High School Volleyball Coaches
Instructional Approaches and Perceptions
to using Athlete Created Pre-competition
Warm-up Music

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Research has shown psychological, psychophysical, and physical effects of music in sport (Bateman & Bale, 2009). However, music has received little attention among sport scholars. The purpose of this study was to examine high school varsity volleyball coaches’ pedagogical assumptions and practices of allowing female high school volleyball teams to create and play their own pre-competition warm-up music. Eleven head coaches of female high school varsity volleyball teams who employed athlete created pre-competition warm-up music were interviewed (minimum 45 minutes). All interviews were transcribed then analyzed using open and axial coding (Corbin & Strauss, 2008). All 11 coaches believed that having athletes create and develop pre-competition music positively impacted athlete performance. Analysis further illustrated the coaches believed a connection exists between the use of music and athletic performance across three themes, increased motivation, mood, and team cohesion. Coaches interviewed in this study believed that music provided a consistent and inspirational routine. A limitation of this study is that actual performance was not measured, so future research is needed to examine the actual impact of music on athletic performance, as well as the impact of warm-up music in other sport settings.

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Research examining the physical effects of music has been around for over 5 decades (Ellis & Brighouse, 1952). Additionally, research has demonstrated psychological, psychophysical, and physical effects of music in sport (Bateman & Bale, 2009). Recently there has been a sizeable interest from researchers to study the use of music in different sport and exercises settings (Boutcher & Trenske, 1990; Priest & Karageorghis, 2008; Karageorghis, Jones, & Low, 2006; North, Hargreaves, & Heath, 1998; Szabo, Small, & Leigh, 1999). Findings have shown that carefully selected music can improve exercise performance (Karageorghis, Jones, & Low, 2006; Pates, Karageorghis, Fryer, & Maynard, 2003; Szabo, Small, & Leigh, 1999; Tenenbaum et al., 2004). Studies examining the impact of music on sport have also shown that music can increase performance (Eliakin, Meckel, Nemet & Eliakim, 2007), elevate mood (Hayakawa et al. 2000) and increase the probability of attaining “flow” states and motivation (Pates et al., 2003; Pelletier, Fortier, Vallerand, Tuson, Briere, & Blais, 1995; Priest & Karageorghis, 2008).

Several studies have holistically analyzed characteristics and effects of music accompanying exercise and sport (Boutcher & Trenske, 1990; Priest & Karageorghis, 2008; Priest & Karageorghis, 2004). Boutcher and Trenske (1990) examined responses to music during an 18-minute cycling session by comparing control, deprived, and music condition groups across the variables of perceived exertion, affect, and heart rate. Boutcher found no differences in heart rate, however showed that significantly lower perceived exertion existed between music of deprived groups at low and moderate workloads. Priest, Karageorghis, & Sharp (2004) investigated the characteristics and effects of motivational music in British athletic clubs on gender, age, frequency of attendance, and the time of day. Results indicated that older participants expressed preferences for slower and generally less stimulating music.

In 2008, building on prior findings, Priest and Karageorghis published a conceptual framework to predict responses to motivational music in exercise and sport. The conceptual framework suggested that music factors (rhythm response and musicality) work in conjunction with personal factors (cultural impact and association) to create motivational qualities. Priest and Karageorghis hypothesized that motivational qualities influence arousal control, reductions in perceived exertion, and improved mood.

Rhythm response and musicality have also been variables examined when determining the impacts of music on exercise (Karageorghis, Jones, & Low, 2006; Tenenbaum et al., 2004; Szabo, Small, & Leigh, 1999; North, Hargreaves, and Heath, 1998). Exercise heart rate (Karageorghis, Jones, & Low, 2006), running perseverance and coping with effort sensations (Tenenbaum et al., 2004), progressive cycling and voluntary physical exhaustion (Szabo, Small, & Leigh,
and time perception in a gymnasium have all been exercise variables examined. In 2006, Karageorghis, Jones, & Low found that young adults in the UK generally preferred musical tempos in the medium to fast range (120-140+ bpm), when walking on a treadmill. Although possible negative impacts of tempos were not reported, Karagoerghis and colleagues believed that affective responses such as boredom and irritation were also possible and suggested that to maximize affective response to music, a variation in tempo maybe the optimal solution as long as it is in a certain bandwidth of tempi. Szabo, Small, and Leigh (1999) used classical music with slow, fast, slow to fast, and fast to slow tempi in a progressive cycling situation to examine the influence of tempo. Findings showed that a significantly higher workload to heart rate reserve ratio existed in the slow to fast tempo condition and that significantly higher workload was accomplished with slow to fast music.

North, Hargreaves and Heath (1998) investigated the effects of slow and fast musical tempi on retrospective estimates of time duration of personal workouts. North hypothesized that there would be a positive relationship between the perceived duration and amount of information encoded within it. The results showed that musical tempo did not influence time duration estimates. However, slow music did lead to a greater degree of inaccuracy of estimated time duration. Although many studies have examined how music impacts sports participation and exercise very few have explored how music has been used in sports settings and the pedagogical implications and assumptions underlying the use of music.

For many athletes music is a part of their pre-performance rituals and routines. For some, music choice is personal through the use of iPods, MP3 players and even car stereos; for others, music is the result of the predetermined environment and the venue’s public address system. Regardless of the medium, music is seen by athletes to play a pivotal role in their pre-competition phase of performance. In different sporting environments coaches also play a variety of roles in determining the music played outside of the competitive environment for example in locker rooms, on the team bus and during warm-ups. In some sport settings event organizers determine the music to be played, in others the coaches have input, still in other settings coaches allow their athletes to make musical selections. In the settings where the coaches allow athletes to make musical selections the questions then become: Why do coaches allow athletes to select the music? What pedagogical processes do the coaches employ when having the athletes develop a pre-competition music? When is the optimal time and context to have athletes develop a warm-up music CD? Through a process of coach socialization, high school and college volleyball coaches are one population that have traditionally utilized athlete created warm-up music prior to competition. However, little is known about why this pedagogical
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practice continues to be a prominent fixture in high school pre-season routines. Additionally, why do volleyball coaches believe this pedagogical practice benefits teams and athletes? Therefore, the purpose of this phenomenological study is to examine high school varsity volleyball coaches’ pedagogical assumptions, and practices of allowing female high school volleyball teams to create and play their own warm-up music.

Methods

When conducting research grounded in a qualitative research paradigm, it is important to carefully and thoroughly describe not only the methodology and the methods used to collect and analyze data, but also to provide support and justify underlying philosophical assumptions (Creswell, 2007; Crotty, 1998). According to Crotty, not only do researchers need to address the assumptions which guide their work, but they must also articulate their epistemology and theoretical perspectives. Therefore, in this study Crotty’s proposed four elements of social research were used as a conceptual framework. The four elements are: epistemology, theoretical perspective, methodology, and methods.

Constructivism was the central epistemological perspective of the researchers for this study. Constructivism focuses on “the meaning making of the individual mind” (Crotty, 1998, p. 58). Simply put the researchers believed that knowledge is constructed through individual experience and interactions with the world around them, and are therefore not simply discovered. In other words, examining coaches’ perspectives related to the use of music in pre-competition settings provided an opportunity for the coach to not only share his/her perspectives but also to understand and construct new meaning as a result of reflecting upon it and sharing it (Bruner, 1990; Richardson, 2000).

When applying Crotty’s (1998) perspective regarding theoretical perspective, it was clear that an interpretive approach was employed since an interpretivist approach “looks for culturally derived and historically situated interpretations of the social life-world” (Crotty, 1998, p. 67). The stated purpose of this study clearly follows an interpretivist perspective since the study was designed to elicit coaches’ values and beliefs of music as an instructional strategy, based on their prior experiences and employed pedagogical practices.

The third element outlined by Crotty (1998) is that of methodology. Merriam (2009) presented five of the most commonly used methodological approaches to qualitative research, which are, case study, narrative analysis, phenomenology, grounded theory, and ethnography. To examine the purpose, the methodological approach of phenomenology guided the study since phenom-
enology is concerned with an individual’s everyday constructed reality based on their conscious experiences (Merriam). In order to further elaborate on Crotty’s (1988) fourth element of social research, methods, three sections will be used to describe specific components: participants and context, data collection, and data analysis.

Participants and Context

The participants in the study were all head coaches of female high school varsity volleyball teams in Colorado, USA who instructed their teams to create and play their own warm-up music prior to competition. The coaches averaged 11.9 years of volleyball coaching experience ranging from 3 – 25 years. The researchers had prior knowledge of two coaches that deliberately and purposefully had their varsity athletes plan and create a music CD for pre-competition warm-ups. Snowball sampling was then used to identify other coaches that used similar pedagogical practices using athlete centered warm-up music. High school volleyball coaches were selected since creating musical playlists have been a pedagogical practice passed on throughout socialization from coaches to players, who subsequently become coaches.

Data Collection

Qualitative research is often gauged by terms such as trustworthiness, accuracy, consistency and plausibility (Blumenfeld-Jones, 1995). One method of addressing these criteria is to examine the research question from a variety of angles using different data collection tools. Therefore, the study examined coaches’ pedagogical assumptions to allow athletes to develop a pre-game warm-up CD through two primary data collection sources: (a) Interviews (b) Artifacts

Interviews: Traditionally when attempting to gain understanding of the underlying structures of an individual’s meaning, the phenomenological interview has been the primary method of data collection (Merriam, 2009). Eleven head female volleyball coaches were interviewed (conducted at a predetermined location agreed upon by the participant and the researchers). Each interview lasted between 45 and 75 minutes. The purpose of each interview was to have the coach a) describe the pedagogical procedures, including when they have the team/athletes develop the CD, the process for the development of the CD, specific instructions and rules, and instructional relevance; and (b) provide justifications and assumptions of the pedagogical procedures including why they believed the team benefited from the outlined pedagogical procedures, team/player benefits, impacts on motivation, flow and performance. All interviews were audio recorded and transcribed verbatim. Participants were also given
the opportunity to review the transcripts of the interviews to ensure accuracy, allowing for comments and the identification of errors. Returning interviews is defined as a form of member checking (Creswell, 1998; Merriam, 2009).

Artifacts: During the formal interview coaches were not only asked to describe and detail the pedagogical procedures they employ, but were also asked to provide examples of play lists and CDs included. The researchers asked the coaches prior to the interview to bring examples, but also collected samples at a later date both in person, through regular mail and play list through email. Artifacts were collected as supporting evidence related to the planning and production process. Examples of artifacts collected included, a copy of the Warm-up CD, original play-lists, coaching plans, list of rules and regulations, and CD “production” guidelines.

Data Analysis

Open and axial coding (Corbin & Strauss, 2008) was utilized in analyzing the 11 coach interviews. Open and axial coding provides researchers with a structure from which to analyze collected data. It is important to note that the “actual procedures are not as important as the task of identifying the essence of the meaning of data” (Corbin & Strauss, p. 160). Therefore, our analysis is in line with our epistemology and theoretical frameworks, since meaning was construct and provided a theoretically grounded interpretation into the essence of the data through the following analysis process.

The first step in data analysis was an independent analysis of the 11 interview transcripts, where preliminary descriptors were identified. Once independent analysis was complete a shared open coding analysis comprising of discussing interpretations, descriptors and codes were conducted. After rereading and coding the transcripts, open coding was further employed to conceptualize, define, and develop categories of results in terms of their properties. At the completion of open coding, axial coding was utilized to determine and build connections within categories. In this phase, the goal was to systematically develop and relate categories. This step also included the process of sorting out the relationships between concepts and sub-concepts with the ultimate goal to discover the ways that categories relate to each other.

When describing qualitative methods and procedures it is also important to minimize bias and maximize trustworthiness (Merriam, 2009). When an independent researcher conducts qualitative analysis there is always a potential for bias. By having two researchers independently and collaboratively analyze the narratives, investigator triangulation (Patton, 2002) was established and the
potential for bias reduced. Additionally, trustworthiness was enhanced through identification and acknowledgement of researcher bias (Creswell, 2007; Merriam, 2009). Reliability was addressed through inter-reader agreement of the emerging themes and an audit trail, including records of music play-lists and instructional procedures, as well as data collection and analysis procedures (Creswell, 2007; Merriam, 2009).

Findings

In addition to analyzing the interview transcripts to identify themes and categories, each transcript was analyzed to look for descriptions and commonalities of the instructional strategies. All eleven coaches noted that the development of the warm-up music was athlete centered and was completed between one and two weeks prior to the first home match of the pending season. None of the coaches provide written instructions to the players about how the task should be accomplished. However, all the coaches provided specific rules and criteria regarding song selections with 5 coaches providing a time limit for the warm-up music (range 20 – 45 minutes). Song selection criteria included no curse words, provocative lyrics (sex, relationships, drugs, violence), or gun shots. Additionally, all the coaches employed a process to check the created CD.

When asked to describe the process that the athletes employed to create the music CD’s all the coaches commented that processes changed slightly from season to season, however, they also commented that changes were minimal since the processes employed were passed down each season as players matriculated through high school. When examining the teams’ process, two dominant strategies were used to create the playlists. The most common practice (7 of the 11 teams) was for the team to get together one evening and construct the CD together. Coaches noted that the meeting took place at school after a practice, at a player’s home, and/or after a team dinner. Four coaches noted that traditionally seniors and/or team captains asked teammates to provide them with a song/s and then they constructed the actual CD.

Regardless of the actual process, each team made sure that every player had input into the music included on warm-up CD. However, again the construction of the CD varied from team-to-team each year. Coaches noted that some teams included complete songs, while others compiled a CD from favorite verses and song parts.

Finally, all the coaches employed a method of censorship prior to the warm-up music being used prior to the first home competition. All the coaches throughout their careers either listened to the warm-up music or had an assistant
coach or school administrator listen to the CD. All 11 coaches had requested at some point that the CD be changed prior to the first home contest. Other strategies that coaches had used included requiring teams to provide a play list, and song lyrics for every song/excerpt included on the CD.

**Thematic Analysis**

After systematic analysis of the data, three central themes were determined, Motivation, Mood, and Team Cohesion. The theme of Mood was further analyzed and stratified into 3 sub-categories, pumping it up, comfort, and inspiration. Additionally, team bonding, and working out seniority/team roles were identified as two subcategories of Team Cohesion.

**Motivation**

All coaches in this study believed that having athletes create and develop pre-competition warm-up music impacted each individual and the team motivation to compete. The coaches noted that they believed the created warm-up music increasingly motivates athletes to perform to their maximal potential and provided a positive pre-competition motivational climate for successful performance. For example, one coach stated “I am a firm believer that music is a strong motivator. I know it helps motivate me.” Another stated “I have noticed that even during practice they love to listen to music. Certain music has a lot of influence, but for me I would say it is just that motivation piece.” Coach J concurred, as he pointed out that “I think using athlete centered warm-up music is self motivating, so I think motivation is a key thing. It motivates me as a coach, so I know that it has to motivate the athletes as well.” Almost all of the coaches believed that when they give the athletes the choice of creating the music that the team takes ownership and therefore provides a central motivational focus prior to competition. Additionally, because athletes took ownership and self-selected not only the songs or song components included but also the play order of those songs, the coaches believed that athletes actually put more effort into the warm-up itself. Coaches believed that the ownership helped team and athletes focus on each match and actually played better during each home competition.

**Mood**

Changing the mood of individuals and the entire gym was consistently identified as a theme stemming from the use of athlete created warm-up music. Conceptions of mood identified by coaches fell into three categories: (a) pumping it up, (b) comfort, and (c) inspiration.
Pumping it up. Enhancing the mood by “pumping it up” was an important finding. Coaches explained how music altered athlete intensity with regards to heightening or calming an athlete’s mood. For examples coaches’ comments included, “Whether it be to fire it up, or just stimulate some kind of game structure, or game atmosphere, I thought it could help them relax or pump them up before a game.” And, “I think music is very important, because you should use any advantage you can give a kid, whether it is to take it down, or pump them up.” Linking mood with an athlete’s ability to focus, another coach noted that she believed “music adds another dimension to get them in that “mind-set” and kind of blocks out a lot of other things that they could be thinking about.” Finally, linked with mood is the notion of establishing a comfortable routine for athletes. One coach commented that “It [the music] is just letting them get in to the moment, the “zone,” and it is their routine and they like it.” From the coaches’ perceptions, whether it is pumping them up, firing them up, getting them in the zone or the right mind set, athlete created warm-up music was seen as a positive instructional component.

Comfort. The comfort of having the music that the athletes created was in most cases seen as imperative when maximizing pre-competition routines and actually created athlete discomfort when modified or adapted from the norm. One coach explained how her athletes wouldn’t run out on the court until the music was ready, and if someone forgot to bring the CD one day they would never forget it again. Coaches also commented on how the music triggered the home crowd. Another Coach elaborated on the warm-up music’s impact on the crowd by noting that music “affects the fans that we have in the stands, they enjoy it, especially if they are there when the girls run out. It is just a ripple effect, it is great, and I love it.” Overall, music was seen by the coaches to impact positively the mood of the athletes by providing a sense of routine and hence overall comfort.

Inspiration. Inspiration can be defined as the stimulation of the mind or emotions to reach a high level of feeling or activity (Heylen, 2010). Coaches throughout the study talked about how they perceived that music helped athletes get to a higher level of focus, intensity, and/or performance during the warm-up. Some coaches even coined the warm-up music as “inspirational”. Coach T suggested that certain types of music had significant inspirational qualities. Based on her own experience she noted, “I am a big lyric person, so I look for motivational types of uplifting, or anything that gets you going, or keeps you from quitting.” Coach P also wanted players to use “uplifting music, or you know, the Rocky type”, the “you are going to succeed” type of music. Several coaches believed that the stimulation of the mind, body, and emotions through the music helped athletes elevate to a higher level, and they believe that tempo, messages, and the lyrics within songs inspired the athletes to perform.
Team Cohesion

Members of a team begin to interact with each other as soon as the team is formed. The manner in which a group interacts constitutes the definition of team cohesion. The process of creating the pre-competition warm-up music playlists was seen to contribute to team dynamics by creating a chance for (a) team bonding; and (b) working out seniority/team roles.

Team bonding. Team bonding starts long before the competitive season. The processes of creating the CDs gave each team a chance to get together off the court, learn more about one another, and develop trust. Coaches also believed that creating the warm-up music gave their teams a chance to bond off the court which ultimately encouraged them to bond on the court in warm-ups because they dance and sing together while they are participating in passing and hitting drills. Coaches also believed that the music typically focused the team as they tended to relax, however for some coaches there were times where it was somewhat of a distraction. The impact of the selected songs and the associated memories of the coaches demonstrate not only a bonding between each team member but also between the players and the coaches. One coach described how she still reflects on past teams when she hears certain songs.

I hope that when they hear that song later in life, driving down the road, or listening to the radio, or at someone’s wedding. I hope it reminds them of the time they had, or that moment of time, and they will reflect about being on that team, and that was our song, and that was the song we ran out to. Because I do that, with a few songs, I think about the players. They use to wiggle and jiggle during their warm-up, and they get excited. So I can tell it is the song that they choose, to play over the loud speakers, and they are doing the hitting warm-up, you can kind of see them shine a little.

It was apparent that the team bonding created from the formation and utilization of the pre-competition warm-up music extends beyond the volleyball season and schooling experience. Some teammates make lasting relationships and have reoccurring memories of the warm-up music that they used to listen to before their volleyball matches.

Working out seniority and team roles. The volleyball coaches had different views on how the process of making the CDs enhanced team cohesion. All the coaches allowed the teams to develop the warm-up music and utilized a creation process individual to each team. However, due to the team socialization process of each varsity high school volleyball team, many of the coaches noted that returning and senior team members were in charge of the organization, synthesis, and
actual making of the disc or list. Several coaches initially delegated team captains to start the process. Coach B, in particular, spoke to how the process was something different then playing and practicing volleyball, but was still central to team development and demonstrated teamwork, and helped the players navigate and develop team roles. By not giving specific instructions on who is to be in charge of creating the playlist, seniors and natural team leaders tended to take charge of developing the warm-up music.

Discussion/Implications

Before summarizing and constructing a discussion based on the findings of the study, it is imperative to first underline some of the studies limitations. One limitation was that the data were not collected during the volleyball season and therefore at a time where the coaches were not utilizing the athlete created warm-up music. Additionally, due to the timing of data collection establishing triangulation was difficult as it was not possible to observe the warm-up music in context. Additionally, the study centered on 11 coaches who were sampled through snowball and purposeful sampling. Coaching high school volleyball in Colorado is a relatively small community with many coaches working with each other during the club season and developing their coaching pedagogies through apprenticeship of observation when acting as assistant coaches and even as players. Therefore a limitation of the sample is such that many of the perceptions could possibly be attributed to the potentially close knit nature of the specific Colorado volleyball community.

With any phenomenological research study the researchers must make an assumption that the participants have represented their accounts of the phenomenon honestly. When asking coaches to accurately describe and provide evidence of the process and underlying motives for allowing athletes to create and play warm-up music prior to competition the coaches were only able to reflect and describe. The researchers looked for any other artifacts that could be related to the study (i.e. Warm-up CD, original play-lists, coaching plans, list of rules and regulations, and CD “production” guidelines), however, out of eleven coaches only five provided an example of warm-up CD and were not analyzed due to an incomplete data set. Additionally, No other forms of data support were provided, which makes the lack of triangulation of evidence a limitation of the study.

Although several study limitations exist, the findings indicated powerful implications of using athlete centered music during pre-competition warm-ups. From the coaches’ perspective the influence of athlete created warm-up music increased motivation, mood, and team cohesion in athletes and thus contributed to athletes performing better during warm-ups and by associate competition.
The coaches also reported that they perceived the athletes to play better if they had a good warm-up.

Motivation ranges from intrinsic motivation to extrinsic motivation to amotivation (Haggar & Chatzisarantis, 2007). The coaches expressed how athletes loved the music and that the use of the music was self-motivating both examples of how music enabled athletes to have high autonomy. According to the coaches, the music helped the athletes enjoy and have fun playing volleyball with no discernible reinforcement. The aforementioned kind of defining features and reward contingencies fall under the intrinsic motivation side of the self-determination continuum (Haggar & Chatzisarantis). Intrinsic motivational contingencies give rise to increased exercise behavior and health-related outcomes. Additionally, contingencies also promote psychological well-being. Pre-competition warm-up music therefore was perceived to change and benefit high school athlete’s motivation and may change exercise behavior and subjective well-being.

As for the construct of mood, a major theme throughout the study, there are both positive and negative dimensions. Mood is almost synonymous from the term emotion, however, emotion may be derived from mood, but both terms relate to a person’s affect (Tuccitto, Giacobbi, & Leite, 2009). Currently research in the field of affect has centered on the Positive Affect Negative Affect Scale (PANAS). The PANAS (Watson, Clark, & Tellegen, 1988) is widely used and provides a dimensional approach to studying affective states and traits. There are nine mood content categories which are: attentive, excited, proud, strong, distressed, guilty, angry, jittery, and fearful. The coaches in this study elaborated on how the warm up music produced moods in the athletes that aligned with the positive side of the PANAS. By delving into the realms of the influence of warm-up music on mood/affect researchers and coaches may further understand both positive and negative affect, and potentially be more informed to help athletes elevated, control and reduce mood/affect.

A central purpose of the study was to examine the pedagogical techniques of coaches who employing athlete centered pedagogy when creating warm-up music prior to competition. Almost all of the coaches interviewed mentioned that a motive for employing such a strategy was to develop team cohesion. Coaches’ uses of leadership style and team cohesion are central to the development of team development. Additionally, the way leaders promote and help create high levels of group cohesion have effect the way a group performs (Turman, 2003). On an informal level, coaches spoke of team cohesion as togetherness, team unity, spirit, and the “sense of teamwork” on a team. Within the literature, team cohesion is one of the most widely researched social psychological influences in
One of the oldest models of cohesiveness (Cartwright, 1968) still serves as a great framework for understanding team cohesion today.

Cartwright’s (1968) model of cohesiveness outlines four team-cohesion determinants: cooperation and competition, stability, homogeneity, and size. These determinants lead to team cohesion, and then being aware of how the consequences/benefits of team cohesion can advantage athletes and coaches. The findings from the present study demonstrated how pre-competition warm-up music can contribute to most of the determinants of team cohesion, as reported by the coaches. The process of actually making the playlist/CD is one of the first chances in a season where teammates cooperate together to achieve a goal. Team stability, another cohesion determinant, related to team cohesion in terms of the number of years, which a group of athletes remain together (Cox, 1985). Some coaches reported that groups of athletes had a couple repeats of songs from previous years, which may have impacted whether or not these athletes remained a stable unit over the years. The team homogeneity determinant refers to how similar teammates are on such factors as cultural background, ethnic background, socioeconomic status, and religion (Cox). The warm-up music enabled the coaches to see how some of the aforementioned factors came out through musical preferences related to music genres (rap, country, rock, techno). Therefore, the number of different genres of music on a warm-up CD may predict levels of team cohesion, especially related to team stability.

Findings and discussions regarding this study point to many directions in which future research must head if researchers are to understand the impacts of music on performance. Findings of this study can help researchers understand reasons why coaches use music to maximize performance. A critical research step would be to examine athletes’ perceptions of the effects of the warm-up music. Additionally, researchers could design quantitative studies examine the degree of the effects warm-up music has on motivation, mood, and team cohesion in addition to measuring actual performance. The Sport Motivation Scale (Pelletier & Serrazin, 2007) could measure the athlete’s motivation levels, with mood being measured by the Positive Affect Negative Affect Scale (Watson, Clark, & Tellegen, 1988). Martens & Peterson’s (1971) Sport’s Cohesiveness Questionnaire has also been one of the most used methods used to measure team cohesion. Also, it is very important to look at the coaches’ and athletes’ use of music for men’s teams, different sport settings and through different musical delivery systems. Although it was not a part of the scope of this study music used by athletes at other times can also be studied, as well as possible case studies on coaches’ and their teams who use warm-up music through different capacities (For example combinations of, individual playlists, team playlists, absence of music).
Repeatedly throughout the study coaches mentioned how athletes use music throughout the day to prepare for games. Coaches elaborated that athletes used music during practices, throughout the school day on game days, on the buses on the way to contests, in the athletes’ cars on the way to home games, in locker rooms before games and practices, as well as after the game. The music used during these different times are also worth studying in relation to how these musical choices help the athletes prepare and unwind for and from competition. This study focused on only pre-competition warm-up music, however, music before and after games, as well as during practices should be examined.

Although coaches could not support their perceptions, they truly believed that a consequence of the warm-up music could increase motivation, mood, and team cohesion and that the positive influences on these constructs could led to better performance in warm-ups, and that might have led to increases in performance during competition. Additionally, because the Athletes were given a choice of what music to play, coaches perceived results of those choices were that athletes put more effort into their warm-up. Regardless of the pedagogical strategies employed by high school women’s volleyball coaches, having athletes determine and create pre-competition warm-up music was seen as positive and perceptually enhanced team and individual performance.

References


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