to moment awareness. Often associated with an athlete’s description of an optimal athletic experience are the following statements: “I knew exactly how I was going to swim the race” and “I knew what I had to do” (Jackson & Csikszentmihalyi, 1999, p. 21). Also, athletes often report having a sense prior to an event that their performance is going to be favorable. Such knowledge helps center the mind in order to maintain the clarity necessary for Flow to occur.

*Unambiguous feedback (UF)*. This dimension of the Flow experience is more or less about the clarity and consistency of internal and external feedback than about a person’s performance. According to Jackson & Csikszentmihalyi (1999), it would be impossible to fully participate in something if the person didn’t know how he/she were doing. Feedback explains the knowledge about a performance that athlete’s receive,
allowing for stability in pursuit of their goals. In order for an athlete to perform well, feedback is essential. Athletes who are in tune with the feedback coming from their own bodies, such as being kinesthetically aware (e.g., knowledge of heart rate, body movements, feeling, position of body in space), feedback coming from the environment (e.g., coach, opponent, time, score, spectators, teammates), are able to sustain a connection and control with what they are doing. It has been a consistent finding in the sport psychology research that the knowledge of results facilitates an enhanced performance (Schmidt, 1991). If an athlete knows what a good performance feels like, then feedback allows the athlete to measure moment by moment how he/she is performing in line with their goals and staying in tune with the task at hand, which brings us to the next Flow dimension.

Concentration on the task at hand (CT). Considering the previous dimensions of Flow: balance of skill and challenge, unity of body and mind, clarity of goals, and feedback, one still needs to focus all their attention on the task. Consider a snowboarder firing down the half-pipe, he cannot afford to be sidetracked with thoughts of how he is going to pay his mortgage for the month, relationship woes, or anything else outside the context of the event itself, because, if his focus drifts away for even a second, he may possibly end up face first in the snow. Jackson & Csikszentmihalyi (1999, p. 25) indicated “focus in Flow is complete and purposeful.” This focus includes but is not limited to their movements and awareness of their opponents, their teammates, and the crowd. Even though focus on the opponents and other things outside of the task itself may seem to go against the idea of total concentration on the task, they are indeed associated with the task for some athletes in some situations. For example, a track runner
needs to be aware of where she is in relation to the other runners, and in basketball players must be aware of where their teammates are as well as the location of their opponents. The crowd for example may at first appear to be a distraction, but to some athletes it is an important component of the whole experience. Some athletes require crowd feedback in order to get in the Flow. Essentially, an athlete must become skilled at preparing their mind to tune out all thoughts not relevant to the task at hand in order to experience Flow in sport.

*Sense of control (SC).* Like the skill of being able to completely and utterly concentrate on the task itself, an athlete must also have a strong sense of self efficacy about the task. This dimension of Flow is when an athlete trusts their level of skill and also perceives the task to be achievable, much like CS. An athlete whom has the knowledge that their level of skill is sufficient to accomplish the task brings a sense of empowerment and composure. Jackson & Csikszentmihalyi (1999) spoke with several athletes and recorded their statements about SC. For example, some describe the feeling as “unbeatable,” “like I can do anything,” and “like nothing can go wrong” (p.26). This sense of control comes from an individual’s belief that he/she has the skill level required for the challenge. This belief takes away from the possibility of self doubt, worry, and thoughts of failure, which, as reported by Jackson & Csikszentmihalyi (1999), seldom enter the mind of an athlete experiencing Flow.

*Loss of self-consciousness (LC).* Within this dimension of Flow, the regard for self goes by the wayside, as does worry and defeating thoughts. With all that we have talked about so far with regard to what an athlete needs in place to experience Flow, there is simply no space left for worry or an ego. The experience of Flow ultimately frees the
individual from themselves. In other words, there is no room for self-concern or self-doubt. A loss of self-importance is an empowering characteristic, because what inevitably results after time spent in Flow is a stronger and more positive perception of self. Jackson & Csikszentmihalyi (1999) noted that athletes have often reported that when they just let go of their self importance and worry about how they will perform and what others will think of them, they feel rejuvenated and liberated. Naturally this dimension is aligned with AA, because letting go of worry about oneself allows the athlete to become totally immersed in the activity. Also, as mentioned previously for CT, the act of becoming one with the activity implies that distracting thoughts about oneself and anything outside of the task are blocked. Some examples of things athletes might articulate when referring to this dimension are: getting “lost in what I was doing,” and “it’s like a subconscious expression or release–my conscious mind was not interfering” (Jackson & Csikszentmihalyi, 1999, p. 27). Along with a loss of self-consciousness comes a disregard for time, which is another dimension experienced in Flow.

Transformation of time (TT). Time is highly valued in today’s lifestyle, almost as valuable as certain natural resources like oil or water, which can either be put to good use or wasted. “Time is money.” We only get so much time in this life, so we had better use it wisely. However, we can experience time in one of two ways, it can drag on forever, or it can fly by. For someone experiencing Flow, time generally flies by; hours pass by like minutes, or minutes like seconds. Nevertheless, the opposite can also occur where people in Flow feel as though they have all the time in the world, and there is no pressure or clock. The aforementioned transformation of time may seem contradictory; however; the experience depends upon the event and the athlete’s perception of time. For example, a
marathon runner may report to have been in Flow for the last four hours of the marathon, yet indicate that it only felt like one hour. According to Jackson & Csikszentmihalyi (1999), events that involve speed and require quick reaction (e.g., track sprints) times may appear to be in the Flow state longer. Conversely, in those events that last longer (e.g., marathons and ultra distance rides), the person may be so absorbed in the task that things seem to be happening faster than they really are. It is important to mention that not all athletes who experience Flow experience transformation of time, because some sports require the awareness of time as part of their total concentration on the task. For example, a sprinter may need to be aware of every second in order to estimate how he should pace oneself for the breakaway. Aside from the few exceptions in sport when transformation of time is not most advantageous, athletes in general have reported that a timeless moment is refreshing (Jackson & Csikszentmihalyi, 1999).

**Autotelic experience (AE).** The last of the nine dimensions of Flow is the fact that the activity is rewarding in and of itself. According to Merriam Webster’s Online Dictionary, autotelic is having a purpose in and not apart from itself. Flow is referred to as an autotelic experience, because it is so enjoyable that people seek to experience it over and over again. Athletes have explained Flow as both fun and enjoyable with statements such as, “it felt great the whole way,” and “it felt like such a rush.” Others have described the experience as having felt no pain, feeling very strong, and having an endless supply of energy. This dimension of Flow is the end product of the other eight dimensions of Flow. The experience of Flow is so rewarding that the athletes have reported feeling the effects long after the event is over. Those who have experienced Flow have reported trying to seek it out again because of how great it feels. The question
of weather or not there is a way to make Flow happen has been a topic of great interest. Jackson & Csikszentmihalyi (1999) believe that these nine dimensions are how Flow is described. Additionally, these dimensions give information to athletes, coaches, and others who are interested in what it takes for Flow to occur. It is important to keep in mind that all of the dimensions have an effect on a person’s ability to reach the Flow state. However, due to each person’s uniqueness, different people experience different levels of each component, and not all people need all nine dimensions present to reach Flow.

Jackson (1995) wanted to gain a better understanding of which of the nine factors most influence the occurrence of Flow in elite level athletes. Jackson (1995) was also interested in examining how athletes perceive their ability to control Flow. The participants in Jackson’s study included 28 elite level athletes from a variety of sports. Athletes were asked to describe a personal experience of Flow and indicate which factors they believed helped, hindered, and disrupted the Flow experience during a performance.

Through an inductive analysis of the qualitative data, among the factors mostly associated with helping Flow occur were “positive team play” and “positive interaction among teammates.” Among the factors that reportedly prevent Flow were “negative team play” and “negative interaction among members.” Lastly, among the factors associated with disrupting Flow were “problems with performance” and “problems with interaction among teammates and coach” (Jackson, 1995). Jackson (1995) further concluded, through qualitative analysis of the athletes’ responses, that the most significant dimensions of Flow were the autotelic experience, concentration on the task, action-awareness merging, and the paradox of control.
With all this being said, it should be understood that Flow is a process, much like the process of team development. Within that process it is the experiencing of several factors in synchronization that makes the experience of Flow and Community possible and unique. Until a team has committed to the emptying process can they experience Flow as a team. Flow is perhaps a byproduct of Emptiness and an element of Community. Nevertheless, it is not yet fully understood to what degree each of the nine dimensions of Flow are necessary to set the stage for Flow to occur. For this reason, more research is needed to better understand how important those factors that are associated with the intra-team dynamics (factors that help, hinder, and disrupt Flow) influence the performance outcome and developmental process of a team over the course of a competitive season.

As mentioned earlier in the discussion of the stage of Emptiness and Community, Flow state falls in line with many of the characteristics present in the final stage of Community-Making. Jackson & Csikszentmihalyi (1999) and Jackson (1995) postulate that Flow state most likely occurs when certain environmental and intrapersonal characteristics are present. For a basketball team, the stage of Emptiness and Community most likely occurs simultaneously on the basketball floor during play. Therefore, because Flow state encapsulates many of the same characteristics as Peck’s (1987) stages of Emptiness and Community, reported levels of Flow state would likely be significantly higher while in the final stage of the Community-Making model (Emptiness and Community).

A discussion of the construct of Flow was presented and how Flow is related to optimal experience and Community-Making in sport was discussed. However, there are
other variables that have been shown to relate significantly to performance, such as the construct of Cohesion. Cohesion is among the factors that have shown a strong relationship to performance outcome. One agreement within the sport literature is that a cohesive team is a more successful team. Knowledge of how such factors as Cohesion and Flow may influence or be influenced by this process is of importance in understanding how to reach an optimal experience and possibly achieve peak performance.

What is Cohesion?

John Bowlby (1980) stated the following with regard to his attachment theory:
Intimate attachments to other human beings are the hub around which a person's life revolves, not only when he is an infant or a toddler or a schoolchild but throughout this adolescence and his years of maturity as well, and on into old age. From these intimate attachments a person draws his strength and enjoyment of life and, through what he contributes, he gives strength and enjoyment to others (p. 422)

Being part of a group is what enables people to thrive and do exceptional things. An individual’s perception of a group to which they ‘belong,’ can be defined in terms of their perception of how well they fit within the group and their attraction to remain a member of a particular group (Carron, Brawley, & Widmeyer, 1998; Widmeyer, Brawley, & Carron, 1985). Historically, Cohesion has been identified as the most important small group variable (Golembieski, 1962; Lott & Lott, 1965). Widespread interest in Cohesion has been shown by researchers in social psychology (Eisman, 1959;
Zaccaro & Lowe, 1986), military psychology (e.g., Manning & Fullerton, 1988; McGrath, 1962), organizational psychology (e.g., Keller, 1986; Trist & Bamforth, 1951), counseling psychology (e.g., Roark & Sharah, 1989), and educational psychology (e.g., Festinger, Schachter, & Back, 1950; Shaw & Shaw, 1962). Additionally, over the past several years Cohesion has been the object of interest in both the sport and exercise psychology fields. Coaches, athletes, sport educators, sport administrators, and the like have shown a fascination with the dynamics and athletic performance of teams and how they relate to the construct of team Cohesion (Carron, 1988; Carron, 1993; Carron & Chelludurai, 1981; Carron & Spink, 1993; Widmeyer, Brawley & Carron, 1985).

The literature has revealed that successful performance can be attributed to a high level of team Cohesion (Wann, 1997; Williams & Widmeyer, 1991). Consequently, several researchers and theoreticians have sought to define Cohesion (Festinger, Schachter & Back, 1950; Gross & Martin, 1952; Carron, Brawley, & Widmeyer, 1998).

A review of the professional literature suggests that the definition of Cohesion proposed by Carron et al (1998) is the most widely accepted definition in the literature to date. According to Carron et al (1998, p. 213), Cohesion is “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.” According to Singer et al (2001), Carron and Associates’ definition was proposed to highlight the fact that Cohesion in sport teams is: multidimensional, dynamic, and affective. In simple terms, there is more than one factor that inspires the cohesive nature of a team. Furthermore, Cohesion is dynamic and indeed changes over time throughout the course of a season. Lastly, Cohesion is seen as being connected with having a positive
emotional effect. In accordance with their definition of Cohesion the widely used and respected model of Cohesion, was developed by Widmeyer, Brawley, & Carron (1985). This model has been used as the basis for most of the Cohesion literature in sport and exercise psychology to date.

Widmeyer et al.’s (1985) model of Cohesion divides the concept of a group’s Cohesion into two general perception areas (see figure 2). The first area is known as group integration (GI), which is the category that conceptually represents “the closeness, similarity, and bonding within the group as a whole—the degree of unification of the group field” (Carron, Widmeyer, & Brawley, 1985, p. 248).

The second area is individual attraction to the group (ATG); which on the other hand is the category that represents the “interaction of the motives working on the individual to

remain in the group-the composite of the individual members’ feelings about the group, their personal role involvement, and involvement with other group members” (Carron, Widmeyer, & Brawley, 1985, p. 248). Furthermore, the two perceptual areas each have two categories. The group’s task orientation (GI-T and ATG-T) is described as the group’s desire to achieve a group goal, and the social orientation (GI-S and ATG-S) is the group’s desire to develop and maintain social relationships with group members.

This model was the basis for one of the most widely used measurements of sport group specific Cohesion, the Group Environment Questionnaire (GEQ) (Widmeyer, Brawley, & Carron, 1985), which will be described in greater detail later. As a result of this model, researchers have been able to gain a better understanding of the complex dynamic of teams. A seminal example is a study conducted by Lenk (1969), who investigated the 1960 World Championship Gold Medal German rowing team and found that, despite their deliberate and open conflict as a team, they remained highly successful on the water. This example lends evidence to the different types of Cohesion to which Widmeyer et al.’s definition points. Perhaps, the German rowing team had low social Cohesion but high task Cohesion.

Later, Widmeyer, Carron & Brawley (1993) suggested that ‘the Cohesion dimension most closely linked to performance outcome is Group Integration-Task’ (p. 686). Widmeyer et al. (1993) proposed that, because of the conceptual nature of the construct, Group Integration-Task is likely to have a stronger association with team performance than Individual Attraction to the Group-Task. However, according to Carron, Bray & Eys (2002) both the Group Integration-Task and Individual Attractions to
the Group-Task dimensions of Cohesion are strongly associated with team success. The
differences are perhaps conditional to the type of team being studied, among other factors.

*CoHesion-Performance Relationship*

The many, no one of whom taken singly is a good man, may yet taken all together
be better than the few, not individually but collectively, in the same way that a
feast to which all contribute is better than one given at one man's expense
(Aristotle)

The value of the relationship between group Cohesion and performance was
realized as far back as 350 BC, when Aristotle recognized the importance of working
together to achieve superior results. Nearly 2360 years later, interest remains prevalent.
Several researchers in the area of sport have continued to study the relationship between
Cohesion and athletic performance.

The study of Cohesion in sport and its relationship to team performance has
produced a myriad of interacting variables over the years (Carron, 1993). As mentioned
earlier, Cohesion has proven to be a complicated dynamic variable within the
development of a group or team. This complexity was what motivated Carron (1982) to
develop a model that conceptualized the multidimensionality of Cohesion through several
variables within a sport team.

*Carron's Model of Cohesion*

Carron’s model (1982) is made up of the following variables: (1) environmental
factors; described as the norms of forces which hold a team together, (2) personal factors;
including the individual characteristics of the members, (3) leadership factors; 
comprising the styles and leadership characteristics of the group leaders, and (4) team 
factors; comprising the group task characteristics, desire for group success, and team 
stability. These factors were labeled as the variables that appear to affect the relationships 
within an athletic team (Carron, 1993). Over the last few decades, researchers have 
examined these factors as both antecedents and consequences to the development of 
Cohesion and its influence on athletic performance (Brawley, 1990; Berardinis, Barwind, 
Flaningam & Jenkins, 1983; Carron, 1988; Carron, 1993; Carron & Chelladurai, 1981; 
Carron & Spink, 1993; Widmeyer, Brawley & Carron, 1985; 1992; Williams & 

Additionally, there have been several meta-analyses conducted to examine the 
Cohesion-performance relationship (e.g., Carron, Colman, Wheeler, & Stevens, 2002; 
Mullen & Cooper, 1994; Paskevich, Estabrooks, Brawley, & Carron, 2001). The general 
accord present throughout the literature is that those groups or teams with higher 
Cohesion perform better.

However, Mullen & Cooper (1994) reported that, as a result of their meta-
analysis, while experimental studies indicated positive relationships between group 
performance and both forms of cohesiveness (task and social), correlational studies 
suggested a positive relationship for task-related cohesiveness and a negative relationship 
for social cohesiveness. As a result, further research was needed to compare the effects of 
different types of cohesiveness on individual and group performance.

Based on the limitations in Mullen & Cooper’s (2002) analysis, Carron et al 
(2002) completed a further meta-analysis using a more comprehensive and appropriate
measure of Cohesion, the GEQ (Widmeyer, Brawley, & Carron, 1985) as opposed to the Sport Cohesiveness Questionnaire (SCQ) (Martens & Petersen, 1971), which Mullen & Cooper based their analysis upon. Carron et al (2002) concluded that there is a significant, positive, moderate to large relationship between Cohesion and performance. This relationship was observed independently of type of Cohesion (i.e. task vs. social), gender, sport type (i.e. co-active vs. interactive), skill/experience of the competitors (i.e. high school, intercollegiate, club, professional), and time of the season (early, middle, or end). Moreover, both task and social Cohesion were related to performance in a reciprocal fashion. Interestingly, research into Cohesion using the GEQ versus the less-than-rigorous Sport Cohesiveness Questionnaire (SCQ) (Martens & Petersen, 1971), has suggested that ‘task’ Cohesion is more important for team success than ‘social’ Cohesion. This could explain the equivocal results of earlier Cohesion studies (e.g., Lenk, 1969; Mullen & Cooper, 2002), and why it is possible for team mates to dislike each other and still win. Typically, coaches and athletes prefer team mates to get along on and off the court. However, it appears that, as long as everyone is focused on the common task and goals then success is possible even without social Cohesion (MacCoun, 1996). An example of this at work was the Chicago Bulls basketball team, which dominated the NBA throughout the 1990s. The players supposedly didn’t hang out with or act friendly with each other off the court, but practiced and competed together with 100% professionalism and commitment to the team’s purpose. That being said, the relationship between Cohesion and performance outcome cannot be fully considered without taking into account such factors as: type of Cohesion, type of sport, and point of time during the season. For the purposes of this study such variables will be considered.
Factors Influencing Cohesion-Performance Relationship

Type of sport. Different sports require different levels of interaction or interdependence among athletes to achieve success. Degree of sport interdependence can be assigned to one of two classes: coactive or interactive. Those sports that require little interaction between the athletes for success require lower levels of interdependence and are coactive in nature. Conversely, sports that require more interaction between athletes for success demonstrate a higher need for interdependence and are interactive in nature. Theoretically, those sports that require more harmony and teamwork require greater task Cohesion for team success (Carron et al., 2003).

As an example, a basketball team is an interactive team since the degree of interdependence and interaction needs to be high in order for the team to perform well. Alternatively, a wrestling team, which is coactive in nature, doesn’t require a high level of interdependence or interaction among the members of the team to perform well because individual members wrestle alone. In a study conducted by Carron & Hausenblas (1998), a high correlation between team effectiveness and individual player’s abilities was associated with a low level of coordination between team members. An example of this is the offensive and defensive players in football. Therefore, the nature of the sport itself seems to have a strong influence over the degree of interaction of the team members, perhaps as much of an influence on the performance itself. For the purposes of this study, the interactive nature of a basketball team will be analyzed.

Time of season. In addition to the type of sport, perhaps the time of the season has a potentially important influence on Cohesion. In a study conducted by Matheson,
Mathes, & Murray (1996) a significant relationship was found among the interacting sports of lacrosse and basketball and the co-acting teams of gymnastics and swimming, on the “individual attraction to group-task” dimension of the GEQ (Widmeyer, Brawley, & Carron, 1985). Furthermore, significantly greater changes ($p < .05$) in Cohesion were found for those co-acting teams verses the interacting teams at the mid-point in the season. Large effect sizes illustrated that the mid-point in the season appears to have the highest levels of Cohesion across attraction to group-task (preseason .83, midseason 1.03, postseason .49), attraction to group-social (preseason .05, midseason .38, postseason .12), and group integration-task (preseason .39, midseason .75, postseason .47). Additionally, large effect sizes were also found across the group-integration-social dimension; however, the highest level was at postseason (preseason .57, midseason .38, and postseason .70). The mid-point in the season is perhaps when a team is within the stages of Emptiness and Community, where levels of Cohesion are described to be at the peak (Peck, 1987). The mid-point of the season is also described by group development literature as the point of which at least half of the group variables are stable. Several group development theorists postulate that Cohesion is high because a group is most likely in the working stage of development. For the purposes of this study, Cohesion will be analyzed at the beginning, mid, and end points of the season.

In the recent Carron et al (2002) meta-analysis of the Cohesion-performance relationship in sport research, 55 studies were conducted. However, only 46 were utilized for the analysis to compute effect sizes. As a result, Carron et al (2002) found a significant moderate to large relationship between Cohesion and performance in sport.
(ES = .655, p < .03) from 164 effect sizes. Also, Carron et al further broke down the findings by way of comparing the published against unpublished sources of data in the event that the source would skew the findings. The published sources yielded an effect size of (ES = .73) and the unpublished sources an effect size of (ES = .51). Despite the differences in effect size between published and unpublished sources; Carron et al (2002) concluded that no significant differences existed in the overall findings for the Cohesion-performance relationship for types of Cohesion (Social, ES = .70; Task, ES .61; Generic, ES .58), interactive against coactive sports (ES = .66; ES = .77), self reported levels of Cohesion against behavioral indices (ES = .58; ES = .69), and Cohesion as an antecedent of performance against Cohesion as a outcome of performance (ES = .57; ES = .69).

Regardless of the moderate to large effect sizes, a significant difference between groups was seen by gender, with males (ES = .56) having significantly lower scores than females (ES = .95), (p < .05). Moreover, a significant difference was found between groups using the GEQ (Widmeyer, Brawley, & Carron, 1985) and those groups that used other measures of Cohesion, (eg., SCQ) (Martens & Petersen, 1971). Analysis of variance (ANOVA) on the data showed the other measures were associated with a significantly higher Cohesion-performance relationship (F (1. 162) = 7.81, p < .01).

The Carron et al. (2002) meta-analysis study provided a good deal of information but, among all of the findings, the main finding was that a positive moderate to large Cohesion-performance relationship exists in sport. That is, the greater the level of Cohesion, the greater the probability of a positive performance. Additional work with regard to the Cohesion-performance relationship has shed a new light for researchers and practitioners. Although, there still remains a gap in the literature with regard to
investigating the dynamic of Cohesion over the course of a competitive season relative to other group variables such as the construct of Flow. Being that Cohesion is a multidimensional construct, other factors such as Flow need to be investigated along side Cohesion over the course of a full season in order to gain a better idea of how important Cohesion is to performance outcome. Additionally, further research to investigate the construct of Cohesion is needed. Using a more appropriate model of team development that considers the dynamic and multidimensional nature of Cohesion on a sport team may help to better understand the unique dynamic of sport.

As mentioned earlier during the discussion of the stages of the Community-Making model, Cohesion is expected to change throughout the course of a team’s time together. However, according to the group development literature and Cohesion literature in sport, the type of Cohesion is more important than the overall level of Cohesion present. Furthermore, Cohesion in sport may be higher at different times of the season than others. However, the task related Cohesion is expected to play a larger role in the process of group development. As mentioned before, Cohesion may appear to be high in the preliminary stages of team formation. Yet, according to the current literature, the ostensible and reported levels of Cohesion are both superficial and based on pretense. Over time, as a team develops the level of task, Cohesion is expected to play more of a role in the team performance than the level of social Cohesion. As Flow is expected to occur during the final stage of Emptiness and true Community; Cohesion is also likely to show an increased level of task Cohesion as opposed to social Cohesion.
Summary

A thorough review of the literature reveals the presence of numerous studies investigating group development in work groups, therapy groups, problem solving groups, and task groups. However, no empirical examination of the group development of a sport team over the course of an entire competitive season, or consecutive seasons was found. Also present within the literature is an abundance of research investigating the positive effects of Cohesion on performance outcome. However, no substantive research investigating how, when, and why the level of Cohesion changes over the developmental process of a sport team has been conducted. Furthermore, there is a large amount of literature on the concept of Flow in sport and how Flow is related to optimal performance. Yet, research has not been done to look at how the concept of Flow relates to the construct of Cohesion over the course of an entire athletic season.

Being that the positive interaction among teammates (Cohesion) has been shown to facilitate the attainment of Flow in sport; it seems like a relationship would exist between Cohesion, Flow, and performance outcome. Several researchers have looked at how Flow is related to performance outcome. There are no studies investigating how Cohesion and Flow state together relate to performance outcome. Furthermore, Peck’s (1987) Community-Making model has not been used to describe the developmental process of a sport team. Given that Cohesion and the nine dimensions of Flow are integral to an optimal performance outcome, it then seems logical to use a model of team development that references the interpersonal dynamics within a team to explain team development. Therefore, the purpose of this study is to investigate how the stages of
Peck’s Community-Making model can be identified and predicted for a collegiate basketball team over the course of consecutive seasons by exploring Cohesion, Flow, and athletic performance.
Chapter III

Methodology

Purpose of the Study

The purpose of this study was to investigate how the stages of Peck’s Community-Making model could be identified and predicted for a collegiate basketball team over the course of consecutive seasons by exploring Cohesion, Flow, and Athletic Performance.

This study was originally designed to be conducted in multiple phases that would build upon each other, dependent upon what was found in the preliminary analyses. However, given the method of data collection and the small sample size, this study only indicated a Phase I. In Phase I, the analysis consisted of looking at trends involving the variables of Athletic Performance, Cohesion, Flow, and the stages of Community-Making. The analysis explored how the variables changed over the course of the athletic season. Based upon the trends that emerged as a part of Phase I, the researcher conducted further analyses, which were aimed at looking for evidence of the stages of Community-Making over the course of the season. Subsequently, the researcher computed the appropriate non-parametric statistic for correlations, Kendall’s tau. Furthermore, the researcher conducted a discriminant analysis in order to determine which athletic performance measures were the best predictors of outcome (win/loss). Based on the result of the regression analysis in Phase I, a subsequent phase of analysis was not indicated. Therefore, this study did not yield a strong enough model to be used to predict what
would happen for the second season of data. The results from the first part of this study were not sufficient to be used to predict what would happen for a second season of data.

However, the results of this study can be used to further the understanding of how the variables of Flow, Cohesion, and performance interact over the course of an athletic season and may be used to inform the establishment of a different model of team development. Furthermore, this study will provide directions for future approaches and research efforts within the areas of group work, organizational development, and sport psychology.

The following sections describe the methodology used in the study: *participants*, *research method and instrumentation*, *data collection*, and *the analysis of data*.

*Participants*

This study used data that has been previously collected under a pre-existing approved IRB research proposal. The population for this study was purposefully chosen. The participants for this study were female Division I student-athletes (N = 13) who were members of a basketball team at a National Collegiate Athletic Association (NCAA) Division I level program in the western region of the USA during the athletic seasons of 1999/2000 and 2000/2001. Basketball has an intuitive advantage over other sports like baseball, football, and volleyball because of the degree of interdependence needed between the team members and the conditions of the group interaction being more heavily controlled by the team environment. All of the data from this study were existing data. However, all student-athletes previously provided informed consent to participate in the collection of the data.
Method and Instruments

This study examined data that was previously collected under a pre-existing approved IRB research proposal through two instruments: The Group Environment Questionnaire (GEQ) and the Flow State Scale-2 (FSS-2), and athletic performance statistics were collected over the course of two competitive athletic seasons. At various times during the competitive season, both the Group Environment Questionnaire (GEQ) and the Flow State Scale (FSS) were administered to the participants (see below for a description of each of the questionnaires). Additionally game performance statistics were recorded and collected for both the individual student-athletes and the team as a whole.

Cohesion and the Group Environment Questionnaire (GEQ)

Team Cohesion results from being bound to teammates in the pursuit of common goals or tasks, and the level of bonding between teammates is essentially the level of Cohesion among them. A review of the professional literature indicates that the structural framework for understanding team Cohesion includes consideration of the individual, the group, the group task, and the social elements of the group. The dynamic interactions that occur between these four influences are seen as producing the essence of Cohesion as well as providing the structural stability for a team to negotiate the emotionality of a competitive season.

The Group Environment Questionnaire (GEQ). The widespread conceptualization of the construct of Cohesion marks the basis for the foundation of the widely used sport group specific 18-item questionnaire known as the Group Environment
Questionnaire (GEQ) (Carron, Widmeyer, & Brawley, 1985). The GEQ has been used extensively in research since its publication to assess individual perception of team Cohesion. The instrument is broken down into four (4) separate subscales, each yielding a separate score, which are summed to comprise an individual’s overall perception of team Cohesion.

The four subscales along with an example from each, consist of: Attraction to Group-Task (AG-T) (“I am unhappy with my team's level of desire to win”); Attraction to Group-Social (AG-S) (‘I am not going to miss the members of this team when the season ends“); Group Integration-Task (GI-T) (“Our team is united in trying to reach its goals for Performance”); and Group Integration-Social (GI-S) (“Our team members rarely party together”). The ATG subscales are assessed by four items each, while the GI subscales are assessed by five items each. It takes less than 10 minutes to complete the questionnaire. (See Appendix A for the GEQ). According to the authors and other researchers, the GEQ has demonstrated good construct and content validity, is internally consistent, and has factorial validity for its four scales. The GEQ has experienced widespread use in researching teams from the United States, Canada, Australia, and several European countries.

Reliability measurements for the GEQ could be interpreted as low for a commonly used psychometric, however; for a dynamic multidimensional construct such as Cohesion, the low internal consistency may not be entirely unrealistic (see table 1). Carron et al. (2002) indicated that their results of low reliability may be explained by some of the teams investigated having not developed on the GI-T because of the early time in the season that the data were collected as compared to other teams. According to
Carron et al. (2002), the longer a team has the chance to develop together, the higher the coefficients may be.

Table 1

**Coefficient Alpha Estimated of Reliability Comparing the GEQ Scale for the Original Study and the Current Study**

<table>
<thead>
<tr>
<th>Scale</th>
<th>GEQ (Carron, Brawley, &amp; Widmeyer, 2002) (n=197)</th>
<th>GEQ (Current investigation) (n= 13)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attraction To Group-Task</td>
<td>.75</td>
<td>.64</td>
</tr>
<tr>
<td>(ATG-T)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attraction To Group-Social</td>
<td>.64</td>
<td>.71</td>
</tr>
<tr>
<td>(ATG-S)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Integration-Task</td>
<td>.70</td>
<td>.73</td>
</tr>
<tr>
<td>(GI-T)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Integration-Social</td>
<td>.76</td>
<td>.66</td>
</tr>
<tr>
<td>(GI-S)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>-</td>
<td>.85</td>
</tr>
<tr>
<td>Mean</td>
<td>.71</td>
<td>.69</td>
</tr>
</tbody>
</table>

Content validity has been assessed by a panel of judges labeled as experts (Brawley, Carron, & Widmeyer, 1987). Further, concurrent validity was evaluated where the GEQ successfully predicted correspondence with alternate measures of Cohesion but with non-Cohesion related constructs. Brawley et al. assessed significant predictive validity when the GEQ could successfully differentiate team and individual sport athletes on the basis of their task Cohesion scores. As reported by Brawley et al., construct
validity predicted a difference in self-responsibility attributions of team sport athlete’s with high and low task Cohesion.

Due to a sound conceptual model of Cohesion on which to base findings, the GEQ has shown a great advantage over other measures of cohesiveness, such as the Sport Cohesiveness Questionnaire (Martens & Landers, 1971) or the Multidimensional Sport Cohesion Instrument (Yukelson, Weinberg, & Jackson, 1984). According to Brawley et al., the absence of a conceptual model and inadequate measurement procedures results in poor conclusions.

For the purposes of this study, the four subscales (or constructs) will be used to assess group Cohesion rather that the aggregate GEQ score. This decision was made in order to (a) better represent the multidimensionality of the group Cohesion construct, and (b) remain consistent with the previous Cohesion research.

Flow State and the Flow State Scale (FSS)

In the professional literature, the emotional aspect of peak performance has been recognized as a Flow state, and support for the relationship between athletes’ best performances and self-reports of Flow have been well established (Jackson, 1995, 1996; Jackson & Eklund, 2002). According to the empirical evidence, Flow is the optimal psychological state experienced by all athletes to varying degrees during competition. When in Flow, individuals connect to the activity or sport at a level where they experience reduced self-consciousness, enhanced clarity of their goals, a deepened awareness of their performance, heightened levels of concentration, increased feelings of success, and a union of mind and body with regard to the performance at hand.
The Flow State Scale-2 (FSS-2). The original Flow State Scale (Jackson & Marsh, 1996) and the updated FSS-2 (Appendix B) were specifically designed to measure Flow state in sport and physical activity settings. The questionnaire is comprised of 36-items measured on a 5-point Likert rating scale (1: Strongly disagree to 5: Strongly agree), which has been demonstrated to have empirical validity for the constructs which support it. The questionnaire has been frequently used in research to measure Flow state among a variety of athletes and sports. This scale is composed of nine subscales, each of which corresponds to a different characteristic of the Flow state. The nine subscales, along with an example item from, each are: Challenge-Skill Balance (‘I felt I was competent enough to meet the high demands of the situation’); Action-Awareness Merging (‘I did things spontaneously without having to think’); Clear Goals (‘I knew clearly what I wanted to do’); Unambiguous Feedback (‘I had a good idea while I was performing about how well I was doing’); Concentration on Task at Hand (‘My attention was focused entirely on what I was doing’); Sense of Control (‘I had a feeling of total control’); Loss of Self-Consciousness (‘I was not concerned with what others may have been thinking of me’); Transformation of Time (‘It felt like time stopped while I was performing’); Autotelic Experience (‘The experience left me feeling great’). Each subscale is assessed by four items. It takes less than 10 minutes to complete the questionnaire. (See Appendix B for the FSS-2).

An early version of this instrument (Jackson & March (1996), FSS) invited subjects to recall an optimal experience during their participation of a physical activity, defined as “one where you were totally absorbed in what you were doing and which was very enjoyable” (Jackson & Marsh, 1996, p. 22). However, in the FSS-2 (Jackson &
Eklund, 2002), less emphasis is put on the retrospective recall of an event that may have occurred long ago, but asks about the relation of the experience in an event just completed.

Taking into consideration the difficulties of quantitatively measuring an abstract construct such as Flow state, there has been a large amount of research focus on establishing appropriate levels of reliability and validity for both the FSS and the FSS-2. Alpha coefficients of .80 and above (Jackson & Marsh, 1996) for all of the nine subscales of Flow indicate an acceptable level of test reliability (See Table 2).

In a pursuit to establish validity for the FSS and FSS-2, Jackson and colleagues have published validation coefficients in numerous studies (Jackson 1995; Jackson & Eklund, 2002; Jackson & Marsh, 1996; Marsh & Jackson, 1999). Additionally CFA has been utilized to examine the internal structure of the psychodynamic properties, where factors vary from .18 to .72 (median $r = .50$) (Jackson, 1995). Also, construct validity was demonstrated by Jackson, Kimiecik, Ford & Marsh (1998), who established the relationship between the construct of Flow and other theoretically related constructs. This was done though canonical correlation analysis in which anxiety-worry loaded most strongly with global Flow state ($r = .79$) with a similar analysis generated for perceived ability ($r = .74$) and concentration disruption ($r = .63$).

Through Jackson’s research (Jackson, Thomas, Marsh, & Smethurst, 2001), it was also found that specific dimensions of Flow, as measured on the FSS-2, turned out to be significant predictors of both subjective (FSS-2) and objective (Dispositional Flow Scale (DFS)) performance ratings ($R^2 = .46$, $p = <.0001$ & $R^2 = .13$, $p = .002$, respectively). In these studies, the relationship between Flow and performance was greater for the FSS
than for the DFS, which was anticipated since the FSS measures feelings resultant of a specific performance and not a general disposition towards Flow. Further validity was provided by Jackson and Eklund (2002), who concluded that being free from worry and distraction, combined with a perception of competency significantly related to Flow, provided good between-network construct validity.

Table 2

*Coefficient Alpha Estimated of Reliability Comparing the Flow State-2 Scale for the Original Study and the Current Study*

<table>
<thead>
<tr>
<th>Scale</th>
<th>FSS-2 (Jackson &amp; Marsh, 1996) (n=394)</th>
<th>FSS-2 (Current investigation) (n=13)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Challenge Skill Balance (CS)</td>
<td>.80</td>
<td>.90</td>
</tr>
<tr>
<td>Action Awareness Merging (AA)</td>
<td>.84</td>
<td>.89</td>
</tr>
<tr>
<td>Clear Goals (CG)</td>
<td>.84</td>
<td>.87</td>
</tr>
<tr>
<td>Unambiguous Feedback (UF)</td>
<td>.85</td>
<td>.89</td>
</tr>
<tr>
<td>Concentration on Task (CT)</td>
<td>.82</td>
<td>.94</td>
</tr>
<tr>
<td>Sense of Control (SC)</td>
<td>.86</td>
<td>.92</td>
</tr>
<tr>
<td>Loss of Self Consciousness (LSC)</td>
<td>.81</td>
<td>.87</td>
</tr>
<tr>
<td>Transformation of Time (TT)</td>
<td>.82</td>
<td>.83</td>
</tr>
<tr>
<td>Autotelic Experience (AE)</td>
<td>.81</td>
<td>.91</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>.90</td>
</tr>
<tr>
<td>*Mean</td>
<td>.82</td>
<td>.89</td>
</tr>
</tbody>
</table>
Individual and Team Athletic Performance Measures

Game performance statistics were also examined in relation to the Cohesion and Flow state data collected for group properties. Katzenbach & Smith (1999, 2003) state that a team further along in the process of development usually performs at a higher level. Therefore, both individual and aggregate performance statistics will be analyzed for the purposes of this study. The 17 performance statistics included: field goals made, field goal attempts, three points made, three point attempts, free throws made, free throw attempts, offensive rebounds, defensive rebounds, total rebounds, personal fouls, total points, assists, turnovers, blocked shots, steals, and outcome (win/loss). Furthermore, Win Score was calculated using the individual players’ statistics from each game including: Total Points; Rebounds; Steals; Assists; Blocked Shots; Field Goal Attempts; Turnovers; Free Throw Attempts; and Personal Fouls.

This information was used not only to provide outcome criteria for both the individual and the team, but also to serve as an individual and team subjective rating. For example, a team may have lost but perceived their individual Flow state or team Cohesion to have been high. Conversely, the same team may have won and reported both team Cohesion and Flow to be low. These performance factors may have direct or indirect impact. For example, researchers have indicated that group Cohesion is influenced by, or is the antecedent to, performance outcome, and that task Cohesion is significantly lower in teams that have lost (Carron et al., 2002; Kozub & Button, 2000).
Data Collection

The data used for this study was data that was previously collected under a pre-existing approved IRB during the 1999/2000 and 2000/2001 basketball seasons. The data was collected at nine predetermined times during the two consecutive seasons. The original researcher administered a questionnaire that measured team Cohesion prior to a particular competition and a questionnaire that measured Flow state immediately following a particular competition. However, due to the nature of an athletic team, there were times when data collection was not appropriate. Therefore, the data collection protocol was amended to account for unforeseen circumstances.

Protection of Participants Rights

The data reviewed in this study were collected within the confines of a pre-existing approved IRB research proposal. The data from the questionnaires were collected on a voluntary basis and kept confidential. These data have been tied to numbers and only the external evaluators have a master list connecting the participant names to the numbers. These lists are kept in locked file drawers in their respective offices. No names will be used as a part of this study.

Analysis of Data

In this study the data is ordinal in nature due to the 5-point Likert scale for the Flow State-2 and the 9-point Likert scale for the Group Environment Questionnaire. The athletic performance measures used to measure game performance are ratio data. The
data in this study was analyzed using descriptive data analysis, various trend graphs, correlational analyses, and regression analysis by way of discriminant analysis.

Secondly, the researcher examined the data analyses and looked for evidence of the stages of Community-Making over the course of the season. The data analyses for the variables of Cohesion, Flow, and Athletic Performance informed the presence or absence of the stages of Community-Making.
Chapter IV

Results

Introduction

The purpose of this study was to investigate how the stages of Peck’s Community-Making model can be identified and predicted for a collegiate basketball team over the course of consecutive seasons by exploring the constructs of Cohesion, Flow, and Athletic Performance. The study utilized data that was previously collected under a preexisting approved IRB research proposal. The data was collected from a convenient sample of female NCAA Division I level basketball athletes (N = 24) at a mid-sized university located in the western region of the USA, during the athletic seasons of 1999/2000 (n =13) and 2000/2001 (n =11). The primary data collected for this research was generated from an inventory packet that consisted of the Group Environment Questionnaire (GEQ) and the Flow State Scale-2 (FSS-2) to measure Cohesion and Flow State, respectively. Furthermore, player athletic performance statistics were recorded to measure performance. The results of the data analysis are described in this chapter.

The results are presented in five sections. These include: (a) psychometric properties for the GEQ and FSS-2, (b) descriptive statistics for the constructs of Cohesion, Flow State, and performance, (c) results of correlational analyses for the constructs of Cohesion, Flow State, and performance, (d) the results of discriminant analysis regarding performance outcome and athletic performance measures, and (e) the findings for the stages of Community making with regard to Cohesion, Flow State, and performance.
This study did not meet the data requirements for prediction because the sample size was too small and the data collection for the measures of Flow State and Cohesion were not concomitant every time they were measured. Given the data restrictions, it was not appropriate to use the results from the first year of data (1999-2000) to predict what would take place for the second year of data (2000-2001). Furthermore, Phase I discriminant analysis did not support testing the model on a second year of similar data. Therefore, this study only utilized the data collected for the 1999-2000 season (N= 13). Please refer to the Limitations section for further explanation. This is discussed further in the Limitations section.

Phase I

Psychometric Properties

In order to discover if an NCAA Division I female basketball team experiences Cohesion and Flow within the four sub-dimensions of the GEQ and the nine sub-dimensions of the FSS-2, inter-item reliability coefficients were calculated and the alpha of each item are presented in Tables 3 and 4, respectively. The overall Chronbach alpha coefficients were very high for both the GEQ, .85, and the FSS-2, .90. Since both the GEQ and FSS-2 were comprised of multiple sub-dimensions, individual reliability analyses were conducted for each subscale.
GEQ Subscale Reliability Analyses

Individual reliability analyses for each of the GEQ subscales indicated that each of the four subscales had a lower overall Chronbach’s alpha value as compared to the overall Chronbach’s alpha for the GEQ. According to Field (2005), all items should correlate with the overall alpha value for the scale at a value greater than .300.

Attraction to group-task. The reliability analysis results for the GEQ subscale of Attraction to Group-Task (ATG-T) was .64. So, after examining the corrected item total correlations it was noted that item number two (.282) was less than .300, which indicates this item does not correlate well with the overall alpha score of the scale. Therefore, item 2 could be dropped in order to increase the overall alpha level for the subscale to .69. However, for the purposes of this study items were not dropped from the analysis to further increase the reliability.

Attraction to group-social. The reliability analysis for the GEQ subscale of Attraction to Group-Social (ATG-S) was .71. Based on the assumption that each corrected item total correlation should be above .300, item number 7 from the ATG-S subscale could be dropped to increase the overall subscale alpha level to .75.

Group integration-task. The reliability analysis for the GEQ subscale of Group Integration-Task (GI-T) was .73. After reviewing the corrected item total correlations, it was determined that all items correlated highly with the scale.

Group integration-social. The reliability analysis for the GEQ subscale of Group Integration-Social (GI-S) was .66. After reviewing the corrected item total correlations it was determined that item number 11 could be dropped to increase the overall alpha level
to .69. However, removing the weakly correlated items would not affect the overall factor structure of the GEQ. Therefore, the researcher did not remove those items which correlated low with the individual subscales.

Table 3

<table>
<thead>
<tr>
<th>Scale</th>
<th>GEQ (Carron, Brawley, &amp; Widmeyer, 2002) (n=197)</th>
<th>GEQ (Current investigation) (n= 13)</th>
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<tbody>
<tr>
<td>ATG-T</td>
<td>.75</td>
<td>.64</td>
</tr>
<tr>
<td>ATG-S</td>
<td>.64</td>
<td>.71</td>
</tr>
<tr>
<td>GI-T</td>
<td>.70</td>
<td>.73</td>
</tr>
<tr>
<td>GI-S</td>
<td>.76</td>
<td>.66</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>.85</td>
</tr>
<tr>
<td>Mean</td>
<td>.71</td>
<td>.69</td>
</tr>
</tbody>
</table>

**FSS-2 Subscale Reliability Analyses**

As can be seen in Table 4 the individual reliability analyses for each of the FSS-2 subscales indicated that eight of the nine subscales had a near equal strength of alpha as related to the overall Chronbach’s alpha for the FSS-2. However, the subscale of
transformation of time (TT) had the lowest alpha, .83. This is consistent with the literature regarding TT. Although, a value over .80 still indicated good reliability.

Table 4.

*Coefficient Alpha Estimated of Reliability Comparing the Flow State-2 Scale for the Original Study and the Current Study*

<table>
<thead>
<tr>
<th>Scale</th>
<th>FSS-2 (Jackson &amp; Marsh, 1996) (n=394)</th>
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<tr>
<td>Sense of Control (SC)</td>
<td>.86</td>
<td>.92</td>
</tr>
<tr>
<td>Loss of Self Consciousness (LSC)</td>
<td>.81</td>
<td>.87</td>
</tr>
<tr>
<td>Transformation of Time (TT)</td>
<td>.82</td>
<td>.83</td>
</tr>
<tr>
<td>Autotelic Experience (AE)</td>
<td>.81</td>
<td>.91</td>
</tr>
</tbody>
</table>

| Total                                    |                                      | .90                                 |
| Mean                                     | .82                                  | .89                                 |
Factor Analyses

Factor analyses were used to determine the number of factors observed in the data. Using a principal components analysis, there appeared to be one main component in each of these inventories (Flow & Cohesion). This was determined by observing the eigenvalues, scree plots, and the interpretability of the factor solutions. However, further factor analyses were not indicated due to the small sample size.

Since this study was exploratory, there were no hypotheses. The overall research question was to explore how Peck’s Community-Making can be identified and predicted for a collegiate basketball team over consecutive seasons by examining the constructs of Flow, Cohesion, and athletic performance.

Descriptive Statistics

Team members’ GEQ scores were aggregated to provide team scores for the Cohesion Total; ATG-T (Attraction to Group –Task); ATG-S (Attraction to Group-Social); GI-T (Group Integration-Task); GI-S (Group Integration-Social). Team members’ FSS-2 scores were aggregated to provide team scores for the Flow State Total; CS (Challenge Skill Balance); AA (Action Awareness Merging); CG (Clear Goals); UF (Unambiguous Feedback); CT (Concentration on Task); SC (Sense of Control); LSC (Loss of Self Consciousness); TT (Transformation of Time); AE (Autotelic Experience). As indicated above, this procedure is consistent with the unit of analysis identified in the research question--that is, the team.
In Table 5, the descriptive statistics for Flow State and Cohesion indicate that the mean scores were higher in this study as compared to the normative data for the sub-dimensions of Cohesion for the subscales of ATG-S and GI-T and the Cohesion Total score; which perhaps supports the choice to use a basketball team for this research. What is important to note, is that the GEQ normative data was based on a cross-section of team sports from city, university, and Olympic levels. Furthermore, this was further delimited to 23 different female sports (N=197).

Of the Flow dimensions, the scores for all nine of the subscales were lower for this study as compared to the Jackson & Eklund (2003) normative data. These results should be interpreted with some caution because Jackson & Eklund’s normative data was based on samples of male and female team sport athletes (N=175) from a cross-section of environments including: international, national, school, and club teams for 13 different sports.

The graphic analysis of the overall sample yielded numerous graphs for the factors of Cohesion, Flow State, and athletic performance for both the team and individual athletes. As a result of the magnitude of graphs, the researcher decided to present the most germane graphs for this section. However, all graphs can be observed in Appendix A.
Table 5

*Descriptive Statistics for the Overall Sample Compared to Normative Data for the GEQ* *(Carron, Brawley, & Widmeyer, 2002) and the FSS-2 (Jackson & Eklund, 2003)*

<table>
<thead>
<tr>
<th>Sub-dimension</th>
<th>Norm Data</th>
<th>Overall Data (This Study)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td></td>
<td>GEQ Scores</td>
<td></td>
</tr>
<tr>
<td>ATG-T</td>
<td>31.10</td>
<td>6.82</td>
</tr>
<tr>
<td>ATG-S</td>
<td>26.49</td>
<td>6.56</td>
</tr>
<tr>
<td>GI-T</td>
<td>20.91</td>
<td>6.40</td>
</tr>
<tr>
<td>GI-S</td>
<td>31.93</td>
<td>6.96</td>
</tr>
<tr>
<td>Total Cohesion</td>
<td>110.43</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: ATG-T (Attraction to Group –Task); ATG-S (Attraction to Group-Social); GI-T (Group Integration-Task); GI-S (Group Integration-Social); CS (Challenge Skill Balance); AA (Action Awareness Merging); CG (Clear Goals); UF (Unambiguous Feedback); CT (Concentration on Task); SC (Sense of Control); LSC (loss of Self Consciousness); TT (Transformation of Time); AE (Autotelic Experience)
To examine if trends were present among the factors of Cohesion and Flow State, scores were analyzed for select games across the 31 game season. A graph displaying the team’s average aggregate Flow Total scores was constructed (Figure 3). The FSS-2 was administered eight times during the course of the 1999-2000 athletic season. Measures were taken after games 1, 3, 9, 13, 16, 29, and 30 out of a total 31 games. For each of the games when the FSS-2 was administered the team scored an average Flow Total score of 113 for Game 1, Game 2 (M = 114), Game 9 (M = 135), Game 13 (M = 126), Game 16 (M = 129), Game 19 (M = 128), Game 29 (M = 142), and Game 30 (M = 128). As can be seen in Figure 3, the total Flow score steadily increased over the course of the games measured. Additionally the average aggregate Cohesion Total scores were analyzed across the games after which the GEQ was administered. A graph displaying the team’s average aggregate Cohesion Total scores was constructed (Figure 4).
Figure 3. Average Team Flow Total Score by Game.
Figure 4. Average Team Cohesion Total Scores by Game.
The GEQ was administered six times during the course of the 1999-2000 athletic season. Measures were taken after games 1, 3, 5, 6, 23, and 31 out of a total of 31 games. Team average Cohesion Total scores were the following for Game 1 \((M = 120)\), Game 3 \((M = 125)\), Game 5 \((M = 124)\), Game 16 \((M = 123)\), Game 23 \((M = 131)\), and Game 31 \((M = 123)\). As can be seen in Figure 4, the mean Cohesion Total score fluctuates somewhat over the course of games. However, the end mean score at Game 31 \((M = 123)\) is approximately the same as the initial mean Cohesion Total score for Game 1 \((M = 120)\).

Due to the nature of the data collection, with a competitive team in season, measures of Flow State and Cohesion were taken concomitantly at only three times during the 1999-2000 season; games 1, 3, and 16. A graph was constructed to indicate the aggregate team scores for both Flow State and Cohesion, for games 1, 3, and 16. It can be seen that the average aggregate Flow State total score increased from Game 1 \((M = 113)\) to Game 3 \((M = 114)\) to Game 16 \((M = 129)\). Conversely, the Cohesion Total score shows an increase from Game 1 \((M = 120)\) to Game 3 \((M = 125)\), but a decrease from Game 3 \((M = 125)\) to Game 16 \((M = 123)\) (Figure 5).

Further analyses were conducted to analyze the team mean scores for the sub-dimensions of Cohesion and Flow State for those games when the scales were administered. The team’s average aggregate Cohesion subscale scores for ATG-T, ATG-S, GI-T, and GI-S were analyzed in graphic form (Figure 6). Using Figure 6 and Table 6 as a guide, it can be seen that the subscales of GI-T \((M = 31.00)\) and ATG-S \((M = 33.54)\)
Figure 5. Team Average Aggregate Flow Total and Cohesion Total Scores by Game.

Note: Scores are based on two different scales of measurement.
Figure 6. Team Average Cohesion Subscale Scores by Game.
Table 6

*Team Average Cohesion Subscale Scores by Game*

<table>
<thead>
<tr>
<th></th>
<th>ATG-T</th>
<th>ATG-S</th>
<th>GI-T</th>
<th>GI-S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Game 1</td>
<td>28.82</td>
<td>33.55</td>
<td>31.00</td>
<td>26.27</td>
</tr>
<tr>
<td>Game 3</td>
<td>28.77</td>
<td>36.08</td>
<td>33.85</td>
<td>26.00</td>
</tr>
<tr>
<td>Game 5</td>
<td>27.54</td>
<td>35.38</td>
<td>34.15</td>
<td>27.00</td>
</tr>
<tr>
<td>Game 16</td>
<td>29.83</td>
<td>34.00</td>
<td>34.00</td>
<td>25.50</td>
</tr>
<tr>
<td>Game 23</td>
<td>28.40</td>
<td>34.10</td>
<td>33.40</td>
<td>26.20</td>
</tr>
<tr>
<td>Game 31</td>
<td>26.00</td>
<td>32.00</td>
<td>31.00</td>
<td>25.00</td>
</tr>
</tbody>
</table>

Note: ATG-T (Attraction to Group – Task); ATG-S (Attraction to Group – Social); GI-T (Group Integration – Task); GI-S (Group Integration – Social)

Note: Scores are the teams average subscale scores for each game.
appeared to remain fairly stable throughout the season. There are no extreme increases or decreases in Cohesion over the course of the season.

In order to analyze the sub-dimensions of Flow State, Table 7 and Figure 7 were created to exemplify the team’s average aggregate Flow State subscale scores for each game that Flow State was measured. Using Figure 7, it can be seen that most of the Flow State subscale scores progress with one another. For example, each of the nine subscales of Flow increased at Game 9, while each of the subscales showed a decrease for games 13, 29, and 30. Conversely, the Flow State subscales of TT, CG, and CS each decreased from Game 13 to Game 16. A further example is that each of the Flow State subscales of LSC, SC, CT, CG, and AA decreased for Game 19, yet, the subscales of CS, TT, UF, and AE each showed an increase. Moreover, each of the nine subscales illustrates a decrease after the first game in the conference tournament (Game 30).

To examine if there were differences between Cohesion subscales and Flow State subscales, a table was created to show the team average aggregate subscale scores from Cohesion (ATG-T, ATG-S, GI-T, GI-S) and Flow State (CS, AA, CG, UF, CT, SC, LSC, TT, AE) for those three games in which Flow State and Cohesion were measured concomitantly (Table 6).

It can be seen in Table 8 that the mean Flow State subscale scores for CS, UF, LSC, and AE increased over the course of the three games when the FSS-2 was administered (Games 1, 3, 16). However, the Flow State subscales of AA, CG, CT, and SC each showed a decrease in the mean scores from Game 1 to Game 3, and an increase in mean scores from Game 3 to Game 16. The Flow subscale of TT was the only subscale which showed an overall decrease for Game 16.
For Cohesion, the task dimension of ATG-T didn’t show considerable change. Although, the social dimension of ATG-S showed a significant increase from Game 1 to Game 3 and then showed a similar level of decrease from Game 3 to Game 16. For the group integration-task dimension of cohesion, the level increased over the course of the three games. Conversely, the social dimension of group integration showed a decrease for the three games (Table 8).

Table 7

*Team Average Flow Subscale Scores by Game*

<table>
<thead>
<tr>
<th></th>
<th>CS</th>
<th>AA</th>
<th>CG</th>
<th>UF</th>
<th>CT</th>
<th>SC</th>
<th>LSC</th>
<th>TT</th>
<th>AE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Game 1</td>
<td>13.09</td>
<td>12.36</td>
<td>15.18</td>
<td>10.82</td>
<td>13.91</td>
<td>12.00</td>
<td>10.18</td>
<td>12.36</td>
<td>12.91</td>
</tr>
<tr>
<td>Game 3</td>
<td>13.15</td>
<td>11.31</td>
<td>14.85</td>
<td>12.54</td>
<td>13.31</td>
<td>10.77</td>
<td>11.54</td>
<td>13.15</td>
<td>13.08</td>
</tr>
<tr>
<td>Game 9</td>
<td>16.08</td>
<td>14.77</td>
<td>17.08</td>
<td>14.46</td>
<td>15.15</td>
<td>14.31</td>
<td>12.77</td>
<td>12.92</td>
<td>17.23</td>
</tr>
<tr>
<td>Game 13</td>
<td>14.00</td>
<td>14.09</td>
<td>16.82</td>
<td>12.82</td>
<td>15.18</td>
<td>13.73</td>
<td>12.45</td>
<td>12.09</td>
<td>14.36</td>
</tr>
<tr>
<td>Game 16</td>
<td>13.91</td>
<td>14.55</td>
<td>16.18</td>
<td>13.27</td>
<td>15.73</td>
<td>15.09</td>
<td>13.45</td>
<td>11.55</td>
<td>15.73</td>
</tr>
<tr>
<td>Game 19</td>
<td>15.00</td>
<td>13.50</td>
<td>16.08</td>
<td>13.33</td>
<td>15.25</td>
<td>14.08</td>
<td>13.08</td>
<td>12.08</td>
<td>15.82</td>
</tr>
<tr>
<td>Game 29</td>
<td>15.90</td>
<td>15.10</td>
<td>17.10</td>
<td>13.80</td>
<td>15.80</td>
<td>15.40</td>
<td>13.90</td>
<td>12.50</td>
<td>16.30</td>
</tr>
<tr>
<td>Game 30</td>
<td>14.25</td>
<td>13.50</td>
<td>15.13</td>
<td>12.50</td>
<td>15.88</td>
<td>14.25</td>
<td>14.25</td>
<td>15.00</td>
<td>13.50</td>
</tr>
</tbody>
</table>

Note: CS (Challenge Skill Balance); AA (Action Awareness Merging); CG (Clear Goals); UF (Unambiguous Feedback); CT (Concentration on Task); SC (Sense of Control); LSC (Loss of Self Consciousness); TT (Transformation of Time); AE (Autotelic Experience)
Figure 7. Team Average Flow Subscale Scores by Game.
Table 8

*Team Average Aggregate Subscale Scores for Cohesion and Flow State for Those Games When GEQ and FSS-2 Measured Concomitantly*

<table>
<thead>
<tr>
<th></th>
<th>Game 1</th>
<th>Game 3</th>
<th>Game 16</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flow State Subscales</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS</td>
<td>13.09</td>
<td>13.15</td>
<td>13.91</td>
</tr>
<tr>
<td>AA</td>
<td>12.36</td>
<td>11.31</td>
<td>14.55</td>
</tr>
<tr>
<td>CG</td>
<td>15.18</td>
<td>14.85</td>
<td>16.18</td>
</tr>
<tr>
<td>UF</td>
<td>10.82</td>
<td>12.54</td>
<td>13.27</td>
</tr>
<tr>
<td>CT</td>
<td>13.91</td>
<td>13.31</td>
<td>15.73</td>
</tr>
<tr>
<td>SC</td>
<td>12.00</td>
<td>10.77</td>
<td>15.09</td>
</tr>
<tr>
<td>LSC</td>
<td>10.18</td>
<td>11.54</td>
<td>13.45</td>
</tr>
<tr>
<td>TT</td>
<td>12.36</td>
<td>13.15</td>
<td>11.55</td>
</tr>
<tr>
<td>AE</td>
<td>12.91</td>
<td>13.08</td>
<td>15.73</td>
</tr>
<tr>
<td><strong>Cohesion Subscales</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATG-T</td>
<td>28.82</td>
<td>28.77</td>
<td>29.83</td>
</tr>
<tr>
<td>ATG-S</td>
<td>33.55</td>
<td>36.08</td>
<td>34.00</td>
</tr>
<tr>
<td>GI-T</td>
<td>31.00</td>
<td>33.85</td>
<td>34.00</td>
</tr>
<tr>
<td>GI-S</td>
<td>26.27</td>
<td>26.00</td>
<td>25.50</td>
</tr>
</tbody>
</table>

Note: ATG-T (Attraction to Group –Task); ATG-S (Attraction to Group-Social); GI-T (Group Integration-Task); GI-S (Group Integration-Social); CS (Challenge Skill Balance); AA (Action Awareness Merging); CG (Clear Goals); UF (Unambiguous Feedback); CT (Concentration on Task); SC (Sense of Control); LSC (loss of Self Consciousness); TT (Transformation of Time); AE (Autotelic Experience)
In order to examine the difference in team performance, a variable named Win Score was calculated for each individual player for each game of the 1999-2000 season. Bray & Whaley (2001) recently questioned the use of a team’s win/loss record as the primary measure of performance effectiveness. They highlighted the many coaches who believe that team success depends on the combination of players’ individual performances (e.g. Wooden, 1976, 1980; Westering, 1990).

Subsequently, the average game Win Score was calculated by averaging individual players’ Win Scores for each game. Individual Win Score was calculated using the individual players’ statistics from each game including: Total Points; Rebounds; Steals; Assists; Blocked Shots; Field Goal Attempts; Turnovers; Free Throw Attempts; and Personal Fouls. Researchers Berri, Schmidt, and Brook (2006) developed a model known as Win Score, to be used to measure basketball performance. The Win Score is used to calculate an individual’s performance or productivity relative to their preceding performance. For the purposes of this study, Win Score was used to determine if the team performed better or worse than their preceding performance. In order to analyze the team performance across the season, the team Win Score was calculated per game, and can be seen in Figure 6. The calculation for Win Score is:

\[(Points + Rebounds + Steals + .5(Assists) + .5(Blocked Shots) - Field Goal Attempts - Turnovers - .5(Free Throw Attempts) - .5(Personal Fouls)\]

As can be seen in Figure 8, Win Score fluctuated greatly over the course of the season. However, it can also be seen that for games 6 through 17, there is a noticeable
Figure 8. Team Average Aggregate Win Score by Game.
uplift in the Win Score. Figure 8 will be discussed at greater depth later in this chapter. However, it should be noted that the highest team Win Score was associated with Game 1 ($M = 6.46$), while the lowest team Win Score was associated with Game 31 ($M = .81$).

To examine the trend between team performance (Win Score) and the constructs of Flow and Cohesion, additional graphs were created (Figures 9 and 10, respectively). As illustrated in Figure 9, there is a noticeable and comparable trend between the team’s average aggregate Win Score and Flow State total score. Conversely, no apparent similar trend existed between the team’s average Cohesion Total score and Win Score (Figure 10). Further discussion about these findings will be presented in the discussion section.

![Graph showing Team Average Aggregate Win Score and Flow State Total Scores by Game](image)

*Figure 9. Team Average Aggregate Win Score and Flow State Total Scores by Game.*

Note: Scores are based on two different scales of measurement.
Also of importance, but not germane to this study, were the individual players’ Win Scores. Graphs illustrating the individual player’s Win Scores were created to examine the difference in performance between games (see Appendix C).

In order to examine Win Score for those three games when Cohesion and Flow State were measured concomitantly, a graph was created to highlight the Win Score for games 1, 3, and 16 (Figure 11). For Game 1, the team average Win Score was 6.46, for Game 3 the team average Win Score was 2.46, and for Game 16 the team average Win Score was 3.96. As illustrated back in Figure 8, it is important to note that the highest team average Win Score was associated with Game 1 ($M = 6.46$), while the lowest was associated with Game 31 ($M = 0.81$). This finding will be discussed at greater length in the Discussion section.

![Figure 10. Team Average Aggregate Win Score and Cohesion Total Scores by Game.](image)

*Note: Scores are based on two different scales of measurement.*
Correlations

As a result of the graphic analyses, the researcher further analyzed associations among the data using the Statistical Package for Social Sciences (SPSS, 16.0). The Kendall’s tau was chosen as the most appropriate non-parametric test to analyze the correlations because of the small data set and the large number of tied scores. This measured the covariance of Flow and Cohesion dimensions and performance measures, with an alpha (a priori) level of significance set at $p < .05$. As such, more accurate
generalizations to the population can be drawn from Kendall’s statistic than from Spearman’s coefficient.

While researchers Csikszentmihalyi (1990) and Jackson and Csikszentmihalyi (1999) have reported on the subjective testimonial descriptions of Flow State in a team sport setting, it has been suggested that teams may experience Flow with a greater complexity than the individual experiences Flow (Cosma, 1999). Given subjective testimonials and research support from the team Cohesion literature, a positive relationship is expected to exist between a team’s level of Cohesion and a team’s Flow State experience. To test this on this data, sub-dimensions from the GEQ and the FSS-2 were calculated using Kendall’s tau correlation coefficients.

The correlational data in this overall sample yielded eight significant correlations among the four Cohesion subscales, Cohesion Total score, nine Flow subscales, and Flow State total score (out of a possible 105), as seen in Table 9. Of these significant correlations, two were significant at the .01 level and had coefficients above .50. The relationship between the FSS-2 subscale of LSC and the Cohesion subscale of ATG-T yielded a (Kendall’ tau) correlation, $r(34) = .351$, $p < .05$. There was a significant positive relationship between the Flow State sub-dimension of LSC and the Cohesion sub-dimension of ATG-T. The Flow subscale of TT and the Cohesion subscale of ATG-S yielded a significant correlation, $r(34) = .610$, $p < .01$. There was a significant positive relationship between the Flow State sub-dimension of TT and the Cohesion sub-dimension of ATG-S. The Cohesion subscale of GI-T correlated significantly with the following subscales of Flow State: CS, $r(34) = .510$, $p < .01$; CG, $r(34) = .396$, $p < .05$; CT, $r(34) = .345$, $p < .05$; LSC, $r(34) = .359$, $p < .05$, and AE, $r(34) = .262$, $p < .05$. 
Lastly, it is important to mention that there was a near significant relationship between the total Cohesion score and the total Flow State score, \( r (34) = .203, p = .09 \). Given the small sample size, this statistic is still worth mentioning.

In other words, there was a significant positive relationship between the Cohesion sub-dimension of GI-T and the Flow State sub-dimensions of CS, CG, CT, LSC, and AE. This suggests that the attraction to group-task (ATG-T) and group integration-task (GI-T) dimensions of Cohesion experienced by the basketball players were positively related to their ability to lose their self consciousness of the task, how they perceived the challenge of the task to meet their level of skill, how clear their goals for the task were, and their enjoyment of the task. However, it was not so clear from this data what role the social dimensions of Cohesion played, since there was only one significant positive relationship with attraction to group-social (ATG-S) and Flow State, specifically transformation of time (TT) \( (r = .610) \). The overall sample size most likely had an influence on the statistical significance.

A further correlational analysis included the 17 athletic performance variables and the four Cohesion subscales, Cohesion Total, nine Flow State subscales, and Flow State total. The correlational data in this overall sample yielded sixteen significant correlations (out of a possible 119), as seen in Table 10. Of these significant correlations, five were significant at the .01 level. Four of the five had coefficients that were above .30, while one was above .20.
Table 9

*Correlations Between the Cohesion (GEQ) and Flow (FSS-2) Dimensions of the Overall Sample (N=13).*

<table>
<thead>
<tr>
<th></th>
<th>CS</th>
<th>AA</th>
<th>CG</th>
<th>UF</th>
<th>CT</th>
<th>SC</th>
<th>LSC</th>
<th>TT</th>
<th>AE</th>
<th>Total Flow</th>
</tr>
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<tbody>
<tr>
<td>ATG-T</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>-</td>
<td></td>
<td></td>
<td>.351</td>
<td>.039*</td>
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<td>ATG-S</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATG-S</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td>.610</td>
<td>.000**</td>
</tr>
<tr>
<td>GI-T</td>
<td>.510</td>
<td>.396</td>
<td>.345</td>
<td>.359</td>
<td>.345</td>
<td>.359</td>
<td>.345</td>
<td>.262</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GI-T</td>
<td>.002**</td>
<td>.018*</td>
<td>.042*</td>
<td>.034*</td>
<td>.034*</td>
<td>.034*</td>
<td>.034*</td>
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<tr>
<td>GI-S</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GI-S</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Total Cohesion</td>
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<tr>
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</tbody>
</table>

Note: ATG-T (Attraction to Group –Task); ATG-S (Attraction to Group-Social); GI-T (Group Integration-Task); GI-S (Group Integration-Social); CS (Challenge Skill Balance); AA (Action Awareness Merging); CG (Clear Goals); UF (Unambiguous Feedback); CT (Concentration on Task); SC (Sense of Control); LSC (loss of Self Consciousness); TT (Transformation of Time); AE (Autotelic Experience) * p < .05 (2-tailed) **p < .01 (2-tailed)

Of the 17 athletic performance measures (Field goals made, field goal attempts, three points made, three point attempts, free throws made, free throw attempts, offensive rebounds, defensive rebounds, total rebounds, personal fouls, total points, assists,
turnovers, blocked shots, steals, and outcome (win/loss) and Win Score), only four measures yielded significant correlations with the four Cohesion subscales and Cohesion Total, and the nine Flow subscales, and Flow State total (Table 10).

The relationships between the Cohesion sub-dimension of ATG-S and three point attempts \( r (34) = -0.334, p < 0.05 \), and assists \( r (34) = -0.377, p < 0.01 \) were negative. In other words, an increase in the number of free throw attempts and assists was related to a decrease in the reported level of attraction to group-social Cohesion. The relationship between GI-T and turnovers \( r (34) = -0.298, p < 0.05 \) was negative. With an increase in the number of turnovers there was a decrease in the reported level of group integration-task Cohesion. The relationships between GI-S and three point attempts \( r (34) = -0.392, p < 0.01 \), assists \( r (34) = -0.397, p < 0.01 \); and turnovers \( r (34) = -0.293, p < 0.05 \) were negative. That is to say, as the number of three point attempts, assists, and turnovers increase, there was a decrease in the reported level of group integration-social Cohesion. The relationships between total Cohesion score and three point attempts \( r (34) = -0.232, p < 0.01 \), assists \( r (34) = -0.181, p < 0.05 \), and turnovers \( r (34) = -0.183, p < 0.05 \) were negative. This goes to show, as the number of three point attempts, assists, and turnovers increase, the overall Cohesion Total score decreases for this sample.

Furthermore, as can be seen in Table 10, the relationships between the Flow State sub-dimensions of CS \( r (34) = 0.172, p < 0.05 \); AA \( r (34) = 0.158, p < 0.05 \); UF \( r (34) = 0.188, p < 0.05 \); SC \( r (34) = 0.183, p < 0.05 \); and total Flow score \( r (34) = 0.332, p < 0.01 \), and Win Score were all positive. This suggests that a higher Win Score was associated with an increase in the participants’ reported levels of challenge skill balance, the merging of
Table 10

Correlations Between the Cohesion (GEQ) and Flow Dimensions (FSS-2) of the Overall Sample (N=13) and Athletic Performance Measures.

<table>
<thead>
<tr>
<th>Cohesion</th>
<th>Three Point Attempts</th>
<th>Assists</th>
<th>Turnovers</th>
<th>Win Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATG-T Correlation coefficient</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sig.</td>
<td>ATG-S Correlation coefficient</td>
<td>-.334</td>
<td>-.377</td>
<td>-</td>
</tr>
<tr>
<td>Sig.</td>
<td>GI-T Correlation coefficient</td>
<td>-</td>
<td>-</td>
<td>-.298</td>
</tr>
<tr>
<td>Sig.</td>
<td>GI-S Correlation coefficient</td>
<td>-.392</td>
<td>-.397</td>
<td>-.293</td>
</tr>
<tr>
<td>Sig.</td>
<td>Total Cohesion Correlation coefficient</td>
<td>-.232</td>
<td>-.181</td>
<td>-.183</td>
</tr>
<tr>
<td>Sig.</td>
<td>CS Correlation coefficient</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sig.</td>
<td>AA Correlation coefficient</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sig.</td>
<td>CG Correlation coefficient</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sig.</td>
<td>UF Correlation coefficient</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sig.</td>
<td>CT Correlation coefficient</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sig.</td>
<td>SC Correlation coefficient</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sig.</td>
<td>LSC Correlation coefficient</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sig.</td>
<td>TT Correlation coefficient</td>
<td>-.333</td>
<td>-.321</td>
<td>-</td>
</tr>
<tr>
<td>Sig.</td>
<td>AE Correlation coefficient</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sig.</td>
<td>Total Flow Correlation coefficient</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sig.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: ATG-T (Attraction to Group–Task); ATG-S (Attraction to Group-Social); GI-T (Group Integration-Task); GI-S (Group Integration-Social); CS (Challenge Skill Balance); AA (Action Awareness Merging); CG (Clear Goals); UF (Unambiguous Feedback); CT (Concentration on Task); SC (Sense of Control); LSC (loss of Self Consciousness); TT (Transformation of Time); AE (Autotelic Experience) * p < .05 (2-tailed) **p < .01 (2-tailed)

Note: For space purposes, only the four statistically significant performance measures were included in the table.
their action and awareness, how easily and clearly they received feedback during the
game, how in control they felt of their personal performance, and their overall
achievement of a Flow State. Lastly, significant negative relationships existed among the
Flow State subscale of TT and three point attempts ($r(34) = -0.333, p < .05$) and assists ($r$
(34) = -0.321, $p < .05$). This suggests that fewer three point shot attempts and assists were
associated with a higher level of experience for transformation of time. Caution should be
used when interpreting these results because of the small sample size. There is no doubt
that the small overall sample size probably influenced the statistical significance,
however; it is difficult to know to what degree.

Regression Analyses

Because there is research suggesting there is a positive relationship between
performance and Cohesion (Carron, Coleman, Wheeler, & Stevens, 2002), and a positive
relationship between Flow State and performance (Jackson & Csikszentmihalyi, 1999), it
seems intuitive to go one step further and investigate whether outcome can be predicted
using the constructs of Cohesion, Flow State, and performance. However, given that the
measure of Flow State was collected only for those games when the outcome was a win,
a regression analysis was not suggested to predict outcome using the construct of Flow
State. Furthermore, a discriminant analysis was not suggested for Cohesion because there
was only one game in which Cohesion was measured and the outcome was loss.
Consequently, the data was not adequate enough to run discriminant analyses using Flow
State and Cohesion as predictor variables. However, a discriminant analysis was
suggested for the predictor variables of athletic performance (free throws made; free
throws attempted; three points made; three points attempted; free throws made; free
throws attempted; offensive rebounds; defensive rebounds; total rebounds; personal
fouls; total points; assists; steals; turnovers; blocked shots; and steals). The goal was to
predict values on the dependent variable, outcome (win/loss) with the independent
variables of athletic performance. The researcher was interested in which athletic
performance measures would best predict the outcome (win/loss).

Given the volume of independent variables, prior to final analysis, the researcher
conducted several separate discriminant analyses to identify the variables that would
most likely account for the most variance in predicting outcome. It was determined that
assists and defensive rebounds accounted for the most variance among the 16 athletic
performance measures.

Subsequently, a stepwise discriminant analysis was conducted with the variables
of assists and defensive rebounds to investigate which variable would be the best
predictor of outcome (win/loss). The analysis generated one function, which was
significant, \(\Lambda = .990, \chi^2 (1, N=402) = 4.211, p<.05\). Only the variable of assists was
entered into the function. The variable of defensive rebounds was excluded because it
was non-significant. Classification results reveal that the original grouped cases were
classified with only 65.5% overall accuracy. Accuracy by each group was 100% for won
and 0% for loss. The cross validated results supported original accuracy levels with
65.5% correctly classified overall. Group means for the function indicated that when the
outcome was a win, it had a function mean of .075, and when it was a loss, it had a
function mean of -.141. These results suggest that when the team won, they also had a
greater amount of assists.
Presence of Peck’s Stages of Community Making

The method used to determine the ability of Peck’s Community-Making model to explain team development for a collegiate women’s basketball team was the determination of the statistical interdependence of Peck’s stages from one another as well as the stage sequence. This was done by using simple averages of the team’s Cohesion, Flow, and performance scores. Given the exploratory nature of this investigation, the researcher considered prior research findings for the relationships between Flow and performance and between Cohesion and performance, to inform the current findings. Furthermore, the researcher determined the stages of team development by referring to what previous researchers have stated with regard to what characteristics are expected to be present during the different stages of group development.

All the individual responses for the games in which the constructs of Cohesion, Flow, and performance were measured, were used to determine the ability of Peck’s Community-Making model to explain team development. Given that the methodology and format of the GEQ and FSS-2 allowed the respondents to provide their perceived levels of Cohesion and Flow State post–performance, the average scores were used for analysis.

According to the data provided by the participants, a three stage model (Pseudo-Community, Chaos, and Emptiness/Community) of Community making was identified with a recursive stage sequence, as was anticipated given the non-linear nature of an athletic team.
After exploring the data analysis, the researcher decided to focus on the nine-game winning streak, which occurred for Game 8 through 16. It made sense to consider this winning streak as the embodiment of what the stage of Emptiness/Community would look like for an athletic team. Therefore, the rest of the analysis will be explained in regard to the team’s nine-game winning streak.

*Nine-Game Winning Streak*

The nine-game winning streak was a representative cross-section of the total season because it was made up of both home and away and conference and non-conference competitions. Furthermore, for the winning streak there were three measures of Flow State collected, one measure of Cohesion, and the Win Score was calculated for each game.

Table 11 presents the aggregate average scores from the constructs of Cohesion, Flow State, and Win Score for those games measured. It is significant to note that Cohesion was only measured for Game 16 of the winning streak, while Flow State was measured for games 9, 13, and 16. Win Score was calculated for each of the nine games. Thus, Flow and Cohesion were only measured concomitantly for Game 16. Furthermore, a Figure was created to highlight the team Win Score for the nine-game winning streak (Figure 12). This will be further discussed in the Discussion section.

To assess stages, the aggregate average scores for the Cohesion Total scores, Flow State, and performance (Win Score), were calculated. Presented below are descriptions and findings for each stage of the three stage model.
### Table 11

*Team Average Scores for Cohesion, Flow State, and Win Score for the Nine-Game Winning Streak*

<table>
<thead>
<tr>
<th>Game</th>
<th>Cohesion Total Mean Score</th>
<th>Flow State Total Mean Score</th>
<th>Mean Win Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Game 8</td>
<td>-</td>
<td>-</td>
<td>2.30</td>
</tr>
<tr>
<td>Game 9</td>
<td>-</td>
<td>135</td>
<td>4.73</td>
</tr>
<tr>
<td>Game 10</td>
<td>-</td>
<td>-</td>
<td>3.88</td>
</tr>
<tr>
<td>Game 11</td>
<td>-</td>
<td>-</td>
<td>3.76</td>
</tr>
<tr>
<td>Game 12</td>
<td>-</td>
<td>-</td>
<td>2.76</td>
</tr>
<tr>
<td>Game 13</td>
<td>-</td>
<td>126</td>
<td>5.23</td>
</tr>
<tr>
<td>Game 14</td>
<td>-</td>
<td>-</td>
<td>5.92</td>
</tr>
<tr>
<td>Game 15</td>
<td>-</td>
<td>-</td>
<td>4.50</td>
</tr>
<tr>
<td>Game 16</td>
<td>123</td>
<td>129</td>
<td>3.96</td>
</tr>
<tr>
<td>Mean</td>
<td>123</td>
<td>130</td>
<td>4.11</td>
</tr>
</tbody>
</table>

Note: Mean Scores are for the games 8-16
Figure 12. Team Average Win Scores for the Nine-Game Winning Streak.

**Pseudo-Community**

During the stage of Pseudo-Community (PC), and consistent with the literature regarding what occurs during the initial stage of any new group, levels of Cohesion were expected to be reported as high. More specifically, social dimensions of Cohesion were expected to be reported as high. Given the task nature of an athletic team, the task Cohesion is expected to be reportedly high at the beginning of the season and stable across the time the team is together. The high scores for the task Cohesion scales at the beginning of the season may reflect the idea that teams give high importance to team-related strategies, goals, and interactions at inception, as they prepare for the season.
These strategies are typically consolidated by the start of the competitive season and may not change to a large extent over the course of the season, which might explain similar task cohesion scores throughout the season.

Additionally, during a stage of Pseudo-Community, the team’s performance is expected to have an inverse association with Cohesion, more specifically social Cohesion. Therefore, Win Score would be expected to be low when Cohesion was reported as high. More specifically, social Cohesion would be expected to be high when Win Score is low. According to researchers (Tuckman, 1965; Peck, 1987), the initial stage of a group’s development is marked by a disregard of individual differences. With that being said, for an athletic team, a disregard of individual differences is expected to convey a flattened and analogous team performance. There is no previous literature to suggest Flow State would be germane until the stage of Emptiness /Community, being that Flow is achieved after each individual and the team has worked through a stage of Chaos. Therefore, an optimal experience is not anticipated to be present early in a team’s development.

Findings

By analyzing the mean scores for each of the games in which Cohesion, Flow State, and Win Score were measured, it was determined that the stage of Pseudo-Community occurred at the beginning of the regular season. For games 1 and 3, Cohesion and Flow State were measured concomitantly. The team had a reported Cohesion Total score of 120, out of a possible 162 and a reported Flow State Total score of 113 out of a possible 180. For Game 2, the team had a reported Cohesion Total score of 125 and a
reported Flow State Total score of 114. What’s more interesting are the dimensions of social versus task Cohesion. The team’s reported level of task Cohesion for Game 1 for attraction to group-task (ATG-T) was 28.81 out of a possible 36. The team’s reported level of task Cohesion for group integration-task (GI-T) was 31.00 out of a possible 45. The teams reported social Cohesion for Game 1 for attraction to group-social (ATG-S) was 33.54 out of a possible 45. The teams reported social Cohesion for group integration-social (GI-S) was 26.27 out of a possible 36. These results, relative to the other times for which Cohesion was measured, indicates that social Cohesion was reported relatively high for Game 1 as compared to those levels reported for the other times Cohesion was measured during the season. Task Cohesion shows to be fairly consistent over the course of the times when Cohesion was measured. However, it is important to note that the dimension of group integration, both task and social, measured noticeably higher than the dimension of attraction to group, both task and social.

Findings indicated that team Win Score was its highest for game 1 (6.46) and was significantly lower for games two (3.31) and three (2.46). Initially, it appears that the high Win Score for game 1 suggests that the team may not have been in a stage of Pseudo-Community during game 1. However, the notable decrease in Win Score from game 1 to game 3 suggests that the team may have been in a stage of Pseudo-Community, due to the increased level of the attraction-to-group social Cohesion dimension. This finding supports the belief that a team in the stage of Pseudo-Community would have a low Win Score and report a higher level of social Cohesion.
Chaos

During the stage of Chaos it was expected that levels of Cohesion would be lower than the levels reported in the preceding stage of Pseudo-Community, namely social Cohesion. Given that researchers (Widmeyer et al., 1993) suggest the task Cohesion is expected to remain stable, the researcher didn’t foresee task Cohesion to change drastically. Widmeyer et al. (1993) have suggested that the task-related dimensions of Cohesion should be most directly related to team success. However, because the Group Integration-Task dimension targets members’ beliefs about the team’s integrated pursuit of its task-relevant goals and objectives, Widmeyer et al. suggested that ‘the Cohesion dimension most closely linked [conceptually] to performance outcome is Group Integration-Task’ (p. 686). The experience of Flow would most likely be inhibited by the stage of Chaos. However, the hypothesis that Flow State doesn’t have a relevant presence until the stage of Emptiness/Community prohibits this researcher to make a grounded hypothesis about the level of Flow State during the stage of Chaos. However, certain sub-dimensions of Flow State were expected to be lower in a state of Chaos than in a stage of Emptiness/Community.

For example, the sub-dimensions of Flow State which are concerned with the athlete’s sense of control over the task and their performance including: sense of control; the receipt of unambiguous feedback on their performance; a sense of their action and awareness merging; and the balance between the level of the challenge and their level of skill with regard to the task. According to Jackson (1995, 1996) these dimensions of Flow would most likely be affected while a team is experiencing conflict. Furthermore,
the Win Score would be expected to be undulated with no visible pattern. This would be identified relative to a stage of Pseudo-Community, when the Win Score is expected to be lower relative to reported levels of social Cohesion. It is important to keep in mind the non-linear nature of Peck’s Community-Making model, in which each stage can consist of the other stages.

*Findings*

After analyzing the Win Score data, it was determined that the team was possibly in a stage of Chaos during games 2 (3.31), 3 (2.46), 4 (1.96), 5 (5.81), 6 (3.54), 7 (4.50), and 8 (2.31). This was determined given the high Win Score (6.46) for Game 1. Furthermore, the results indicated that the team may have been in the stage of Chaos during games 2, 3, 4, 5, 6, 7, and 8 because of the social Cohesion scores for Game 5 and the Win Scores for each of the games.

The Cohesion Total score (124) for Game 5 was noticeably higher than as measured for Game 1 (120), but slightly lower than Game 3 (125). While the difference is small, this difference was better understood after analyzing the sub-dimensions of Cohesion. The group integration (GI-S) dimension of social Cohesion for Game 5 (27.00) was slightly higher than that of Game 3 (26.00). However, the attraction to group (ATG-S) dimension of social Cohesion (35.38) was slightly lower for Game 5 than it was for Game 3 (36.07). This would suggest the team reported a higher level of social group integration and a lower level of social attraction to the group for Game 5. The group integration (GI-T) dimension of task Cohesion (34.15) for Game 5 was slightly higher than that of Game 3 (33.84) and markedly higher than that of Game 1 (31.00).
Furthermore, the attraction to group (ATG-T) dimension of task Cohesion (27.53) for Game 5 was slightly lower than it was for Game 3 (28.76). This finding suggests that the team may have become more task oriented after having worked through the initial stage of Pseudo-Community. Caution should be used when interpreting these results given the singular Cohesion measure taken during the stage of Chaos.

Win Score was noted as being variable with several rise and falls for games 2 through 8. This suggests that the team was in a stage of Chaos. Flow State was not measured during the stage of Chaos. Therefore, it is not possible to truly consider Flow State during the stage of Chaos. However, Flow State was measured for games 3 and 9. Team total Flow State score for Game 3 was 114 and for Game 9, 135, out of a possible 180. This supports the literature suggesting that Flow State may increase slowly over the time a group is together (Jackson, 1995).

Emptiness/Community

During the stage of Emptiness/Community, it was expected that the levels of Flow State, Cohesion, and Win Score would all exhibit an increase as compared to the preceding stages of Pseudo-Community and Chaos. However, levels of Cohesion during the stage of Pseudo-Community are expected to be high; therefore, Cohesion, more specifically social Cohesion, may be reported as the same or lower than was reported during Pseudo-Community. The levels of social Cohesion were expected to be higher in the stage of Emptiness/Community than were reported during the stage of Chaos. The levels of task Cohesion would be expected to show no difference. Cohesion increases as
members share common concerns and feelings in preparing to face a common goal together (Emptiness/Community), rather than separately (Pseudo-Community & Chaos).

The team’s experience of Flow State was expected to be at a higher level during the stage of Emptiness/Community than any other stage. However, Flow was expected to be more stable and consistent over the time spent in Emptiness/Community. As mentioned earlier, it has been suggested that teams may experience Flow with a greater complexity than the individual experiences Flow (Cosma, 1999). Therefore, Flow State for a women’s basketball team may be reached without experiencing all nine of the sub-dimensions of Flow.

In the stage of Emptiness/Community the team’s Win Scores were expected to be at higher and more consistent levels as compared to when the team was in the stages of Chaos and Pseudo-Community. Since Win Score is how the team’s performance was measured, it was expected that the Win Score would display an increased, more leveled out, and consistent pattern while in a stage of Emptiness/Community.

Findings

After exploring the results, it was identified that the stage of Emptiness/Community was present during the nine-game winning streak. During the nine-game winning streak Cohesion was measured once, Flow State three times, and Win Score was calculated for each of the nine games. Since Cohesion was only measured once during the nine-game winning streak, caution should be used when interpreting these results. Cohesion was measured for the last game of the nine-game winning streak (Game 16). The team reported an average Cohesion Total score of 123 out of a possible 162. More
importantly, the subscale scores of Cohesion and Flow State were calculated for those games that were measured during the nine-game winning streak (See Table 12). More specifically, the attraction to group (ATG-S) dimension of social Cohesion (ATG-S) was 34.00. The group integration (GI-S) dimension of social Cohesion was 25.50. For task Cohesion the attraction to group (ATG-T) dimension was a reported score of 29.83, while the group integration (GI-T) dimension was 34.00. These findings suggest that the team’s level of group integration-social Cohesion had decreased from prior measures of Cohesion. It is important to note that group integration-task had remained similar to prior measures. This result lends support to previous literature indicating that group integration to the task remains stable over time (Carron et al., 1998).

Over the three separate times that Flow State was measured during the winning streak, (games 9, 13, and 16) the team’s average Flow State total score for the three games showed a notable increase ($M = 130$) from the average of the two previous measures, which were taken during the beginning of the season at Game 1 and 3 ($M = 113.5$). Although, it was more important to investigate the sub-dimensions of Flow State to explore which dimensions increased or decreased. The four sub-dimensions of Flow (CS, AA, UF, and SC) each measured visibly stable across the three games Flow was measured during the nine-game winning streak (See Figure 13). Given the significant positive correlations between the four sub-dimensions of Flow and the Win Score, these results lend further support that the team may have been in a stage of Emptiness/Community. Researchers (Jackson & Csikszentmihalyi, 1999) suggest that action-awareness merging (AA) only comes about when the athlete becomes completely absorbed in what he/she is doing.
Table 12

*Team Average Cohesion and Flow Subscales, and Win Scores for the Nine-Game Winning Streak*

<table>
<thead>
<tr>
<th></th>
<th>Game 8</th>
<th>Game 9</th>
<th>Game 10</th>
<th>Game 11</th>
<th>Game 12</th>
<th>Game 13</th>
<th>Game 14</th>
<th>Game 15</th>
<th>Game 16</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATG-T</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>29.83</td>
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<tr>
<td>ATG-S</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>34.00</td>
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<tr>
<td>GI-T</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>-</td>
<td>-</td>
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<td>-</td>
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<td>-</td>
<td>14.09</td>
<td>-</td>
<td>-</td>
<td>14.55</td>
</tr>
<tr>
<td>CG</td>
<td>-</td>
<td>17.08</td>
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<td>-</td>
<td>-</td>
<td>16.82</td>
<td>-</td>
<td>-</td>
<td>16.18</td>
</tr>
<tr>
<td>UF</td>
<td>-</td>
<td>14.46</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>12.82</td>
<td>-</td>
<td>-</td>
<td>13.27</td>
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<td>3.77</td>
<td>2.77</td>
<td>5.23</td>
<td>5.92</td>
<td>4.50</td>
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Note: ATG-T (Attraction to Group –Task); ATG-S (Attraction to Group-Social); GI-T (Group Integration-Task); GI-S (Group Integration-Social); CS (Challenge Skill Balance); AA (Action Awareness Merging); CG (Clear Goals); UF (Unambiguous Feedback); CT (Concentration on Task); SC (Sense of Control); LSC (Loss of Self Consciousness); TT (Transformation of Time); AE (Autotelic Experience)
Figure 13. Team Average Flow Subscale Scores (CS, AA, UF, SC) and Win Scores by Game.

Note: Flow Scores and win scores are based on two different scales of measurement.
This absorption comes about when he/she feels that he/she has the skills to meet the challenge (CS). Furthermore, unambiguous feedback (UF) is when the athlete receives information about their performance, which allows for stability in their pursuit of the task. Feedback is paramount to a successful performance. Those athletes who are tuned into the feedback coming from both their bodies and the external environment are more able to remain connected with what they are doing, which leads to a greater sense of control. Lastly, an athlete’s sense of control comes from their perceived belief that he/she has the level of skill necessary for the challenge. These four dimensions of Flow may be necessary for a team to experience a state of Flow. In other words, the higher the teams Win Score, the higher the experience of Flow for the sub-dimensions of CS, AA, UF, and SC. However, the directionality of the relationship is unknown.

Additionally, the team’s Win Score during the nine-game winning streak indicated a trend, which measured above the team’s average Win Score for the season. In other words, for Game 8 the team Win Score was 2.31; for Game 9 it was 4.73; for Game 10 it was 3.88; for Game 11 it was 3.77; for Game 12 it was 2.77; for Game 13 it was 5.23; for Game 14 it was 5.92; for Game 15 it was 4.50; and for Game 16 it was 3.96. The average Win Score for the nine-game winning streak was 4.11, which was higher than the team’s overall average season Win Score of 3.38 (See Figure 14). This finding suggests that the team may have been in a state of Flow and the stage of Emptiness/Community during the winning streak.
Figure 14. Team Average Win Score for Nine-Game Winning Streak.
Summary

Given the exploratory nature of this study, the findings are immense. Since the main interest of this study was to determine whether the stages of Peck’s Community-Making model could be identified for a collegiate level basketball team via the constructs of Flow, Cohesion, and athletic performance, not all the findings will be discussed. The Discussion section will instead focus on the relationships found between the constructs of Cohesion, Flow and Performance (Win Score). Furthermore, the presence of Pecks’ stages of Community-Making will be discussed at length proximate to the nine-game winning streak.

Phase II

Given that this study did not meet the data requirements for prediction, it was not appropriate to use the results from the first year of data (1999-2000) to predict what would take place for the second year of data (2000-2001). Furthermore, Phase I discriminant analysis did not support testing the model on a second year of similar data. Please refer to the Limitations section for further explanation.
Chapter V

Discussion

The main purpose of this study was to explore how the stages of Peck’s Community-Making model could be identified and predicted for a collegiate basketball team over the course of consecutive seasons using the constructs of Flow, Cohesion, and performance. Participants in this study included 13 female student-athletes whom were members of a Division I basketball team. Participants were grouped as a team (N=1).

Through the use of descriptive statistics, correlations, and trend analysis, the study focused on exploring whether the constructs of Flow, Cohesion, and performance could be used to indicate the stages of team development using Peck’s Community-Making model. In addition, a discriminant analysis was conducted to determine which athletic performance measures are most related to outcome (win/loss) for this team.

Since there is an absence of literature in the area of team development in athletic teams, this investigation aimed to provide insight into the existence of Community-Making in athletic teams via the constructs of Flow, Cohesion, and performance. This chapter discusses the results of this exploratory study. This chapter includes a discussion of the investigative findings that either support or refute the existence of Peck’s stages of Community-Making. A proposed model of team development is outlined, followed by the practical limitations to the study, and recommendations regarding future research.

The relationships between group integration-task (GI-T) Cohesion and the following five subscales of Flow, challenge skill balance (CS), clear goals (CG), concentration on task (CT), loss of self consciousness (LSC), and autotelic experience
(AE), yielded significant positive correlations of .38, .39, .27, .35, and .26, respectively. Furthermore, the relationships between performance (Win Score) and the following subscales of Flow: challenge skill balance (CS); action awareness merging (AA); unambiguous feedback (UF); and sense of control (SC) yielded significant positive correlations of .17; .15; .18; and .18, respectively. Lastly, it was revealed that the team experienced a nine-game winning streak, which became the central point for the discovery of the stages of Peck’s Community-Making model. These findings set the tone for the discussion.

Indeed a relationship between the Flow Total and Cohesion Total scores would have provided a strong supportive basis that Flow State and Cohesion were related. However, the correlation between the two constructs was not significant ($p = .09$). Though statistical analysis didn’t yield a significant correlation between global Flow and Cohesion, this researcher decided it noteworthy to mention nonetheless. The relationship between global Flow and global Cohesion would suggest that the group dynamics of a basketball team play a role in the team’s achievement of the experience of Flow. Given the nature of the data collection and the small sample size, it is reasonable to suppose this result would have been different had there been additional measures of Flow and Cohesion taken concomitantly. Although, a breakdown into the sub-dimensions of Cohesion and Flow revealed more specific and interesting findings.

The concept of task Cohesion is described as the integration or personal involvement with the group’s task, productivity, goals and objectives, and overall bonding within the team around the group’s task. Research has indicated (Mugford, 2005) that the sense of bonding for completion of the task is important in achieving a
Flow State, especially in an interdependent sport, such as basketball, where the sum and synchronicity of the individual parts and the greater whole are essential to the overall team performance. The findings from this study showed that the overall sample (team) had several significant correlations between task Cohesion (group integration-task (GI-T)) and Flow State. The significant correlations with GI-T Cohesion included five of the nine sub-dimensions of Flow, with the highest being clear goals (CG) ($r = .39$), followed by challenge skill balance (CS) ($r = .38$), loss of self consciousness (LSC) ($r = .35$), concentration on task (CT) ($r = .27$) and autotelic experience (AE) ($r = .26$). The task Cohesion sub-dimension of attraction to group-task (ATG-T) yielded one significant correlation with the Flow sub-dimension of transformation of time (TT) ($r = .35$). Overall Flow Total produced a non-significant, but noteworthy, relationship coefficient as a psychological construct with overall Cohesion Total ($r = .203$). The aforementioned relationships indicate that if this basketball team rated their perceptions of task Cohesion as being high, whether through their personal attraction to the team or perception of how well the team performed their task together, they were more likely to report a high Flow State. This Flow State was more specifically expressed through clarity of goals, knowledge that they had the skill to meet the demands of the situation, a loss of self concern and negative thoughts, intense focus on the task, and enjoyment of the task.

The concept of social Cohesion is the integration or personal involvement with the social interactions within the group and overall bonding within the team as a social unit. It has been suggested that a sense of social Cohesion would be important in achieving a Flow State, especially in an interdependent sport where the sum and synchronicity of the individual parts and the greater whole are essential to the team’s
overall performance. Previous research (Carron et al., 2002) reported a greater effect size between the social Cohesion dimension of Cohesion and performance than with the task Cohesion dimension. However, the findings from this study showed that the overall sample had far fewer significant correlations between the social dimension and Flow State than with the task dimension of Cohesion. The only significant correlation among the social Cohesion dimension and Flow State was a strong positive correlation between attraction to group-social (ATG-S) and the Flow sub-dimension of loss of self consciousness (LSC) \( r = .46 \). This finding may be explained by the “Crowd Psychology” phenomenon. According to Le Bon (1895), “Crowd Psychology” is when individuals lose all sense of self and all sense of responsibility when they immerse themselves as part of the crowd. Perhaps, the relationship found between social cohesion and LSC is in part due to the individual becoming part of the social group and losing a piece of individual identity or awareness. This might explain a strong relationship between social cohesion and loss of self consciousness. However, caution should be used when interpreting these results due to the small sample size.

It does seem as though the greater strength of the task Cohesion and Flow State relationship not only makes intuitive sense with regard to an athletic team, but was also supported by the seminal study of Lenk (1969). Lenk’s study specifically emphasized the importance of task Cohesion over social Cohesion in the sport of rowing. The rowing team had serious internal conflict, yet became both world and Olympic champions.

What does this mean? Even though both social and task dimensions of Cohesion related significantly with Flow State, the dimension of task Cohesion produced more significantly positive relationships between five of the six correlated sub-dimensions of
Flow State than was achieved with the social Cohesion dimension. In effect, female basketball players in this study were more likely to achieve a Flow State through positive task Cohesion than by having positive social characteristics. Given Csikszentmihalyi & Jackson’s (1999) and Jackson’s (1995) findings that support Flow State having a strong relationship to performance, it makes sense to consider that Flow State would have a significant positive relationship with performance for the current study. Furthermore, given that task Cohesion, more specifically, group integration-task (GI-T) has a positive relationship to several dimensions of Flow in the current study, it makes intuitive sense to consider there to be a connection between Cohesion, Flow State, and performance. However, it is impossible to determine how and to what degree that relationship exists.

Further analysis, which was based on the performance of the sample, specifically the relationship between Win Score and the sub-dimensions of the constructs of Flow State and Cohesion for a collegiate basketball team allowed greater interpretation. As explained in Chapter IV, the Win Score was used rather than game outcome to calculate an individual’s performance or productivity relative to their preceding performance. Outcome is considered irrespective of the team’s actual performance. A team can win a game, but not necessarily have performed well, vice versa. Bray & Whaley (2001) reported coaches’ beliefs that team success is better measured by analyzing the individual players’ performances.

Basically, Win Score was used to determine if the team in the current study performed better or worse than their preceding performance, by means of calculating the average team Win Score for each game using each individual’s Win Scores. Using this calculation, the researcher was able to investigate performance along with the constructs
of Flow State and Cohesion. Previous research suggests there to be a significant positive moderate to large relationship between Cohesion and performance (Carron et al., 2002; Mullen & Cooper, 2002). However, Mullen & Cooper’s (2002) meta-analysis indicated that task Cohesion is more important for team success than social Cohesion.

Although the results from the current study did not provide statistical significance between task Cohesion and performance success, the significant relationships found between task Cohesion and Flow State may be important in helping to explain the significant relationships present between Win Score and Flow State.

The findings from the current study showed there were no significant relationships between Cohesion and Win Score. But, significant relationships were found between specific athletic performance measures and Cohesion. The findings from this study showed that the overall sample (team) had several significant correlations between social Cohesion (attraction to group- social (ATG-S) and group integration-social (GI-S)) and the athletic performance measures of: three point attempts, assists, and turnovers. The significant correlations with ATG-S Cohesion included three point attempts and assists. The relationships between ATG-S and three point attempts \( (r = -.33) \) and assists \( (r = -.37) \) were negative. The significant correlations for GI-S included three point attempts, assists, and turnovers. The relationships between GI-S and three point attempts \( (r = -.39) \), assists \( (r = -.39) \), and turnovers \( (r = -.29) \) were all negative. These relationships are somewhat counter-intuitive.

Mullen & Cooper (2002), through a meta-analysis of the literature regarding the relationship between Cohesion and performance found a positive relationship between task Cohesion and performance and a negative relationship for social Cohesion and
performance. For this study the more socially cohesive the team was the fewer assists and three point attempts were made. When the team reported increased levels of social attraction and integration to the team it had a negative effect on the team’s performance by way of assists and three point attempts. Therefore, the current study provides further support for Mullen and Cooper’s (2002) findings with regard to the negative relationship between social Cohesion and performance. However, the negative relationship found between social Cohesion and turnovers does not support previous findings.

However, the negative relationship found between turnovers and social Cohesion does not support the literature regarding social Cohesion having a negative effect on performance. In basketball a turnover is considered an offensive error. Therefore, a negative relationship would suggest a positive effect on performance; the higher the social Cohesion the fewer turnovers made.

Additionally, the findings from the current study showed there was a significant relationship between task Cohesion and athletic performance. The significant correlation was between group integration-task (GI-T) and turnovers. The relationship between GI-T and turnovers was negative ($r = -.29$). Given what is known about task Cohesion, especially group integration-task, it makes sense for there to be a negative relationship between GI-T and turnovers. Since a turnover in basketball is usually the result of the offense losing possession of the ball by means of an error or violation, it is logical for turnovers to be associated with low levels of task Cohesion. The more task-cohesive a team is on the court, the fewer offensive mistakes are expected. For this overall sample, the higher the reported level of task Cohesion, the fewer turnovers. This finding provides further support for the findings of Carron et al., (2002) and Mullen & Cooper (2002).
More specifically, this study contributes information regarding the relationship between task Cohesion and specific measures of performance for the sport of basketball.

The findings from the current study showed that the overall sample (team) yielded several significant correlations between Win Score and Flow State. The significant correlations with Win Score and Flow State were among the overall Flow Total score, and four sub-dimensions of Flow State. Win Score correlated highest with overall Flow Total score \( (r = .33) \), followed by challenge skill balance (CS) \( (r = .17) \), action awareness merging (AA) \( (r = .15) \), unambiguous feedback (UF) \( (r = .18) \) and sense of control (SC) \( (r = .18) \). These relationships indicate that for a basketball team a high Win Score was associated with a high Flow State score. This Flow State was more specifically expressed through an overall Flow experience, more specifically, through knowing that they had the skill to meet the demands of the task, the feeling that their bodies and minds were fused as one, understanding and interpreting feedback that they were doing well, and a sensation of automaticity and control over their performance.

When the overall sample (team) was examined in terms of Win Score by game, there was an apparent trend present during the nine-game winning streak. During the nine-game winning streak the mean Win Score was 4.11 as compared to the overall mean season Win Score of 3.38. Certainly there is no way to determine whether this difference is significant due to the small sample size, but given that this study is exploratory in nature, there does appear to be a practical difference during the winning streak. This winning streak was determined to be the basis of identifying stages of team development.
Presence of the Stages of Community-Making

It was clear from the analysis of the team’s data that the team experienced Flow as a team and that Cohesion was positively related to these Flow experiences. Task Cohesion was particularly related to the Flow experience, which may seem intuitive given the direct interaction between team members performing a self-paced interactive team task, such as basketball. The following section presents the team data from this overall sample, which led the researcher to conclude that a three stage model of Community-Making for a collegiate level women’s basketball team emerged.

Given the constructs of Flow State, Cohesion, and performance, the researcher determined that the team experienced the stage of Emptiness/Community during the nine-game winning streak. This was concluded after analyzing the team’s constructs of Flow State, Cohesion, and performance during the nine-game winning streak. As mentioned in Chapter IV, the Win Score showed an apparent and consistent uplift during the nine-game winning streak (games 8-16). This uplift was determined by analyzing the team Win Scores for the season, and taking the average of the team Win Scores during the nine-game winning streak and comparing that average against the season average Win Score. The average Win Score for the nine-game winning streak was 4.11, which was higher than the season average Win Score of 3.38. Due to the small sample size, it is not possible to conclude if this difference carries statistical significance. However, it is reasonable to suppose this result shows practical significance. According to researchers (Thompson, 2002; Onwuegbuzie and Leech, 2004) there are three types of significance in quantitative research: statistical significance, practical significance, and clinical
significance. Kirk (1996) indicated that relying solely upon statistical significance “turns a continuum of uncertainty into a dichotomous reject-do-not-reject decision” (p. 748). So, for the purposes of this study and due to the small sample size, this researcher assessed the practical significance of the findings in order to enhance the interpretation of the results. Since this research is educational evaluation, practical significance is functional for achieving verstehten in the current study.

Additionally, analyses from the nine-game winning streak also indicated that the team experienced a stage of Emptiness/Community, given the preceding stages of Pseudo-Community and Chaos. This will be discussed further during this section. As discussed in Chapter IV, Pseudo-Community was operationally defined as a time when the team would be expected to report high levels of social Cohesion. Given the nature of an athletic team, task Cohesion was expected to be reported as high at the start of the season. Furthermore, according to the literature regarding group development with task groups, performance is expected to be lower during a stage of Pseudo-Community. Performance in this study was measured as Win Score. However, there is an absence of research involving group development and athletic teams, so for the purposes of this study, Pseudo-Community was expected to look different than any other non-athletic task group. Given the nature of a collegiate level athletic team, the start of a new season might resemble a stage of Community. Because of the pre-season training camp which precedes the start of the competitive season, the team may have worked through a stage of Pseudo-Community. However, for the purposes of this study, the researcher cannot presuppose what went on during pre-season. Therefore, the data for this sample suggests that the team may have in fact attempted instant Community. Peck (1987) postulates that it is
natural for a new group to attempt instant Community. This attempt at instant Community follows the characteristics of Pseudo-Community.

_Pseudo-Community_

Considering the team performance (Win Score), findings suggest the team may have been in a stage of Pseudo-Community during the first four games. Win Score for game one was 6.46. Interestingly, Win Score for game one was the highest followed by a gradual and persistent decrease for games two, three, and four, respectively. This finding would suggest the team may have made an attempt at instant Community (Pseudo-Community). Team Cohesion was measured for games one and three. The team’s average Cohesion Total score for game one was 113 out of a possible 162. More importantly, the social Cohesion sub-dimension of attraction to group-social (ATG-S) was a mean of 33.55 out of a possible 45, and group integration-social (GI-S) was a mean of 26.27 out of a possible 36. For game three, the team’s average Cohesion Total score was 114. The social Cohesion sub-dimension of ATG-S was a mean of 36.08, while GI-S was 26.00. This result suggests that the team may have been experiencing what any new group experiences during Pseudo-Community, the facade of high social cohesion. Such a façade is marked by high social Cohesion, more specifically the team’s attraction to be part of the group, socially.

The increase in ATG-S from game one to game three indicates that the team may have been experiencing Pseudo-Community, a time when the group ignores individual differences. Furthermore, for game one the team’s task Cohesion sub-dimension of attraction to group –task (ATG-T) was a mean of 28.82 out of a possible 36. And group
integration-task (GI-T) was 31.00 out of a possible 36. For game three, the team’s average ATG-T score was 28.77, while GI-T was 33.85. This result suggests that the team’s attraction to the group’s task remained the same. Yet, the direction of the group towards achieving their goal (GI-T) increased somewhat from game one to three.

Overall, these results indicate the team’s attraction to the group on a social level was more punctuated than their attraction to the group’s task, which is indicative of what Peck postulates to happen during a stage of Pseudo-Community. Further, the team’s performance started out relatively high for game 1, subsequently showing a consistent decrease for games 2, 3, and 4. Since Cohesion was only measured for Games 1 and 3 during the proposed stage of Pseudo-Community, this researcher can only juxtapose Win Score and Cohesion for those two games. What stands out is that Win Score for Game 1 was at its highest for the entire season, while ATG-S Cohesion was near its highest level for the six times Cohesion was measured. Moreover, GI-S Cohesion was also near its highest level. For the six times Cohesion was measured throughout the season, there was only one time when both ATG-S and GI-S measured higher: Game 16 and Game 5, respectively.

Attributable to the literature (Peck, 1987) regarding the characteristics of a group in Pseudo-Community, it is reasonable to conclude that based on the results for Win Score and Cohesion measures, the team for this study most likely experienced a stage of Pseudo-Community during the first four games of the season. Given the non-linear developmental nature of Peck’s Community-Making model, the researcher cannot be sure of the beginning and end of each stage. Therefore, it is important to consider that the
stages may occur in conjunction with other stages, especially when transitioning from one stage to the next.

**Chaos**

After discovering when the team experienced both a stage of Emptiness/Community and a stage of Pseudo-Community, the researcher was more easily able to identify a stage of Chaos. Considering the dynamic and recursive nature of an athletic season, the researcher determined that the team may have in fact experienced a stage of Chaos both concurrently and subsequent to Pseudo-Community. As described in Chapter IV, certain characteristics of Flow, Cohesion, and performance were expected to be present during a stage of Chaos. Chaos was defined as a time when the team would be expected to report lower levels of Cohesion, more specifically social Cohesion. These levels of social Cohesion are expected to be lower than those levels reported while in a stage of Pseudo-Community (Peck, 1987). Task Cohesion wasn’t expected to show much change due to the task nature of an athletic team. Furthermore, according to the group development literature with task groups, performance is expected to be low during a stage of Chaos (Peck, 1965; Tuckman, 1965).

Peck (1987) on the other hand describes Chaos as a dynamic and compulsory process a group must go through to become open to one another. This suggests that Chaos is not necessarily a negative state, perhaps providing the stage for positive experiences, such as good performance. However, given the paucity of group development literature involving athletic teams, the researcher cannot presume to know what performance for an athletic team would look like in Chaos. Researchers (Bales &
Strodtbeck 1951; Peck, 1987; Tuckman, 1965) concerned with groups other than athletic teams suggest that if the stage of conflict is not addressed and worked through successfully, then the group exhibits intra-group conflict and resistance to the task and structure, which displays as a decrease in group performance. Thus, for an athletic team it makes intuitive sense that performance would be undulated, lacking any apparent consistency or pattern, which is marked by highs and lows.

The ability of a team to experience team Flow during a stage of Chaos would most likely be inhibited. Although, the same may not hold true for an individual to experience a Flow State amidst Chaos. However, given the lack of research in the area of Flow and team development, it would be conjecture to anticipate the characteristics of Flow during a stage of Chaos. According to Jackson & Csikszentmihalyi (1999), Flow State is a process that most likely occurs when certain environmental and intrapersonal characteristics are present. Among these factors team climate is known to facilitate an optimal performance (Flow) in sport (Jackson, 1995; Jackson & Csikszentmihalyi, 1999). Yet, Jackson (1995) did indicate, through an inductive analysis of qualitative data, that the dimensions most significantly related to Flow were autotelic experience (AE), concentration on the task (CT), action awareness merging (AA), and the sense of control (SC). Therefore, it is conceivable that Flow State can occur within a state of Chaos, provided the necessary dimensions are experienced. However, it is difficult to understand the full interpersonal and intrapersonal context in which the data was collected, due to the complex interaction between team members and interactions across teams.

In view of team performance (Win Score), the team was identified as being in a stage of Chaos during games 4, 5, 6, and 7, because of the “chaotic” nature of the Win...
Scores. The Win Scores illustrate an inconsistent rise and fall, which suggests the team may have been in a stage of Chaos. According to the group development literature, conflict or Chaos can occur when a team starts losing after a winning streak. Game 4 was the first loss of the season after having won three straight. Game 4 was also the lowest Win Score out of the four games. Interestingly, for Game 4, the team Win Score went from a low of 1.96 to 5.81 for Game 5. This distinct difference in Win Score is important to note in reference to the loss for Game 4. The Game 4 loss is important to note relative to the three game winning streak during Pseudo-Community. Furthermore, the Win Scores for games 5, 6, and 7 were 5.81, 3.54, and 4.50, respectively. The inconsistent rise and fall is suggestive that the team was in a stage of Chaos with respect to the loss at Game 4.

Team Cohesion was only measured for Game 5 during the proposed stage of Chaos. The team’s average Cohesion Total score for Game 5 was 124 out of a possible 162. More specifically, the social Cohesion sub-dimension of attraction to group-social (ATG-S) was a mean of 35.38 out of a possible 45 and group integration-social (GI-S) was a mean of 27.00 out of a possible 36. The task Cohesion sub-dimension of attraction to group-task (ATG-T) was 27.54, while group integration-task (GI-T) was 34.15. In contrast to the stage of Pseudo-Community, this result suggests the team experienced a slightly higher level of group integration-social (GI-S) Cohesion in Game 5 and a slightly lower level of attraction to group-social (ATG-S) than experienced during the identified stage of Pseudo-Community. Additionally, the team experienced nearly similar results for the task dimension of Cohesion for Game 5. However, ATG-T did fall slightly in comparison to game three. Nonetheless, it is important to note that it is impossible to
fully understand this result in context of the team due to the singular measure of Cohesion at Game 5. What’s interesting is that ATG-S for Game 5 (35.38) only decreased slightly from the Game 3 measure (36.08), which was while the team was possibly in a stage of Pseudo-Community. This result may be due to a number of contextual factors that are difficult to determine. It is also interesting to note, that ATG-S is at its second highest level of the season for Game 5. Perhaps, the unique team dynamic and common interest of an athletic team might influence Cohesion differently than for a different type of group.

Group development researchers (Peck, 1987; Tuckman, 1965) suggest that social Cohesion is at its lowest during a stage of Chaos. Yet, for this sample it was almost at its highest. This finding supports what sport researchers (Carron et al., 2002; Mullen & Cooper, 2002) found with regard to the inverse relationship between social Cohesion and performance. Perhaps, Chaos can be identified when there are high levels of social Cohesion and low levels of performance, which would look similar to a stage of Pseudo-Community. It is also important to note what was found among both the social and task dimensions of Cohesion for Game 5. GI-S was reported lower than GI-T, while ATG-S was reported higher than ATG-T. This finding indicates that for Game 5, the team experienced less Cohesion in relation to the team’s commitment to the goal. Moreover, the team reported a higher attraction to the group socially than task wise. This suggests that the team perceived themselves as getting along more on a social level, but not as integrated socially towards the teams’ mission. Lastly, Flow State was not measured during the identified stage of Chaos. Therefore, Chaos cannot be described in terms of Flow State.
Emptiness/Community

According to researchers (Bales & Strodtbeck, 1951; Bennis & Shepard, 1956; Bion, 1948; Peck, 1987; Tuckman, 1965) a stage of conflict and Chaos usually precedes a stage of openness and willingness to work together, where the task within this stage is one of communication. Communication provides a team with a means to resolve conflict rather than avoid conflict. Peck (1987) describes this stage of his Community-Making model as Emptiness. Given that Peck never applied his model of Community-Making to an athletic team, Community-Making may in fact progress differently for an athletic team than for any other task group. As described in the literature review, an athletic team develops in a recursive, rather than a linear manner. Furthermore, Peck (1987) describes Emptiness as a bridge between the stages of Chaos and Community. There seems to be a general agreement that those teams that navigate successfully through the previous stages of development, subsequently enter into a working stage (Community), where an optimal performance (Flow) can occur (Bales & Strodtbeck, 1951; Bennis & Shepard, 1956; Bion, Fisher, 1975; Gersick, 1988; McGrath, 1991; 1948; Peck, 1987; Tuckman, 1965).

While there has been very little research done with regard to team development for athletic teams, this researcher identified the nine-game winning streak, which took place for this overall sample, as what an optimal performance would look like in sport. Also, this researcher presupposed that it would be difficult to discern between the stages of Emptiness and Community for an athletic team. Considering the dynamic nature of sport, Emptiness and Community were identified as one in of the same, instead of two separate stages. This is the point at which Peck’s model doesn’t explain the unique and
dynamic process an athletic team goes through during their time on the court. Basketball is an interdependent sport, which relies upon the sum of the individuals’ efforts on and off the court. For the purposes of this study, Emptiness and Community are impractical to differentiate through the use of qualitative methods alone.

As described in Chapter IV, certain characteristics of Flow, Cohesion, and performance were expected to be present during a stage of Emptiness/Community. The stage of Emptiness/Community was defined as a time when the team would be expected to report relatively high levels of Cohesion, more specifically social Cohesion. Task Cohesion would be expected to remain similar to what was reported early in the season. Team Flow would be expected to be at a higher and more consistent level than in a stage of Chaos and Pseudo-Community. Lastly, in a stage of Emptiness/Community a team’s performance (Win Score) was expected to be at a higher and more consistent level than during the preceding stages.

During the winning streak Cohesion was only measured for Game 16, which happened to be the end of the nine-game winning streak. It is not possible to suggest what the team’s reported level of Cohesion would have been during the entire winning streak. However, it is interesting to note that the team’s reported mean level Cohesion Total score was relatively low for Game 16. In comparison to the five other times when Cohesion was measured throughout the season (Game 1 = 120; Game 3 = 125; Game 16 = 123; Game 23 = 131; Game 31 = 123), the Cohesion Total score for Game 16 was lower than the identified stages of Pseudo-Community and Chaos. Also worth mentioning is that the reported Cohesion Total score for Game 16 (123) was the same as reported for the last game of the season, Game 31 (123). This result supports the group
development literature with regard to groups reporting decreased levels of Cohesion towards the end of a group’s time together. Originally, this researcher didn’t believe the adjourning stage of group development would apply to an athletic team, because of the persistent nature of the task. However, it appears that this team may have experienced a degree of separation as described by Tuckman (1965) in his fifth stage of adjourning. Peck (1987) suggests that closure depends largely on the group’s reason and ultimate goal for assembly from the start. However, Peck (1987) also suggests that a group in the stage of Community doesn’t necessarily abandon their Community because the end is near. This may imply that this team was not in a stage of Community at the end of the season. In line with the Community-making literature, a group tends to experience the stages of Chaos and Pseudo-Community again throughout their time together (Peck, 1987). For this team, it is likely that they experienced Community during the nine-game winning streak, and soon after, fell out of Community back into a stage of Chaos. Specific reasons for a return to Chaos are unknown.

During the nine-game winning streak the task dimension of Cohesion (ATG-T = 29.93; GI-T = 34.00) was relatively high for Game 16, which suggests that the team was integrated and involved with the team’s task, performance, goals, and objectives. Moreover, the team was bonding within the team around the group’s task. Widmeyer et al. (1993) suggested that, because of the conceptual nature of the construct, Group Integration- Task is likely to have a strong positive relationship with team performance. In view of Widmeyer et al.’s (1993) findings, it seems intuitive that task Cohesion would peak during a winning streak. It is also significant to note the context of Game 16. Game 16 was the last win of the winning streak, the third game on a four game
road trip, and the mid-point of the season. Being on the road can certainly produce some strain on team members. The relatively low results for the dimension of social cohesion (ATG-S = 34.00; GI-S = 25.50) suggest that the team may have been growing tired of each other on a social level. This is purely conjecture, but it makes instinctive sense that a team in these circumstances would report relatively low levels of social Cohesion at this point in the winning streak. However, caution should be used when interpreting these results, given the singular measure of Cohesion. This researcher has no way of knowing what Cohesion would have been measured as prior to Game 16.

It is also important to note the team’s Win Score for Game 16. Team Win Score for Game 16 was 3.96, which was low relative to the previous four games (Game 13 = 5.23; Game 14 = 5.92; Game 15 = 4.50; Game 16 = 3.96). Interestingly, social Cohesion was also on a decline. Notice that team Win Scores for games 14 and 15, which were also on the road. This suggests that team performance may have been impacted by the long road trip, the pressure of a nine-game winning streak, and the potential that individuals were growing tired of their teammates.

Flow State was measured for games 13 and 16 during the nine-game winning streak. For games 13 and 16 the team average Flow State total scores were 126 and 129, respectively. In context of the season as a whole, reported Flow State for games 13 and 16 were relatively similar. This suggests that the team may have been in a consistent state of Flow during the winning streak. Provided that only two measures of Flow were taken, it is not possible to presume what Flow State would have been for the remainder of the winning streak. Originally, this researcher anticipated a state of Flow to be associated with optimal performance (relatively high Win Score). However, Flow State is more than
an optimal performance; it is an optimal experience, which is not limited to the quantitative measures of Flow State and performance. Therefore, it is reasonable to believe that certain individual’s on the court may have been experiencing peak Flow experiences and performances; although, the team didn’t report a higher Flow State experience. However, it is interesting to note that for Game 16, Flow was reported higher (129) than for Game 13 (126), while Win Score for Game 16 was the lower of the two games. It is interesting that a higher Flow score wasn’t associated with a higher Win Score. According to Csikszentmihalyi (1975, 1990) Flow State is a state of optimal experience involving total absorption in a task, thus creating a state of consciousness where optimal levels of functioning can occur. Given that this sample was investigated at the team level instead of the individual level, the results are team levels of Flow, Cohesion, and performance. The team is inclusive of those players who both received and did not receive playing time; therefore, having a possible effect on the actual Flow State and Win Scores of the team on the floor.

The correlational analysis of the means for Flow, Cohesion, and Win Score didn’t produce the exact associations the researcher anticipated during the stage of Emptiness/Community. However, the significant correlations for Flow State and Win Score are important to note. Certain dimensions of Flow State had significant positive correlations with Win Score, which suggest as Win Score increased so did team Flow State on those certain dimensions, or vice versa. It appears that for this sample those dimensions most associated with team Flow State were challenge skill balance, unambiguous feedback, action awareness merging, and sense of control. This is important because Jackson (1995) found that those factors most associated with Flow were autotelic
experience, concentration on the task, action awareness merging, and sense of control. This study supported Jackson’s (1995) original findings that action awareness merging and sense of control were most associated with Flow State.

Cosma (1999) and Jackson (1995) suggested that the ability for a team to experience Flow depends on several factors in synchronization and perhaps, can be experienced without all nine sub-dimensions. Each team is different and responds differently together. This team was more able to experience an optimal Flow State when they felt that their level of skill met the challenge, the internal and external feedback they were receiving with regard to their performance was both clear and precise, they were able to perform as they were one with their actions, and believed that they would do well as long as they put forward their best effort.

Given the significant relationships found between the dimension of task Cohesion and select dimensions of Flow, this study seems to support Csikszentmihalyi (1975, 1990) in that Flow State is a state of optimal experience involving total absorption in a task, thus creating a state of consciousness where optimal levels of functioning can occur. However it is not possible to discern how and to what degree Flow State and Cohesion are related, due to the complexity of the constructs. It can only be suggested that for this sample Flow State and task Cohesion were related positively and team performance and specific aspects of Flow were related.

Lastly, previous research has provided some support for the proposition that playing status is related to Cohesion. For example, Granito and Rainey (1988) reported that starters perceived stronger task Cohesion than non-starters. Spink (1992) found similar results except that team success was a moderator. In other words, perceptions of
Cohesion were different in less successful teams (with starters holding stronger perceptions of team cohesiveness) but no different in more successful teams. Therefore, in previous literature playing time has been introduced as a covariate in the analysis of the Cohesion performance relationship. Since the unit of analysis in the current study was the team, this study did not investigate the variable of playing time. However, this team had a successful season (20 wins-11 losses). Provided Spink’s (1988) findings, it is possible that playing time may have had no effect on overall team Cohesion for this sample.

Presence of Stages for the Remainder of the Season

The Community-Making model has been described as recursive and non-discrete; whereby, a group may cycle in and out of the stages over the course of their time together. Game 16 was noted as the end of the winning streak and was marked by a decrease in Cohesion, more specifically social Cohesion. While it was suggested that the team was in a stage of Emptiness/Community during their winning streak, it can also be noted that after Game 16, the average Win Score for games 17 through 20 showed a noticeable downward trend (Figure 15). Assuming a relationship between Win Score and the stage of Emptiness/Community exists, this team most likely fell out of the stage of Emptiness/Community soon after Game 16. The average Win Score for games 17 through 20 was 3.18 as compared to the average Win Score of 4.11 during the proposed stage of Emptiness/Community, which suggests that the team may have fell out of the stage of Emptiness/Community. Yet, it is impossible to suggest what the levels of Flow State and Cohesion were during that time, because Flow was only measured once (Game
19), while Cohesion was not measured at all. For Game 19 Flow State was reported similarly to the levels reported during the stage of Emptiness/Community. As can be seen in Figure 15, is the noticeable drop in Win Score for games 21 through 25. The mean Win Score for this time was 2.89. There were no measures of for Flow or Cohesion during this time.

Furthermore, the average Win Score for games 26 through 31 was 2.13. Essentially, after the proposed stage of Emptiness/Community, the average Win Score declined for the remainder of the season. It appears that the team reached its peak performance during their nine-game winning streak. This suggests that the team may have cycled in and out of the stages of Chaos and Emptiness/Community for the remainder of the season. Perhaps, the team was in a stage of Chaos for games 17 through 20, which was marked by the extreme rise and falls of the Win Scores. Still, the team may have entered back in to a stage of Emptiness/Community for games 21 through 24, which was marked by a less undulated and more consistent up lift. Lastly, the team may have fallen back out of Emptiness/Community for games 26 through 31. This hypothesis can be endorsed by the visible decrease in Win Score and relatively low Cohesion score at Game 31 (123).
Figure 15. Team Average Win Scores.
In effect, it was determined that the team experienced an optimal experience during the nine-game winning streak as substantiated by the consistent and elevated levels of Flow, Cohesion, and performance. However, caution should be used when interpreting these results because of the singular measure of Cohesion taken during the winning streak. There may certainly have been times when the team experienced the stages of Pseudo-Community, Chaos, and Emptiness/Community again, but without concomitant measure of Flow and Cohesion it is not possible to be sure when and for how long.

Conclusions

The crux of the interest in this study was to explore whether the stages of Community-Making could be identified for a collegiate level women’s basketball team via the constructs of Flow, Cohesion, and Athletic Performance. Given the exploratory nature of this study, the researcher identified some important preliminary relationships between the dimensions of Flow, Cohesion, and Performance. The researcher was able to identify possible stages of Community-Making through analysis of the team’s mean scores for Flow, Cohesion, and Win Score. Team performance was found to be positively related to specific dimensions for Flow, while the task Cohesion dimension of Cohesion was found to be significantly and positively related to specific aspects of Flow. The present findings provided further support that supports the literature that social Cohesion has a negative relationship to performance. Specific to this study, social Cohesion was found to be negatively associated with certain aspects of basketball performance (i.e.,
three point attempts, assists, turnovers), than its counterpart, task Cohesion. This finding lends further support that social Cohesion can be detrimental to performance success.

Although no significant relationship was found between the global measures of Flow and Cohesion, this doesn’t suggest a relationship did not exist. Due to data limitations and the sample size, it is difficult to fully understand what was happening for this team. Given the nature of a competitive Division I athletic team, the ability to gain deep access to a team is very difficult and contingent upon several factors. Notwithstanding the limitations, a three stage model of team development was identified contiguous the team’s nine-game winning streak. Despite the paucity of empirical research with regard to stages of group development for athletic groups, this research provides the foundation for future research in the area of athletic team development.

**Limitations of the Study**

There are several limitations of this study. A major limitation concerns the sample size. The sample size in the current study was too small to conduct more sophisticated statistical analyses (e.g., regression analyses, structural equation modeling) which may have helped to better understand the ability of the sub-dimensions of Flow State, the sub-dimensions of Cohesion, and the athletic performance measure to predict performance outcome; relationships, unique contributions, and directionality of influences among the sub-dimensions of Flow, Cohesion, and measures of performance.

Second, almost all of the measures in the study were subjective. Thus, a limitation is to assess subjective experiences quantitatively. This limitation has been discussed at
length by several researchers (Jackson, 2000; Jackson & Eklund, 2002; Jackson et al., 1998; 2001). Furthermore, it has been postulated that much emphasis should not be placed on any empirical measure of Flow, so as not to diminish or lose the experience by reducing it to scores on a questionnaire (Csikszentmihalyi, 1992). Nonetheless, by quantifying Flow State one can attempt to assess their relative contributions to performance.

Third, a team level of analysis was used for this study, although an individual level of analysis may have offered some unique findings. Nevertheless, the current findings extend some of the existing literature for specific aspects of Flow State and Cohesion, and their respective relationships and contributions to performance.

Fourth, there are issues regarding the generalizability of the present findings to other types of teams and sports. The current findings are based on a singular collegiate level women’s basketball team. It is unknown if the results of this study could be generalized to other populations. For example, male athletes, a female basketball team at a different level of competition, or female teams in different sports. Also, experiences of Flow State and Cohesion may differ according to the nature of the sport (e.g., co-acting versus interactive), degree of controllability in the sport (e.g., self paced verses other-dependent); context of sport (e.g., learning environment versus competitive environment); or other situational variables (e.g., number of years team has been together, number of veteran players versus new players). These variables may limit the generalizability of the findings.

Fifth, Flow State, Cohesion, and performance were only assessed three times concomitantly during the course of the season. Furthermore, Flow State was assessed five
times exclusive of Cohesion, while Cohesion was assessed three times exclusive of Flow State. An optimal approach would be to assess these variables concomitantly across multiple competitions. This would help to determine (a) the stability of Flow State across the season, (b) the stability of Cohesion across the season, (c) the relationships between Flow State, Cohesion, and performance more accurately, and (d) the presence of stages of team development more accurately given the constructs of Flow and Cohesion. However, there may have been a practice effect operating due to taking the GEQ and the FSS-2 measures several times throughout the season.

Sixth, the presumed directionality of relationships among Flow State, Cohesion, and performance measures. That is, Flow was measured after performance, but the interpretation of the results involved the assumption that Flow State contributes to performance, more specifically, assessing Flow after performance, it is possible that players used their individual and team performances to judge whether they were in Flow, such as “We must have been in Flow because we won.” Thus, the theoretical issue is, does the Flow State measure predict performance measures and/or do players use their performance to assess their Flow (individual and team) experiences? The same holds true for the measure of Cohesion. Cohesion was measured after the performance, but the interpretation of the results involved the assumption that Cohesion contributes to performance. Although, Cohesion is not state dependent in the same sense as Flow State is dependent upon the activity.

Seventh, due to the nature of this study, selection of the sample was convenient. Furthermore, the data used for this study was existing data, which was not collected by the current researcher. Consequently, the researcher had no control over the data
collection procedure and methodology. The original researcher was also the team’s sport consultant and determined it inappropriate to administer the measures in certain circumstances, so as to not risk doing harm. This is a limitation for longitudinal data collection.

Eighth, this study was an exploratory study using two instruments, performance data, and a theoretical model of team development. There was no manipulation of an independent variable. Consequently, there were no hypotheses established at the outset.

Ninth, the assessment of team performance was the use of the Win Score calculation. This measure included the Win Scores for the entire team, including those individual athletes who played, did not play, or had very little playing time. Furthermore, the Win Score does not take into account the skill level of the opposing team, or the influence of external factors (e.g., injuries, calls made by the referee, home versus away games). Despite these limitations, the fact that (a) some significant relationships were found among the variables of Flow, Cohesion, and performance, (b) stages of team development could be identified using the constructs of Flow, Cohesion and performance, provides a beginning for further research in the area.

Although the limitations of this study are numerous, what must be taken into consideration is that the data was collected on a real team in real time, during a real and intact season. Gaining access to an intact athletic team is extremely difficult to achieve. Furthermore, gaining access to an intact team over the course of their entire competitive season is even more difficult. This difficulty most likely explains why there is a deficiency of empirical research with regard to group development conducted with
athletic teams. Moreover, this most certainly explains why there is a dearth of longitudinal research for an entire athletic season.

In order to evaluate the group development of an athletic team, the researcher must become part of the team for the entire season, so as to gain trust with the coach and athletes. Considering the inherent difficulty in collecting longitudinal data for an athletic team, this study provides a unique and prevailing foundation for further research in the area of team development for athletic teams.

*Future Implications*

Given the limitations of this study, the implications for further research in the area of team development are promising. The findings have several implications for the areas of teaching, research, practice, and theory; some of which are listed below.

Several implications exist for the classroom. The majority of research regarding group development and group dynamics has not been spread across a wide range of researchers, but instead has been primarily done by only a few investigators. The model most discussed in most courses regarding group process is that of Bruce Tuckman. As mentioned in the review of the literature, Bruce Tuchman’s group development model has been championed as the most universal understanding of how a group develops. However, successive to a review of the group literature, it was determined that Tuchman’s model may not be appropriate for all types of groups. Instead, the Community-Making model proposed by Scott Peck is perhaps a better fit for the complex inter/intrapersonal process present for an athletic team. This research is the first to indicate Peck’s model for an athletic team.
The non-linear nature of the Community-Making model is more appropriate for the recursive developmental nature of an athletic team. For those leaders who wish to address the intrapersonal processes of their organizations, the Community-Making model provides an optimal theoretical framework to do so. Educators can juxtapose the two models instead of operate only from linear model of Tuckman.

Several suggestions exist for future research. The current study provides an extension of the current literature for group development. Understanding group processes will aid leaders of varying types of organizations toward creating more effective and productive groups. Gaining insight into specific functions of group development allows leaders to strategically create the optimal climate for group and team success. Successful groups will produce successful organizations that result from sound group theory and practice. As mentioned, the current study provides the preliminary step for identifying a model of team development that can be applied to athletic teams. Currently, there is not a model of team development appropriate for athletic teams. Therefore, the consideration of an appropriate model is needed to account for how an athletic team performs as a whole versus how each individual performs separately within the team. Given the nature of an athletic team, in that team performance is emphasized over individual performance, a model that considers the aggregate process would be valuable for teams, athletes, coaches, administrators, and sport psychology consultants. Knowledge of which stage of development a team is in can provide valuable information to coaches; information that can assist coaches in taking a constructive approach to their team in an effort to work in and through that stage.
Further research designed to establish a model of team development for athletic teams would be better suited if the researcher investigated several teams throughout the course of their seasons. Because of the level of trust required and the time it would take to investigate a single team throughout their season, this researcher suggests that a team of researchers gain access to one team each and remain with them throughout their season. Furthermore, the measures of Flow and Cohesion would need to be collected concomitantly at predetermined times throughout the season for each team. Such a design may provide a better opportunity to investigate the presence of the stages of Community-Making for athletic teams.

The existing literature regarding Flow in sport has helped provide a deeper understanding of this phenomenon. Furthermore, this understanding has provided coaches and athletes practical information on how to facilitate a Flow experience (Jackson & Csikszentmihalyi, 1999). The team perspective provides an increasing complexity, but a greater understanding as to how teams experience Flow may provide the opportunity for achieving Flow through certain psychological skills training and team building programs. Certainly, the additional consideration of Cohesion as a related construct can facilitate work, which is carried out to increase task Cohesion. Through a better understanding of how the constructs of Flow and Cohesion interrelate and relate to performance over the course of an athletic season, researchers can hopefully move closer to identifying whether or not the measures of Flow, Cohesion, and performance can be used to identify the stages of Community-Making within an athletic team.

Further, it might be beneficial for researcher to instead have the coaches administer the measures. In the event that full internal access to the team is not possible,
coaches’ administration is favorable. For instance, unless the primary investigator is able to gain the trust and acceptance of both the coaches and the team, it is difficult to justify having the team complete a testing packet following a loss, or any other intense circumstance. In this study the data was collected by the team’s sport psychology consultant, which made it easier to gain access to the team. However, there were times when the consultant determined it inappropriate to administer the measures on particular testing dates due to extreme circumstances.

The findings from this study also provide several implications for practice. For teams, the present study found that the team’s perception of their flow state was related to performance and task cohesion. More specifically, when the team perceived to have the skill to meet the demands of the task; that their minds and bodies were in sync; they received clear feedback about their performance; and they felt a sense of control over their performance, they experienced a better performance.

Furthermore, the relationship found between the Cohesion sub-dimension of group integration-task and specific dimensions of Flow indicated that this team was more able to achieve an experience of Flow when they reported working together to perform the task. More specifically, when the team perceived to have a clear sense of their goals, the skill to meet the demands of the task, a loss of self concern and negative thoughts, an intense focus on the task, and an overall enjoyment of the task, they were likely to work together as a team with regard to the task. What does this mean? Team perceptions of Flow and task Cohesion were important contributors to team performance. This suggests that team members can serve an important role through helping each other stay in control and focused during games, remain positive, and promote a fun and rewarding playing
experience. Overall, if players know what contributes most to their performance and to that of teammates, they can try to learn effective strategies to help elicit these certain characteristics of flow and cohesion during the season.

For coaches, knowledge of the relationship between Flow and performance and Cohesion and performance has enormous implications. Coaches are encouraged to use strategies to promote an environment for optimal performance and experience. Given the positive relationship found between task cohesion and performance and the negative relationships found between social cohesion and specific aspects of basketball performance, it would benefit coaches to focus on promoting task cohesion rather than social cohesion. Furthermore, coaches could approach their team from a developmental and process-oriented philosophy, which may translate in to increasing team skills and overall experience.

For sport consultants, the findings of this study indicate the importance of the team experience at different stages of team development. Thus consultants may wish to develop effective interventions and recommend coaching strategies in order to facilitate coaches to recognize when their team may be in stage of Pseudo-Community, Chaos, or Emptiness/Community. Knowledge of which stage of development a team is in can help coaches to understand what could be done to assist the team to work in and through that stage. A phenomenological and constructivist approach to working with teams may provide leaders with more empathy and understanding to be able to meet their teams where they are. Such an approach would support the natural developmental process inherent in particular groups.
Lastly, the findings from this study offer several theoretical implications. As discussed in the rationale for this study, there is not a model of group development specific to the developmental process of athletic teams. The model often used to describe the developmental process of an athletic team has been the linear model of Bruce Tuckman. However, an athletic team does not develop in a linear fashion. The researcher decided to investigate Scott Peck’s Community-Making model as a more appropriate model to explain the recursive process of an athletic team. The Community-Making model has not been previously discussed with regard to an athletic team. Peck’s model considers both the intra/interpersonal processes within a group. Peck postulated there to be four stages of Community-Making: Pseudo-Community, Chaos, Emptiness, and Community.

For this study the researcher proposed the two stages of Emptiness and Community to be one stage rather than two separate stages. This proposition was due to the unique process natural to athletics. For an athletic team the process which takes place on the playing field during competition does not lend itself to separate the stages of Emptiness and Community. For a basketball team, the process of Emptiness can occur several times throughout a competition. For example, a basketball team has five players on the floor at all times; however, those five players are not always the same. In sport there are substitutions, where one player replaces another player on the court. This characteristic is unique to sport. In other task groups, members are often times participants in the task throughout the course of the group. In sport, some athletes play and some do not. The process of Emptiness can be happening several times for an athletic team during the course of a game or the course of a season, depending upon the
circumstances. Furthermore, the experience of Community can happen on or off the court. Just like Emptiness, the experience of Community can occur immediately successive to an emptying experience. This process for an athletic team might be characterized by a 10 point scoring break. The ability to distinguish moments of Emptiness and Community for a basketball team would be difficult to measure in a post competition manner. For an athletic team, the stages of Emptiness and Community can happen concurrently. The concept of Flow was proposed to occur at its most optimal level during the stage of Emptiness/Community. Therefore, Flow would hypothetically occur in the midst of Emptiness/Community.

Because this study was exploratory in nature, the researcher determined the Community-Making model to have its limitations with regard to an athletic team. Instead, the researcher suggests there to be three stages of development for an athletic team; Pseudo-Community, Chaos, and Emptiness/Community. In an effort to advance this research, the researcher suggests that the third stage of the model be labeled as “Atonement”. Atonement is characteristic of a stage of “at-one-ness,” which may better explain the process present at the confluence of an optimal Flow experience, Emptiness and Community. The theoretical implications of this study provide the basis for a new model of team development to be used to explain the unique developmental process of an athletic team. Further research will be conducted to establish a sound model.
References


New York: Wiley.


Appendix A

The Group Environment Questionnaire

This questionnaire is designed to assess your perceptions of your athletic team. There are no right or wrong answers so please give you immediate reaction. Some of the questions may seem repetitive, but please answer ALL the questions.

Your responses will be kept in strictest confidence (Neither your coach, or anyone other than the researcher will see your responses).

The following questions 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 the statements.

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

2. I’m not happy with the amount of playing time I get.

3. I am not going to miss the members of this team when the season ends.

4. I’m unhappy with my team’s level of desire to win.

5. Some of my best friends are on this team.
6. This team does not give me enough opportunities to improve my personal performance.

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*Strongly Disagree* | *Strongly Agree*

7. I enjoy other parties more than team parties.

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*Strongly Disagree* | *Strongly Agree*

8. I do not like the style of play on this team.

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*Strongly Disagree* | *Strongly Agree*

9. For me this is one of the most important social groups to which I belong.

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*Strongly Disagree* | *Strongly Agree*

The following questions are designed to assess your perception of **YOUR TEAM AS A WHOLE**. Please circle a number from 1 to 9 to indicate your level of agreement with each of the statements.

10. Our team is united in trying to reach its goals for performance.

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*Strongly Disagree* | *Strongly Agree*

11. Members of our team would rather go out on their own than get together as a team.

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*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

13. Our team members rarely party together.

1 2 3 4 5 6 7 8 9

Strongly Disagree

14. Our team members have conflicting aspirations for the team’s performance

1 2 3 4 5 6 7 8 9

Strongly Disagree

15. Our team would like to spend time together in the off-season.

1 2 3 4 5 6 7 8 9

Strongly Disagree

16. If members of our team have problems in practice, everyone wants to help them so we get back together again.

1 2 3 4 5 6 7 8 9

Strongly Disagree

17. Members of our team do not stick together outside of practice and competition.

1 2 3 4 5 6 7 8 9

Strongly Disagree

18. Members of our team do not communicate freely about each athlete’s responsibilities during competition or practice.

1 2 3 4 5 6 7 8 9

Strongly Disagree
Appendix B

The Flow State Scale-2

Please answered the following questions in relation to you experience in the event you have just completed. These questions relate to the thoughts and feelings you may have experiences during the event. There are no right or wrong answers. Think about how you felt during the event and answer the questions using the rating scale below. Circle the number that best matches your experience from the options to the right of each question.

Rating Scale:

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree Nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
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</table>

1. I was challenged, but I believed my skills would allow me to meet the challenge. Strongly Disagree Strongly Agree
   1 2 3 4 5
2. I made the correct movements without thinking about trying to do so. Strongly Disagree Strongly Agree
   1 2 3 4 5
3. I knew clearly what I wanted to do. Strongly Disagree Strongly Agree
   1 2 3 4 5
4. It was really clear to me that I was doing well. Strongly Disagree Strongly Agree
   1 2 3 4 5
5. My Attention was focused entirely on what I was doing. Strongly Disagree Strongly Agree
   1 2 3 4 5
6. I felt in control of what I was doing. Strongly Disagree Strongly Agree
   1 2 3 4 5
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<tr>
<td>7.</td>
<td>I was not concerned with what others may have been thinking of me.</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
<td>1</td>
<td>2 3 4 5</td>
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<tr>
<td>8.</td>
<td>Time seemed to alter (either slowed or speeded up).</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
<td>1</td>
<td>2 3 4 5</td>
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<tr>
<td>9.</td>
<td>I really enjoyed the experience.</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
<td>1</td>
<td>2 3 4 5</td>
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<tr>
<td>10.</td>
<td>My abilities matched the high challenge of the situation</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
<td>1</td>
<td>2 3 4 5</td>
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<tr>
<td>11.</td>
<td>Things just seemed to happen automatically.</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
<td>1</td>
<td>2 3 4 5</td>
</tr>
<tr>
<td>12.</td>
<td>I had a strong sense of what I wanted to do.</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
<td>1</td>
<td>2 3 4 5</td>
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<tr>
<td>13.</td>
<td>I was aware of how well I was performing</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
<td>1</td>
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<tr>
<td>14.</td>
<td>It was no effort to keep my mind on what was happening.</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
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<td>15.</td>
<td>I felt like I could control what I was doing.</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
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<td>16.</td>
<td>I was not worried about my performance during the event.</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
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<td>17. The way time passed seemed to be different from normal.</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
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<td>18. I loved the feeling of that performance and want to capture it again.</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
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<td>19. I felt was competent enough to meet the high demand of the situation</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
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<td>20. I performed automatically</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
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<td>21. I knew what I wanted to achieve.</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
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<td>22. I had a good idea while I was performing about how well I was doing.</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
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<td>23. I had total concentration.</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
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<td>24. I had a feeling of total control</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
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<td>25. I was not concerned with how I was presenting myself.</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
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26. It felt like time stopped while I was performing.  

27. The experience left me feeling great.  

28. The challenge and my skills were at an equally high level.  

29. I did things spontaneously and automatically without having to think.  

30. My goals were clearly defined.  

31. I could tell by the way I was performing how well I was doing.  

32. I was completely focused on the task at hand.  

33. I felt in total control of my body.  

34. I was not worried about what others may have been thinking of me.
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<td>35. At times, it almost seemed like things were happening in slow motion.</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
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<td>36. I found the experience extremely rewarding.</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
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Appendix C

Individual athlete’s graphs representing (a) Average Flow Subscale Scores by Game, (b) Cohesion Subscale Scores by Game, (c) Win Score by Game, (d) Average Flow Total and Win Scores by Game, and (e) Average Cohesion Total and Win Scores by Game.

Note: Figures which contain Cohesion scores and Win Score are based on two different scales of measurement.

Note 2: Figures which contain Flow State scores and Win Score are based on two different scales of measurement.
Figure C1. Player #1 Average Flow Subscale Scores by Game.
Figure C2. Player #1 Cohesion Subscale Scores by Game.
Figure C3. Player #1 Win Score by Game.
Figure C4. Player #1 Average Flow Total and Win Scores by Game.
Figure C5. Player #1 Average Cohesion Total and Win Scores by Game.
Figure C6. Player #2 Average Flow Subscale Scores by Game.
Figure C7. Player #2 Cohesion Subscale Scores by Game.
Figure C8. Player #2 Win Score by Game.
Figure C9. Player #2 Average Flow Total and Win Scores by Game.
Figure C10. Player # 2 Average Cohesion Total and Win Scores by Game.
Figure C11. Player #3 Average Flow Subscale Scores by Game.
Figure C12. Player #3 Cohesion Subscale Scores by Game.
Figure C13. Player #3 Win Score by Game.
Figure C14. Player #3 Average Flow Total and Win Scores by Game.
Figure C15. Player #3 Average Cohesion Total and Win Scores by Game.
Figure C16. Player # 4 Average Flow Subscale Scores by Game.
Figure C17. Player #4 Cohesion Subscale Scores by Game.
Figure C18. Player # 4 Win Score by Game.
Figure C19. Player # 4 Average Flow Total and Win Scores by Game.
Figure C20. Player #4 Average Cohesion Total and Win Scores by Game.
Figure C21. Player #5 Average Flow Subscale Scores by Game.
Figure C22. Player # 5 Cohesion Subscale Scores by Game.
Figure C23. Player #5 Win Score by Game.
Figure C24. Player #5 Average Flow Total and Win Scores by Game.
Figure C25. Player # 5 Average Cohesion Total and Win Scores by Game.
Figure C26. Player # 6 Average Flow Subscale Scores by Game.
Figure C27. Player #6 Cohesion Subscale Scores by Game.
Figure C28. Player #6 Win Score by Game.
Figure C29. Player #6 Average Flow Total and Win Scores by Game.
Figure C30. Player #6 Average Cohesion Total and Win Scores by Game.
**Figure C31.** Player # 7 Average Flow Subscale Scores by Game.
Figure C32. Player # 7 Cohesion Subscale Scores by Game.
Figure C33. Player #7 Win Score by Game.
Figure C34. Player #7 Average Flow Total and Win Scores by Game.
Figure C35. Player # 7 Average Cohesion Total and Win Scores by Game.
Figure C36. Player #8 Average Flow Subscale Scores by Game.
Figure C37. Player #8 Cohesion Subscale Scores by Game.
Figure C38. Player #8 Win Score by Game.
Figure C39. Player #8 Average Flow Total and Win Scores by Game.