

Properties Of Music Used Pre-Match By
Rugby Teams And
Players' Perceptions Of Its Effects

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Rugby Teams And
Players' Perceptions Of Its Effects

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Dedication

For my Nan, for helping to give me the best possible start in life.

R.I.P. Joy Lamden

1931-2005.

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Doing this project has by far been the hardest thing I have ever embarked on in my life so far. I would not have managed to do this project without a small number of people. First and foremost, thank you to my parents Glenn and Deborah Brooks, for their relentless and continued support, not just during this project but throughout my entire life in all endeavours; for that I can not thank you enough. Thank you to Thomas Brooks and James Swadlo for helping to keep me sane for the last two years. Thank you to Dr. Jason Woolley and Dr. David Smith for their interest, support and work on this project, it has been a pleasure working with you both. Thank you to all the bands and artists that have made my passion for music continue to grow over the years; without them this project would not have happened. Finally, thank you to Mr. William Webb Ellis, for picking up the football and running with it on that fateful lunchtime at a school in rugby. Thus creating the greatest sport known to man.

Abstract

In recent years sports science has shown a considerable interest in how athletes can use music to produce a greater athletic performance. By comparison, musicology has sadly done little in this area of research. Sports science research has considerably furthered the understanding of how music can be used to alter athletes' perceptions of, and improve athletic performance. The research has shown that this impact comes from the psychological and psychophysical influence that music is capable of. However, most studies have been based on singular athletes and in a testing or laboratory environment. Furthermore, research has overlooked competitive team settings and musicologically-focused analysis in studies, therefore limiting ecological validity and findings based on motivational musical qualities in sports.

This study focused on addressing the aforementioned limitations. A competitive rugby team was interviewed based on their use of music during their pre-match routine, and completed the BMRI task based on two songs that they use. The songs were subject to a musicologically-focused analytical method to identify the particular musical qualities responsible for the motivational effects that the players reported. The study found that within the social context of a team setting, the shared listening experience amongst the players can considerably impact the teams' arousal. It also found that intrinsic musical qualities can be influential on an athletes' perception of arousal. However, it offers a considerable avenue for future research, as it suggests extrinsic qualities of music to have a greater impact within a team setting.

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Abbreviations

Analytical Object – AO

Beats Per Minute – BPM

Brunel Music Rating Inventory – BMRI

Crewe And Nantwich RUFC – C.n,N

Inter Objective Comparison Material – ICOM

Ratings Of Perceived exertion- RPE

“Swing Low, Sweet Chariot” – “Swing Low”

Chapter 1: Introduction

1.1 Background

Research continues to develop regarding how an athlete can use music to increase his or her sense of preparation and produce a greater athletic performance. Over 40 studies have been published to further the understanding of the phenomenon (Karageorghis and Terry, 2009).

This research project explores what has been defined as three distinctive areas of academic focus that include psychological, psychophysical and ergogenic effects of music (Elliot, 2013; Lokuta, 2013; Mouzourides *et al.*, 2009) and also further explores and attempts to expand upon past research on how musical listening can act as a motivational tool (Bishop and Karageorghis, 2009). Broad attempts to investigate the musical characteristics that are responsible for the motivational perception of compositions have been made (Priest, 2003) but much of the research focuses on the use of music on individual athletes in laboratory or pre-formulated testing settings, rather than competitive team sport settings. Furthermore, research up to this point has contained a number of reoccurring methodological limitations that have in the past been highlighted. Bale and Bateman (2009) highlighted how research from both the sports and music domains have largely ignored each other, while Snyder (1993) highlighted the lack of attention that sports scholars have given to music. This is arguably due to sports science studies lacking musicological theory and analysis within investigations.

Musicologists have found that music is capable of having a significant impact on emotional processes (Sloboda and Juslin, 2001). Furthermore, it has been assumed that the listener would fail in identifying the musical qualities responsible for the aforesaid affect (Sloboda and Juslin, 2001). This is a broad generalisation, although interesting as in the past it has also been stated that music is capable of moving people in an involuntary way (Cook, 1994) by influencing sub-conscious rhythmical movement within individuals, such as tapping. This suggests that music is capable of having an influence on an individual without them understanding why.

The psychophysical influence of music has been a focus within studies including Lokuta (2013), Elliot (2007) and Karageorghis *et al.* (2009). Musical rhythm has received considerable attention with Ghaderi *et al.* (2009) and Karageorghis and Terry (2009) suggesting that music is capable of promoting an enhanced physical performance. Moreover, rhythm has been considered as the leading musical variable in a proposed motivational hierarchy above extrinsic motivational qualities (Karageorghis and Terry, 2009). This is interesting, as it has been suggested that rhythm is also the leading musical quality within a composition that can promote a psychophysiological influence (Kotta and Lock, 2012).

To suggest that rhythm will always have more impact than external factors of music, such as the meaning and emotional attachment it can establish, is a problematic claim. Whether these studies have fully considered musical

variables, such as the proposed statistical parameters proposed by Meyer (2001), and the social context of different listening environments such as team settings is not clear. Furthermore, it could be argued that there is much more being heard than just the rhythm of the song that the athlete is listening to, which may have a considerable impact on how it is perceived, particularly in particular social contexts; an issue that will be explored in this thesis. Research has tended to focus on individual athletes, including Karageorghis (2006), Szabo *et al.* (1999) and Tenenbaum *et al.* (2004). As informative as their research is, there has been limited research within team settings. Thus, aspects of cultural value and the social contexts of the listening environment, and how these aspects may alter the listener's perception of the music and its possible effects may have much more potential findings. Frith (1996: 21-22) advised:

To understand cultural value judgments we must look at the social contexts in which they are made, at the social reasons why some aspects of a sound or spectacle are valued over others.

1.2 Research Focus

This research will investigate how players within a team setting perceive the effects of musical listening as part of a pre-match environment. It will also investigate if the findings from the studies based on individual athletes within laboratory and testing environments resonate within a real life competitive team environment, as some of these studies may lack ecological validity. This

study shall consider musicological variables with reference to specific musical qualities by using a musicologically-focused analytical method.

1.3 Overall Research Aim and Individual Research

Objectives

This study involved interviewing a rugby team that use music as part of their pre-match routine before competitive rugby fixtures. In relation to the pre-match activity, the aims of this study were to investigate; (i) players' perceptions of musical listening in a pre-match setting, including their perceptions of its psychological and psychophysical effects; (ii) identifiable musical similarities and differences between the compositions used by means of a musicologically-focused analytical method, and (iii) if a link can be identified between the musical qualities found and the reported effects from the team that are related to musical listening.

1.4 Value of This Research

There have been criticisms in past literature regarding the lack of consideration for musicological variables within sports science research of this nature (Bale and Bateman, 2009; Snyder, 1993). This research will be valuable because it will consider musicological variables by using a fully musicologically-focused analytical method to analyse the compositions. This will allow for the consideration of common intrinsic and extrinsic musical qualities that have, as of yet, have been unconsidered. This will provide the opportunity to assess multiple aspects of the composition as opposed to

variables such as tempo alone, with which particular past research has been concerned (Crust and Clough, 2006; Elliot, 2007).

This research will enhance the understanding of how players within a team setting may perceive musical listening before taking part in a competitive match. Past research has focused heavily on individual athletes within laboratory and testing environments. This highlights that some findings may arguably lack ecological validity because they have not been investigated within a real life team setting. This may have a considerable impact on the players' perception of music and its possible effects. How players perceive musical characteristics, with reference to how they feel music impacts on their own and team performance will be investigated, as well as considering how being in the social context of a team setting influences this.

The following chapter will expand on some of the points made above, summarising and analysing the extant literature to place the study conducted into its proper context.

Chapter 2: Literature Review

2.1 Introduction

Music has been a focus of study throughout multiple time periods including the renaissance, classical India, China and ancient civilizations (Cook, 1994). The theory that music expresses emotion and induces emotions within people

is one that dates back to ancient Greece where terms such as mimesis and catharsis were established (Cook and Dibben, 2001).

More recently, researchers have suggested that people are capable of identifying the emotion that a particular song is expressing (Scherer and Zentner, 2001). The fact that music has been linked with emotional influence for thousands of years signifies the possibility of a general long-term acceptance of this theory. The particular study of cognitive processes and emotional perception can be traced back to the eighteenth century (Juslin and Sloboda, 2001); illustrating people's enduring interest in the influence that emotion can have on individuals. The study of emotion has since been categorised into the area of psychology and has been deemed a phenomenon of study that is concerned with the behaviour that an individual exhibits (Chapman *et al.*, 1958).

Music has been used to alter the behaviour of competitive athletes. Elite rugby players, Jonny Wilkinson and Toby Flood, reportedly played guitars to reduce the daily stresses of the game (Johnson, 2008). It is also interesting that former world champion boxer, David Haye, listened to Stevie Wonder and Frankie Valli directly before leaving the changing room to compete in a fight. Additionally, it is reported that the music reminded him of happier times and put him in the desired mind-set for the fight (Worsell, 2011), highlighting an extrinsic impact from the music. Furthermore, Olympic gold medallist, Michael Phelps, reportedly used aggressive hip-hop music as an arousal tool to prepare for events (Jeffery, 2012).

It has been said that music can alter the feelings that people can experience (Trehub and Schellenberg, 1995). There have been numerous studies investigating the influence that music can have on psychological and psychophysical processes. What's more, Karageorghis and Terry (2009) stated that music can work by influencing an individual's mood, emotion, cognition, behaviour and perception of physical exertion and effort levels.

This literature review will explore why music is being used by athletes, with reference to its somatic and cognitive influence. How it may alter players' perceptions of the aforesaid notions will be explored. Before dissecting past literature, the first logical step is to understand two defining types of musical groupings surrounding motivational qualities of music.

2.2 Motivational Musical Characteristics in Sport

2.2.1 Intrinsic Motivational Qualities Of Music.

Intrinsic musical qualities are said to be specific musical characteristics, with Karageorghis and Terry (2009) asserting that five primary elements exist within a musical composition. These are melody, harmony, rhythm, tempo and dynamics. Sloboda (2001) suggested that particular musical alterations could influence musical characteristics of a composition and identified syncopations, enharmonic changes (key changes), melodic appoggiaturas and musical theoretical constructs (the theoretical reason to why a passage sounds like it does, example; major and minor scales) as being able to produce an influence on how an individual perceives intrinsic variables.

Furthermore, this theory has been developed by Meyer (2001) who introduced the idea of statistical parameters, these being particular aspects of sound that can alter how an individual perceives a song as being happy or sad. He offered a number of examples that included register (lower-higher), dynamic level (louder-softer), speed (faster-slower) and continuity (gradual-abrupt; Meyer, 2001). Additionally, Karageorghis and Terry (2009) highlighted that the intrinsic musical feature of rhythm response and the broad term of musicality have been placed above the extrinsic factors of cultural impact and association within a proposed adaption of a hierarchy of motivational musical qualities.

A number of claims regarding what intrinsic musical qualities are have been presented, and though they differ in some respects, they are related in that that they all refer to structural characteristics. Thus, it could be asserted that intrinsic musical qualities are defined as specific structural characteristics that make up a composition, which in turn may have an impact on a listener's perception of a song.

2.2.2 Extrinsic Motivational Qualities Of Music

A second source of motivational stimuli is linked to external sources of emotion with Karageorghis and Terry (2009) translating this description as extrinsic motivational qualities. Extrinsic qualities focus on the external motivational influence that a musical passage may produce; for example, the impact that music may have on an individual's cognitive processes. For instance, Priest (2003) asserted that music is capable of influencing an

emotional response on an individual. A significant theory was developed by Sloboda (2001) who highlighted that music can be expressive of things and events, human character and political and social conditions. This suggests that music can, in specific circumstances, impact on multiple areas of emotion. An example shall be discussed to clarify the understanding of extrinsic musical qualities.

The song "Swing Low, Sweet Chariot" ("Swing Low") has been identified as the unofficial anthem for England rugby supporters (Collins, 2009). It could be argued that this particular song is considered as being *oudeterous*; defined as music that is not considered motivational or de-motivational (Pates *et al.*, 2003) due to the song lacking fast rhythmical traits. The question arises, do, and if so why and how, songs such as this have such an impact on the performance of teams? It is plausible that this particular song may express identified regulation as well as a sense of prototyping.

Identified regulation is defined as when a particular activity is judged as being valuable, which in turn can influence an individual's choices because of their identification with that activity (Ratelle and Vallerand, 2002). Priest (2003) highlighted how Rosch (1973) defined prototypes as an example of the category to an area that they belong, therefore offering "God Save The Queen" as a prototypical example to an Englishman. It is then likely that supporters have identified that "Swing Low" reinstates a sense of national identity for themselves and England, with a conscious effort to raise cognitive arousal and in turn raise the athletes' physical effort levels, depicting both a

possible psychological and psychophysical influence. It must be questioned as to how this process transfers to the participating players. It could be considered that in this particular example, the crowd are transferring the process of identified regulation and stimulating introjected regulation within the players; defined as someone acting out of obligation to avoid shame and internal pressure (Ratelle and Vallerand, 2002). Thus, effectively transferring a greater feeling of responsibility to the players to perform.

In theory, players may identify the song that may then induce emotions related to the notion of pressure to perform as well as re-establishing their sense of national identity within the event in which they are competing. This is further supported by Davies (2001), who asserted that music can resemble an emotion by way of sharing a displayed dynamic character. Music may resemble emotions by rekindling past emotions, feelings and thoughts experienced by the player who may in the past had to perform under similar conditions. This highlights how the influential source comes from either the emotion's phenomenological profile or within the public behaviour where the emotion is exhibited (Davies, 2001).

Within the given scenario, the supporters are arguably exhibiting a display of national identity and unison that may transfer the notion of inspiration to the participants. Higgins (1979:308) stated: "The conceptual structure created by the listener contains more information than the actual sounds that enter his ears." This suggests that the listener can experience more than just the intrinsic elements that he or she is hearing, such as music's extrinsic

capabilities. Furthermore, Priest (2003) highlighted how Mark (1998) considered age, occupation and education as determining factors with reference to musical preference. It is therefore likely that the notion of individualism and individual differences within listeners, are significant factors related to studies that focus on how music may impact the perception of sporting performance within athletes.

This theory suggests that music does not necessarily have to possess prominent intrinsic characteristics to have an impact on an individual's perception of sporting performance, and songs that hold a more extrinsically powerful meaning could have a greater impact than songs with less powerful extrinsic meaning in the correct setting. This is supported by the idea that people relate a songs' melodic and rhythmic structure through its words (Frith, 1996). It could be argued then that the social context of the music is important, as it is hard to argue that listening to a prototypical song such as "God Save The Queen" while performing sprint training would have a credible impact, as it lacks fast intrinsic characteristics. However, within the social context of a match, stadium or amongst a team, it may have a substantial impact if the lyrical content or song relates to the sport in which it is heard. Furthermore, it has been suggested that if the music that is played is related to a given situation, then it may be preferred within that given context (Martindale and Moore, 1988; 1989), example; the Rocky theme tune in a boxing setting.

The theory of authorship arises that in the past has been referred to as being

problematic (Brackett, 1995), with Barthes (1977) presenting the theory that authorship of a particular text can surpass that of the original writer. As a simplistic scenario: the original author could write a text to represent an experience, the origin of which is personal to the writer from a lived experience by way of autobiographical references (Barthes, 1977) but the audience may receive an entirely different interpretation of the writing. Furthermore, there is the theory of multiplicity of voices within a text. Voices are defined as the human tones that present meaningful aspects of the words that are sung, that may be representative of persons or a personality (Frith, 1996), with it being stated that the destination of the text holds more importance than its origin (Barthes, 1977). Barthes (1977) highlighted that the reader should be considered as more important than the original author due to the reader's ability to attach a personal and external meaning to the writing that may not have been intended, thus, in theory becoming their own author within a particular passage of writing. Brackett (1995:15) related this theory to a strictly musicological ideology and wrote:

There exists the possibility, that a song and a recording may present a range of affect that exceeds the composer/performer's intentions: listeners may interpret a song in a way that has little to do with what the performer [or composer] "felt" when he or she recorded or wrote it.

The theory is further supported by Frith (1996), who highlighted that particular lyrical content could be perceived as silly by a person, but could

impact another's more serious feelings.

With this theory considered, one may reconsider the reason to why rugby supporters recite "Swing Low". The song was originally composed in the United States by Africans who were forced into slavery (McDaniel, 1995). Furthermore, the song was originally a reference to how life conditions were so poor for those in slavery that they wished for their current life to end and for a chariot to carry them home; a reference to reincarnation to Africa (McDaniel, 1995).

The song originally had no intention or meaning towards the sport of rugby, as the slave trade begun in Portugal 1440 (Thomas, 1997) and the Rugby Football Union was formed in England in 1871 (Bath, 2011). It is plausible then that the theory of authorship (Barthes, 1977; Brackett, 1995) relates here. English rugby supporters have adopted "Swing Low" within the social context of the rugby environment and have sub-consciously created their own authorship of the song. The song contains multiplicity of voices by way of themes originally attached to the desire to return to Africa (McDaniel, 1995). It is plausible then that English rugby fans have established their own authorship of the song and voices within their own social context and have attached the extrinsic voice of notions related to a desire to win to the song. Thus, transforming the song into what is now a prototypical English song; something that has been obviously identified by the players, hence the impact of the song on English rugby players. Furthermore, this highlights the relevance of the aforementioned view of Frith (1996) who stressed the

importance to understanding the cultural impact of the social context when considering music's impact on people. This identifies that the social context that the music is played in and its destination (listener) is of critical importance to studies of this nature, an area that has clearly lacked consideration in research of this nature up to now.

2.3 Psychological Effect of Music

As theories of intrinsic and extrinsic musical qualities have been discussed, the next step is to understand the influence that mood and emotions can have on an individual's perception of sporting performance and address how music may possibly alter these cognitive processes. On the definition of psychological musical effects, Karageorghis and Terry (2009:15) wrote: "Psychological effects refer to how music influences mood, emotion, affect, cognition and behaviour."

Researchers have considered that music is capable of altering an individual's perception of emotional states (Bishop and Karageorghis, 2009). Musicologists Juslin and Laukka (2004) supported this and linked fast rhythmical traits with performance-influencing emotions such as happiness and anger. It is therefore suggested that there is an established relationship between particular musical qualities and emotional arousal. This is significant because Markman (2012) suggested that it is possible for a positive mood state to impact an athlete's physical work intensity with Sloboda (2001) articulating that mood states have a prolonged influence when compared to

emotions and stating that emotions are a short experience. This suggests that although music could act as a performance enhancement tool, it may only be a brief influence unless it is altering the athlete's mood state as well; something that needs to be explored within future research.

Karageorghis and Preist (2007) have suggested that musical exposure can heighten positive aspects of mood such as vigour and happiness and reduce negative aspects such as tension and anger. This, in theory, supports the idea that listening to music can have a positive impact on cognitive arousal and that therefore, may in turn, aid athletes, but this also conflicts with the theory from Juslin and Laukka (2004) who claimed that music can heighten anger. This highlights the uncertainties that surround the phenomenon and a present lack of research within this area of study. An example scenario shall be discussed to clarify the understanding regarding music's influence on psychological arousal.

Rugby has 15 players per team and it is plausible to assume that players generally have a desire to win. It has been said that because rugby is a team game, it is probable that cognitive anxiety exists in relationship with the collective efficacy of the teams' efforts towards achieving a win (Karageorghis *et al.*, 1997) with Karageorghis *et al.* (1997) supporting the argument that cognitive anxiety is mediated by team cohesiveness. In theory, if the team were to play a song during the pre-match setting with fast rhythmical qualities then current research suggests (Bishop and Karageorghis, 2009; Juslin and Laukka, 2004; Karageorghis and Preist, 2007) negative emotions

such as anxiety, will be reduced and positive emotions will be heightened. There are potential limitations to this generalisation, as the music that has an effect on one may not on another, regardless of its tempo and rhythmical traits. Furthermore, it has been highlighted that personality traits such as introversion and extraversion will moderate the effects of music on task performance (Preist, 2003) with it being considered that individuals with different attentional capabilities could have neuropsychological differences (Crawford and Gruzelier, 1992; Pribram, 1991), with Priest (2003) considering that such personal differences may impact on the effects that music may have on performance enhancement. However, the cultural impact of the social context of a team setting may influence how the music is perceived by players with there being a clear need for future research on this topic.

It can be argued that the categorisation of emotions (anger) as being negative by the aforementioned researchers is a broad assumption (Karageorghis and Preist, 2007; Bishop and Karageorghis, 2009; Juslin and Laukka, 2004). Within general society, emotions such as anger may be considered as negative. However, athletes such as boxers or rugby players, may harness anger as a controllable tool for positive use due to the sport's aggressive nature. This establishes that further research is required within this field, as researchers are theorising with the assumption that athletes are attempting to lower particular emotions, when on a personal level and within particular sports, athletes may focus on enhancing it.

Future research could focus on athletes reporting their view on musical

listening before an event. This would achieve understanding of athletes' experience and would also allow for a team environment to be considered, regarding how the social context of the environment may influence their perceptions of the music and its possible effects.

The next logical step is to assess literature that is concerned with listening to music within pre-task environments.

2.3.1 Arousal Regulation and Pre-Task Listening in Sport

Various professional and amateur sports teams, including the England cricket team and the England rugby union team, have been known to use music as an emotional stimulant prior to matches (Karageorghis and Terry, 2009). The aforementioned boxer, David Haye, listened to music for its extrinsic properties before a fight (Worsell, 2011). Moreover, in 2001 the British and Irish Lions rugby team used The Jam as their pre-match music in the changing room to prepare for a match (Johnson, 2001). With Johnson (2001:130) writing:

It was important to put all the nonsense behind us, one way was to crank the team stereo as loud as possible.

Priest (2008) stated how emotion has been defined on numerous occasions as a reaction or a response to a particular stimulus and highlighted the recommendations from Ellis and Moore (1999) and Frijda (1993) as examples. The study of mood and emotion, when concerned with music, has received

growing attention from both a musicological and sports science perspective, with the former focusing on how music can alter emotional arousal (Juslin and Sloboda, 2001) and the latter looking to determine how emotions connected with musical exposure can have an impact on an athlete's sporting performance, in both a somatic and cognitive manner. Sports science has put emphasis on a process known as arousal regulation (Karageorghis and Priest, 2008). This effect has been defined as the controlling of cognitive and physiological processes that can aid sporting performance (Robazza *et al.*, 2004; Karageorghis and Priest, 2008).

However, it seems that a clear definition has yet to be agreed upon regarding emotions with Hanin (2007:31) stating:

It has become a common practice to state that it is intuitively clear what emotion is, but difficult or even impossible to define.

There exist attempts at defining emotions, with Kleinginna and Kleinginna (1981) advancing that emotions are complex interactions among subjective and objective factors.

Emotions have been categorised in the past with musicologists suggesting that happiness, anger, sadness, fear and disgust are defined as the primary emotions (Juslin and Sloboda, 2001). With this considered, debates will continue surrounding the definition of what an emotion is, but what is

asserted is that emotions are very influential on human behaviour (Juslin and Sloboda, 2001) including sporting performance (Vallerand and Blanchard, 2000). Therefore, if an athlete can consciously control his or her emotions using music, then it may contribute to an enhanced performance.

Research has investigated if athletes are capable of managing pre-event emotions using arousal regulation techniques. Robazza *et al.* (2004) investigated whether athletes are capable of using arousal regulation techniques to optimise their athletic performance. Eight athletes were chosen, four elite hockey players and four elite gymnasts. The participants were introduced to methods of recall in an attempt to reinstate idiosyncratic emotions and autonomic symptoms associated with their best and worst performances (Robazza *et al.*, 2004). Their pre-event emotional states were assessed and data was collected over ten separate events (Robazza *et al.*, 2004). The intensity of separate emotional states was measured using the Borg Category ratio scale (Borg, 2001).

Robazza *et al.*'s (2004) findings supported that pre-task emotions can affect performance levels and that athletes are capable of predicting and managing their personal pre-competitive emotions. However, the study cautioned that initiating an individual's optimum zone of cognitive arousal does not guarantee that the athlete will maintain it during the task or event (Robazza *et al.*, 2004). A further suggestion was that somatic and cognitive emotional states can be managed by regulation techniques, and that regulation is

further compatible as a performance enhancing effect when the participant is aware of their preferred emotional state for performance (Robazza *et al.*, 2004). These authors suggested that cognitive restructuring modifies a number of influential performance-related stimuli that may influence sporting performance that includes cognitions, emotions, motivations, and motor behaviour and made the following recommendation (Robazza *et al.*, 2004: 381):

To enhance performance it is necessary that an athlete is: aware of his or her optimal and dysfunctional zones; able to distinguish optimal from less than optimal states; and able to enter and stay in the optimal zone during performance.

Robazza *et al.* (2004) concluded that further intervention strategies should be investigated. This is interesting as a small number of studies have been conducted that investigate the use of music as a pre-task stimulant or sedative within sports settings (Karageorghis and Terry, 2009). It has been suggested that music has been shown to induce motivational emotional responses (Bishop and Karageorghis, 2009) and to be a potent inducer of arousal regulation (Karageorghis and Priest, 2008). Why music has this impact links to the appraisal theory. In a review of research, Karageorghis and Terry (2009) highlighted the importance of the appraisal theory when concerned with a particular stimulus eliciting an emotional response and noted how Frijda (1987) suggested that it will not lead to direct action, but an

action tendency and may influence a state of readiness within an individual to achieve a goal within a particular environment (Karageorghis and Terry, 2009). Therefore, in theory if a rugby player listened to a prototypical song (Priest, 2003) it may, in turn, motivate the individual to play rugby and produce a heightened physical performance due to an action tendency from cognitive appraisal.

Research has suggested that pre-task music can effectively increase muscular endurance performance (Pearce, 1981; Karageorghis and Lee, 2001) with Pearce (1981) showing that music with a fast tempo (classed as stimulative music) can effectively increase grip strength if listened to before the task as opposed to listening to slow music (classed as sedative music). Karageorghis and Terry (2009:31), in a review, summarised research that focuses on the impact of pre-task music:

Pre-task music can be used to (1) manipulate activation states through its arousal control qualities; (2) facilitate task relevant imagery/mental rehearsal;(3) promote flow; and (4) enhance perceptions of self confidence.

Arousal regulation and the appraisal theory are considered important aspects to the current study. However, the findings discussed here do contain a number of limitations. Firstly, Robazza *et al.* (2004) generalised findings from data acquired from just four test subjects and from only two separate sports. Many different sports exist and the mentality for these two represented sports could differ considerably; and so might the emotion-performance link in the

different sports. Secondly, Robazza *et al.* (2004) did not consider different levels of athlete, testing elite level only.

Representation from other sports is required as well as a higher number of participants to explore the emotion-performance link. Taylor (1995) suggested that the analysis of the demands of the specific sports should be considered in research that focuses on emotion. That suggests the emotion-performance link may change due to specific demands of the sport. With this point noted, the findings from Pearce (1981) and Karageorghis and Lee (2001) are considered valuable, but do have ecological limitations. It could be challenging to argue that the findings from a grip strength task on individual athletes would be as applicable within a competitive team setting, as many other variables and influencing external factors would be present, such as the social context of the setting and the group of players; identifying an avenue for future research.

Cognitive arousal has been identified to be of great significance and it has been stated that a musical stimulus can impact on arousal regulation and act as either a sedation or stimulation tool to emotional processes (Karageorghis and Terry, 2009). Furthermore, musical listening can potentially manipulate an optimal mind-set for sporting performance (Karageorghis and Priest, 2008). However, research in this area is limited and it has been identified that there is considerable scope for further investigation (Karageorghis and Terry, 2009). Hence, to develop the understanding of the phenomenon of music as

a pre-task stimulant, research needs to consider more in-depth investigations within team settings.

2.4 Effects of Music on Physical Perceptions of Performance

As aforementioned, fast rhythmical traits have been linked with particular performance influencing emotions (Juslin and Laukka, 2004). It is common to see athletes personalising their auditory environments; with statistical data supporting that seven thousand participants ran the London half marathon while synchronising to pop music and reporting that music inspired them and made the challenge fun (Lloyd, 2008). It is important to consider the impact that cognitive arousal from music is having on the psychophysical processes within listeners. Karageorghis and Terry (2009:15) offered a definition of music's psychophysical effects: "Psychophysical effects of music refer to the psychological perception of physical effort as measured by ratings of perceived exertion."

The next logical step is to identify the effects that have been suggested to have an impact on an individuals' perception of exertion.

2.4.1 Dissociation

A significant theory is that by using music in a synchronous manner, the listener may induce the effect of dissociation (Boutcher and Trenske, 1990). The Synchronous method involves a participant performing movements in

time with the repetitive beat or tempo of a song (Simpson and Karageorghis, 2005). Dissociation is defined as diverting an individual's attention away from symptoms of fatigue (Karageorghis and Priest, 2008) with Boutcher and Trenske (1990) suggesting that music is capable of occupying the individual's attention, thus preventing an individual from focusing on feelings of physical discomfort. Furthermore, this was supported by Crust and Clough (2006) who highlighted Szabo *et al/s.* (1999) suggestion that at sub-maximal intensities, music can possibly restrict the processing of aversive afferent signals by way of narrowing an individual's attentional focus, which in turn may cause a shift from internal to external cues (Crust and Clough, 2006). This was supported by Karageorghis and Priest (2007), who confirmed that at submaximal intensity (85% of aerobic capacity), bodily functions such as lactic accumulation will override the effects of music in an attempt to force rest.

It is unlikely that a long distance runner would exceed their 85% capacity for the majority of the event, as Gifford (2008) supported that runners would typically aim to establish an even running pace throughout the event with the aim to preserve energy to perform a sprint to finish the race, thus not exceeding their 85% capacity until the final sprint. This suggests that as a result of running to music, it may considerably lower the athletes' sense of effort. This is supported by the fact that professional Ethiopian distance runner, Haile Gebrselassie, reportedly broke the world record of a 2,000 meter run in 1998 while synchronising to the Pop song 'Scatman' (2001;

Karageorghis and Terry, 2009). The next logical step is to investigate research regarding the use of music in the synchronous manner.

2.4.2 The Synchronous Method

Elliot (2007) investigated the impact of different tempos on psychophysical responses such as aerobic work rate and arousal effects (dissociation). The study was based on the performance of a sub-maximal cycling task. Contemporary electronic dance music was chosen as an appropriate musical selection, with it being identified that all participants generally enjoyed the style using North and Hargreaves (1995) Music Liking Scale and the Brunel Music Rating Inventory (BMRI; Karageorghis *et al.*, 1999). Four separate conditions were investigated: no music, chill out slow 100 beats per minute (BPM), dance anthems moderately fast 140 BPM and happy house fast 180 BPM (Elliot, 2007).

The findings suggested that the fast and moderately fast tempo conditions increased the participants' physical work rate and prolonged physical endurance due to dissociation (Elliot, 2007). The slow condition had no noticeable effect on work rate and the no-music state had the lowest distance travelled. Furthermore, the 140 BPM moderately fast music condition resulted in the furthest distance travelled (Elliot, 2007).

Karageorghis *et al.* (2009) also investigated the impact of synchronous music, focusing on a treadmill walking endurance task. Three conditions were

investigated; a motivational synchronous condition, an outeterous (non-motivational) synchronous condition and a no music condition. Fifty males and fifty females from running based sports were used. The music that was chosen met the criteria of 113-135 BPM and either belonged to the pop or rock genre using the BMRI (Karageorghis *et al.*, 2009). Each track was played for 90 seconds allowing for at least one chorus and verse to be heard (Karageorghis *et al.*, 2009).

The findings suggested that there was an increase in RPE with each measurement point; by a significant margin in fact and that the music condition states impacted on the in-task affect, although the authors noted that the noticeable in-task affect was decreasing significantly as measurement points were gradually reached (Karageorghis *et al.*, 2009). This suggests the affect from the music was gradually having less impact as time progressed. There was no difference in heart rate during the task, however music conditions impacted significantly on time to exhaustion, with the motivational music state producing the greatest endurance level (Karageorghis *et al.*, 2009).

Karageorghis *et al.*'s (2009) findings supported that music can moderate an individuals sense of fatigue and argued that musical manipulation can account for 38% of variance as well as highlighting that it lasted throughout the entire duration of the task (Karageorghis *et al.*, 2009). Schneider *et al.* (2010) suggested that 120 BPM may be the optimum frequency of rhythmical

perception within humans and may promote increased endurance if an individual is exposed to music of this tempo due to humans being able to rhythmically relate to it. Furthermore, this offers support to Elliot's (2007) aforementioned findings that music with fast rhythmical intrinsic qualities can act as a motivational tool to impact an individual's sense of physical endurance and work rate. This supports research that suggests music alters cognitive function (Bishop and Karageorghis, 2009). Therefore, it also supports research suggesting the impact of musical rhythm, including the link between fast rhythmical traits with performance influencing emotions (Juslin and Laukka, 2004) and the proposal that rhythm is the fundamental musical variable that influences sporting performance above extrinsic variables (Karageorghis and Terry, 2009).

Particular areas of both Elliot's (2007) and Karageorghis et al.'s (2009) research could have been further investigated, referring to the musicological variables in the music that was used. Both studies rightly stated the BPM of the songs, as this was the fundamental variable being investigated and both used the informative and validated BMRI framework (Karageorghis *et al.*, 1999) to understand how motivational the participants found the songs. However, the inclusion of a musicologically-focused analytical viewpoint of the music used may have aided in further developing the understanding of more in-depth musical variables, that could have impacted the athletes' interpretation of the song and highlighted more particular musical variables

such as the ones aforementioned (Meyer, 2001; Sloboda, 2001) that may impact upon the listeners' perception.

Elliot (2007) suggested that moderately fast music can prolong endurance. However, his research did not compare different styles of music and so is open to question: Would a song of a different genre at 140 BPM produce the same results as different music produces different emotive effects (Higgins, 1979)? Further research across a broader range of musical genres would be useful to clarify this, and while the BPM of the tracks is undoubtedly an important intrinsic quality that impacts on an athletes' performance, it is one of the many musical elements that make up a composition that may also be responsible for the said effects. Therefore, it would be important for future research to consider a holistic approach to musical characteristics (Tagg, 1982).

A holistic musicologically-focused analytical approach may have produced further information on more specific musical qualities that may influence tempo to impact an athlete's physical endurance. Future research may also consider the influence of the social context of the listening environment and the external variables of a competitive sports setting, as these variables could have great impact on how athletes perceive the music.

Karageorghis *et al.* (2009) highlighted that the compositions that were tested were 120 BPM and of a Rock or Pop genre and Elliot (2007) gave descriptions

of the music. As informative as this research is, a musicologically-focused approach may well produce findings related to compositional techniques that may be partly responsible for the influence that music can have on an athletes' performance. An identification of more specific variables may have been useful as compositional techniques can considerably alter how a song is interpreted, again referring to the aforementioned music variables (Meyer, 2001; Sloboda, 2001).

Examples shall be given to develop the understanding of this point. High frequencies performed as short bursts with fast decay are said to transmit a high energy level, while low frequencies with longer decay are said to transmit less sonic energy (Davies *et al.*, 2002). Variables such as these may have impacted the level of affect from the music. When referring to rhythmical traits, syncopated rhythms are more challenging to perceive and are suggested to require a higher level of listening experience in relation to none syncopated ones (Higgins, 1979). This highlights that different compositional techniques can be interpreted differently.

Research has suggested that a leading factor related to the impact of synchronous music is due to the rhythm of the song relating to aspects of human functioning that include heartbeat, walking and respiration (Bonny, 1987). Furthermore, it has been suggested that 120 BPM is a human's optimum frequency of rhythmical perception (Schneider *et al.*, 2010). Karageorghis *et al.* (2009) agreed that a strong rhythm and fast tempo music

may induce bodily action and increase energy that the music may transfer. This is interesting as Lock and Kotta (2012) also considered rhythm along with register and dynamics to be of vital importance when analysing the energy transmitted by a composition. Higgins (1979) assumed that a primary task of the listener is to keep track of the beat when hearing a rhythm. This suggests that a subconscious synchronisation with the stimulus may be a possibility and a reason to why the synchronous method is able to have such an impact on athletes. Support for this theory comes from Wilson and Davey (2002) who highlighted that people perform physical gestures to the rhythmical beat of music even when sat motionless.

With Schneider *et al.*'s (2010t) aforementioned theory being considered, data analysis of over 70,000 musical compositions from the popular music domain did show 120 BPM to be the most reoccurring tempo (Mcdougall and Moore, 2005). Thus, in theory, 120 BPM could be considered as the natural tempo that people create music by. However, in a review Karageorghis and Priest (2012) highlighted Smoll and Schultz's (1982) suggestion that this variable may be individualistic, with reference to intended work rate of the individual that suggests the significance of factors external to the athlete.

When one considers Smoll and Schultz's (1982) theory, one could compare an amateur and elite rugby player, who both use music to accompany a training session. Both may also use a song that resonates at 120 BPM. However, it may have a greater impact on the elite level athlete due to a higher work

intention that is related to external variables such as career prospects, livelihood, and having the intention to produce a performance to their optimum capacity. Smith (2003) evaluated that the final performance of elite athletes requires all components to perform at optimum levels. Thus, there could be multiple external stimuli that may influence an athlete's capability to perform to or use music to enhance their sporting performance, hence why research needs to consider team settings as the company of other athletes as well as the occasion of an event may alter the possible effects of music.

2.4.3 The Asynchronous Method

The asynchronous method is defined as playing music in the background of a particular setting to enhance the ergogenic effect that in turn has been linked to an individual's state of flow (Pates *et al.*, 2003). Flow is defined as an athlete fully engrossing in the cognitive and somatic demands of a particular task (Pates *et al.*, 2003). Literature has highlighted how findings related to the study of asynchronous music have been equivocal when compared to that of the study of synchronous music (Crust and Clough, 2006). Past literature has highlighted methodological limitations including musical choice and participant variables (Karageorghis and Terry, 1997). Crust and Clough (2006:187) theorised:

If motivational asynchronous music is played during a non-complex motor task, it is likely that some participants will be more responsive to

stimulation, and thus endure the task for longer when listening to music compared with no music, based on personality traits.

Crust and Clough (2006) investigated the level of effects of asynchronous music on an isometric endurance task. Participants included forty-one males and seventeen females. The task involved suspending a 1.1kg dumbbell weight in front of them for as long as physically capable whilst being exposed to music, with selections being based on recommendations from Karageorghis and Terry (1997). A remix of the song "Beautiful Day" by U2 (2000) was used for the task. Furthermore, it was noted that the track had a tempo of 132 BPM and had strong associations with the sporting world, whilst also exhibiting strong intrinsic and extrinsic qualities. Ten participants rated the song using the Brunel Music Rating Inventory framework and it received high ratings from all participants. A motivational music state and no-music state were tested.

The findings suggested that the motivational music state improved physical endurance by 11% when compared to a no-music state. Crust and Clough (2006) highlighted how their finding supported past research including Copland and Franks (1991), who also reported that music can prolong physical endurance. Elliot *et al.* (2004), Szabo *et al.* (1999) and Thornby *et al.* (1999) also all supported the idea that asynchronous music can have an ergogenic impact. Additionally, Pates *et al.* (2003) supported that

asynchronous music can have an impact on flow state within individual athletes that can produce an enhanced performance.

Hayakawa *et al.* (2000) investigated the use of traditional Japanese folk asynchronous music based on a dance group, which was considerably different musically to the Rock/Dance remix composition that Crust and Clough (2006) used, as well as the participant population. However, both studies investigated the impact of asynchronous music and reported similar findings; that music is capable of inducing positive arousal effects with Hayakawa *et al.* (2000) reporting the ergogenic effect of dissociation as a result of the music. This research also supports that music of different genres may influence somatic motor tasks and the sense of physical endurance.

Crust and Clough (2006:194) supported the idea that individual personality traits could play a key role as to the level of how arousing music may be and theorised:

Rather than being stimulated by the more obvious and practical rhythm components, more sensitive individuals may find that musicality and personal interpretations of the music (meaning to the individual) generate pleasant thoughts that influence attention, thus promoting increased endurance.

This could be related to the social context of a team setting, with the knowledge that collective efficacy within a team setting is managed from the cognitive anxiety of the players' efforts towards achieving a win (Karageorghis *et al.*, 1997). Then it could also be theorised that the external influence from the team setting and the collective desire to win may also have an impact on how individuals and the team, as a unit, perceive musical listening when using the asynchronous method; with reference to the appraisal theory and action tendency of the team as a unit. This links to the theory of authorship from Barthes (1977) and Brackett (1995), by way of people attaching their own meanings and external links to music to effectively become their own extrinsic author of a song, with "Swing Low" being a prime example within the social context of an English rugby match. It has been said that intrinsic musical qualities are more influential on arousal with rhythm being suggested as the leading influence (Juslin and Laukka, 2004; Karageorghis and Terry, 2009). However, it does not mean to say every person shares the same relationship with these qualities, as Frith (1996) highlighted on the subject of lyrical content in that how it is delivered (performed: fast, slow etc.) may lead to further understanding of its effects. This suggests that particular musical performance variables can produce different proportions of arousal on different people, with reference to intrinsic and extrinsic influence. Furthermore, how people react to music while in particular social contexts needs to be considered, so as to understand the cultural value of the competitive sporting domain, along with how this influences the players' as a result of music's effects; defining the ecological validity of past research.

2.5 Summary Of Review

Studies have noticeably been concerned with investigation of individual athletes, with generalisations being made and little consideration for the external variables that impact upon musical listening, such as the cultural impact of the social context of the setting (Frith, 1996). It would be challenging to apply some of the aforementioned findings within team environments, as it seems that current research is lacking fully team-focused studies. The fact that the athletes would be part of a real life competitive team setting, with other athletes present, may influence the way that they perceive their musical listening, as well as the cognitive impact this has on their performance.

Sports science studies have yet to fully consider a musicologically-focused analytical method in research. The research is tending to generalise findings on music as a sports enhancement tool based on studies that just test, for example, tempo. This ignores the fact that the listener is hearing more than just the tempo of the song and so overlooks relevant performance techniques and extrinsic factors within music, such as the aforementioned variables highlighted by Sloboda (2001) and Meyer (2001). This is unfortunate because there may well be more specific areas of a composition that could influence how motivational a musical stimulus is for athletes, however researchers have been reluctant to consider musical analysis.

Chapter 3: Methods

3.1 Research Introduction

This research was split into two interlinking studies with a qualitative approach used (Dawson, 2009). Study one focused on an interview process with players and their personal perceptions towards musical listening before playing sport within a competitive match. Study two focused on the analysis of the music that the players used. The focus of the research was to further investigate how a particular group of players, in this study specifically rugby players, perceive musical listening, with reference to the music's impact on their personal and teams' performance.

3.2 Study 1: Player Interviews And Listening Task

3.2.1 Introduction

Study one involved an interview process and focused on participants' experience of a phenomenon within a specific sport similar to past research (Jensen *et al.*, 2013; Priest, 2003). Participants completed a musical listening task using a structured rating framework and took part in a personal semi-structured interview with the lead researcher (see below), with all procedures being approved by the University's Ethics Committee.

3.2.2 Participants

Fifteen male amateur rugby union players participated in the study. Their ages ranged from 18 to 38 years who compete in the English Midlands 2, for Crewe and Nantwich RUFC (C.n.N). The requirements included that the participants were male and were also members of C.n.N 1st XV squad. All the

participants had previous experience of musical listening within a pre-match routine before a competitive rugby match. The participants completed both the Brunel Music Rating Inventory (BMRI; Karageorghis *et al.*, 1999) task and a semi-structured interview process. Relevant consent forms were distributed and signed before any procedure was performed, and every effort was made to ensure the interviewee understood the procedures and were comfortable with them.

3.2.3 Method: Interview Process

A focus of the study was to investigate how players perceive the effects from musical listening before a competitive rugby match. The study considered how music was used as a performance enhancement tool within a pre-match setting, in relation to their own and the teams' performance.

The study used the 13-item Brunel Music-Rating Inventory Framework (BMRI; Karageorghis *et al.* 1999). The BMRI frameworks have been useful in past research of this nature, including Atkinson *et al.* (2004); Crust, (2004); Elliot, (2007); Edworthoy and Waring, (2006); Priest, (2003) and Simpson and Karageorghis, (2005). The study did consider the latter developed frameworks (BMRI-2; Karageorghis *et al.*, 2006; BMRI-3; Karageorghis, 2008). However, it was identified that the latter versions are more question based that are more suited for general exercise settings.

The 13-item characteristic specific nature of the original BMRI framework was considered as more informative for the musical analysis stage, as it pinpointed ratings of specific intrinsic and extrinsic qualities that this study was interested in exploring, and was developed with reference to sport and exercise contexts (Karageorghis *et al.*, 2006). The framework was subject to a rigorous validation study, using a confirmatory factor analysis, on 314 participants whom exercised to music. It was critically assured to be an acceptable, effective and informative framework for researchers to use in studies of this nature (Karageorghis *et al.*, 1999).

Personal perceptions and feelings of the players towards the phenomenon were a focus of the study. Obtaining reports directly from the players was deemed of critical importance to aid the research outcome. Jensen *et al.* (2013) highlighted how Dale (1996) considered participants as experts of the particular phenomenon under focus, expressing how direct interaction with the researcher of the study represents an opportunity to unveil a rich and nuanced view of a particular lived experience (Jensen *et al.*, 2013).

Personal interviews have long been considered a primary method in social science research (Liedtka, 1992). Stand alone questionnaires and surveys were deemed inadequate methods and would have failed to reach the depth of information that would be required to answer the research questions adequately, due to the inability for participants to expand on the answers that they give.

The study considered various interview methods. Unstructured interviews were deemed too unfocused, as interviews with little content direction would have hindered in producing the answers that the investigation required to gain an understanding of the phenomenon considered. Furthermore, it was identified that unstructured interviews were better tailored for life history researchers and that structured interviews were suited for market research (Dawson, 2009).

A semi-structured interview method was deemed most suited for the study's aims, as this method offered the opportunity for expansion on answers given by participants and the ability to probe them for further information. This particular method of research is common in qualitative investigations (Dawson, 2009) with it being asserted that qualitative investigations dictate an emphasis on open questions (Biggam, 2011) and coincided with the focus of this procedure, which was to compare the interview results from the participants. On the subject of Semi-structured interviews Dawson (2009:28) stated:

In this type of interview, the researcher wants to know specific information which can be compared and contrasted with information gained in other interviews.

With this point considered, a one to one semi-structured interview process was used, which allowed for the answers that players gave to be more

expansive in nature (Biggham, 2011) and allowed the researcher to probe for further information.

3.2.4 Procedure

The first stage of the procedure was the 13-item BMRI task (Karageorghis *et al.*, 1999; see Appendices B for BMRI Framework). The procedure required participants to listen to two chosen songs and for them to rate 13 particular musical characteristics from 1 to 10 (1 being low and 10 being high), based on how motivational they perceive the particular characteristic to be to their performance (Karageorghis *et al.*, 1999). The procedure took place in a changing room of the teams' clubhouse during six mid week training sessions. The participants and the lead researcher were present during the task.

Players were individually asked to listen to two songs and to then rate the 13 particular characteristics that are highlighted within the BMRI. The song choices were "*Hold Your Colour*" by Pendulum (2005) and "*Bonkers*" by Dizze Rascal (2009). The team used both songs during a pre-match routine and so were deemed appropriate choices for the task, as it presented a realistic investigation. A laptop was used to play the songs and a pen and answer sheet were distributed to the players to record their answers.

Semi-structured interviews followed, that were conducted with team members individually. The players were asked questions from a guide of 26 pre-formulated questions (see Appendices B for question guide); some that were more simplistic in nature and others required a more in-depth

explanation. The questions were grouped into categories to help the participants engage in the specific subject themes, as opposed to mixing the themes and confusing their focus when answering.

Due to the interviews being semi-structured in nature, the questions and answers were expanded on when the opportunity presented itself to obtain more information. Interviews took place in 30-minute slots with each player and were audio recorded for transcriptional purposes (see appendix C for transcriptions).

3.2.5 Analysis

The 15 results from the BMRI task were averaged and presented in a table format to identify how players rated the songs overall, as well as the particular musical characteristics from their chosen song. Interview results were approached using the open coding grounded theory that Matsumoto and Wilson (2005) highlighted, that has been defined as a comparative analysis that identifies concepts and properties. The method has been considered an essential procedure within qualitative analysis that forces verification and qualification of the identified theory (Strauss, 1987), and was addressed with a thematic approach with the focus to be inductive (Dawson, 2009). This process was concerned with identifying reoccurring similarities and opposing differences, to further the understanding of the relationship between how musical listening may impact the players' perceptions of their own and teams' performance.

3.3 Study 2: Musical Analysis

3.3.1 Method

A musicologically-focused analytical method was used in an attempt to discern specific musical qualities by way of compositional techniques of the two compositions chosen that were used by the team. This assisted to identify if there is a link between the musical qualities identified and the reported effects from the team.

The choice of analytical method to use within musicological based studies has long been debated, with the formalist approach being the most commonly used (Tagg, 1982). The formalist approach focuses on structural aspects of music, such as the mode and musical form, while ignoring the cultural influence and aesthetic content of the music itself. Analytical methods such as the Schenkerian analysis (seen in; Marsden, 2007) and Kotta and Lock's (2012) musical energy analysis were considered. However, both methods are formalistic structural based methods that use notation as their primary source material, and used art music within their literature examples. Music has been categorised into three distinct areas; folk music, art music and popular music (Brackett, 1995; Tagg, 1982). The songs used in the analysis were from the popular music domain.

The question of using a method that focuses on western musical notation within popular musical analysis identified relevant issues. Brackett (1995) highlighted how Seeger (1977) presented his view of the distinction between

prescriptive and descriptive issues that relate to using notation. He dictated that western notation is primarily prescriptive in nature and consists of directions for a performance (Brackett, 1995). It was argued that to describe music using western notation, that is not intended, will force the analysis to focus on elements that match the priorities of the notation, which will be considerably different to the actual aesthetic values of the music that is under focus (Brackett, 1995).

Tagg (1982) expressed that traditional formalist methods such as these can not be used to analyse popular music, highlighting how popular music is made for mass distribution and not made to be stored as written notation like art music arguably is. Thus, one cannot use notational-based analytical methods on material that was not intended to be notated due to such different aesthetic values (Tagg, 1982). Tagg (1979) also argued how important parameters of musical expression within popular music are impossible to encode in traditional notation, relating closely to the earlier point that notational methods would force the focus away from aesthetic values of popular music (Brackett, 1995).

With this knowledge, it was decided that notational based structural method such as the Kotta and Lock (2012) or the Schenkerian analysis (Marsden, 2007) would have hindered in reaching the aims of the study. A holistic approach was considered. Holistic in a musical analytical sense focuses on particular instrument compositional techniques and how they may influence the overall perception of sound for the listener, with Tagg (1982:6)

commenting:

It is clear that a holistic approach to the analysis of popular music is the only viable one if one wishes to reach a full understanding of all factors interacting with the conception, transmission and reception of the object of study.

The analytical method used elements from the holistic approach of Tagg (1982) and took inspiration from the analytical writing of Brackett (1995). Furthermore, it used notational examples of the music to only help clarify the points made. It focused on identifying particular minimal units of expression (musemes; Tagg, 1982) by way of compositional techniques used in the songs, which in turn, resonates the musical qualities that the players were hearing.

The following steps were undertaken: (1) established a checklist of parameters of musical expression (Tagg, 1982). The analysis focused on three areas of the composition that included, (i) Aspects of time, (ii) aspects of tonality and texture, (iii) dynamical aspects (see chapter 4.3.1 for more detail; Tagg, 1982). Tagg (1982) expressed that not every aspect of the list needs to be applied and stated it is in place to assure that important parameters of musical expression are not overlooked. (2) The establishment of musemes by means of inter-objective comparison (Tagg, 1982). This stage compared the two compositions under focus and detailed how they are musically similar and different with reference to the aforementioned musical parameters. (3) Identification of reoccurring and different musical qualities

between the compositions. (4) A cross-reference with the musical parameters used within the BMRI. This final stage of the analysis made a cross reference based on the results of the of the BMRI task that the players took part in and the results of the musical analysis to identify any reoccurring similarities between the players' reports and what was identified within the analysis.

3.3.2 Content

The content that was analysed was the two songs that were used in the listening task (see chapter 3.2.4)-

Chapter 4: Results

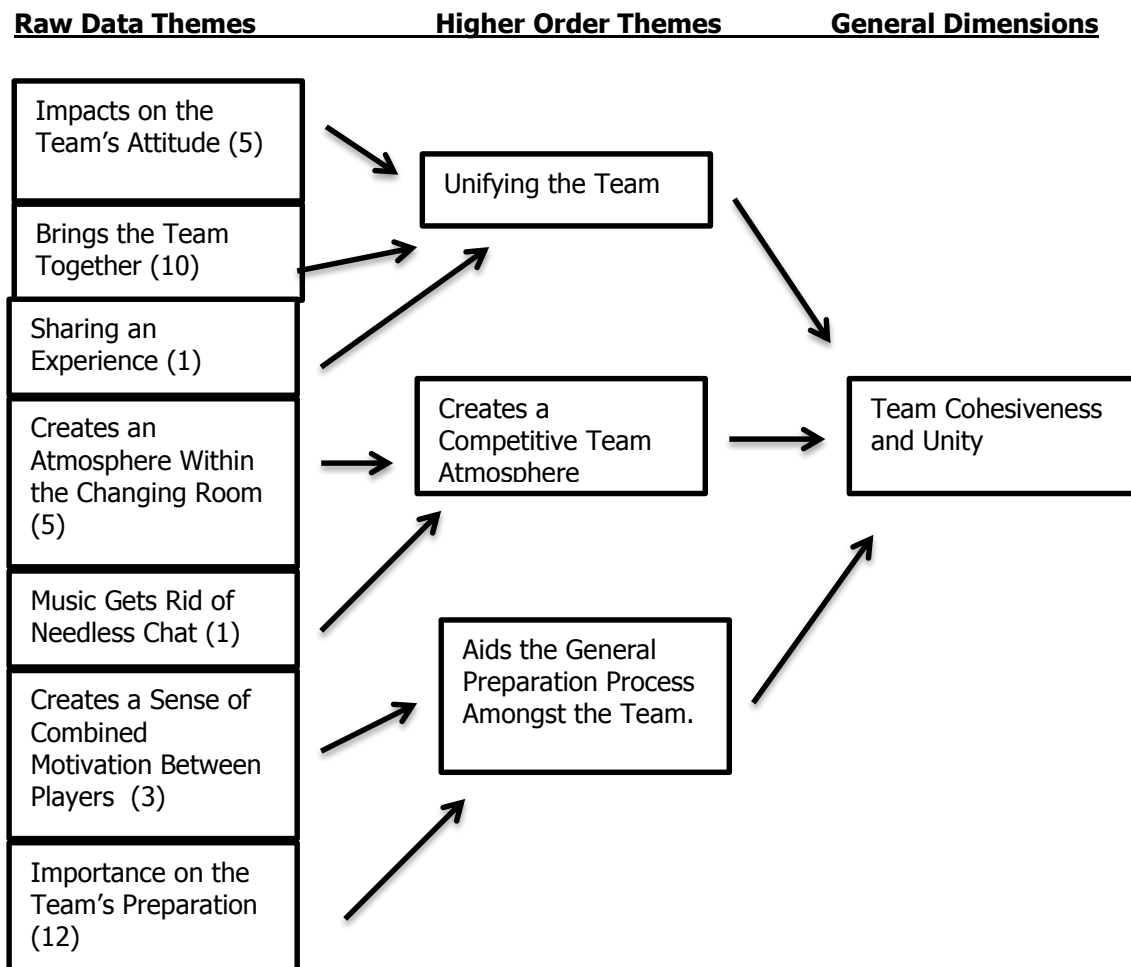
4.1 Interview Analysis

The interview procedure identified 5 general dimensions that represented 23 higher order themes that were made up of 49 raw data themes.

4.1.1 Team Cohesiveness and Unity

seven raw data themes and three higher order themes were identified that suggested music's impact on team cohesiveness and unity (see figure 1)

Figure 1: Open Coding themes 1.



The following sample extracts from the interviews support the themes in figure 1. There were many reports that music influences the team's sense of togetherness or cohesion.

"I have noticed that it [music] changes every ones attitude and gets everyone pumped, it brings everyone together."(Participant 1)

"We listen to the same songs together. It affects us at the same time. It brings us in together, especially if we are in a huddle, arms bound

with the music going on, that's when I think it affects the most, as a cohesive unit.”(Participant 8)

“In the changing room there is always something played and it gets everyone singing from the same sheet, all in the same game.”
(Participant 7)

“In the changing rooms it gets you all moving about and dancing around, which gets us together.”(Participant 3)

“Everyone will be on the same level. Whether everyone is thinking the same thing I don't know but it [music] definitely makes us closer.”
(Participant 9)

This idea was expanded on by a number of players who expressed that the shared experience of listening to music has a direct impact on arousal.

“The fact that we are all in the changing room at the same time and that we all listen to the music means that we are sharing an experience.”(Participant 15)

It is also very interesting that players reported that they experience a sense of arousal as a result of other players being stimulated by listening to music.

"Some of the players will be [Mentally aroused]. And they can bring the rest of the players up with them, which can really help me personally at times."(Participant 10)

However, a player did highlight that music is one aspect of a bigger process that aids the pre-match routine;

"I think music can aid in bringing everyone together with a mutual feeling of preparation for a game but it's just a cog in a bigger machine when it comes to the pre-match routine."(Participant 11)

The same player felt that using music in the pre-match routine is individualistic, but identified that the social context of the team setting influences the motivational impact that the music has.

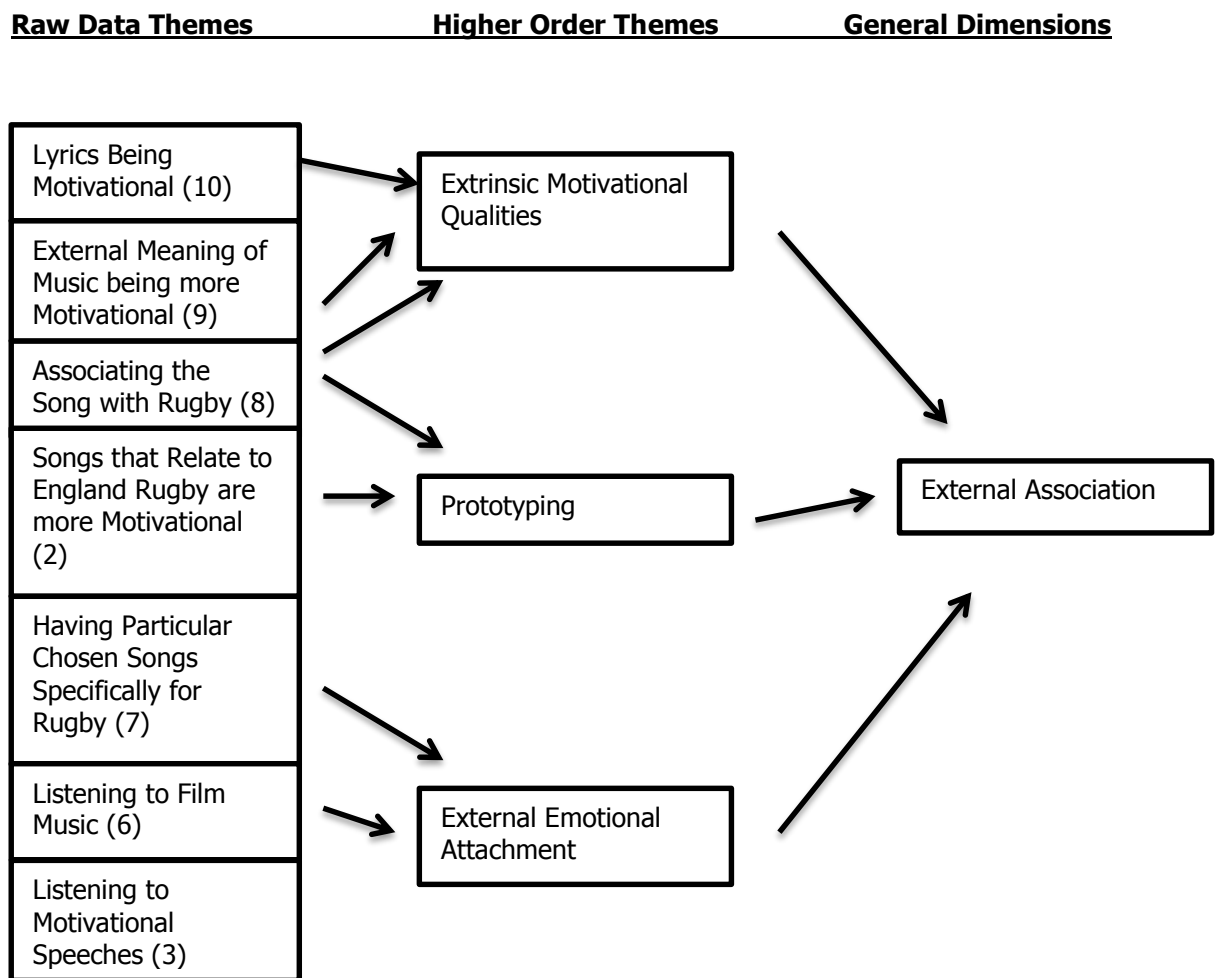
"I also feel this subject of music/audio and its effect on sporting performance is highly individual, everyone is different and everyone is effective by different songs etc. However, I do feel there is a certain level of a combined motivation when a group of team mates listen to music together, they do become influenced off each other."
(Participant 11)

(See Appendices A chapter 8.1.2 for further supportive extract analysis.)

4.1.2 External Association

Seven raw data themes and three higher order themes were identified that suggested that the team felt, that music that they can associate with an external meaning outside of the music (strong extrinsic qualities) was favoured by the team (see figure 2).

Figure 2: Open coding themes 2.



The following sample extracts from the interviews express the themes in figure 2;

An interesting finding was that most players expressed that they found music that conveys external meaning, or that they can relate to it, to be more motivational with lyrical content being repeatedly mentioned. The players also

mentioned that they favoured songs that they could somehow relate to rugby.

"I got some songs that I like to play in the car on the way to a game that I know I can relate to and I can sing to that get me really fired up."(Participant 8)

"If you have a song with lyrics that you can associate with rugby those usually are the best for me."(Participant 2)

"The person who made the song isn't that important to me but if I can relate to the lyrics at all than that helps a lot."(Participant 6)

Particular players referenced lines from an actual song that they used during their pre-match routine and stated that they associated them with rugby.

"One of the first few lines "they have taken it from you" or something similar to that, then "Put your colours against the wall" and that just reminds me of rugby really, that's how I associate it."(Participant 2)

"They sing about people being against them and stuff and I can relate that to rugby, like its me against whoever is out there and I am going to beat them sort of thing."(Participant 6)

Two Particular players expressed their preference to external association by referencing songs prototypical to rugby;

"A song like Swing Low Sweet Chariot would motivate me more than any other music as of its meaning to rugby as I'm English, so music that has external meaning I find most influential."(Participant 14)

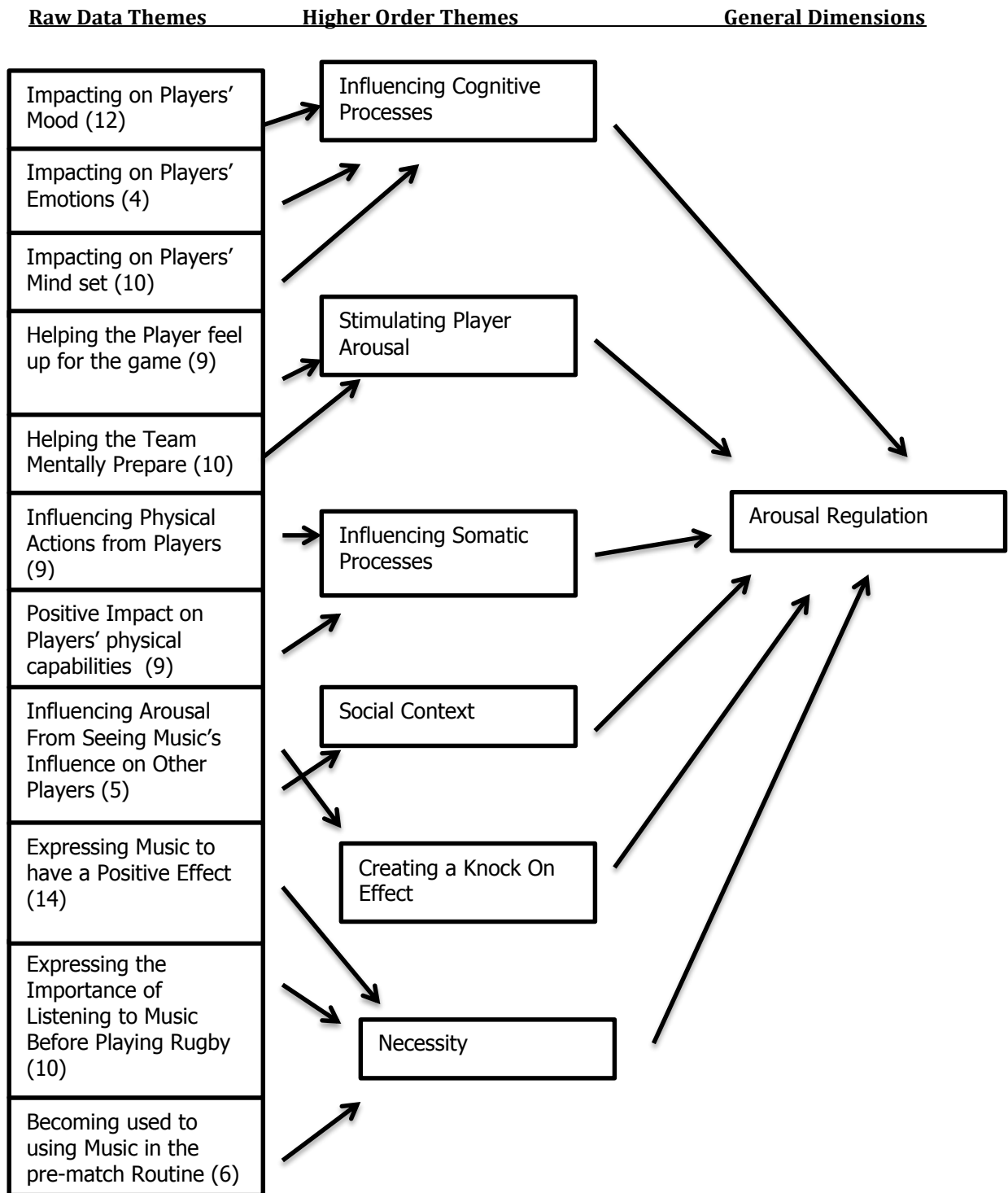
"If there is an external meaning to the song then I believe it will extrinsically affect players. Swing low sweet chariot is a perfect example as it obviously relates to our national team and the players would relate to this."(Participant 15)

(Please see Appendices A chapter 8.1.3 for further supportive extract analysis.)

4.1.3 Arousal Regulation

11 raw data themes and 6 higher order themes were identified that expressed a positive arousal regulation effect due to exposure from music with suggestions of action tendency (see figure 3)

Figure 3: Open coding themes 3.



The following extracts from the interviews express the themes in figure 3.

All but 1 player expressed some degree of positive arousal as a result of listening to music. A reoccurring idea was that the music substitutes the

awkward atmosphere that silence brings in the pre-match routine. It was expressed that music helps produce a positive atmosphere.

"On the big games if no music is played there is an awkward silence. If it's a big game there is tension and an awkward atmosphere, so there should be music on. There shouldn't be any awkward silence."

(Participant 4)

"Before the squad warm up I think I use the music to help me relax. After the warm up and before the team talk I sometimes feel myself mentally and physically jumping to the beat. As captain I also feel as though I need to say things to the players at this point and the music helps with not having any silences." (Participant 15)

A certain player admitted that the use of music rekindles past feelings for the team.

"It [music] stimulates people's feelings about previous matches so they know what's coming." (Participant 5)

It is very interesting that a number of players reported that even when they do not personally like the music, it will produce an effect as a result of the players being witness to arousal from other players.

"The music itself does not always work for me but when I see team mates getting up for the match from listening to music, like behaving

differently and getting a bit mad that can really help me get up for it."

(Participant 10)

"When people see other people getting fired up for it from the music that is on, they might not necessarily get fired up from the music that is on, but seeing someone get fired up from the music might influence them to put in a better performance." (Participant 7)

Psychological and psychophysical influences were continuously reported from the team as a result of listening to music. Furthermore, a number of players reported to feeling better prepared as a result of exposure to music.

"It just gets me psyched up in a positive frame of mind." (Participant 10)

"I definitely feel more prepared from listening to the music." (Participant 15)

(See Appendices A chapter 8.1.4 for further supportive extract analysis

4.1.4 Individualistic listening Requirements

17 raw data themes and 7 higher order themes were identified that

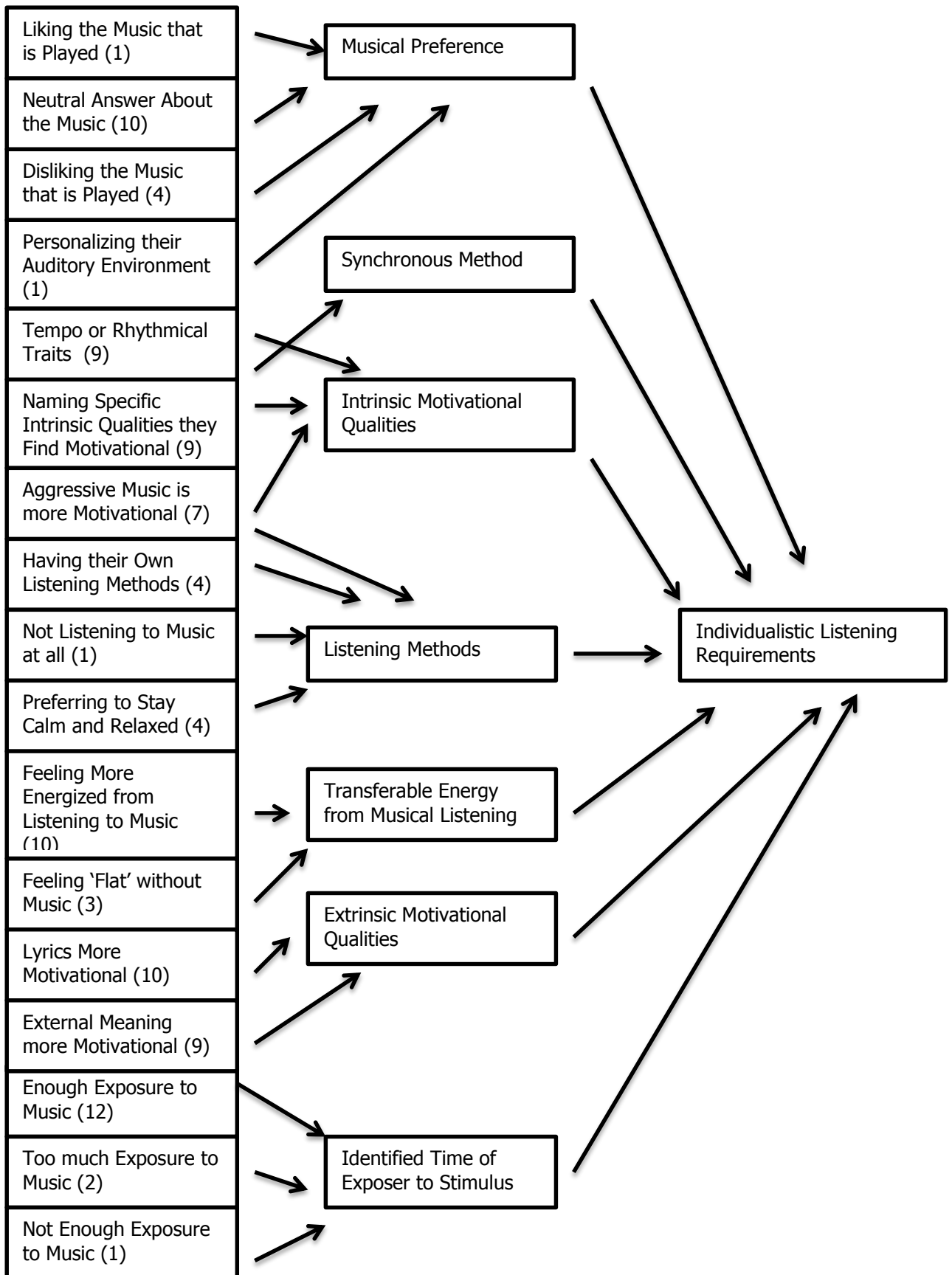
suggested the players have individualistic listening requirements (see figure 4).

Figure 4: Open coding themes 4

Raw Data Themes

Higher Order Themes

General Dimensions



The following extracts from the interviews express the themes in figure 4.

The interviews highlighted that the members of the team do have specific listening requirements regarding what makes a song motivational, as well as how they are exposed to the music. A number of players expressed that they may have established their own listening methods with regards to what they listen to and how they listen to it.

"I like to just sit in the corner with my hood up and my eyes closed. I like to be totally immersed in what I am doing. People sometimes come up to me or try to interact with me and I normally just try and get the interaction over and done with as soon as possible and then get back to zoning out."(Participant 12)

"Not everyone listens to the music that is put on in the changing room, some individuals use iPods or their phones."(Participant 14)

"I don't like something that I find difficult to understand then I can't relate to it. I like to sing a few lines of the chorus that helps you get yourself into it as well."(Participant 8)

"I personally like a mixed approach, predominately I like more atmospheric music or inspirational music/speeches. I like to feel directly motivated from the audio or slowly built up for a more atmospheric and deeper music genre."(Participant 11)

"I try and listen to music that inspires me before hand because I find you can hold on to emotions longer than you can from just being pumped up [during the match]." (Participant 2)

"Lyrics are really motivational, that mixed with the good beat do the job."(Participant 9)

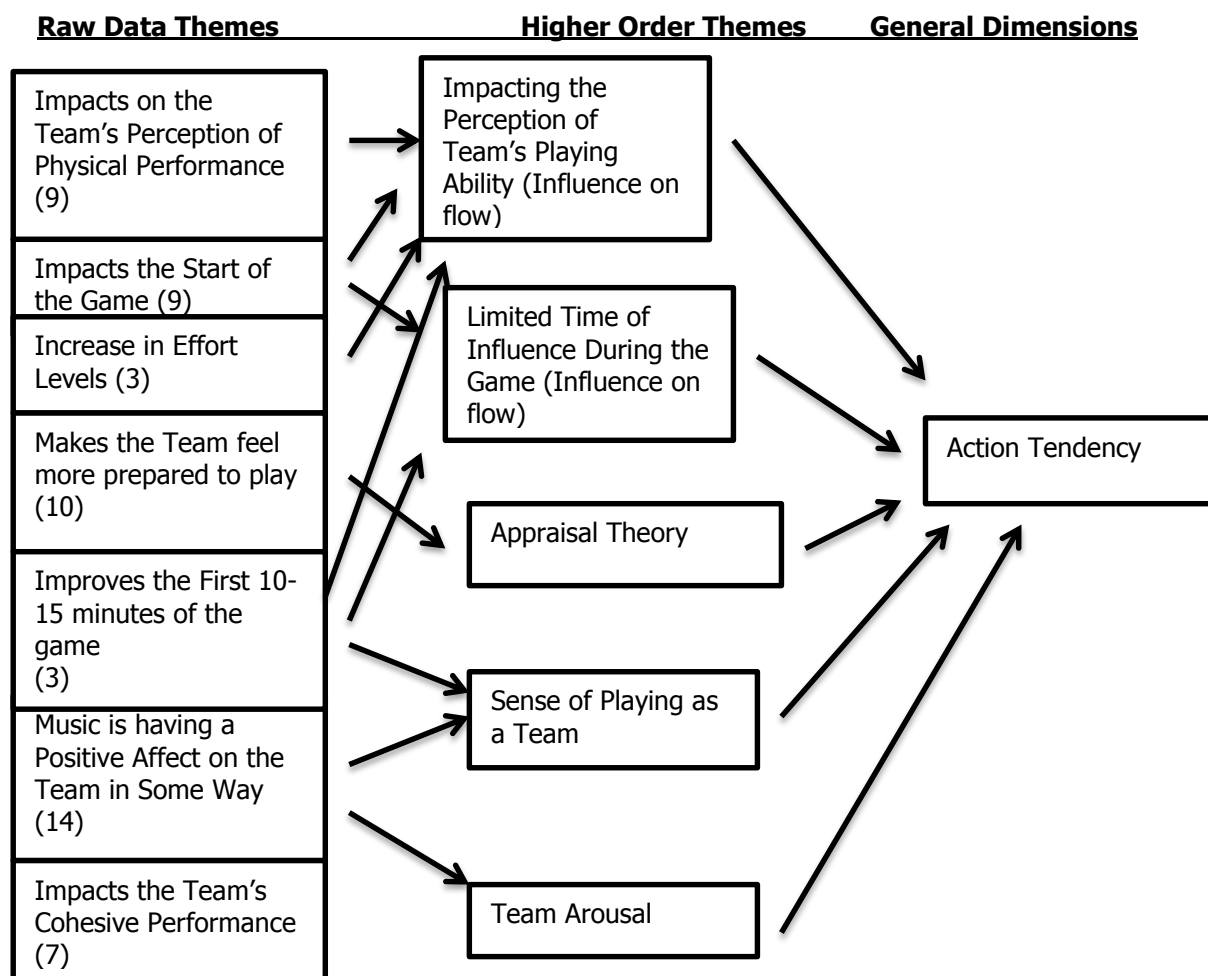
"I can't get myself motivated of off a slow beat, I need something fast, upbeat, something to get the body pumping."(Participant 7)

(See Appendices A chapter 8.1.5 for further supportive extract analysis.)

4.1.5 Action Tendency

Five higher order themes were created from seven raw data themes that suggested that exposure to music can produce an action tendency within the team (See figure 5).

Figure 5: Open coding themes 5



The following extracts from the interviews express the themes shown in figure 5. It was highlighted repeatedly that as a result of listening to music, players perceived an influence, most notably at the start of the match, with particular players subconsciously reporting the notion of an action tendency.

"It probably does for the first few minutes [effect the match]. But after that I don't think it'd have much effect because most people just use

the music for an initial burst rather than something that last over the entire game.”(Participant 12)

“Obviously if it is a very close match then I think it can increase up to 10% and that can be the difference between winning and losing.”
(Participant 9)

“I definitely believe music is a big help to us in the game, more so the first half and the start. Because obviously you do not have the use of the music in the second half of the game.”(Participant 8)

Players continued to report psychological and psychophysical effects during the game.

“Listening to music for me will make me more physical throughout the game.”(Participant 6)

“Yea I think it [music] definitely affects it [emotions] during the game.”(Participant 8)

(See Appendices A chapter 8.1.6 for further supportive extract analysis.)

4.2 Brunel Music Rating Inventory Data

Table 1: The below table represents how the participants rated the two songs. The ratings of thirteen different musical characteristics that were highlighted in the BMRI have been mean averaged to create one overall song score. The higher the number is it is suggested the more motivational they feel it is. The fifteen overall song scores have then been added up and mean averaged to give both songs a general overall team score, as to compare the difference to how motivational the team has rated them.

Song	Dizzee Rascal – "Bonkers"	Pendulum – "Hold Your Colour"
Participant 1	80	57
Participant 2	64	66
Participant 3	87	27
Participant 4	57	35
Participant 5	69	48
Participant 6	86	82
Participant 7	84	69
Participant 8	95	80
Participant 9	104	69
Participant10	85	70
Participant 11	79	74
Participant 12	48	35
Participant 13	112	76
Participant 14	83	68
Participant 15	93	50
Mean Average	81.7/130	70.3/130

4.3 Musical Analysis

The musical analysis focused on the two songs that were used for the BMRI task. The first was "Hold Your Colour" by Pendulum (2005). It was defined as the analytical object and will be referred to as the AO. It was compared to "Bonkers" by Dizze Rascal (2009). This was defined as the inter-objective comparison material and was abbreviated to the IOCM. The aforementioned abbreviations and definitions were used in Tagg's (1982) analysis of popular music. This analysis used notational transcripts to further clarify the points made. It must be noted that the transcripts are approximations and may be interpreted with minor differences. For the use of this analysis; the term syncopation, is identified as a minor displacement of a regular musical accent and may be represented by the use of a weaker accented note or beat within a sequence or groove, such as the drum groove. Furthermore, a bridge is identified as a short interlinking musical section that often connects other sections, such as, the verse and chorus.

4.3.1 Checklist Of Parameters Of Musical Expression

This analysis focused on three areas of the compositions. These included: (i) Aspects of time i.e. tempo, duration of sections, rhythmical texture and metre. (ii) Aspects of tonality and texture i.e. harmonic rhythm, chord alterations, compositional texture and method and relationships between the voice and the instrumentation. (iii) Dynamical aspects i.e. levels of sound, accentuation and audibility of parts (Tagg, 1982).

4.3.2 Establishment Of Musemes By Means of Inter-Objective Comparison

The AO plays in the key of G minor and has a tempo of 174 BPM (approximation). The IOCM plays in the key of Ab Minor (appears to modulate to E minor) and has a tempo of 130 BPM (approximation). Both songs play in a 4/4 (common) time signature. However, it is arguable that there are musical qualities used in both songs that may considerably alter the overall listening experience that is perceived by the audience, with regards to their perception of the songs tempo. Thus, possibly having an impact on how motivational a person may find them within a sports setting.

The first point of consideration is the initial impact that the songs have. As it is within these first measures that the listener may begin to subconsciously make judgments, with regards to how motivational the intrinsic and extrinsic qualities of the music is to him or her. The AO's tempo of 174 BPM could be considered as being *Vivace* (lively, fast). However, the introduction of the song delivers musemes by way of musical-qualities that will arguably influence the listener to perceive the song as being slower than this.

Figure 6: Below are the first eight measures of the AO (approximated) that show a synthesizer playing in conjunction with an effected vocal line that provides the section's melody.

Intro

p soak ing through hold your

(approximate rythm)

P

5

col our a gainst the wall soak

P

The introductory eight measurers offer a number of interesting points to consider. First, the synthesizer is played with a delay effect and using a syncopation technique that performs off-notes. This contributes to the overall rhythmical texture of the song and can be seen in figure 8.

Figure 7: Synthesizer performed with a delay effect (approximated).

(approximate rythm)

P

However, this part is played in conjunction with the opening vocal line. This vocal line begins on the first measure before the synthesizer begins. This acts as the leading instrument and takes dynamical and rhythmical dominance within the mix of the song, and so it is arguable that the listeners' attention will be fixed on the vocal section and the feeling it creates. Figure 8 shows

the opening lyrical phrase of the song.

Figure 8: Opening lyrical phrase (approximated).

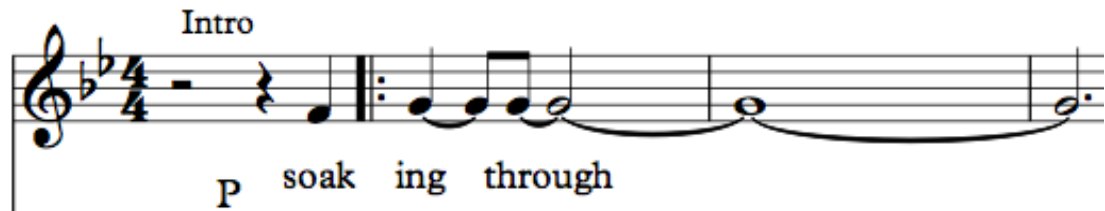
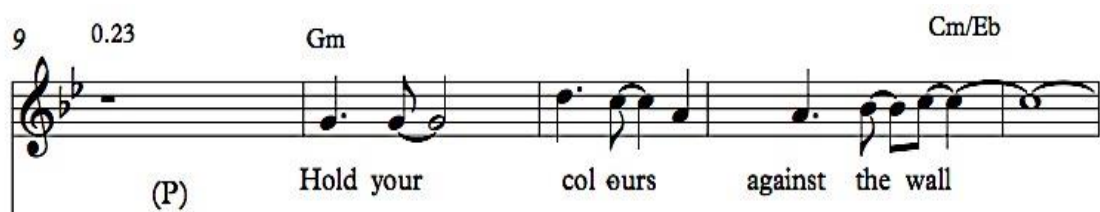


Figure 8 shows the vocal line between the measures 1 and 5. The manner in which it is performed is represented by the use of semibreve and minim note worth. This will inevitably influence the listener to perceive the deliverance of the opening vocal line as being slow due to single words being performed across whole measures as opposed to performing words as crochet or quaver notes on each beat of the bar. This is regardless of the syncopated synthesizer as the vocal section acts as the leading instrument. This therefore influences the overall perception of the song to be slower in nature. This compositional technique continues as the song progresses, which is highlighted in figure 9.

Figure 9: The vocal section of the AO between measures 9 and 23 (approximated).



14

Gm

When they take every

20

Eb

thing a way

Measures 9 to 23 of the AO highlights that the vocal section is delivered using minim and semibreve rhythmical timing and shows the use of a melodic contour wave technique as well as accentuation of a sustain and slow decay on the single lyrics 'Wall' and 'Way', with the lyric 'Way' having a duration of 12 beats (3 semibreve notes). This would influence the listener to perceive the vocal lines slow deliverance. Furthermore, this point is further accentuated by the fact that there is a delayed guitar playing a single note progression using G, B, C with semibreve and minim note values, which also have a sustain resulting in long decay. The guitar and vocal also use a dynamical level of *piano* (*P*, softly).

This opening section of the AO is almost void of a prominent rhythmical instrument (besides very minimal cymbal taps) such as either the drums or a percussive based source for the listener to synchronise to. With this considered, the listener will use the rhythmical influence of the vocal section as the element to synchronise to, as it is the leading instrument within the

opening 23 measures of the song. Consequently, because it is the leading instrument and is performed with a slow deliverance the song may be perceived initially as slower than 174 BPM.

To further understand this notion, the vocal technique that is heard in the AO shall be compared to the one in the IOCM.

The AO between 0:24 -0:57 over 24 measures;

*"Hold your colours against the wall
When they take everything away
Hold your colours against the wall, with me"*

The IOCM between 0:20- 0:41 over 24 measures;

*"I wake up everyday it's a daydream
Everything in my life isn't what it seems
I wake up just to go back to sleep
I act real shallow but I'm in to deep
And all I care about is sex and violence
And a heavy bass line is my kind of silence
Everybody says I got to get a grip
But I let sanity give me the slip"*

*"Some people think I'm bonkers
But I just think I'm free*

Man I'm just living my life

"There nothing crazy about me"

A comparison of the vocal techniques highlights a very interesting point. The AO performs 19 words across 24 measures and the IOCM performs 90 words across 24 measures. The AO performs its vocal part with a melodic technique that uses semibreve and minim note worth. In comparison, the IOCM uses a rap style vocal technique that performs quaver and semi-quaver note worth i.e. much shorter note duration and considerably faster and livelier. Furthermore, figure 11 shows the use of syncopation used in the vocal technique in the IOCM. This syncopation accentuates the songs tempo and makes it feel much more energetic than the opening 23 measures that are heard in the AO due its slower melodic vocal style.

Figure 10: syncopated vocal technique (approximated).



Therefore, from comparing vocal techniques, a person may perceive the IOCM as initially being faster than the AO. This is interesting considering the AO is 174 BPM and the IOCM is 130 BPM. However, there are other instruments and sections heard in both songs. On the second measure of the IOCM, a full groove using the drums begins, which can be seen in figure 11.

Figure 11: The groove that is performed in the first 5 measures of the IOCM (approximated).



The groove that is seen in figure 11 plays with a *mezzo forte* dynamic level (moderately loud) and uses an alternating snare and bass drum pattern that performs crochets notes on each beat of the measure. However, the hi-hat can be seen to be used to great effect here. The quaver that is performed on the *and'* of the second and fourth beat of each measure stresses an off-beat. Furthermore, between the first and second and the third and fourth beat, semi-quavers are performed on the hi-hat which establishes syncopation within the groove.

The groove is simply playing crochets on the bass drum of each beat. However, as a result of the syncopation and the off-beat that is created by the hi-hat, the groove has a livelier and more energetic feel. A person might perceive the groove as energetic, as it accentuates the songs tempo.

This initial groove only lasts for the first 5 measures of the song and accompanies a high-pitched electronic sound effect that creates a dynamical crescendo. This then abruptly ends for the main harmony to begin, which is played on an effected synthesizer. However, the aforementioned vocal section then replaces the initial drum groove as the dominant rhythmical source, as it

is established as the leading instrument within the song. Thus, the accentuation of the song's lively tempo can continue, plus any synchronisation that the listener has with the rhythmical qualities of the song.

As the IOCM progresses, there is what can be considered as the bridge section, with the vocal and drums playing in conjunction with each other. This can be seen in figure 12.

Figure 12: Syncopated vocal technique that is played with a marching style drum groove (approximated).

17 Extract 2 0.35

The image shows a musical score for a vocal line and a drum groove. The vocal line is written in a treble clef with a key signature of three flats (B-flat, E-flat, A-flat) and a 7/8 time signature. The lyrics are "some peo ple think I'm bon kers but I just think I'm free". The drum groove is written in a bass clef with a key signature of three flats and a 7/8 time signature. The drum groove consists of a steady pattern of semi-quavers on the bass drum, with a snare drum playing a pattern of eighth notes. The vocal line is marked with a forte (F) dynamic.

F some peo ple think I'm bon kers but I just think I'm free

Figure 12 shows the vocal playing in conjunction with the drums and represents a particular musical relationship between the instrumentation. Here the drums are performing a marching style groove that uses semi-quavers to create syncopation as well as using crochets that are performed on the bass drum to each beat to maintain the pulse of the tempo. This groove does not deviate for the 8 measures that it is accompanying the vocal. In these eight measures, the listener will establish the vocal section as the leading instrument, as it is alternating while the drums do not. Furthermore, the drums are performing semi-quavers that accentuate the tempo of the

song in conjunction with the syncopated vocal style that further elaborates its lively feel. This produces an overall dynamical crescendo to *forte* (*F*; Loudly).

On the 40th measure, the main section of the song begins i.e. the introduction has ended. From considering figure 13, it is clear that the aforementioned rhythmical qualities continue. The off-beat syncopated drum groove is still performed with the vocal still acting as the leading instrument. The amount of syncopated quavers and semi-quavers that are performed in the vocal section, in the space of 4 beats, highlights the lively feel that the song has. This suggests that the song is very much driven by its rhythmical characteristics as apposed to melody and would undoubtedly be the main point of interest for the listener, as the main rhythmical source (vocal section) is also the leading instrument. Consequently, the listener will be able to synchronise with the rhythmical feel of the song with ease and have a clear perception of the songs lively tempo of 130 BPM.

Figure 13: The main groove and vocal accompaniment in the IOCM (measure 42 and 43, approximated). Note the amount of quavers and semi-quavers that are performed in the vocal part within 4 beats that accentuate the song's tempo.

The image displays musical notation for measures 42 and 43. The top staff is a vocal line in treble clef with a key signature of one sharp (F#). The lyrics are: "thin in my life aint what it seems I wakarup just to go back to sleep I acreal". The bottom staff is a drum groove in bass clef, featuring a syncopated pattern of quavers and semi-quavers with 'x' marks indicating drum hits.

In comparison, the AO does not have a prominent rhythmical feature until the main full groove begins, which isn't until the 24th measure and at 1:06 minutes into the song. The full groove and vocal section can be seen in figure 14.

Figure 14: Vocal section and full groove in the AO, measures 25-27 (approximated).

The image displays two staves of musical notation for measures 25-27. The top staff is a vocal line in treble clef with a key signature of one flat (Bb). The lyrics are: "now op en up your eyes I twis ted in the knife now op en up your eyes". The bottom staff is a guitar line in bass clef, featuring a distorted progression of chords: G5, Bb5, and C5. The notation includes various rhythmic values such as eighth notes, quarter notes, and rests, with a dynamic marking of (F) for forte.

A comparison between the vocal techniques in each song's main sections highlight that the IOCM is much livelier and busier than the AO. However, the full groove of the drums that are used in the AO at 1:06 fully accentuates the songs tempo of 174 BPM. With this considered, and with the aid of the vocal line and a distorted guitar progression of G5, Bb5, C5; it in turn produces an overall accumulation of dynamics to *forte*.

This comes from the use of a off-beat drum groove (see figure 14). Figure 14 shows that the hi-hat performs quaver and semi-quavers between the second and third beat in fast succession, with the use of a off beat crochet played on the bass drum. In retrospect, this groove fully accentuates the songs tempo

and helps produce an overall dynamical crescendo within the song. This section shows much more noticeable rhythmical activity that makes the song considerably more powerful, both rhythmically and sonically than its aforementioned introductory section.

Please see appendices A, chapter 8. for further musical analysis-

Chapter 5: Discussion

This research suggests that particular aforementioned theories do relate within competitive team settings. This includes the idea that music can alter an athlete's emotional perceptions (Bishop and Karageorghis, 2009; Priest, 2003) and that it can influence a positive impact on their general mood state (Karageorghis and Priest, 2007; Sloboda, 2001). It supports past theories that this process can influence an individual's perception of physical work rate (Markman, 2012). This is arguably due to an action tendency that is related to the appraisal theory (Frijda, 1999; Karageorghis and Terry, 2009) and improved flow state at the beginning of the match (Pates *et al.*, 2003) as a result of musical exposure.

Robazza *et al.* (2004) recommended that further intervention strategies should be investigated within arousal regulation methods. In this study, the majority of the players reported that they do feel more prepared to play after musical exposure and expressed psychological and psychophysical arousal

influences. Furthermore, the interviews suggest that listening to music within a team setting does produce a greater sense of cohesiveness amongst the team, with an arguable sense of identified regulation (Ratelle and Vallerend, 2002) and improved team atmosphere (preparation). This supports the suggestion made by Karageorghis and Preist (2007) in that music can reduce tension and induce positive aspects of mood related to team settings. Therefore, it identifies the importance of cultural consideration within research that is concerned with music (Frith, 1996), as it was suggested by the team that the shared experience of listening to music together produces this feeling.

The majority of players felt that from listening to music during the pre-match setting, it has a substantial impact on the team's overall performance, with the beginning of the match being the most identified time of influence. This supports past research in that music can impact a player's flow state (Pates *et al.*, 2003) and the theory that music is a potent inducer of arousal regulation (Karageorghis and Preist, 2007). However, the players did stress that this perceived impact is limited. This supports Robazza *et al.*'s (2004) caution that the influence from arousal regulation can be limited, with players reporting that external situations during the match replace their attentional focus that causes the potential arousal effects from music to subside.

Crust and Clough (2006) highlighted that results concerning asynchronous music investigations have been equivocal. This study supports past research

(Elliot *et al.*, 2004; Pates *et al.*, 2003; Szabo *et al.*, 1999; Thornby *et al.*, 1999) in that asynchronous music can have a credible impact on an athletes' psychophysical cues (physical work rate) by way of an emotional response to the music. However, this research suggests that it has a brief effect within a competitive team setting due to the athletes not continuously being aroused by music; which supports past theories regarding the brief impact of emotions (Sloboda, 2001). This eradicates the possibility of dissociation due to the lack of synchronisation with the music.

This study looked to address past noted limitations (Bale and Bateman, 2009; Snyder, 1993) regarding the lack of musicological consideration within studies of this nature by using a musicologically-focused analytical method. This research identified musicological findings that can be related to personal performance and findings related to team performance.

Particular players highlighted how they and other team members have their own preferred songs and methods that they use before a match, as well as differences as to what they find motivating in music regarding intrinsic and extrinsic variables. The results suggested that music with strong intrinsic rhythmical qualities can have a credible impact on personal arousal. This was further supported by the BMRI results, where players noticeably rated rhythmical traits, including tempo, as being more motivational than any other musical quality on both songs. This is interesting, as the musical analysis highlighted that both songs show strong intrinsic qualities. This supports that

rhythm is a leading arousal quality in music (Juslin and Laukka, 2001) and supports Karageorghis and Terry (2009), who in their review, highlighted that strong rhythmical qualities are a prominent feature within music that could impact an athlete's performance and who placed rhythm response at the top of a proposed hierarchy above extrinsic motivational qualities.

However, the musical analysis identified that particular performance techniques can considerably alter the perception of a composition, something that was highlighted in past literature (Sloboda, 2001; Meyer, 2001). The analysis identified that syncopated rhythms can considerably alter an individual's perception of a song. This is supported by the fact that the AO at 174 BPM is faster than the IOCM at 130 BPM, but has had its rhythmical qualities rated as lower motivationally than the IOCM due to a syncopated musical technique accentuating the IOCM's tempo. Furthermore, the analysis identified that sustained notes using semibreve and minim note worth, such as the vocal section in the AO, can influence the song to be perceived as slower, which links to the aforementioned theory that frequencies with long decay exhibit less musical energy (Davies *et al.*, 2002).

The analysis identified that dynamical alterations, such as crescendos, can accentuate particular relationships between instruments and can force the listener's attention onto the leading instrument. Consequently, this can in turn produce the said perceptive alterations such as a syncopated rhythm that can accentuate the tempo. It was identified that vocal techniques can act as the

lead rhythmical influence such as the rap technique heard in the IOCM. This supports the earlier contention that past research (Elliot, 2007; Karageorghis *et al.*, 2009 etc.) could have further explored musical variables within their research.

This research supports that it is problematic to not consider musical possibilities that could alter how and why the listeners perceive the songs they are hearing, as the analysis used in this study has identified that a song at 130 BPM could be perceived initially as faster than a song at 174 BPM. This is interesting as it could link to the theory that 120 BPM is a person's optimum frequency of rhythmical perception (Schneider *et al.*, 2010) as 130 BPM is considerably closer to 120 BPM than 174BPM, and was rated as more motivational. However, this would require further investigation.

The BMRI results suggested that being familiar with a song can enhance how motivational it is. However, the interviews suggested that the social context of the listening environment can override personal favouritisms, with particular players reporting that within the pre-match team setting, they do not need to personally like the song, and that the shared listening experience with the team can act as an arousal tool. Furthermore, 10 players reported to finding lyrical meaning more motivational than intrinsic qualities such as rhythm, and 9 players reported that within a team environment, the extrinsic qualities of music have a greater impact, with prototypical and film music examples being highlighted.

This finding supports that if the players can associate the music with the sport they are playing or has personal meaning to them, then it can have a credible impact on the players' cognitive arousal. This suggests that the aforementioned proposed hierarchy (Karageorghis and Terry, 2009) that placed extrinsic qualities secondary to intrinsic qualities may need to be re-considered when concerned with team settings. Nevertheless, the BMRI results suggested that the players favoured intrinsic qualities over extrinsic within the two songs, and rhythmical qualities were repeatedly reported as being a motivational quality in music in the interviews. This identifies that there is a noticeable tension between the facts that on a personal level, intrinsic qualities seem to be favoured, although within a team setting extrinsic qualities are favoured.

This research has produced a number of applied implications for competitive team settings. Coaches could use music within the teams' pre-match setting to aid their sense of preparation. The question of what to play may be clearer now as a result of this research. It would be very difficult find songs with intrinsic musical qualities that every team member favoured, something that was clear from the interviews. However, this research suggests that it would be more effective to play a song with extrinsic qualities related to the sport that it is used in, as all the team members would relate to it. Thus, it would arguably have a greater impact.

Chapter 6: Conclusion

This research has presented a number of valuable findings that can be used within future research. It suggests that the use of a musical analysis can highlight more particular musical qualities that are important to the outcomes of sports science research that is concerned with music. Future research needs to continue to consider more in depth musical variables and cultural aspects of the setting before making generalisations based on music used in a sport setting.

Also, the research suggests that if asynchronous music is played within a team setting before a competitive rugby match, it can impact on the sense of team unity due to a shared experience within the team. This is identified as an extrinsic factor as a result of listening to music as a team. As a result, this may influence a sense of identified regulation within players and produce an action tendency and a greater physical work rate for a limited duration of the match. Furthermore, this research highlights that when concerned with team settings, there is a tension between the intrinsic and extrinsic qualities of music regarding what is considered more motivational. This research presents the theory that intrinsic musical qualities, such as rhythm, are favoured amongst athletes on a personal level that can produce an arousal response that has, in past research, been reported. In spite of this, it also presents a valid argument that in preparation for a competitive match within the social context of a team setting, it is the extrinsic qualities of music that will have a considerable impact on arousal and sense of cohesion of the team as opposed

to singular athletes; something which could be considered as much more valuable in a team context.

Future research needs to further explore and clarify this theory between intrinsic and extrinsic focused music used in pre-match routines of team settings. It would be very useful to identify if there is a noticeable difference between how elite level and amateur teams use music, as there would be many more external variables for elite athletes to consider. Furthermore, musicological variables need further consideration such as considering 1st, 2nd and 3rd degree listeners in research of this nature. Sports science would considerably further its knowledge in this area if it were to consider working with musicological authorities in future research, as well as musicology needs to consider sports science based avenues for research.

It should be noted that this research focused on a level 6 amateur rugby union team and has neither considered professional, nor elite level athletes as well as other sports, therefore identifying a limitation of this research. A second limitation is that this study focused on one team and the opinions of other teams may be different, as well as their listening methods. Consequently, this study focused on two particular tracks from the popular music domain. There are many different kinds of music that have not been considered.

The reports acquired from the players represent the possible alterations that music is capable of having on players' perceptions of sporting performance

when in a team setting.

Finally, it explored non-laboratory based research and so holds ecological validity. It would arguably be difficult to administer findings from testing and laboratory environments on real life sports settings, because there would then be a number of very important variables that would have a serious influence on the athlete that would not have been present during the laboratory setting, such as, team mates, event preparation, the pressure to perform, the weather etc. This research was based on a real life competitive team setting and so expresses a direct representation of a realistic environment and occurrences.

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7.1 Reference List

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Chapter 8: Appendices A

8.1 Interview Extracts That Support The Aforementioned

Findings in Chapter 4

This chapter includes statements from the interviews with the players. These examples identified the themes that were highlighted in chapter 4.

8.1.2 Team Cohesiveness And Unity

The following statements suggested that the team did identify that music has a noticeable impact on their sense of cohesiveness and unity. There were a number of players that highlighted music to have the ability to produce a motivational atmosphere during the pre-match setting. Furthermore, particular players reported to feeling more prepared and focused to play rugby as a result of listening to music.

"I think music helps. I think if you get a good track and collectively there all good tracks then we all get into the atmosphere more than sitting there silently. It really helps us prepare together." (Participant 6)

"I feel music can help bring the team together." (Participant 14)

"Some people really like it [music] and ask what it is. I think overall it's got a good vibe about it and everyone enjoys it so really helps getting us together."(Participant 7)

"Yea I think it's important and helps us get together more beforehand."(Participant 4)

"I think sometimes it's hard, some people don't know what to say, some people don't do the whole screaming and shouting before a game. So having that music there allows them to not sink into the background but gives them something that they can get hyped up to, instead of thinking should I be shouting, should I be stamping my feet. Having that music on brings everyone in."(Participant 2)

"I do think since we have started to introduce music at the start of the games it has helped the team become more focused definitely."
(Participant 8)

A player expressed that music enhances their pre-match routine while another expanded on this and expressed that it stops conversations that are irrelevant to the match.

"The music makes our pre match routine better."(Participant 15)

"The music gets rid of idle chit chat and if you have the right motivational stuff with the right lyrics it gets everyone up for it and we come together as a team instead of individuals."(Participant 2)

It was interesting that the players reported that music had a further motivational purpose due to the shared listening experience with teammates. There were reports that music helps them to produce particular emotions, with one player highlighting the idea of emotional recall. This suggests the impact and importance of the social context of listening environments within research of this nature.

"Your friends are listening and your team mates are listening you know that you're feeling the same emotions at the same time. And you sort of feel like you're all charged at the same time, you feel part of a unit."
(Participant 8)

"I do feel there is a certain level of a combined motivation when a group of team mates listen to music together, they do become influenced of each other."(Participant 11)

"I have seen it [music] have a positive impact. The manager has put together the play list and it was the same every week, so it stimulates peoples' feelings about previous matches so they know what's coming. It's a routine, it's something that everyone is happy with, tempo, beat

and familiarity wise and that really helps the sense of togetherness within the team.”(Participant 5)

The team captain commented on the teams’ use of music as a pre-match tool and confirmed how important music is to their preparations.

“I truly believe that music has a positive impact on players’ mental and physical state, preparing us for the pre match warm up and team talk before the game. It is now a key feature in our pre match preparations.”(Participant 15)

“When we have not been able to play music due to facilities not being available. For example, at one away game we set up the speakers and then someone from the away side must have cut the power. It just doesn’t feel right without the music in the changing rooms. I suppose it is something we have become used too.”(Participant 15)

The team captain finished with this statement to summarise their use of music.

“I think the music is now part of our pre match preparations to the extent that it is just as important as the physical warm up.”
(Participant 15)

8.1.3 External Association

The following statements from the interviews suggested that the team favour music that the players can relate to. This suggests that music with extrinsic connotations that are personal to the individual, or relate to the sport that the individual is playing, does produce strong ergogenic effects. Thus, within the social context of a team environment, extrinsic qualities of music may have a greater impact than music that has a fast tempo and strong rhythmical traits.

"If you can relate to it [music] it's much more motivating." (Participant 4)

"If it [The music] is associated with rugby than I will be more up for the game." (Participant 5)

"There is a song that I know that I have listened to in the past for rugby, if it is associated with rugby than I will be more up for the game." (Participant 5)

"Being able to relate to the song is probably most important thing before a game." (Participant 9)

"You can relate things to the music cant you, like things in the past and things like that so it can definitely help out with it and get your mind set and mood better than it was." (Participant 9)

"I do find lyrics motivational as well if it's the right subject obviously, if I can relate it to sport somehow then it can help."(Participant 7)

The external connotations that are linked to film music were highlighted as being motivational.

"Song such as the "Rocky" theme song are very cliché in suggesting motivational songs but in answering this question I think it is a good example. This song instantly installs the plot of the film and how through the ups and down, hard work and determination result in success. I think the best songs are those which players can relate to in either having heard the song before or even better if the song is related to a successful experience."(Participant 15)

"It can do if it's got associations with films and stuff that you have seen, it's cheesy but the "Rocky" theme, "Rocky 3" and "Eye Of The Tiger". It's cheesy but it works."(Participant 5)

Players frequently mentioned the importance of lyrical content and that being able to relate to the content makes music more motivational.

"I think lyrics that are related to competition or being an underdog or striving for something, think it's decent to listen to that sort of stuff, if

it is about someone being beaten and getting back on top I think that works.”(Participant 6)

“Yea I would definitely say that lyrics are more influencing then a fast beat.”(Participant 6)

“I think if people listen to the lyrics than it might speak out to different people in different ways.”(Participant 7)

“I like things by Eminem or a few rock bands. Their lyrics are normally quite confrontational, which obviously is beneficial for playing rugby. It fires me up to be much more aggressive and in people’s faces than I would be otherwise.”(Participant 12)

A particular player stated that he uses music to inspire himself before the match. He also mentioned that he believes he can use this more effectively within the match as opposed the just being “pumped up” by what could be suspected as the effects of arousal from intrinsic qualities.

“ I try and listen to music that inspires me before hand because I find you can hold on to emotions longer than you can just being pumped up.”

(Participant 2)

8.1.4 Arousal regulation

The following statements from the interviews suggest that the players do experience arousal effects as a result from listening to music as part of their pre-match routine. There were numerous reports of both a psychological and psychophysical influence.

"When listening to music in the changing room I can feel the effects more so I become more animated and generally more responsive to the music. I would say it makes me feel more psychologically up for it and my physical behaviour probably reflects this." (Participant 11)

"It just gets me in an aggressive mood. I listen to the lyrics of the music more than the pace and tone. Emotive language etc. fires me up and gets me in the right frame of mind for what I'm about to do which obviously is something who have to be aggressive about." (Participant 12)

"From a more mental side I think it [music] helps to get the team fired up and pumped. I definitely think certain individuals in the team respond a lot better to being fired up definitely. And music does help to do that, I have noticed a massive difference in some players cause it really takes a lot to get them going but now it's noticeably different." (Participant 8)

"I genuinely believe it motivates me mentally and helps me get the right attitude and improves my physical preparation for games."

(Participant 15)

"I feel like I can do a lot more [physical work] with the music on than with the music off. It just puts me in a mental state of concentration."

(Participant 7)

"It definitely affects my mind set and mood, I like to listen to certain things on the way to the game. So it's normally loud stuff I go for, for me it slips into a routine so I have certain songs I like to listen to. Such as, Rage Against The Machine, Slipknot. It builds me up and helps me prepare my mind set for the game and helps me focus."(Participant 3)

"Music is important for the team, as certain individuals must get something out of it as they always listen on their iPods before a game. I feel that anything that helps an individual player helps the team."

(Participant 14)

Particular players reported to not being as able to participate in the match without the use of music, while others reported that music has a considerable impact on their ideal mental state, focus and personal preparation for playing.

"Because it is in my routine it [music] does build me up and it does prepare me for the game."(Participant 3)

"If I am not up for a game then I am not very physical and music helps me get to that level."(Interview 6)

"Yea it [music] channels that mood into rugby. It makes me realize that I am about to play rugby, like be physical."(Participant 1)

"I try and use it [music] as a tool to get me to a level I feel I personally need to be mentally."(Participant 8)

"I feel music helps me focus and get my game head on. I believe music prior to the game creates the right mood in the changing room. I think it not only helps players relax but also increase arousal levels in the right way for playing."(Participant 15)

"I can't obviously speak for everyone, but my personal opinion and from seeing everyone else and how often it's [music] used, I reckon it has a massive affect. I wouldn't be able to play rugby the same or be hyped up for it. I would feel a bit soft."(Participant 2)

"I would just struggle to get up for a game without listening to music."
(Participant 6)

A player reported that the team had sub-consciously taken ownership of songs in the past and that it rekindled past memories and emotions to represent previous efforts when they are exposed to it.

"We had a song that we played at the end of season meal that meant a lot because it represented our entire season. If you played that song now it puts everyone in the right mind set."(Participant 2)

Players did report to being aware of the noticeable influence that music has on fellow team members during the pre-match routine.

"Everyone one is just quiet getting their own shit together which can be a bit boring and music changes that and makes everyone seem up for it."(Participant 10)

"It definitely changes some people's behaviour. I like to think I'm quite mild mannered but when I put my music on ready for rugby I don't think I'm very nice to be around. Some people go to a whole new level though. One of my very good friend of a number of years head butted me in the changing room before a cup final a few years ago after having his music in before the game."(Participant 12)

"Music that has that aggressive beat and lyrics can sometimes bring the hairs up on the back of your neck, which at the time feels like a small release of adrenaline."(Participant 14)

A particular player reported that music can have such a credible impact that he felt it can be more influential than someone speaking e.g. the captain or coach.

"I think music, if you use it right, is a bigger motivator than someone speaking. A lot of people find it can get them a lot more motivated."

(Participant 2)

8.1.5 Individualistic Listening Requirements

The following statements from the interviews suggested that the players, although perceiving effects from listening to music as a team, do have individual requirements with regards to what they perceive as motivational qualities in music. A player admitted that it was the atmosphere that music can create amongst the team that makes it most motivational. This suggests that the consideration of the social context of the listening environment is important for research of this nature.

"For me personally I've always been effected more by the atmosphere music can create. I like a song that builds slowly, has a solid rhythm. I suppose a song that is layered well and goes into quite a deep state, sometimes a completely instrumental song. I wouldn't say lyrics are a necessary ingredient to a stimulating song." (Participant 11)

Rhythmical characteristics such as a fast tempo were reoccurring musical characteristics that were highlighted within the interviews. This suggests that

on a personal level, to particular players, intrinsic rhythmical qualities are important variables to music being motivational. This identifies that there is a tension of what is favoured amongst the team between intrinsic and extrinsic characteristics.

"As long as it's fast paced and up there then it will get me in the zone a bit. If it were slower then I would feel a little bit lethargic about it."

(Participant 7)

"When the song ["Hold Your Colour"] dropped the tempo of the song was really high, gets me in the mood to play, gets my head bobbing and gets me into the beat of the song."(Participant 1)

"It's got to be upbeat hasn't it. It has to be fast otherwise you slip into relaxation."(Participant 5)

"For me it's high tempo, lyrics don't really do that much for me, just something that will get the blood going a bit."(Participant 10)

"Lyrics are important but a good tempo and rhythm really help physical and mentally wake me up and help me prepare."(Participant 8)

"A bit of Rock, a bit of dance, something that is a bit heavier, a bit more tempo to it. I wouldn't listen to anything if it was slower; the

slowest I would go is probably Eminem "Loose Yourself." (Participant 7)

"The song that is played before kickoff is the song that gets me in the mood, a song with a fast tempo gets me pumped feeling aggressive and ready to go out and play rugby." (Participant 1)

"I just imagine myself in that changing room environment. I personally feel your looking for a raise. You are looking for something to stimulate you, like imagine your heartbeat as that beat. I want something fast and something to get me pumped basically." (Participant 7)

To further elaborate this notion of a tension between what is considered more motivational between intrinsic and extrinsic characteristics, particular players continued to highlight that they perceived extrinsic focused musical qualities as motivational. However, a number of players highlighted a mixture of the two and declared musical qualities from both areas as being motivational.

"If I was to choose music to listen to before a game it would be the Rocky tune or "Eye Of The Tiger" and some Guns And Roses just because it has a more aggressive beat to it, and lyrics." (Participant 14)

"I personally prefer to listen to music that has more of a meaning to it, but music for there an then in the changing room to get you buzzing for the game then yea a good tempo can aid that."(Participant 11)

"Stuff that has personally affected me in the past, it does not necessarily have to be fast it could be something slow but means a lot to me. I like these recent ones where we have a motivational speaker and a nice beat behind it."(Participant 2)

A small sample of the team highlighted that they preferred to stay calm and that music that is too fast or too loud acts as a negative distraction rather than a positive motivational tool.

"Some people do their own thing, some listen to music in the background. I personally don't listen to it. The nearer it gets to the game I try to get it as quiet as possible and don't listen too much."
(Participant 3)

"I would rather have something slow that I can sit and bob my head to really slowly so I can relax myself and think about what I am going to do."(Participant 6)

"Sometimes when it is too heavy or too dancey then it just distracts me."(Participant 6)

One stand-alone player out of fifteen admitted that he did not find music motivational and does not use it during the pre-match routine.

"I don't use music and never have as a motivational tool so I'm not sure, it doesn't have an effect on me."(Participant 13)

8.1.6 Action Tendency

The following statements from the interviews suggested that players did perceive an overall influence on the team. The notion of an action tendency was frequently highlighted with the idea that musical listening is impacting on the teams' perceptions of physical performance and mental preparation, linked to in-task motor skills. Players frequently highlighted that the start of the match is the most noticeable period of affect; some were more specific and gave time frames for how long they felt the effects last.

"I'm not sure if you could say the music has a holding affect beyond preparing us for the game and the initial ten minutes of the game. However, if music better prepares us for the game we will start the game to the best of our ability, which will then have a holding affect on the rest of the game. This links to our confidence and self-belief, if we start well we are probably more likely to do better at scrums and mauls."(Participant 15)

"Yea I think people are going to have a better game in my opinion, that lifts the whole team and everyone is going to put in a better

performance as a team from it. Whether you win or not depends on the game but I do think it makes a big difference, it aids the start of the game.”(Participant 1)

A player expressed that they lose the effects of music due to not continuing to listen to it.

“I definitely believe music is a big help to us in the game. More so in the first half, and the start because obviously you do not have the use of the music in the second half of the game. Definitely in the build up if it’s a team you have not played before or you have not been in that environment. So it does help you step into the unknown and makes you feel more prepared.”(Participant 8)

A player expressed that listening to music before playing can give the team an advantage at the beginning of the game.

“I think with rugby, obviously 80 minutes it’s a hard game and I think everyone knows that. If you can get on top of a team at the beginning because you’re better prepared than that can have a big affect on the game, so yea I would say music has a massive affect. People don’t realise how much of an affect it has and it can be taken for granted and the impact it has on the game. I think if we didn’t have music and we were going out, it’s just as good as a motivational speech, you

might not lose the game because of it but obviously it a massive disadvantage without it.”(Participant 2)

Players sub-consciously reported that listening to music can influence an action tendency and influence them to pre-predict what they are about to perform. Players highlighted more specific motor skills that are used in the game.

“For me it [music] will get my mind set on the game because I will think about what I want out of a game, how I will approach the game, and the music is uplifting so it makes you want to excel in the game just because you are listening to the things I like to listen to is about people doing good stuff and it’s about your time and all that. So it makes you want to do that out on the pitch.”(Participant 9)

“I think that the music helps prepare players mentally for playing, this in turn impacts on physical ability. If we are better mentally focused we will play physically better, so yes I think the music helps us tackle harder and run faster.”(Participant 15)

“If you are in a ruck or a maul or anything then it gives that extra 10% because you can hold on to that emotion. It means you don’t fatigue as quick. Because you got adrenaline more pumped.”(Participant 2)

"I think if you have a song with a big tempo it will affect a few different people in the team and get them pumped up and then first few hits will be more aggressive."(Participant 10)

"I think it influences the first quarter of the game, after that people don't think about the music stuff, but the first fifteen minutes it just sets the tempo of the game. Listening to something slow you might start slow, if it's faster and more upbeat people are ready for it and fired up, taking it to them."(Participant 7)

It was also expressed again that musical listening within a team setting does aid in the players playing as a team, rather than just individuals.

"The idea of listening to that song before a match is long gone but listening to it as a team makes you all go out as a team, and you would work as a team."(Participant 1)

Players continued to express that listening to music before the match will impact their perceptions of performance and mental preparation at the start of the match.

"I personally believe the music prepares us for our mental and physical state for when the whistle goes to begin the game and it might last as long as the first ten minutes."(Participant 15)

"I personally believe the music prepares us for our mental and physical state for when the whistle goes to begin the game and it might last as long as the first ten minutes."(Participant 15)

"It probably does [Impact the teams' physical performance] for the first few minutes but after that I don't think it'd have much effect because most people just use the music for an initial burst rather than something that last overs the entire game."(Participant 12)

"I think it just gets me in the zone for the first few minutes."
(Participant 12)

"I think it only really affects the first play, maybe the first few minutes. Nobody is thinking about music ten minutes into a game, they are too focused on the match. I think it just gives you that initial burst ready for the first confrontation."(Participant 12)

"It's got to affect the result if it relaxes people more. Some of our best results have been when we have been relaxed and when we are at home beating the big teams. We have not had the awkwardness or the silence, we have all gone out there relaxed and enjoying it, and if you have got music on you have got to enjoy it rather than having none at all, it's got to help you that way."(Participant 4)

A player agreed that as a result of exposure to music, it does produce a greater perception of performance amongst the team when playing. However, it was also highlighted that it is a limited effect and stated a specific percentage to how much influence it may have.

"I would say it [music] definitely makes it [performance] better, but how much better I don't know, definitely no more than 15%."

(Participant 9)

8.2 Musical Analysis continued.

8.2.1 Identification Of Reoccurring and Different Musical Qualities Between The Compositions

The AO and the ICOM perform syncopation techniques in their drum grooves that include off-beats. This makes the grooves seem much busier and livelier and accentuates the songs rhythmical tempo and dynamical level by way of narrowing the duration of the wait to the next beat, making it be perceived as faster and naturally making the sections dynamic level accumulate.

Both songs perform specific vocal techniques that may be considerably influencing how the listener perceives the songs. The IOCM extensively uses syncopation in the vocal line that acts by becoming the leading rhythmical source in the song. This technique fully accentuates the songs 130 BPM and would give the listener the perception of fast rhythmical traits. However, the AO initially does the opposite and uses a melodic singing technique that initially plays with a soft dynamical level that influences the overall tempo of

the song to seem much slower than its 174 BPM suggests.

The AO officially has the fastest tempo of 174 BPM, but it is not until 1:06 that this is fully accentuated; up until this point the song is arguably perceived as slower. The AO is more melody driven and opted to use guitar melodies and melodic contour within the vocal section in conjunction with its harmony and rhythmical drum groove. In comparison, the IOCM is more rhythmically driven from the start than the AO and uses a rhythmically focused vocal technique and syncopated grooves that perform throughout the song. This establishes that the IOCM has much more rhythmical activity from the beginning. When the AO accentuates its tempo at 1:06 it will undoubtedly be perceived as faster than the IOCM. However, it is very possible that this is simply too long to wait, with reference to intrinsic motivational qualities and that the IOCM could be perceived as establishing prominent intrinsic qualities by way of rhythmical traits faster than the AO. Therefore, possibly being perceived by the listener as exhibiting greater motivational intrinsic qualities.

8.2.2 A Cross Reference With The Musical Parameters Used Within The BMRI

The IOCM got an overall mean average rating of 81.7. In comparison the AO got 70.3, this suggests that as a team the players found the IOCM more motivational with 14 out of 15 players rating the IOCM higher overall (see figure 16). Figure 16 shows the specific musical characteristic ratings. The data clearly highlights that all 13 characteristics in the IOCM got a higher rating than that of the AO.

Table 2: Mean averaged BMRI characteristic ratings.

Motivational Characteristic	IOCM Dizzee Rascal – “Bonkers”	AO Pendulum – “Hold Your Colour”
1.Familiarity	8.9	3.6
2.Tempo	7.7	6.3
3.Rhythm	7.2	6.2
4.Lyrics Related to Physical Activity	4.9	4.3
5.Association Of Music with Sport	5	4.7
6.Chart Success	5.3	3.3
7.Association Of Music with a Film or Video	4.5	2.5
8.The Artist\s	6.4	3.6
9.Harmony	5.6	5.2
10.Melody	5.8	5
11.Stimulative Qualities of Music	7.5	6
12.Danceability	7.1	5.4
13.Date Of Release	4.4	2.2

When considering *Tempo* as a motivational characteristic, the IOCM received a mean average rating of 7.7. In comparison, the AO received a score of 6.3. This is interesting because, as aforementioned, the AO has a faster tempo (174 BPM) than the IOCM (130 BPM). From a cross-reference perspective with the analysis, it is plausible that this has occurred due to the AO not establishing strong rhythmical activity fast enough. Thus, not accentuating its tempo.

The players have sub-consciously identified the IOCM establishes rhythmical activity much faster and as a result it has been perceived as being more motivational. To further clarify this point, it was identified that the AO does not establish a prominent drum groove until 1:06, that when initiated, could

arguably be perceived as faster than the IOCM, although the duration until this rhythmical activity is too long. The IOCM accentuates its tempo much earlier in the song by performing a syncopated rap style vocal technique and performs off-beat drum grooves. Thus, it is plausible that the IOCM has stimulated arousal within the players faster than the AO and has been perceived by the players as being more motivational.

The players rated *Rhythm* as 7.2 for the IOCM and 6.2 for the AO. The analysis highlighted that both compositions do have influential rhythmical qualities. The AO uses syncopation in its main drum groove and its initial synthesizer part. However, the syncopation that is used in the synthesizer is sonically overpowered, with the vocal section acting as the leading instrument and making the song seem slower than its 174 BPM tempo suggests. Furthermore, as highlighted, the syncopated drum groove comes too late in the song to have an initial impact on the listener. In comparison the IOCM uses syncopation extensively within the vocal section. The use of syncopation in the vocal section and drum groove by way of adding multiple notes to the measure accentuates the songs tempo much more effectively and sooner than the AO does. This could be considered as directly linked to the *Danceability* rating of 7.1 for the IOCM and 5.4 for the AO; a noticeable difference.

Harmony and *Melody* received limited ratings (see figure 16). The analysis identified that the AO is more melodic in nature than the IOCM with the latter

being more rhythmically driven. The syncopation that was identified in the synthesizer part of the AO not act as the leading instrument, so had a limited impact on altering the perception of the song. Although the AO was more melodic in nature, the players did not identify this as being motivational, which is an obvious observation from the ratings. The players instead noticeably favoured the rhythmical qualities of both songs and more specifically the ones used in the IOCM.

The IOCM got a *Familiarity* rating of 8.9, being the highest average rating of all the characteristics. In comparison the AO received a rating of 3.6. It is plausible that players have previously identified that the IOCM performs strong rhythmical qualities, suggesting that they can expect/pre-predict their own arousal capabilities from exposure to the song. In comparison, they were noticeably unfamiliar to the AO. Thus, the AO failed to make an impact on the players' arousal levels with duration (1:06) time to wait until considerable rhythmical activity in comparison to the said rhythmical qualities of the IOCM. It is plausible that this is directly linked to players rating the *Stimulative Qualities of Music* as 7.5 for the IOCM over 6 for the AO.

The extrinsic areas of both songs received low ratings on the BMRI (see figure 16). This identifies that the players found the intrinsic qualities on both songs to be more motivational than their extrinsic counterparts. This is interesting because the IOCM is very self-indulgent to the artist that performs

it, and could be considered as a personal life story whether that is factual or fictional. Example;

*"I wake up just to go back to sleep
I act real shallow but I'm in to deep
And all I care about is sex and violence
And a heavy bass line is my kind of silence"*

In comparison the AO does contain lyrics that may produce connotations that are linked to being against something or someone. This was highlighted by a particular player and may be considered relatable to a team ethic. Example;

*"Hold your colours against the wall
When they take everything away
Hold your colours against with wall
With me"*

However, the BMRI results suggested that with these two particular songs, the intrinsic qualities have been favoured. The next logical step is to discuss how the results of the study relate to past research (See chapter 5).

Chapter 9: Appendices B

9.1 BMRI Framework

Table 3: BMRI framework (Karageorghis *et al.*, 1999)

1. Familiarity	1 2 3 4 5 6 7 8 9 10
2. Tempo (beat)	1 2 3 4 5 6 7 8 9 10
3. Rhythm	1 2 3 4 5 6 7 8 9 10
4. Lyrics Related to Physical Activity	1 2 3 4 5 6 7 8 9 10
5. Association of Music with Sport	1 2 3 4 5 6 7 8 9 10
6. Chart Success	1 2 3 4 5 6 7 8 9 10
7. Association of Music with a Film or Video	1 2 3 4 5 6 7 8 9 10
8. The Artist/s	1 2 3 4 5 6 7 8 9 10
9. Harmony	1 2 3 4 5 6 7 8 9 10
10. Melody	1 2 3 4 5 6 7 8 9 10
11. Stimulative Qualities of Music	1 2 3 4 5 6 7 8 9 10
12. Danceability	1 2 3 4 5 6 7 8 9 10
13. Date of Release	1 2 3 4 5 6 7 8 9 10

9.2 Semi-Structured Interview Questions

Below are the questions that were used as a basis for the interviews with the players.

(A) BMRI results.

(I) Questions on the participants' answers of the BMRI questionnaire to gain a further understanding of the views on characteristics that the compositions have.

(B) How The Team Use music in Pre-match Routines.

- (I) At what point does music start playing within the changing room?
- (II) Who is in charge of what is played, is it a team decision or does someone just randomly put something on?
- (III) What is played on a typical day?
- (IV) Does everyone listen to the same song?
- (V) How long are the team exposed to music during the pre-task routine?
- (VI) Do you feel the team is exposed long enough to music before leaving the changing room?

(C) The Teams' Psychological Perception of using Music to Aid Sporting performance.

- (I) How do you feel the music affects your mind-set (mood, emotion)?
- (II) How do you feel the music influences your mental preparation for the match?
- (III) Do you feel music is impacting on team unity and getting everyone on the same thought process?
- (IV) How do you feel music is affecting the teams' mental well being as a collective?
- (V) How important do you feel is it for the team to use music to mentally prepare themselves?

(D) The Teams' Psychophysical Perception of using Music to Aid Sporting Performance.

- (I) How do you feel music affects you physical ability?
- (II) How do you feel music influences your physical state (do you feel the need to do anything in particular)?

(III) How do you feel the music is holding affect on the teams' physical ability?

(IV) How do you feel music is affective the teams physical behaviour (do you notice anything in particular)?

(V) How important do you feel music is on the teams' cohesive physical presence during the match?

(E). The Participants Ideal Musical Selection for Pre-match Routines.

(I) Summarise what you feel about the music played during pre-task routines.

(II) What music would you personally choose to play to prepare before a match?

(III) What do you feel makes a song motivational (musical qualities)?

(IV) Do you look to feel energetic music is more influential during preparation?

(V) Do you find music that has external meaning more influential on performance than music that has a fast tempo and rhythm?

(F). To what Level Does Using Music Aid In Increased Performance.

(I) How would you feel if no music was played during a pre-task routine?

(II) How important do you feel music is on your personal performance?

(III) How important do you feel music is on the teams' cohesive performance?

(IV) How prepared do you feel to play after listening to the music?

(V) To what extent do you feel utilising music affects the match?

(G) Further Discussion

(I) Would you like to say anything else related to the subject or anything we have discussed here today?

Chapter 10: Appendices C

10.1 Interview Transcriptions

Within this chapter there are the 15 full transcriptions from the interviews with the players. No manner of speech or phrasing has been altered; all information and speech has been included. The extracts seen in chapter 4 and chapter 8 were taken from these transcriptions.

Participant 1

Interviewer: "Why have you rated 9 for motivation on tempo, why do you find the tempo of the song motivational?"

Interviewee: "When the song dropped the tempo of the song was really high, gets me in the mood, gets my head bobbing and gets me into the beat."

Interviewer: "So do you find tempo more effective than say lyrics related to physical activity which you have put 2. Do you find you can relate to tempo a lot more?"

Interviewee: "Yes, I found myself listening to the tempo and the beat more than the lyrics."

Interviewer: "You have said that the actual artist makes the song more motivational?"

Interviewee: "Yea pendulum obviously being a big part of music and if it's someone I have never heard of I wouldn't be into it as much than a famous band."

Interviewer: "Is there any other artists that you would find as motivational?"

Interviewee: "Yes there would be others on the same level."

Interviewer: "You have put harmony and melody as 4 out of 10, why do you not find them very motivational aspects of the songs?"

Interviewee: "Because tempo and the beat of the songs took over most of the other things I was listening too, harmony and melody don't really come into it."

Interviewer: "Danceability, you have rated high up as well?"

Interviewee: "Just the fact that you can nod along to it and it gets your foot tapping, it gets you in the mood and helps get you focus into the right attitude for the game."

Interviewer: *"So do you feel that a song you can physically move to gets you more motivated before sports?"*

Interviewee: *"Yes definitely, something that makes you move."*

Interviewer: *"At what point in the changing rooms does music start playing?"*

Interviewee: *"Before the warm up, while getting changed, coming back in from the warm up just before going out on the pitch, with music louder music, bigger beats and tempo to get you in the mood just before you go out, it's more focused just before you go out the game."*

Interviewer: *"Who is in charge of what it played?"*

Interviewee: *"One person puts it on but it's a team decision, everyone feels as though it helps, they enjoy it as well."*

Interviewer: *"On a typical Saturday what it played?"*

Interviewee: *"Rock music or fast tempo music, whatever they feel gets them going, get's them in the mood, pumped for it."*

Interviewer: *"Does everyone listen to the same song?"*

Interviewee: *"Obviously other people have other choices that they would rather listen to."*

Interviewer: *"Do you think that has a different affect, the fact that some are listening to different music?"*

Interviewee: *"Yea I think other people have different ways of getting pumped for a game some like to hear nothing else around them but their music."*

Interviewer: *"How long would you say they team is exposed to music before a match?"*

Interviewee: *"On the whole about 10 -15 minutes. While getting changed, before the warm up, than a louder song before we go out to play."*

Interviewer: *"Is the last song always a song with a fast tempo or fast beat?"*

Interviewee: *"Yes, that's like the key song before we go out so something fast normally gets us going."*

Interviewer: *"Do you think the team is exposed long enough to music?"*

Interviewee: *"Yea I think it's spot on, you wouldn't want people to overdo it. People would start getting bored. Two or three songs get's you pumped and ready to go out there and do your thing."*

Interviewer: *How do you feel music affects you mind-set before a game?*

Interviewee: *"The song that is played before kickoff is the song that gets me in the mood. A song with a fast tempo get's me pumped feeling aggressive and ready to go out and play rugby."*

Interviewer: *"If you where in a bad mood one Saturday and you come into the changing room and listen to music, does that change you mood and make it more positive?"*

Interviewee: *"Yea it channels that mood into rugby. It makes me realise that I am about to play rugby, like be physical."*

Interviewer: *"How do you feel it helps you mentally prepare for the game, how much more ready does it make you feel?"*

Interviewee: *"I think it improves my attitude towards a game a lot. If I turned up to a game with no music I wouldn't be pumped what so ever, it can really change the way a player looks at a game."*

Interviewer: *"When music is playing in the changing rooms is there a higher sense of team unity?"*

Interviewee: *"Individuals listen to their own music and they have their own ways of doing it but people listening to the same song are all looking at each other getting pumped for the game."*

Interviewer: *"How do you feel music is affecting the team?"*

Interviewee: *"Yea I think it changes every ones attitude and gets everyone pumped. It brings everyone together."*

Interviewer: *"How important do you think using music is to mentally prepare the team?"*

Interviewee: *"Yea really important, if it wasn't important then we wouldn't do it."*

Interviewer: "How do you feel music affects your physical ability on the pitch?"

Interviewee: "Id say quiet a lot. After I have gotten pumped for it, it will make me work harder and be more aggressive."

Interviewer: "Do you feel listening to music makes you feel the need to do anything in particular physically?"

Interviewee: "Yea it will get me in the mood and make me start foot tapping and getting up and walking about. Quiet a few of us start moving around to what is playing."

Interviewer: "How do you feel music is affecting the teams' physical ability?"

Interviewee: "I think if the team are all listening to a song together then the teams' momentum is completely different. It brings the team together as a unit."

Interviewer: "Do you notice any particular physical behaviour from team members?"

Interviewee: *"Yea it goes up in stages. The last song is the loudest, everyone is on their feet knowing they are about to go out which I think does make them more physical when playing cause they are more prepared and ready."*

Interviewer: *"How much affect do you think music has on the teams' cohesive physical presence during a match?"*

Interviewee: *"The idea of listening to that song before a match is long gone but listening to it as a team makes you all go out as a team and you would work as a team."*

Interviewer: *"Summarise how you feel about the music that is played in the changing rooms during your pre-match routine."*

Interviewee: *"The music played in the changing room before a game isn't the music I would choose to listen too. I think that specific genre with a fast tempo is best for getting everyone pumped."*

Interviewer: *"What genre?"*

Interviewee: *"Not a genre but fast paced music, that's what it's for it's to lift you."*

Interviewer: "What genre would you choose to use to play before a game?"

Interviewee: "Dance music, house music."

Interviewer: "What do you find as the most motivational quality in a song?"

Interviewee: "Tempo, fast music is going to get someone going. I don't think slow music would work the same."

Interviewer: "Do you personally look to feel more energized from the song you are listening to?"

Interviewee: "Yea definitely I think that is the reason for it, if I listened to no music before I would just be sitting there quiet. Music lifts me, gets me going and gives me energy."

Interviewer: "Do you feel that music with an external meaning is more influential than that of one that has a fast tempo? Example, swing low sweet chariot?"

Interviewee: "It's more influential during a game. Before though it does not need a specific meaning to the sport it could be a song about

anything. If the tempo is high and fast paced then it is going to do the job."

Interviewer: *"How would you feel if no music was played during a pre-match routine?"*

Interviewee: *"Id feel flat. I would feel as though I wasn't about to play, I wouldn't be excited for it and wouldn't be up for it."*

Interviewer: *"How important is it on your personal performance that you listen to music?"*

Interviewee: *"If the changing room didn't have music than I would have my own headphones."*

Interviewer: *"To what level do you feel music influences the result of the game?"*

Interviewee: *"Yea I think people are going to have a better game in my opinion, that lifts the whole team and everyone is going to put in a better performance as a team from it. Whether you win or not depends on the game but I do think it makes a big difference, it aids the start of the game."*

Participant 2

Interviewer: *"Why have you rated tempo as 5 out of 10 on the pendulum song?"*

Interviewee: *"I think from the question as motivational I can appreciate a good tempo, bur for me it's not motivational."*

Interviewer: *"You have rated lyrics related to physical activity as high, for what reason?"*

Interviewee: *"I have never really heard that song properly. One of the first few lines was "they have taken it from you" or something similar to that, then "Put your colours against the wall" and that just reminded me of rugby really, that's how I associate it."*

Interviewer: *"So would you say your find lyrics related to physical activity more motivational than a fast tempo?"*

Interviewee: *"Yes for me it does."*

Interviewer: *"At what point does music start playing in the changing room on match day?"*

Interviewee: *"It's pretty much straight away. As soon as we can get the music plugged in and playing."*

Interviewer: *"Who is in charge of what is played, does the team decide what is played or does one person randomly put a song on?"*

Interviewee: *"It's normally a certain player (states name and position) but since he has been injured it's anyone now. It's usually the more hip people in the group."*

Interviewer: *"What is played on a typical day?"*

Interviewee: *"It's like dance music, proper grungy, hardcore dance music."*

Interviewer: *"Would you say a bit of everything?"*

Interviewee: *"Yea."*

Interviewer: *"Does everyone listen to the same song or have you noticed people listening to their own music?"*

Interviewee: *"Some people have headphones, some people like to get themselves hyped up. I am one of them really, I like to listen to specific stuff."*

Interviewer: *"So do you use headphones or do you listen to what everyone is listen to?"*

Interviewee: *"I normally listen to stuff before I even get into the changing room. I have my own little routine of stuff I like to listen to, to inspire me before I even get here. Then when I get here I listen to music that someone else has chosen purely to get everyone else going."*

Interviewer: *"So you listen to it because the whole team listen to it?"*

Interviewee: *"Yea."*

Interviewer: *"How long are the team exposed to music before a match?"*

Interviewee: *"About 40 – 45 minutes."*

Interviewer: *"Do you feel the team is exposed for long enough before a game?"*

Interviewee: *"Um, yea. I think when we need it more than anything is right before we go out. I think music, if you use it right, is a bigger motivator than someone speaking. A lot of people find it can get them a lot more motivated. I think when it just gets cut off rather than died out it just ruins it."*

Interviewer: *"How do you feel music affects your mind set, such as your mood and emotion?"*

Interviewee: *"The reason why I like to listen to my own music before the game is because I find the music that we listen to here gets us worked up and gets up pumped up and in the mood. But as soon as you get tired in a game that soon goes and that anger and aggression just dies off. So I try and listen to music that inspires me before hand because I find you can hold on to emotions longer than you can just being pumped up. I find all it takes it something to go wrong on the pitch for it to die off if your just angry and worked up."*

Interviewer: *"Do you feel music help you mentally prepare for a match?"*

Interviewee: *"Yea I think if you listen to something that motivates you then it definitely puts you in the mood for it and it obviously helps boost your focus."*

Interviewer: *"Do you think the sense of team unity is in everyone's thought process more when you all listening to the same song?"*

Interviewee: *"Yea I think if you're coming to a game, especially if you're travelling away you can be a bit disorientated from the journey and helps everyone get in the right mood for the match."*

Interviewer: *"If they are not switched on?"*

Interviewee: *"Yea not switched on. The music gets rid of idle chat and if you have the right motivational stuff with the right lyrics it gets everyone up for it."*

Interviewer: *"Do you feel the team are more mentally prepared together rather than singled out?"*

Interviewee: *"Yea. I think if you play the right song it can get everyone ready and it can be detrimental putting a silly song on, I am guilty of that, cause I have got some shit on my iPhone. So it can also have a detrimental effect. We had a song that we played at the end of*

season meal that meant a lot because it represented our entire season. If you played that song now it puts everyone in the right mind set."

Interviewer: *"How important do you feel it is for the team to use music to mentally prepare themselves?"*

Interviewee: *"I can't obviously speak for everyone but my personal opinion and from seeing everyone else and how often it's used. I reckon it has a massive affect. I wouldn't be able to play rugby the same or be hyped up for it. I would feel a bit soft."*

Interviewer: *"Do you think it is important as a team to do it?"*

Interviewee: *"Yes I definitely think so. I think sometimes it's hard. Some people don't know what to say, some people don't do the whole screaming and shouting before a game. So having that music there allows them to not sink into the background but gives them something that they can get hyped up to. Instead of thinking should I be shouting should I be stamping my feet? Having that music on brings everyone in."*

Interviewer: *"How do you feel music affects you physical ability?"*

Interviewee: "A lot. I listen to the "300" theme tune and the music they play behind their speeches in that. That gets me really goose-bumpy. It keeps me focused and I can hold on to emotions. If you are in a ruck or a maul or anything then it gives that extra 10% because you can hold on to that emotion. It means you don't fatigue as quick. Because you got adrenaline more pumped."

Interviewer: "When you are listening to music do you feel the need to do anything physically?"

Interviewee: "Yea I can't sit down when listening to music. It makes me want to get up and do something."

Interviewer: "How do you think music affects the teams' physical ability?"

Interviewee: "I think if you have everything rattled up then it helps that first 10 minutes, but it's up to them then and how they prepare."

Interviewer: "Do you notice that anyone in the team do anything physically?"

Interviewee: "Yea there is people jumping around and slapping their chests."

Interviewer: *"How important do you feel music is on the teams' physical presence during the game?"*

Interviewee: *"For me personally, and if I have prepared well, I think it does give me a good 45 minutes. I can sometimes draw on it past that. It depends on what music really and how it is attached to them, whether they take it and absorb it or just use it to get wound up."*

Interviewer: *"Summarize what you feel about the music used in the teams' pre-match routine."*

Interviewee: *"It's a bit mass for me. It works for most people so that's ok. It's fast it's repetitive. It doesn't really hit my emotions but it has got a good beat to it so everyone can get wound up. For music that we play before a game, it doesn't really do anything for me but as a whole it seems to have an effect on the team."*

Interviewer: *"What music would you personally play before a game if it was up to you?"*

Interviewee: *"Stuff that has personally affected me in the past. It does not necessarily have to be fast it could be something slow but*

means a lot to me. I like these recent ones where we have a motivational speaker and a nice beat behind it."

Interviewer: *"What musical qualities do you find most motivating?"*

Interviewee: *"Stuff that is relevant, so anything to do with battle or war. If you have a song with lyrics that you can associate with rugby those usually are the best for me."*

Interviewer: *"Do you feel like you want to be made more energized by music before a match?"*

Interviewee: *"Yes. I think that's the reason why we do listen to it. People have work before rugby, people get up late, it's just like an extra stimulant, it's like drinking energy drink it gets into your head and you can absorb it all."*

Interviewer: *"How would you feel if no music was played before a game?"*

Interviewee: *"I think it would be awkward. People would try and say too much it would just be awkward. It's a good feeling, sometimes if you have a big game it's nice to have a bit a silence, just time to absorb, we do need it. I think it would be strange."*

Interviewer: *"How important do you feel music is on your personal performance?"*

Interviewee: *"If I don't listen to music I feel like I go into a game a bit soft. It takes me longer to get into it after getting smashed a few times so really it just helps me get into the right attitude before I got out."*

Interviewer: *"How important do you feel listening to music is on the teams' cohesive performance?"*

Interviewee: *"If you choose the right song and it means a lot to someone. I think it is important especially the first ten minutes because if you go behind it can have a detrimental effect, so if you can get them rattled up from the beginning it helps and I think music plays a big role in that."*

Interviewer: *"How personally prepared do you feel after listening to music. Are you ready to go out?"*

Interviewee: *"Yea. Sometimes when it gets abruptly cut off then it's a bit crappy because it like you lose all that momentum from listening to music."*

Interviewer: *"To what extent do you feel listening to music affects the actual match?"*

Interviewee: *"I think with rugby obviously 80 minutes it's a hard game and I think everyone knows that. When people come out they are ready to go. If you can get on top of a team at the beginning because you're better prepared than that can have a big affect on the game. So yea I would say music has a massive affect. People don't realize how much of an affect it has and it can be taken for granted and the impact it has on the game. I think if we didn't have music and we were going out it's just as good as a motivational speech, so yea a massive affect. We might not lose the game because of it but obviously it a massive disadvantage without it."*

Participant 3

Interviewer: *"You have rated tempo as 7 on the pendulum song which is high. Why do you find tempo motivating here?"*

Interviewee: *"It gears me up more than anything, it does not really work if it's slow. So yea kind of builds me up."*

Interviewer: *"Why do you not find melody as motivating?"*

Interviewee: *"That's purely based on the fact that I didn't really like the song to be honest with you."*

Interviewer: *"If you do not like the song do you find it is less motivational?"*

Interviewee: *"Not always. If it has a good tempo and is aggressive then it could work. I am just not into that sort of dance music."*

Interviewer: *"At what point does music start playing in the changing room?"*

Interviewee: *"Normally as soon as we get in when we are getting changed. So pretty much straight away, as soon as we get there. Up until 10 minutes before we go out."*

Interviewer: *"Who is in charge of what is played is it a team decision or does one person put anything on?"*

Interviewee: *"A few people put stuff on."*

Interviewer: *"What is played on a typical day?"*

Interviewee: *"Dance stuff at the moment."*

Interviewer: *"You say at the moment so does that change?"*

Interviewee: *"Well to be honest it's only one persons fit. So it's all his music, a lot of dance stuff or put a play list on and people are asked what they want on it."*

Interviewer: *"Does everyone listen to the same song or do you notice people listening to their own music?"*

Interviewee: *"Some people do their own thing. Some listen to music in the background. I personally don't listen to it. The nearer it gets to the game I try to get it as quiet as possible and don't listen too much."*

Interviewer: *"You like to stay quiet before a game do you?"*

Interviewee: *"Yes, on the way to the game I will listen to music. 10-15 minutes before the game ill keep quiet."*

Interviewer: *"How long are the team exposed to music for in the changing room before the game?"*

Interviewee: *"I would say 45 minutes."*

Interviewer: *"Do you feel the team is exposed long enough to music before a match or too much?"*

Interviewee: *"I don't know to be honest. I think it's personal preference. I'd say too much but that's just me because I like to keep quiet."*

Interviewer: *"How do you feel music affects your mind set, your mood and emotions?"*

Interviewee: *"It defiantly affects it. I like to listen to certain things on the way to the game. So it's normally loud stuff I go for."*

Interviewer: *"Can you give some examples, genre or bands?"*

Interviewee: *"Rage Against The Machine, Slipknot, stuff like that to fire out of my car speakers. It builds me up."*

Interviewer: *"And why them bands specifically, what is it about their music that works for you and makes you more motivated?"*

Interviewee: *"It's fast, aggressive and has a heavy sound to it, just gets my head sorted to where it needs to be"*

Interviewer: *"How do you feel music affects your mental preparation before a game?"*

Interviewee: *"I think it does. For me it slips into a routine so I have certain songs I like to listen to. So that's now found its way into my preparation and routine."*

Interviewer: *"Do you feel by listening to music it is getting the team on the same thought process?"*

Interviewee: *"I don't know, I would like to say no. I think the game in itself should be something everyone should be playing towards. I think music is just something in the background."*

Interviewer: *"Do you feel the team as a whole are more mentally prepared to play after listening to music?"*

Interviewee: *"Yea I would say so. Some obviously don't want to listen to it and just shut it out. Your blood is getting pumping and you*

can't hear all the talking but it keeps that tempo I the background. Because if there is not music for 5 minutes then it can go flat. If you have it all the time then there is always some sort of tempo in the background."

Interviewer: *"How important do you feel it is that the team use music to mentally prepare themselves?"*

Interviewee: *"I would say its quiet important. The decision making with what you listen to, you choose what you want and it does relax you a little bit before a game, its important otherwise it's flat."*

Interviewer: *"How do you feel music affects your physical ability?"*

Interviewee: *"Not at all."*

Interviewer: *"When listening to music, do you feel the need to physically do anything?"*

Interviewee: *"I do fidget. But whether or not that's because of the music I don't know. I would imagine I end up fighting to the beat of the song."*

Interviewer: *"You have said it doesn't affect your physical ability, but have you noticed it affecting other team members?"*

Interviewee: *"Yea it definitely fires some people up. Definitely in the changing rooms, people start dancing round and it obviously affects them. Weather it affects them on the pitch, I don't know."*

Interviewer: *"Do you feel music has an effect on the teams' cohesive physical performance?"*

Interviewee: *"I think it has got a place. I think it will have an effect. Because we are all on the same level. Again it's that thing about the beat in the background, we are all ticking along to the same beat and it does just lift you a little bit."*

Interviewer: *"What do you think about the music that is played before the matches?"*

Interviewee: *"At the minute I think there awful, it's all dance stuff and just repetitive music. Yea I just don't like it."*

Interviewee: *"What would you personally choose to play before a game?"*

Interviewee: *"More like rock and metal music."*

Interviewer: *"What do you personally feel is the most motivational quality in a song?"*

Interviewee: *"I kind of just work on noise."*

Interviewer: *"Do you look to feel more energised from listening to music before a game?"*

Interviewee: *"No, because I like to feel quiet before a game, going to the game ill listen to music, in the changing rooms I will listen to what is on. But when we come in from the warm up I like to sit quiet and not really pay attention to what is going on."*

Interviewee: *"Do you find music with an external meaning to be more influential than a song with a fast tempo and rhythm?"*

Interviewee: *"Yea I think I would."*

Interviewer: *"Why is that?"*

Interviewee: *"I think because it means something and it's what I am about to do so I can relate to that"*

Interviewer: *"How would you feel if no music was played before a game?"*

Interviewee: *"It would be strange, it would feel a little bit off. It's always there so it feels part of your build up."*

Interviewer: *"Do you feel that it's a necessity?"*

Interviewee: *"Yea I think it is. If you took it away it would noticeable straight away. Whether you listen to it or not it is that bit in the background."*

Interviewer: *"How important do you feel music is on your personal performance?"*

Interviewee: *"I don't think it has got anything to do with it."*

Interviewer: *"How important do you think music is on the teams' cohesive performance?"*

Interviewee: *"Playing I don't know but it must add something. In the changing rooms it gets you all moving about and dancing around,*

which gets us together. But once we go on the pitch I don't think any of that is there."

Interviewer: *"Do you feel after that, that it is replaced by more important things?"*

Interviewee: *"Yea, a lot always happens in the game and you just won't be thinking about the music anymore so that initial affect has gone."*

Interviewer: *"How prepared do you feel after listening to music?"*

Interviewee: *"I don't know, as normal."*

Interviewer: *"You said how if there was no music then it would be weird?"*

Interviewee: *"Yea it is something that is always there. I would notice a difference, I suppose because it is in my routine it does build me up and it does prepare me for the game."*

Interviewer: *"To what extent do you feel listening to music in the changing room affects the match?"*

Interviewee: *"I don't know. I would like to say it doesn't affect it at all. But on some level I think it does. On the respect I think it does kind of prepare you for the game, once you're in the game it's irrelevant I think. It helps the build up and that just as important as the 80 minutes on the pitch."*

Participant 4

Interviewer: *"You have put that you find danceability of a song motivates you. Why is this?"*

Interviewee: *"Its quiet an upbeat song isn't it that you can dance to it."*

Interviewer: *"Do you find the fact that you can dance to music motivates you to play sport?"*

Interviewee: *"In a way yes, that's the only thing I would say about that sort of song."*

Interviewer: *"What do you mean by that?"*

Interviewee: *"I just don't like that sort of genre of music so it didn't really do much for me."*

Interviewer: *"If you do not like that song do you feel you not as motivated by it to play?"*

Interviewee: *"Most of the time yea because I personally like to stay more quiet before a game. I know it works for the other lads so it does some good."*

Interviewer: *"At what point does music start playing in the changing room before a game?"*

Interviewee: *"Sometimes it's as soon as we are in the changing room, now and again it can be just when we come in before the chat before we go out."*

Interviewer: *"Who is in charge of what is played, is it a team decision or does one person choose?"*

Interviewee: *"It is a team decision, but some people just want to listen to their music so they put their IPod on [states a particular player]."*

Interviewer: *"What is played on a typical day?"*

Interviewee: *"It's mainly dance sort of stuff at the minuet."*

Interviewer: *"Does everyone listen to the same song or do some listen to their own music?"*

Interviewee: *"Not so much their own iPods anymore but before we had music playing loads of people did."*

Interviewer: *"How long does the team listen to music before a game?"*

Interviewee: *"A good half an hour id say easy."*

Interviewer: *"Do you think that's too much or too little or just enough?"*

Interviewee: *"As long as it's not too loud. I think it's all right. I think if it's too loud for that long it can just be annoying. I think if you are going to have it on loud a quick ten minutes before a game just to get the adrenaline pumping a bit."*

Interviewer: "Do you feel it's more affective if it's played loud right before you go out?"

Interviewee: "If it's loud then yea. I like it in the background when we are getting changed I think that's good, I like a bit of music on in the background."

Interviewer: "How do you think music affects your mind set, mood and emotions?"

Interviewee: "You can't play anything morbid like Coldplay because that will just depress everybody. It does not really affect me that much."

Interviewer: "How do you feel music affects your mental preparation before a game, just not much at all?"

Interviewee: "Yea not much at all. I think sometimes just having a relaxed atmosphere like everyone chatting and getting along with music in the background. Just before the game maybe something quiet upbeat."

Interviewer: "Do you feel that by listening to music it is getting the team on the same thought process?"

Interviewee: *"I wouldn't say the whole team no. I think it affects people differently and it depends on what song it is. I suppose it might work for some and others it might have no effect."*

Interviewer: *"How do you think music is affecting the team's mental well being, do you think it's putting team in a positive state to play rugby?"*

Interviewee: *"I think everyone prefers to have it on, because if it's not on you can tell the difference. I think it gets rid of the awkwardness by having it on."*

Interviewer: *"How important do you feel it is to use music to mentally prepare yourselves before a game?"*

Interviewee: *"To me it's not that important, but to some people I think it is yea definitely."*

Interviewer: *"How do you feel music affects your physical ability?"*

Interviewee: *"It doesn't really."*

Interviewer: *"When you listen to music do you feel the need to do anything physically?"*

Interviewee: *"No, I like to just sit there and listen to it, just relax I suppose."*

Interviewer: *"Do you feel that music affects the teams' physical ability, regarding how physical the team is as a whole?"*

Interviewee: *"I think it could do yea. I think you want to be aggressive before the game I think it can give you a rush if it's just before going out I suppose, but it's got to be just before going out. I think if you do that half an hour before a game then that rush is gone."*

Interviewer: *"How important do you think music is on the teams' physical presence?"*

Interviewee: *"I think its quiet important yea. Overall I think it's better to have it than not. I think the people that it doesn't affect don't mind it being on but people it does affect if it's not on it can be quiet awkward."*

Interviewer: *"How do you feel about the music that is played?"*

Interviewee: *"It doesn't bother me it's not my sort of thing."*

Interviewer: *"So you wouldn't listen to it in your own time?"*

Interviewee: *"Not in my own time no."*

Interviewer: *"What would you personally choose to use music wise if it were up to you?"*

Interviewee: *"Any Manchester music like Stone Roses, Happy Mondays, anything like that. Or a bit of Britpop or something like that, maybe some Kasabian or Arctic Monkeys as it can be quiet aggressive cant it, that sort of thing."*

Interviewer: *"What qualities of a song do you find most motivational?"*

Interviewee: *"I think I am more motivated the more relaxed I am. So if I am listening to something of my own I'll be more relaxed."*

Interviewer: *"So you look to feel more relaxed before a match?"*

Interviewee: *"Yea I think if I feel under pressure they can try too hard. It's easier to make a mistake when you are under pressure. I think if you're more relaxed the more you can just take on the chin and get on with it. The more calm you are the more better game you have."*

Interviewer: *"So would you look to more soft relaxed music before a match?"*

Interviewee: *"Yea something with a bit of a groove to it. The whole Stone Roses album is perfect for me because it's got the same groove all the way though it, that sort of thing for me."*

Interviewer: *"So do you find the beat influences you?"*

Interviewee: *"Yea the beat, the bass and the drums. It's got a like dance groove all the way through, as well as the lyrics and guitar solos."*

Interviewer: *"Do you find a song that has an external meaning more influential than a song with a fast tempo or rhythm?"*

Interviewee: *"Yes definitely."*

Interviewer: "You mentioned how any Manchester music motivates you, why is that?"

Interviewee: "It's got like a twang to it. I mainly like the Stone Roses, the lyrics all the way through it, I am like a massive fan so I can sort of relate to it in a way that I know what they are talking about. It's not just your normal Oasis song where it's just sing along lyrics. Most dance music now days the amount of crap they talk, it's just so fake, it's nothing about them they are just making it for people to buy. If you can relate to it it's much more motivating."

Interviewer: "How would you feel if no music was played before a game?"

Interviewee: "It all depends on the atmosphere of everyone else. If everyone else is all relaxed and calm and we are laughing and joking than everything is fine. Recently on the big games if no music is played there is an awkward silence. If it's a big game there is tension and an awkward atmosphere, so there should be music on. There shouldn't be any awkward silence."

Interviewer: "How important do you think music is on your personal performance?"

Interviewee: *"It doesn't really affect it."*

Interviewer: *"How important do you think music is on the teams' cohesive performance, playing together as a team?"*

Interviewee: *"Yea I think it's quiet important and helps us get together more before hand, I think it's better to have it than not."*

Interviewer: *"How prepared do you feel to play after listening to music?"*

Interviewee: *"I definitely feel relaxed with it on."*

Interviewer: *"So it creates an atmosphere?"*

Interviewee: *"Yea it does. It definitely lifts an atmosphere having music on. If there is no music on then people can go out silent, some people don't even speak to people before a game and if there is music on then it must make them more relaxed."*

Interviewer: *"To what extent do you feel using music affect the result of the match?"*

Interviewee: *"It's got to affect the result if it relaxes people more. Some of our best results have been when we have been relaxed and when we are at home beating the big teams. We have not had the awkwardness or the silence, we have all gone out there relaxed and enjoying it, and if you have got music on you have got to enjoy it rather than having none at all, it's got to help you that way."*

Participant 5

Interviewer: *"You have rated tempo as eight out of ten so you obviously find that very motivating, why is that?"*

Interviewee: *"It's got to be upbeat hasn't it. It has to be fast otherwise you slip into relaxation."*

Interviewer: *"So you like to feel more upbeat?"*

Interviewee: *"Yea."*

Interviewer: *"You have put familiarity as 1 which is obviously very low?"*

Interviewer: *"Yea I didn't really know the song so that didn't help it be motivating."*

Interviewer: *"You have also put rhythm and danceability as being very motivating as well?"*

Interviewee: *"Yea if it has got good danceability it makes me ready to go out."*

Interviewer: *"At what point does music start playing in the changing room on a Saturday?"*

Interviewee: *"First thing. I don't tend to pay much attention to the music as it tends to be crap."*

Interviewer: *"Who is in charge of what is played, is it a team decision or is one person in charge of what is played?"*

Interviewee: *"(Says two particular names) And they put on some crap, the problem with our team is they put on something for a couple of minutes then someone will change it, so I think that has a negative effect on my preparation, I would rather have no music than chopping and changing between tracks. Chopping and changing between different rhythms and different beats ruins it."*

Interviewer: *"What is played on a typical day before a game?"*

Interviewee: *"There is this song that they play all the time (quotes some lyrics), it's played every week, it's dub step quiet often. I am not practically musical with new dance stuff."*

Interviewer: *"Does everyone listen to the same song or do you notice other people listening to their own stuff?"*

Interviewee: *"People have headphones in but most people listen to what's on."*

Interviewer: *"Do you have headphones?"*

Interviewee: *"No I listen to what ever is played out loud."*

Interviewer: *"How long are the team exposed to music for before a game?"*

Interviewee: *"It's about half an hour tops I think. I don't really pay a lot of attention, if it is a good song and I am happy about it then I will try and get into the zone, but if it's something shit then I am not bothered."*

Interviewer: *"Do you think the team is exposed long enough to music or not enough?"*

Interviewee: *"I think if someone made the effort to make a playlist then it should be longer."*

Interviewer: *"How do you feel music affects you mind set, your mood and your emotions?"*

Interviewee: *"It definitely has an affect but it depends on the song, there is a song that I know that I have listened to in the past for rugby, if it is associated with rugby than I will be more up for the game."*

Interviewee: *"How do you think music prepares you for the game mentally?"*

Interviewee: *"It is hard to say, I don't know one way or the other if it has a positive impact or not, I like to think it does something. If it's a song that I am used to and I feel like I am getting in the zone."*

Interviewer: *"Do you feel like you have to be familiar with the song for it to be affective?"*

Interviewee: *"Not necessarily, they play songs all the time that I have never heard before, if it has got a decent enough beat you can start bouncing around whilst getting ready for the game."*

Interviewer: *"Do you feel using music is helping the team get on the same thought level?"*

Interviewee: *"I think it can do but I don't think it does the way we do it."*

Interviewer: *"Why is that?"*

Interviewee: *"Everyone has their own choice of what they want the song to be and they tell everyone to turn it off, so they are more interested in the song then getting changed and ready for the game."*

Interviewer: *"How important do you feel it is for the team to use music to mentally prepare themselves before a game?"*

Interviewee: *"I don't think it is that important for our preparation. I think if it was then someone would take charge."*

Interviewer: *"How do you feel music affects your physical ability?"*

Interviewee: *"Again it depends on other factors, certain songs make me feel up for the game. Other times I feel just as up for the game without the music."*

Interviewer: *"You mentioned you dance around a little bit, do you feel the need to do this when listening to music?"*

Interviewee: *"Yea, I am always moving when I am getting changed. There will be pauses where I am just stood there listening to the music if it's something I am into, if it's not then I just get changed."*

Interviewer: *"How do you feel music is affecting the teams' physical ability?"*

Interviewee: *"I don't know I have never paid enough attention to what is going on the field when no music has played compared to when it hasn't."*

Interviewer: *"Do you notice other people's physical behaviour changes?"*

Interviewee: *"Yea there is a few people that bounce around like I do, the guys that have headphones don't because their listening to something else, they don't move around as they are getting more focused."*

Interviewer: *"Would you say it is important for the team to listen to music to get physically ready for a game?"*

Interviewee: *"I think it can be. I have seen it have a positive impact, the manager has put together the play list and it was the same every week, so it stimulates people's feelings about previous matches so they know what's coming, it's a routine, it's something that everyone is happy with, tempo, beat and familiarity wise."*

Interviewer: *"Summarize how you about the music that is played?"*

Interviewee: *"Generally half and half really, sometimes it's good, sometimes it's bad, I haven't got a real overall opinion about it."*

Interviewer: *"What music would you choose to use before a game?"*

Interviewee: *"Something heavy really."*

Interviewer: *"Can you give an example?"*

Interviewee: *"Like rock music, I like Linken Park because it's dancey rock, so it's high tempo and quiet heavy."*

Interviewer: *"What qualities would you say make a song most motivational?"*

Interviewee: *"A song needs to have rhythm, personally I like to dance around when I am getting changed."*

Interviewer: *"So do you look for a song to make you feel more energized and get you moving?"*

Interviewee: *"Yea."*

Interviewer: *"Would you say tempo and rhythm are the motivational then?"*

Interviewee: *"Yea."*

Interviewer: *"Do you find a song that has an external meaning more influential than a fast tempo or rhythm?"*

Interviewee: *"It can do if it's got associations with films and stuff that you have seen, it's cheesy but the rocky theme, rocky 3 and eye of the tiger, it's cheesy but it works."*

Interviewer: *"Why do you think it works?"*

Interviewee: *"It has connotations doesn't it, the film has a montage of them training, and men being men, it's got it all."*

Interviewer: *"How would you feel if no music was played?"*

Interviewee: *"It would feel a bit flat, it can help lift a team a little bit. I have been in both sorts of changing room where there is music and where there isn't and it doesn't really seem to affect my game at all that noticeable but I like to think that it helps."*

Interviewer: *"How important do you feel music is on your personal performance?"*

Interviewee: *"Not very? I don't know. I played my best rugby after listening to that set playlist but that's partly my age and confidence levels. Lots of extrinsic stuff outside of music."*

Interviewer: "How important do you think music is on the teams' cohesive performance?"

Interviewee: "I think it can be very important, again when we all listen to the same thing and get all on the same page, everything is the same every week, you just get into routines inside and outside of music, like it all comes together to help."

Interviewer: "How prepared do you feel to play rugby after listening to music?"

Interviewee: "I think I can play a similar game of rugby without music when compared to playing with music. It's very difficult to judge isn't it because you don't know one from the other."

Interviewer: "To what extent do you feel using music affects the match?"

Interviewee: "Very little if you do it the way we do it."

Interviewer: "Do you feel it affects the beginning of the match more so than the end of the match?"

Interviewee: *"Yea everyone is going to be up for the start of the match and then something can go wrong then something can go wrong and there is an injury in the game, every ones head goes down and they forget about the music or the I think the only way music would affect it is if it's the same every week. When everyone is happy with what is going on and that it's a routine then other routines come into it and it forms part of the whole process rather than just dripping in and out which is the way we do it. I think most of the things we do is a bit drippy. We don't have a set routine for everything which if you go to higher levels of rugby they have routines for everything and music for some teams is part of that."*

Participant 6

Interviewer: *"You have put the tempo of the song [Hold your Colour] as not being very motivational why is that?"*

Interviewee: *"It's too fast and it distracts me, too much going on, too much noise, too much interference when I am trying to get my head down and think about what I am going to do."*

Interviewer: *"So do you find songs with fast tempos and fast rhythms not so motivating?"*

Interviewee: *"Yea I would rather have something slow that I can sit and bob my head to really slowly so I can relax myself and think about what I am going to do."*

Interviewer: *"Why have you rated melody so high?"*

Interviewee: *"I like the slow bit in the beginning where you can just listen to the word and what they sing about people being against them and stuff and I can relate that to rugby, like it's me against whoever is out there and I am going to beat them sort of thing."*

Interviewer: *"You have rated chart success, association with film and artist as very low?"*

Interviewee: *"Yea things like that don't make any song more motivational for me, it's more about what you are hearing than who made it."*

Interviewer: *"You have put lyrics related to physical activity high as 8, why is that?"*

Interviewee: *"The person who made the song isn't that important to me but if I can relate to the lyrics at all than that helps a lot".*

Interviewer: *"So you have put tempo as 2 and lyrics as 8 so do you find the lyrics in music more motivational than the tempo of a song?"*

Interviewer: *"Yea I do because I prefer to stay more relaxed than go mental to a fast song so lyrics that mean something are better."*

Interviewer: *"At what point in the changing rooms does music start playing?"*

Interviewee: *"Normally quiet early when everyone is getting into the changing rooms."*

Interviewer: *"Who is in charge of what is played, is it a team decision or does one person choose?"*

Interviewee: *"It's normally whoever puts their music on first."*

Interviewer: *"What is played on a typical day?"*

Interviewee: *"It's normally a mixture of fast stuff and not so fast stuff but it's not normally the stuff I would listen to."*

Interviewer: *"In terms of genre what is it?"*

Interviewee: *"It's like heavy stuff more like metal and rock."*

Interviewer: *"Does everyone listen to the same song or do you notice other people listening to headphones?"*

Interviewee: *"Some people play more dance orientated music than others, some play more heavy music and some play dance music. I have noticed some people taking iPods out to warm up with and after the warm up as well."*

Interviewer: *"How long are the team exposed to music for during a pre-match routine?"*

Interviewee: *"About twenty minutes or half an hour."*

Interviewer: *"Do you think that's enough or not enough?"*

Interviewee: *"No I think that's enough because It is just while you are getting yourself ready and you normally take a certain time to get ready and the music is on for that certain time and you're out of the changing room."*

Interviewer: *"How do you feel music affects your mind-set, mood and emotions?"*

Interviewee: *"I think the right music can help it."*

Interviewer: *"What do you mean by the right music?"*

Interviewee: *"If I have one of my favourite songs to listen to before the game then I can really get into it and really psych myself up."*

Interviewer: *"How do you feel music influences your mental preparation for the game?"*

Interviewee: *"I never play without listening to a playlist that I had, so it helps a lot I think."*

Interviewer: *"Did you build a specific play list? What sort of music was on that?"*

Interviewee: *"Some old school Kanye. Just a load of hip-hop and indie music."*

Interviewer: *"Do you think music helps get the team in the same thought process?"*

Interviewee: *"I don't know because some players listen to different music, so I don't think so. I think we all have our own way to get up for a game."*

Interviewer: *"How do you feel music affects the teams mental well being as a whole, do you think it helps get the team up for the game?"*

Interviewee: *"Yea I think music helps. I think if you get a good track and collectively there all think good tracks then we all get into the atmosphere more than sitting there silently, it really helps us prepare together."*

Interviewer: *"How important do you feel music is on the teams' preparation?"*

Interviewee: *"Yea I think it is important, we don't go anywhere without our speaker set it helps us all get into the right attitude for it."*

Interviewer: *"How do you feel music affects your physical ability?"*

Interviewee: *"It can affect it quite a lot, if I am not up for a game then I am not very physical and music helps me get to that level."*

Interviewer: *"When you're listening to music in the changing rooms do you feel the need to do anything?"*

Interviewee: *"No, on occasion I'll get up and start pacing but normally I'll just sit in my space and just listen to music and get thinking about what I am doing."*

Interviewer: *"How do you feel music affects the teams' physical ability?"*

Interviewee: *"I wouldn't know."*

Interviewer: *"Do you notice any other players' in the changing rooms doing anything?"*

Interviewee: *"Yea you get chest bumps, slaps on the back and you do see people pacing and throwing balls around, jumping up and down, stamping their boots."*

Interviewer: *"So there is a noticeable effect on other players?"*

Interviewee: *"Yea."*

Interviewer: *"How important do you feel music is on a teams' physical presence during a game?"*

Interviewee: *"It is hard to say really."*

Interviewer: *"Without music do you think the team would be as physical as they would with it?"*

Interviewee: *"Personally I probably wouldn't. I would struggle to get to the right level without listening to music before hand and id go out on a low and wouldn't be up for the game to start with. So if they are anything like me than no they wouldn't."*

Interviewer: *"What do you feel about music that is played before a game?"*

Interviewee: *"Sometimes it's alright, but sometimes when it is too heavy or too dancey then it just distracts me."*

Interviewer: *"What music would you personally choose to play before a game?"*

Interviewee: *"Id just put my favourite music on, so just some hip-hop or some indie music on."*

Interviewer: *"What musical characteristic do you find most motivating?"*

Interviewee: *"A slow beat that I can just nod my head to, like a metronome. Nod my head and think of nothing but the game."*

Interviewer: *"Would you say you look to feel more relaxed before a game as opposed to being all psyched up and ready to go?"*

Interviewee: *"Yea but not that sort of relaxed, like the relaxed where my body is completely unrigged and my head is completely relaxed on the game."*

Interviewer: *"So you don't look to feel more energetic before a game?"*

Interviewee: *"No, I want to calm myself down and think about what I am going to do. I can get energetic as soon as I get out of the changing rooms but when I am in the changing room I want to focus on what I want to do when I get outside of them."*

Interviewer: *"Do you think that music that has an external meaning more influential on your performance than music that has a fast tempo or rhythm?"*

Interviewee: *"Yea I would definitely say that lyrics are more influencing than a fast beat."*

Interviewer: *"How would you feel if no music at all was played?"*

Interviewee: *"It would be a bit flat, there would be nothing to focus on so it would just be the hustle and bustle of the changing rooms. People knocking into each other. I would have nothing to focus myself on, so I wouldn't be able to get myself in the right place as easy as I would with music."*

Interviewer: *"How important do you think music is on your personal performance?"*

Interviewee: *"Very important."*

Interviewer: *"Why is that?"*

Interviewee: *"As I have said I would just struggle to get up for a game without listening to music. If I am not up for a game and I can*

get into a space and listen to some good songs and I can get myself psyched up but if it is flat and there is no music then I would really struggle until I got out there twenty minutes in."

Interviewer: *"How important do you feel music is on the team playing together, as a team?"*

Interviewee: *"I don't think it really influences us once we get out there."*

Interviewer: *"Would you say for instance that a lot of the changing room interaction with each other from listening to music helps you play as a team more?"*

Interviewee: *"Possibly, but it completely changes when you get outside. All twenty of us are in there and a good song comes on, then you get outside and split up forwards and backs. I personally go away from everyone and throw balls at them, it just changes."*

Interviewer: *"So would you say the affect of music might ware of once you have got out?"*

Interviewee: *"On the cohesiveness yea."*

Interviewer: "How do you feel music affects your performance?"

Interviewee: "It depends what song has been played but it can help yea."

Interviewer: "To what extent do you feel using music affects the match?"

Interviewee: "Listening to music for me will make me more physical throughout the game, it just psych's me up so I feel like I can do anything in that game. Rather than thinking I am going to go in take a knock and it is going to be sore. I wouldn't think about that if I was ready and psyched up which music does."

Interviewer: "Is there anything else that you would like to say about the subject that we have not brought up here."

Interviewee: "I think lyrics that are related to competition or being an underdog or striving for something, think it's decent to listen to that sort of stuff, if it is about someone being beaten and getting back on top I think that works."

Participant 7

Interviewer: "You have rated tempo and rhythm as being highly motivating; (9)(10), why is that?"

Interviewee: "I can't get myself motivated of off a slow beat, I need something fast, upbeat, something to get the body pumping."

Interviewer: "Do you find tempo and rhythm more influential than lyrical content?"

Interviewee: "It depends what the situation is. Depending on what mood everyone is in. I find in a changing room situation the lyrics can be different for everyone so the tempo and rhythm keeps it upbeat and keeps everyone motivated."

Interviewer: "You have rated Harmony as 6 and Melody as 7 why is that?"

Interviewee: "Yea it is an important part of the song but it's the tempo of the beat and the rhythm that really gets me going that why there not as high as them."

Interviewer: "You have put lyrics related to physical activity as 7?"

Interviewee: *"Yea I do find lyrics motivational as well if it's the right subject obviously, if I can relate it to sport somehow then it can help."*

Interviewer: *"At what point does music start playing before a game."*

Interviewee: *"Not straight away. I like to get involved and have a laugh with the lads and then the music comes into it when you come in from the warm up."*

Interviewer: *"Who is in charge of what is played, does one person put something on or is it a team decision?"*

Interviewee: *"Generally someone just puts something random on but whatever comes on is generally high tempo dance music, stuff that people listen to on a regular basis really."*

Interviewer: *"What is played on a typical day?"*

Interviewee: *"Dance music, Skrillex and stuff like that, stuff with really high tempo, it just gets people bouncing in the changing room."*

Interviewer: *"Does everyone listen to the same song or do you notice people with headphones in?"*

Interviewee: *"Yea some people in certain positions put headphones in to listen to another genre of music or they might not like what is being played."*

Interviewer: *"How long are the team exposed to music for before a game?"*

Interviewee: *"Typically in out club probably about twenty minutes to half an hour."*

Interviewer: *"Do you think that is enough or not enough?"*

Interviewee: *"I think that is fine."*

Interviewer: *"Why is that?"*

Interviewee: *"As people are getting changed it is something in the background have a bit of banter, then it is put on after the warm up, then we have a chat and get out there."*

Interviewer: *"How do you feel music affects your mind-set, mood and emotions?"*

Interviewee: *"It doesn't really matter what the music is. As long as it's fast paced and up there then it will get me in the zone a bit. If it were slower then I would feel a little bit lethargic about it."*

Interviewer: *"How do you feel music influences your mental preparation before a game?"*

Interviewee: *"It helps me get ready. I listen to a certain style of music on the way to rugby. Then listen to the same style in the changing room, just gets your head in the game really."*

Interviewer: *"Do you feel that music is impacting on team unity and getting everyone on the same thought process?"*

Interviewee: *"Yes and no. Some people don't like the music that is played so obviously they put their own music on. They have a bit of banter saying how other peoples music is shit, some people really like it and ask what it is. I think overall it's got a good vibe about it and everyone enjoys it."*

Interviewer: *"How do you feel music is affecting the teams' mental well being. If the team do not feel up for it does it help?"*

Interviewee: *"Yea, because when people see other people getting fired up for to the music that is on. The music might not necessarily get fired up from the music that is on but seeing someone get fired up from the music might influence them to put in a better performance."*

Interviewer: *"How important do you feel it is for the team to use music to mentally prepare themselves before a game?"*

Interviewee: *"Quiet important because if you have just got a coach stood there talking to you giving you directions what they want to do it can just distract from what you have got to do. Music just puts you in your own little zone."*

Interviewer: *"How do you feel music affects your physical ability?"*

Interviewee: *"Quiet a lot. I put on stuff in the gym, I feel like I can do a lot more with the music on than with the music of, it just puts me in a mental state of concentration."*

Interviewer: *"Do you feel the need to do anything in particular physically before a game?"*

Interviewee: "No, just sit there and get my head in the game. I don't feel the need to bounce around. I just sit there and listen to it and get my head in the game."

Interviewer: "How do you feel music is holding affect on the teams' physical ability?"

Interviewee: "I think it's helping because on a Wednesday session in the gym the same sort of music that is played on the weekend in played and if it pumps them up in the gym then it pumps them up for the weekend."

Interviewer: "Do you notice other people doing physical actions in the changing room?"

Interviewee: "Some people do, some have a lot of energy to burn before a game. Some people seem to be always on the Lucozade's ready to go and wanting to get out first and some people are just sat around getting themselves in the zone."

Interviewer: "What do you notice them doing in the changing room?"

Interviewee: *"They do a lot of jumping about, passing the ball a bit, slapping themselves, just getting themselves motivated."*

Interviewer: *"Summarise how you feel about the music played before a match on a Saturday?"*

Interviewee: *"Yea I think it works, it covers most players. Most listen to that style of music. To cater to individual needs I don't think most people will take to it, but with the dance music and quiet recent music, people all know what it is."*

Interviewer: *"What music would you personally choose to play before a game?"*

Interviewee: *"I take music from films that I like, like I have watched "Never Back Down" a fair few times and the music from there. A bit of Rock, a bit of dance, something that is a bit heavier, a bit more tempo to it. I wouldn't listen to anything if it was slower, the slowest I would go is probably*

"Lose Yourself."

Interviewer: *"Can you list any musical qualities that you think make a song motivational?"*

Interviewee: *"Not so much with the lyrics. I think if people listen to the lyrics than it might speak out to different people in different ways. So I think more of it is keep the rhythm, keep the tempo up, add some lyrics in there but nothing specific really, just keep it up and get everyone bouncing to the same tune."*

Interviewer: *"Do you look to feel more energized before a game form listening to music?"*

Interviewee: *"I do yea."*

Interviewer: *"Do you find a song with an external meaning more influential than a song with a fast tempo or rhythm?"*

Interviewee: *"I do yea but it wouldn't necessary work for someone else, so I think in a changing room environment unless you are listening to your own then dance track are really good for people."*

Interviewer: *"How would you feel if no music was played?"*

Interviewee: *"I think peoples approach would be different. I don't think peoples' heads would be on it, id imagine a lot of people would bring their own headphones and iPods."*

Interviewer: "How important do you feel music is on your personal performance?"

Interviewee: "On the way I have a set play list in the car so if nothing is played in the changing room then I have already got my mind set on what I need to do, but in the changing room there is always something played and it gets everyone singing from the same sheet, all in the same game."

Interviewer: "How important do you feel music is on the teams' cohesive performance, playing as a team?"

Interviewee: "For the majority I think it works well. A few others have personal preferences that are not interested in it and they do their own thing. But in general I think this season it's improved moral, speaking about music and getting them talking, overall it as proved worthy of doing it."

Interviewer: "How prepared to play do you feel after listening to music?"

Interviewee: "A Lot more prepared than I would be if I didn't listen to music. Just gets my head in the game. If people are dicking about in

the changing room you can still sit there and listen to what is being played, you just get yourself in the zone."

Interviewer: *"To what extent do you feel using music before a game can affect the match outcome?"*

Interviewee: *"I think it influences the first quarter of the game, after that people don't think about the music stuff, but the first fifteen minutes it just sets the tempo of the game. Listening to something slow you might start slow, if it's faster and more upbeat people are ready for it and fired up, taking it to them."*

Participant 8

Interviewer: *"You have rated tempo and rhythm as really high up as being motivational for you, why is that?"*

Interviewee: *"I just imagine myself in that changing room environment. I personally feel you're looking for a raise. You are looking for something to stimulate you, like imagine your heartbeat as that beat. I want something fast and something to get me pumped basically."*

Interviewer: "You rated danceability as 4, do you not find songs that you can dance to motivational?"

Interviewee: "Well I am not trying to use the song for the purpose of dance. It has a purpose and I am not trying to think about dancing at that time."

Interviewer: "Why have you rated lyrics as 5?"

Interviewee: "Lyrics are important but a good tempo and rhythm really help physical and mentally wake me up and help me prepare."

Interviewer: "Is that why you rated stimulative qualities of music as 8?"

Interviewee: "Yea."

Interviewer: "At what point does music start playing in the changing room on a Saturday?"

Interviewee: "Pretty much from the start basically. Sometimes later, we go out, warm up, come in, then the build up for the game begins. You have got everything out of the way, your warm ups and your

drills. It then becomes a mental thing to focus and sort of build yourself up mentally for the game."

Interviewer: *"Who is in charge of what is played, is it a team decision or does anyone put something random on?"*

Interviewee: *"It's normally an individual but it's usually based on that individual gauging what everyone responds to. They get a few shouts if they put something on that people don't really agree with."*

Interviewer: *"So what is played on a typical day?"*

Interviewee: *"Again, something with a good beat, something bit aggressive really due to the nature of the sport, something like Paramore, something like that, something to get you fired."*

Interviewer: *"Does everyone listen to the same song or do you notice people listening to iPods?"*

Interviewee: *"Some people listen to their own music. I prefer to listen to the music that is being played, sort of get a feel, because then you are in it with everyone else, listening and you are in tune with everyone else. But some lads like to totally zone into their own*

headphones. I have seen some guys just wearing them and not listening to anything else."

Interviewer: *"You said you like listening to the music that is played, why is that?"*

Interviewee: *"Well, I can relate to it and like I said one of the main things is you know when there is a good beat and your friends are listening and your team mates are listening you know that you're feeling the same emotions at the same time. And you sort of feel like you're all charged at the same time, you feel part of a unit."*

Interviewer: *"How long are the team exposed to music for before a game?"*

Interviewee: *"I'd say half an hour to an hour."*

Interviewer: *"And do you think this is enough or not enough?"*

Interviewee: *"Yea I think that is enough. You do not want to overdo it."*

Interviewer: *"Why do you think that is enough, do you think people might get bored?"*

Interviewee: *"Well yea, you don't want to lose you edge with it. When you get to the point of starting that game, if you have to slow of a build up or too long of a build up it's almost like you become accustomed to it, short and sharp."*

Interviewer: *"How do you feel music affects your mind set, your mood and emotions?"*

Interviewee: *"Yea I think it definitely affects it during the game you know. I think it would change your feelings and emotions depending on the music, and what was being played."*

Interviewer: *"How do you feel music affects your mental preparation for the game?"*

Interviewee: *"I like to use the music. Because I feel if I am not switched on, as I would like to be then I try and use it as a tool to get me to a level I feel I personally need to be mentally. Then there becomes a point where I zone away from the music and just focus on my own self and what I want to do."*

Interviewer: *"Do you feel that music is impacting on team unity and getting everyone on the same thought process?"*

Interviewee: *"Yea definitely, we have been playing music at the end of the game when we come in, it's normally the same song, so we become accustomed to that song and relate that song too winning. So you know when you hear that song you have done well."*

Interviewer: *"If the team were not seeming fully up for the game do you feel the music helps mend this?"*

Interviewee: *"I do think since we have started to introduce music at the start of the games it has helped the team become more focused definitely."*

Interviewer: *"How important do you think it is for the team to use music to mentally prepare themselves before a game?"*

Interviewee: *"Yea I definitely think it is important, especially at an amateur level. You sort of go from being yourself to the next level of performance really, you have got to take yourself away from the daily activities because then it becomes something else."*

Interviewer: *"How do you feel music affects your physical ability?"*

Interviewee: *"I wouldn't say it affects my physical ability what so ever. It may affect the way I use my physical ability, however I do not think it affects the speed I run at or how hard I hit. I don't think it affects that. I think it affects you mentally and makes you want to do them things but I don't think it makes any difference once you have got onto the pitch."*

Interviewer: *"When you listen to music do you feel the need to do anything physically in particular?"*

Interviewee: *"Yea you sort of try and relate your body movements to the beat but just before the game there is a last few songs that come on with a fast tempo and fast beat. Ill start small jumps, a bit of movement, a few stretches. I tend to clap a lot for some reason I don't know why. I like to clap just to get that rhythm and sound and the feeling going through your body."*

Interviewer: *"How do you think music is holding an effect on the teams' physical ability?"*

Interviewee: *"Yea again from a more mental side I think it helps to get the team fired up and pumped. I definitely think certain individuals in the team respond a lot better to being fired up definitely. And music does help to do that, I have noticed a massive difference in some*

players cause it really takes a lot to get them going but now it's noticeably different."

Interviewer: *"You said how you start clapping, do you see other team members doing anything physical?"*

Interviewee: *"Yea a few people doing push ups. Some will start smacking their heads and legs and sort of insinuating hits and contact in the game. I have seen other people bury their heads in their hands and sort of apply pressure to the head just to more to focus themselves."*

Interviewer: *"What do you feel about the songs played in the pre-match routine?"*

Interviewee: *"Yea they are good I like them, I like the beat I like the tempo, anything lively."*

Interviewer: *"What would you personally choose to play before a game to motivate yourself?"*

Interviewee: *"Something aggressive. Whether that is lyrical or just a fast beat or tempo or again something I know. I got some songs that I like to play in the car on the way to a game that I know I can relate to*

and I can sing to that get me really fired up, along the lines of that really."

Interviewer: *"What musical qualities make a song motivational for you?"*

Interviewee: *"I suppose if I am looking for lyrics in a song then I like something I can sing to myself part of a song. I don't like something that I find difficult to understand then I can't relate to it. I like to sing a few lines of the chorus that helps you get yourself into it as well."*

Interviewer: *"Do you look to feel energized after listening to music before a game?"*

Interviewee: *"Definitely."*

Interviewer: *"Do you find music that has an external meaning more motivational than a song with a fast tempo or rhythm?"*

Interviewee: *"No probably not, although I can see why some people would. I personally wouldn't."*

Interviewer: *"How would you feel if no music was played before a game?"*

Interviewee: *"I have been there when that has happened and you sort of have to look for different ways to motivate yourself without the use of music."*

Interviewer: *"Any examples of that?"*

Interviewee: *"Id probably be more vocal. Because there would be no background noise, so you have to rely on yourself or others shouting, encouraging you on. You can also do that when there is music on but you don't need to do it to such an extent."*

Interviewer: *"How important do you feel music is on your personal performance?"*

Interviewee: *"Yea I would say it's relatively important. For me I think it helps, for me a large part of the game is mental, and it is definitely a big help to me on that."*

Interviewer: *"How important do you feel music is on the teams cohesive performance, playing as a team?"*

Interviewee: *"Yea definitely, I think that is one of the big effects it has. Especially when I said before when we all listen to the same*

music we become a unit. We listen to the same songs together. It affects us at the same time. It brings us in together, especially if we are in a huddle, arms bound with the music going on, that's when I think it affects the most, as a cohesive unit."

Interviewer: *"How prepared do you feel to play after listening to music?"*

Interviewee: *"Yea as well prepared as I could be."*

Interviewer: *"To what extent do you fee using music affects the match?"*

Interviewee: *"It has got to help it. I defiantly believe music is a big help to us in the game. More so the first half and the star because obviously you do not have the use of the music in the second half of the game. Definitely in the build up if it's a team you have not played before or you have not been in that environment. So it does help you step into the unknown and makes you feel more prepared."*

Participant 9

Interviewer: *"You have put tempo down as 5 out of why is that?"*

Interviewee: *"Yea it's average. I thought it was alright. Not like mega. It's not really my sort of thing but it was alright."*

Interviewer: *"You have put melody and harmony as 7 and 8 which is quiet high, so why do you find them more motivating?"*

Interviewee: *"The actual beat was quiet uplifting, got me going a bit, more than the actual lyrics I would say."*

Interviewer: *"You have put danceability as 9 which is your highest rating and stimulative qualities of music as 8. Why have you found these aspects more motivational?"*

Interviewee: *"If I can dance to the song than it gets me going, gets me moving which to me is motivational and makes me more up for it. It didn't have the best tempo but I could dance to it"*

Interviewer: *"What about the lyrics?"*

Interviewee: *"Lyrics are really motivational, that mixed with the good beat do the job."*

Interviewer: *"At what point does music start playing in the changing room on a Saturday?"*

Interviewee: *"We put it on straight away."*

Interviewer: *"Who is in charge of what is played. Is it a team decision or does one person put something random on?"*

Interviewee: *"One person will put something on but if it is shit then it will get changed. People know what people are going to want, we have the same sort of stuff every week."*

Interviewer: *"What is played on a typical day?"*

Interviewee: *"Nelly, Thought Minor, "Here Comes The Boom", Eminem a bit. I like that Roy Jones Jr song, anything like that, anything with that tempo."*

Interviewer: *"Does everyone listen to the same song or do you notice some people listening to iPods?"*

Interviewee: *"Yea some people do use their own iPods, not many about two or three."*

Interviewer: *"Do you listen to what is played or your own music?"*

Interviewee: *"I just listen to what ever is put on."*

Interviewer: *"And why is that?"*

Interviewee: *"It is too much hassle bringing your own stuff."*

Interviewer: *"How long are the team exposed to music for in the changing room before a game?"*

Interviewee: *"It could be anything between half an hour in the changing room then another five minutes when you are drawn back in the room. Anything from ten minutes up to an hour."*

Interviewer: *"Do you think that is enough or not enough?"*

Interviewee: *"That's enough. Most of the lads are listening to music on the bus."*

Interviewer: *"How to you feel music is affecting your mind set, your mood and emotions?"*

Interviewee: *"Definitely because you can relate things to the music cant you like things in the past and things like that so it can definitely help out with it and get your mind set and mood better than it was."*

Interviewer: *"How do you feel music is helps your mental preparation for a game?"*

Interviewee: *"For me it will get my mind set on the game because I will think about what I want out of a game, how I will approach the game, and the music is uplifting so it makes you want to excel in the game just because you are listening to. The things I like to listen to is about people doing good stuff and it's about your time and all that. So it makes you want to do that out on the pitch."*

Interviewer: *"Do you think music has an influence on team unity and getting the players on the same thought process?"*

Interviewee: *"Yea, everyone will be on the same level. Whether everyone is thinking the same thing I don't know but it definitely makes us closer."*

Interviewer: *"How important to you feel it is for the team to use music to mentally prepare?"*

Interviewee: *"I think certain players it can definitely. But I don't see it like if we have no music then it is a total disaster."*

Interviewer: *"How do you think music affects your physical ability?"*

Interviewee: *"It just gets your mind set right so it could definitely increase it but again I am not going to say you're going to walk out there and play a lot worse because you have not had it."*

Interviewer: *"Do you feel the need to do anything physically when you listen to music in the changing room?"*

Interviewee: *"No, but I see a lot of lads tapping their toes, it definitely makes you want to sort of get up and start moving. It makes you feel like you have more energy I would say."*

Interviewer: *"Would you say you feed off what you see other people do in the changing room?"*

Interviewee: *"Yea."*

Interviewer: *"How important do you feel music is on the teams 'cohesive physical performance during the game?"*

Interviewee: *"I wouldn't say it makes it any worse but I wouldn't say it makes it any better because I wouldn't say it makes you play more as a team because you listen to the same music."*

Interviewer: *"What do you feel about the songs that are played in the pre-match routines?"*

Interviewee: *"It's alright, it's not exactly what I want but it's not the last thing I would choose."*

Interviewer: *"What would you choose to play personally before a game?"*

Interviewee: *"Top three songs, I would have Roy James Jr. "Can't Be Touched", "Here Comes The Boom" and Thought Minor."*

Interviewer: *"And why is that?"*

Interviewee: *"I just love the songs. They get me going."*

Interviewer: *"So what musical qualities do you feel make a song motivational?"*

Interviewee: *"Tempo, but lyrics definitely. Being able to relate to the song is probably most important thing before a game."*

Interviewer: *"Do you look to feel more energetic after listening to music in the changing room?"*

Interviewee: *"Yes."*

Interviewer: *"Do you find music with an external meaning more motivational than a fast tempo or rhythm?"*

Interviewee: *"Yea. The stuff I listen to at the gym. I listen to speeches and sayings all that, I think that probably does more for me than songs do. But obviously songs that have good lyrics in and songs that I am on about."*

Interviewer: *"How would you feel if no music was played before a game?"*

Interviewee: *"Probably wouldn't bother me."*

Interviewer: *"Not at all?"*

Interviewee: *"No."*

Interviewer: *"How important do you feel music is on your personal performance?"*

Interviewee: *"Minor, not much."*

Interviewer: *"How important do you think music is on the teams' performance?"*

Interviewee: *"I would say it definitely makes it better, but how much better I don't know, definitely no more than 15%. To say that about just because music is playing is a lot for something that is so minor."*

Interviewer: *"How prepared to play do you feel after listening to music in the changing rooms?"*

Interviewee: *"More than I was."*

Interviewer: *"To what extent do you feel using music affects the match?"*

Interviewee: *"Obviously if it is a very close match then I think it can increase up to 10% and that can be the difference between winning and losing."*

Interviewer: *"Would you say it affects the start of the match more so than the end of the match?"*

Interviewee: *"Yea I would. Obviously if you start the match well then the chances are you are going to carry that through."*

Participant 10

Interviewer: *"You have put nine of familiarity, why do you find that motivating?"*

Interviewee: *"Well it is a familiar song. And if you know the song you are going to get a bit more pumped up I think, rather than something you don't know then it means nothing to you."*

Interviewer: *"You also put tempo and rhythm really high as eight, why is that?"*

Interviewee: *"If you play something that has slow tempo it's not gonna get your blood going and it is not going to do anything for you. The faster the tempo for me it is going to get you pumped a bit more."*

Interviewer: "At what point does music start playing in the changing room on a Saturday?"

Interviewee: "As soon as we get in there really. Get in there, get the music on while we are getting changed."

Interviewer: "Who is in charge of what is played is it a team decision or does someone just put something random on?"

Interviewee: "Usually someone just puts a song on random."

Interviewer: "What is played on a typical Saturday?"

Interviewee: "Anything really."

Interviewer: "Does everyone listen to the same song or do you notice people with iPods?"

Interviewee: "There is always three or four with their head phones in getting in the zone."

Interviewer: "Do you listen to your own iPod?"

Interviewee: "No I just listen to whatever is on."

Interviewer: *"Why is that?"*

Interviewee: *"Can't be arsed bringing an iPod. Something else to remember isn't it."*

Interviewer: *"How long are the team exposed to music for in the changing rooms before a game?"*

Interviewee: *"About twenty minutes or so."*

Interviewer: *"Do you think that is enough or not enough?"*

Interviewee: *"That's enough really because the thing is before the game you do not want to be in the changing rooms for too long in my opinion, so twenty minutes in the changing room is plenty enough for me."*

Interviewer: *"How do you feel music affects your mind set, mood and emotions?"*

Interviewee: *"It just gets me psyched up in a positive frame of mind."*

Interviewer: *"Do you feel music influences your mental preparation before a game?"*

Interviewee: *"No wouldn't say so, you have to turn up with the right mind-set. Music isn't going to do that for you."*

Interviewer: *"Do you think the music impacts on team unity and gets everyone on the same thought process?"*

Interviewee: *"Probably not."*

Interviewer: *"Do you feel that music is affecting the teams' mental well being, if the team do not seem up for it does it change that?"*

Interviewee: *"Yea. But the trouble is with the music, different people, some like RnB some like Hip-Hop. It would be difficult to find that one song that would get everyone in the write frame of mind."*

Interviewer: *"How important do you feel it is for the team to use music to mentally prepare themselves?"*

Interviewee: *"I wouldn't say it is the most important thing but you know it does play a part I think."*

Interviewer: *"How do you feel music is affecting your physical ability?"*

Interviewee: *"I don't think it does really. Mentally it gets you pumped."*

Interviewer: *"When you listen to music in the changing room do you feel the need to do anything physically?"*

Interviewee: *"No."*

Interviewer: *"Do you notice anyone else doing anything?"*

Interviewee: *"No. I just don't pay attention in the changing room. I just get my shit and get out."*

Interviewer: *"How do you feel music is impacting on the teams' physical ability?"*

Interviewee: *"I think if you have a song with a big tempo It will affect a few different people in the team and get them pumped up and them first few hits will be more aggressive. For me personally it does not work like that."*

Interviewer: *"What do you think about that music that is played during pre-match routines?"*

Interviewee: *"Sometimes it's good. I am not really into RnB and Hip-Hop so if someone puts it on then you have to listen to it. Sometimes it's good and sometimes it's bad basically."*

Interviewer: *"What music would you personally choose to play before a game to motivate yourself?"*

Interviewee: *"Heavy Metal, Hard Rock. A bit of thrash."*

Interviewer: *"Any bands in particular?"*

Interviewee: *"Not really, nothing of the top of my head."*

Interviewer: *"What musical characteristics do you find make a song motivational?"*

Interviewee: *"Just a good beat really. For me its high tempo, lyrics don't really do that much for me, just something that will get the blood going a bit."*

Interviewer: *"Do you look to feel more energised before a game?"*

Interviewee: "Yea probably."

Interviewer: "Do you find music with an external meaning more motivational than a fast tempo or rhythm?"

Interviewee: "No."

Interviewer: "How would you feel if no music was played before a game?"

Interviewee: "Sometimes it can be a bit morbid can't it. The changing room, everyone one is just quiet getting their own shit together which can be a bit boring and music changes that and makes everyone seem up for it."

Interviewer: "Would you say it creates an atmosphere in the changing room?"

Interviewee: "It can do yea."

Interviewer: "A positive atmosphere?"

Interviewee: "Yea."

Interviewer: "How important do you feel music is on your personal performance?"

Interviewee: "It is not major. I am sure it does have an impact, because you do go out happy and a little bit buzzed up but overall not really."

Interviewer: "How important do you feel music is on the teams' cohesive performance?"

Interviewee: "Not very. That should come of the training field rather than twenty minutes before a game."

Interviewer: "How prepared do you feel to play after listening to music?"

Interviewee: "Well you have to be prepared to play before you turn up but it makes you feel happy which does help the mind-set for a game."

Interviewer: "To what extent do you feel using music affects the match?"

Interviewee: *"It has a good affect for me."*

Interviewer: *"Would you say it has more of an effect on the start of the game rather than the end?"*

Interviewee: *"Yea I would because it pumps individual up. Some don't get pumped up. If it pumps half the team up then it has had a good affect hasn't it."*

Interviewer: *"You think some players go out more energized and more up for the game?"*

Interviewee: *"Yea definitely, some of the players will be. And they can bring the rest of the players up with them which can really help me personally at times."*

Interviewer: *"Do you find that some players may go off of what other people behave like?"*

Interviewee: *"Yea definitely. I think I do to be honest, the music itself does not always work for me but when I see team mates getting up for the match from listening to music, like behaving differently and getting a bit mad that can really help me get up for it."*

Interviewer: *"Is there anything else you want to add to this interview related to the subject discussed?"*

Interviewee: *"I reckon if you play the wrong music it can bring the mood down."*

Interviewer: *"What would be an example of the wrong music?"*

Interviewee: *"Just rapping for me. That genre just doesn't do it for me, it brings me down rather than pumping me up, I just find it a bit boring."*

Interviewer: *"So have you found that it can be detrimental more?"*

Interviewee: *"Sometimes if it is the wrong track then yea. If it is too loud as well. If it is too loud then you have to shout."*

Interviewer: *"Do you prefer the music to be more of a background noise rather than in your face loud?"*

Interviewee: *"Yea to create the environment rather than silence just to bring it out a little bit."*

Participant 11

Interviewer: "You have rated both songs high for tempo, do you find tempo as a motivating factor of a song then?"

Interviewee: "I personally prefer to listen to music that has more of a meaning to it but music for there an then in the changing room to get you buzzing for the game then yea a good tempo can aid that but I don't think you can carry that into the game much."

Interviewer: "I noticed that you rated association of music with sport as being very low on both as well?"

Interviewee: "Well yea they are just typical dance tracks at the end of the day I can't really associate any of that with rugby so in that way they wouldn't do much."

Interviewer: "At what point does music start playing within the changing room?"

Interviewee: "The music generally starts straight away – as soon as the equipment can be set up. The music does become more intense in nature closer to the match however."

Interviewer: *"Who is in charge of what is played, is it a team decision or does someone just randomly put something on? What do you feel about this?"*

Interviewee: *"Generally 2-3 people put their music on. I think this is probably due to them being more pro-active than others."*

Interviewer: *"What is played on a typical day?"*

Interviewee: *"I'd have said Dance music is the most popular, mixed with hip-hop and rap. Generally, high tempo aggressive music."*

Interviewer: *"Does everyone listen to the same song or do you notice people listening to their own music with iPods?"*

Interviewee: *"A small amount of the players listen to their own music with head phones and like to focus on their own routine."*

Interviewer: *"How long are the team exposed to music during the pre-task routine?"*

Interviewee: *"It varies due to timings of matches and early arrivals etc. It's definitely more short and sharp exposure."*

Interviewer: *"Do you feel the team is exposed long enough to music before leaving the changing room?"*

Interviewee: *"I think it's personal preference to whether you enjoy or find the music useful. Me personally would like to listen to more music but it's not always practical."*

Interviewer: *"How do you feel the music affects your mind-set, emotion and mood?"*

Interviewee: *"Music most definitely has the potential to effect individuals moods. As part of the pre game routine, music helps me to generate adrenalin and boost my energy for the game."*

Interviewer: *"How do you feel the music influences your mental preparation for the match?"*

Interviewee: *"With this everyone is different. I find it hard to use any external source to aid my match preparation because of the wait between the changing room and kick off."*

Interviewer: *"Do you feel music is impacting on team unity and getting everyone on the same thought process?"*

Interviewee: *"I think music can aid in bringing everyone together with a mutual feeling of preparation for a game but it's just a cog in a bigger machine when it comes to the pre-match routine."*

Interviewer: *"How important do you feel is it for the team to use music to mentally prepare themselves?"*

Interviewee: *"I would rather have music as part of the pre-match routine than not every time. However the difference between players and personalities provides a barrier to bringing everyone up together."*

Interviewer: *"How do you feel music affects you physical ability?"*

Interviewee: *"It does to an extent but for me personally I find it hard to maintain any effect from the music into the game because you can't listen to music right up to kick off or during the game. I honestly feel like if you could listen during the game it would be a significant difference."*

Interviewer: *"How do you feel music influences your physical state. Do you feel the need to do anything in particular while listening to music in the changing room?"*

Interviewee: *"When listening to music in the changing room I can feel the effects more so I become more animated and generally more responsive to the music. I would say it makes me feel more psychologically up for it and my physical behaviour probably reflects this."*

Interviewer: *"How do you feel the music is holding affect on the teams' physical ability?"*

Interviewee: *"Regarding the rest of the team I couldn't say how they get affected."*

Interviewer: *"Summarise what you feel about the music played during pre-task routines?"*

Interviewee: *"Generally speaking the music played is high tempo, passionate, energetic and sometimes aggressive. I think this reflects the nature of the sport and the ideal attitude going into a game of such a physical nature."*

Interviewer: *"What music would you personally choose to play to prepare before a match?"*

Interviewee: *"I personally like a mixed approach. Predominately I like more atmospheric music or inspirational music/speeches. I like to feel directly motivated from the audio or slowly built up for a more atmospheric and deeper music genre."*

Interviewer: *"What musical characteristics do you feel makes a song motivational?"*

Interviewee: *"For me personally I've always been effected more by the atmosphere music can create. I like a song that builds slowly, has a solid rhythm. I suppose a song that is layered well and goes into quite a deep state. Sometimes a completely instrumental song. I wouldn't say lyrics are a necessary ingredient to a stimulating song."*

Interviewer: *"Do you look to feel more energized from listening to music in the changing room?"*

Interviewee: *"I do feel more energized from listening to music. However it has to be effective music and that sometimes can be a subjective choice."*

Interviewer: *"Do you find music that has external meaning more influential on performance than music that has a fast tempo and rhythm?"*

Interviewee: *"No, I feel that music is only influential to an individual for their own reasons. If somebody has a memory or an experience related to a piece of music then they will find it effective. This maybe a piece of wider influence it maybe a piece that no one else has ever heard. However it could be seen as likely that an individual has had an experience from a more popular piece of music."*

Interviewer: *"How would you feel if no music was played during a pre-task routine?"*

Interviewee: *"I agree that music can certainly improve your mentality pre-game and therefore the omission of music would remove this possible improvement. I would say that I think music is a benefit as oppose to no music being a negative."*

Interviewer: *"How important do you feel music is on your personal performance?"*

Interviewee: "I personally use music and inspirational audio to influence my sporting mentality but more often not on game day I struggle to carry the feeling from music into the game because of the time gap between the changing room and the game."

Interviewer: "To what extent do you feel listening to music in the pre-match routine affects the match?"

Interviewee: "For me personally I can't take the effect of music into the game because for me. It's an immediate and instant effect I receive and there for it's lost very quickly, within minutes."

Interviewer: "Would you like to say anything else related to the subject or anything we have discussed here today?"

Interviewee: "As I have mentioned various times, music and inspirational audio is effective and I do use it to motivate me. However, I can't use it directly into a game because the affect is immediate. If I could listen to music right to kick-off over a tanoy etc. I could take that effect straight into the game. I also feel this subject of music/audio and its effect of sporting performance is highly individual, everyone is different and everyone is effective by different songs etc. However, I do feel there is a certain level of a combined motivation

when a group of team mates listen to music together, they do become influenced of each other."

Participant 12

Interviewer: *"You have rated familiarity and tempo really high as motivational why is that (Dizzee Rascal)."*

Interviewee: *"I can dance to it so it makes me want to move, it's got a good tempo, it wouldn't work for me if it was slow and I knew the song really well so I like it to."*

Interviewer: *"Is tempo important for you to find a song motivational before you play."*

Interviewee: *"Yea, that as-well as some good lyrics normally do the job, stuff that's fast and aggressive."*

Interviewer: *"At what point does music start playing within the changing room?"*

Interviewee: "As soon as the 'music guy' comes in the changing room, the music goes on."

Interviewer: "Who is in charge of what is played, is it a team decision or does someone just randomly put something on?"

Interviewee: "There is normally a few different guys who have already made playlists ready for rugby. Personally, I quite like the type of things that go on, although generally I put my headphones in as soon as I get in the car to travel to the club so it doesn't really have much effect on me what they play."

Interviewer: "What is played on a typical day?"

Interviewee: "Stuff that's fast paced and angry. A lot of Eminem, Linkin Park, Limp Bizkit etc. If it's got a heavy beat and emotive lyrics, it has probably been played at some point."

Interviewer: "Does everyone listen to the same song or do you notice people listening to their own music with iPods?"

Interviewee: "Some people definitely use their headphones, others will listen to the music over the speakers and others just won't take

much interest in what is on and go and chat elsewhere. Again, it's personal preference."

Interviewer: *"How long are the team exposed to music during the pre-task routine?"*

Interviewee: *"Just while they are getting changed so maybe thirty minutes or so. Then again it'll briefly be on again while we get our match kit on, maybe for ten to fifteen minutes or so before it gets turned off for the team talk."*

Interviewer: *"Do you feel the team is exposed long enough to music before leaving the changing room?"*

Interviewee: *"I think so yes. Again, it is different for me because I put my headphones in at home and then don't take them out again until we warm up. But from what I have seen, I think the majority of the team is happy with what music goes on and how long it is on for. It has been the same routine for so long that it'd probably have a detrimental effect if we changed it."*

Interviewer: *"How do you feel the music affects your mind-set, mood and emotion."*

Interviewee: "It just gets me in an aggressive mood. I listen to the lyrics of the music more than the pace and tone. Emotive language etc. fires me up and gets me in the right frame of mind for what I'm about to do which obviously is something who have to be aggressive about."

Interviewer: "How do you feel the music influences your mental preparation for the match?"

Interviewee: "It fires me up and gets the adrenaline pumping. But at the same time, if it works too well you can lose focus on what you're doing and you can be overeager which is detrimental to your performance. I've got my playlist down exactly to get me to my peak level, then I turn it off."

Interviewer: "Do you feel music is impacting on team unity and getting everyone on the same thought process If some are not feeling up for it do you think music is aiding in getting people up for it and thinking on the same level?"

Interviewee: "I think so yes. There is always days that you can't be bothered to play or you just aren't in the mood. But if you set about your normal routine, you always end up in the same place mentally

and ready to play despite whatever mood you may have been in before."

Interviewer: *"How important do you feel is it for the team to use music to mentally prepare themselves?"*

Interviewee: *"It completely up to the individual. Some people need it, some people will do it if they can remember, some people couldn't care less. It's a very personal thing in my opinion."*

Interviewer: *"How do you feel music affects you physical ability, do you feel it affects you how physical in the game."*

Interviewee: *"Things which require brute force or some degree of bravery I think are improved. Fine motor skills though never end up going right if you get's yourself too fired up."*

Interviewer: *"How do you feel music influences your physical state, do you feel the need to do anything in particular while listening to music in the changing room?"*

Interviewee: *"I like to just sit in the corner with my hood up and my eyes closed. I like to be totally immersed in what I'm doing. People sometimes comes up to me or try to interact with me, and I normally*

just try and get the interaction over and done with as soon as possible and then get back to zoning out."

Interviewer: *"How do you feel the music is holding affect on the teams' physical ability?"*

Interviewee: *"It probably does for the first few minutes but after that I don't think it'd have much effect because most people just use the music for an initial burst rather than something that last over the entire game."*

Interviewer: *"How do you feel music is affective the teams' physical behaviour?"*

Interviewee: *"It definitely changes some people's behaviour. I like to think I'm quite mild mannered but when I put my music on ready for rugby I don't think I'm very nice to be around. Some people go to a whole new level though. One of my very good friend of a number of years head butted me in the changing room before a cup final a few years ago after having his music in before the game."*

Interviewer: *"Summarise what you feel about the music played during pre-task routines?"*

Interviewee: *"I think it's important for some less so than others. Some people don't care what the music is on as long as it's fast paced whereas others want to listen to the lyrics. Again, very individual."*

Interviewer: *"What music would you personally choose to play to prepare before a match?"*

Interviewee: *"I like things by Eminem or a few rock bands. Their lyrics are normally quite confrontational, which obvious is beneficial for playing rugby. It fires me up to be much for aggressive and in people faces than I would be otherwise."*

Interviewer: *"What do you feel makes a song motivational?"*

Interviewee: *"I think the lyrics and the pace are equally important. You aren't going to get fired up listening to slow ballads but you will if you're listening to something quick and full of swearing and emotive language."*

Interviewer: *"Do you look to feel more energised from listening to music in the changing room?"*

Interviewee: *"Definitely. I think that's the main reason why people listen to music in the first place."*

Interviewer: "Do you find music that has external meaning more influential on performance than music that has a fast tempo and rhythm?"

Interviewee: "It can do. If I listened to sweet chariot before my games for my club, it'd do nothing for me. However, I couldn't imagine anything more motivational than hearing that while playing for England in front of your home crowd. It's going to be different for different people in different situations."

Interviewer: "How would you feel if no music was played during a pre-task routine?"

Interviewee: "I wouldn't be fired up for the game at all I don't think and ultimately my performance would go downhill. I have had the same routine for years so to change that would not sit well with me at all."

Interviewer: "How important do you feel music is on your personal performance?"

Interviewee: "I think it just gets me in the zone for the first few minutes. If I play well and am aggressive in the first few minutes of

the game I'll grow in confidence and play well. If I'm not I'll know I'm not playing well and it'll affect my mind-set."

Interviewer: *"How important do you feel music is on the teams' cohesive performance?"*

Interviewee: *"Not very. I think it's an individual thing and it doesn't really bring people together."*

Interviewer: *"How prepared do you feel to play after listening to the music, do you feel more ready to play after listening to music?"*

Interviewee: *"If I have listened to my music in the same routine as I always have, then I think I am in the perfect mind-set ready to play. Anything other than this, and I won't be at my peak."*

Interviewer: *"To what extent do you feel utilising music affects the match?"*

Interviewee: *"I think it only really affects the first play, maybe the first few minutes. Nobody is thinking about music ten minutes into a game, they are too focused on the match. I think it just gives you that initial burst ready for the first confrontation."*

Interviewer: "Would you like to say anything else related to the subject or anything we have discussed here today?"

Interviewee: "Just to reiterate what I have said in pretty much all my answers, it's a very individual process. What works for one, won't work for another."

Participant 13

Interviewer: "You have rated both songs noticeably low compared to everyone else, why is that?"

Interviewee: "I don't use music at all before playing so it just doesn't make any difference what is played for me."

Interviewer: "At what point does music start playing within the changing room?"

Interviewee: "Music is usually put on by the first person in the changing room. It is always on when I get there. Nothing particularly themed, planned or motivational."

Interviewer: *"Who is in charge of what is played, is it a team decision or does someone just randomly put something on."*

Interviewee: *"I think our captain has some input but I'm not sure who exactly."*

Interviewer: *"What is played on a typical day?"*

Interviewee: *"The coaches prefer more upbeat and high tempo music. Not sure on the artists as I'm not a fan of it."*

Interviewer: *"Does everyone listen to the same song? Do you notice people listening to their own music with iPods?"*

Interviewee: *"A few people listen to their own stuff. The music is stopped when talking begins however."*

Interviewer: *"How long is the team exposed to music during the pre-task routine?"*

Interviewee: *"Not long, 5 mins max. Usually whilst we are getting our match kit sorted."*

Interviewer: "Do you feel the team is exposed long enough to music before leaving the changing room?"

Interviewee: "I don't use music and never have as a motivational tool so I'm not sure, it doesn't have an effect on me."

Interviewer: "How do you feel the music affects your mind-set, your mood, emotion, how your feeling."

Interviewee: "Music has no effect on me. I'm too busy thinking about what I'm about to do to allow myself to be distracted by it."

Interviewer: "How do you feel the music influences your mental preparation for the match?"

Interviewee: "No influence whatsoever."

Interviewer: Do you feel music is impacting on team unity and getting everyone on the same thought process?

Interviewee: "No, words from team mates or coaches have the desired effect."

Interviewer: "How important do you feel is it for the team to use music to mentally prepare themselves?"

Interviewee: "Not important. The task in hand should be motivation enough."

Interviewer: "How do you feel music affects you physical ability?"

Interviewee: "No effect at all."

Interviewer: "How do you feel music influences your physical state. Do you feel the need to do anything in particular while listening to music in the changing room?"

Interviewee: "No influence."

Interviewer: "How do you feel the music is holding affect on the teams physical ability?"

Interviewee: "I don't feel that music has an effect on the team on the pitch. I believe what has happened in the game or what we need to do tactically on the pitch is at the front of people's minds, not the words of someone who has no idea what we're trying to accomplish."

Interviewer: "How do you feel music is affective the teams physical behaviour?"

Interviewee: "I don't notice the music having an effect on anyone except the people who listen to their own iPods. It has no effect on me."

Interviewer: "Summarise how you feel about the music played during pre-task routines?"

Interviewee: "For me, it has no place in my routine so I don't think it is necessary. I don't know what songs are played."

Interviewer: "What music would you personally choose to play to prepare before a match?"

Interviewee: "I wouldn't choose music at all."

Interviewer: "What do you feel makes a song motivational in terms of musical characteristics?"

Interviewee: "Unknown. I imagine it's the words used or the fast paced nature of the song."

Interviewer: *"Do you look to feel more energised from listening to music in the changing room?"*

Interviewee: *"No."*

Interviewer: *"Do you find music that has external meaning more influential on performance than music that has a fast tempo and rhythm?"*

Interviewee: *"Unknown."*

Interviewer: *"How would you feel if no music was played during a pre-task routine?"*

Interviewee: *"Better, less distractions."*

Interviewer: *"How important do you feel music is on your personal performance?"*

Interviewee: *"Not important at all. I'm too focused on the task in hand."*

Interviewer: *"How important do you feel music is on the teams' cohesive performance?"*

Interviewee: "Not important."

Interviewer: "How prepared do you feel to play after listening to the music?"

Interviewee: "It has no effect on me, so no."

Interviewer: "To what extent do you feel utilising music affects the match?"

Interviewee: "I feel it has no effect."

Participant 14

Interviewer: "You have rated tempo and rhythm as 7 for motivational on the Pendulum song, why is that?"

Interviewee: "It's got a good tempo, just that fast beat, well after the start anyway so that was good, good tempo is always good"

Interviewer: "You have rated familiarity on the Dizzee Rascal song as 9 which is very high why do you find that motivating?"

Interviewee: "That was on the radio load's when it first came out so I knew the song which helps."

Interviewer: "Do you find that if you know the song you can get more motivated from it?"

Interviewee: "It can do, but generally music has a limited affect on me I think."

Interviewer: "At what point does music start playing within the changing room?"

Interviewee: "Music starts playing ASAP in the changing room."

Interviewer: "Who is in charge of what is played, is it a team decision or does someone just randomly put something on?"

Interviewee: "People pretty much take it in turns being in charge of what is played unless (says name of player) is playing. I feel that music is just randomly put on, it does not bother me as a player."

Interviewer: *"What is played on a typical day?"*

Interviewee: *"Music that is played is varied, dance music and gangster rap sticks in my mind."*

Interviewer: *"Does everyone listen to the same song? Do you notice people listening to their own music with iPods?"*

Interviewee: *"Not everyone listens to the music that is put on in the changing room, some individuals use iPods or their phones etc."*

Interviewer: *"How long is the team exposed to music during the pre-task routine?"*

Interviewee: *"The team are exposed to music whilst changing before going out for the warm up which can be up to 30 minutes, sometimes more at home game."*

Interviewer: *"Do you feel the team' are exposed long enough to music before leaving the changing room?"*

Interviewee: *"I feel that the team are exposed to music long enough before leaving the changing rooms because it can get in the way of discussing what it is we are going to do if it is left on to long."*

Interviewer: *"How do you feel the music affects your mind-set, mood, and emotion?"*

Interviewee: *"I don't feel much affect on my mind-set from listening to music."*

Interviewer: *"How do you feel the music influences your mental preparation for the match?"*

Interviewee: *"Music doesn't influence my mental preparation for the match."*

Interviewer: *"Do you feel music is impacting on team unity and getting everyone on the same thought process, if some are not feeling up for it do you think music is aiding in getting people up for it and thinking on the same level?"*

Interviewee: *"I feel music can help bring the team together but if someone is not up for it by Saturday morning I can't see music helping them much."*

Interviewer: "How important do you feel is it for the team to use music to mentally prepare themselves?"

Interviewee: "I don't find any influence from music in the preparation of the team mentality as I think mental preparation is something that that should have been sorted by the final training session on Thursday so all you have to do is go over as a player what you have to do come game day. This should be done in your own head until game day."

Interviewer: "How do you feel music affects you physical ability?"

Interviewee: "I don't think music affects my physical performance unless I'm listening to it whilst I am actually playing which isn't going to happen."

Interviewer: "How do you feel music influences your physical state do you feel the need to do anything in particular while listening to music in the changing room?"

Interviewee: "I don't feel the need to do anything whilst listening to music in the changing room."

Interviewer: "How do you feel the music is holding affect on the teams' physical ability?"

Interviewee: "I think music must do something to the team as so many individuals listen to their own music. But, I can't explain what it is as I don't feel much off the music myself."

Interviewer: "How do you feel music is affective the teams physical behaviour?"

Interviewee: "I notice many players listening to music of their own on IPods etc. And they seem quite and seem to be concentrating which I suppose helps me individually, as it gives me confidence that they are alert and seem positive."

Interviewer: "Summarise what you feel about the music played during pre-task routines."

Interviewee: "The rap and dance music that is played isn't of my choice so I don't like them, which could be a reason why I feel the music in the changing room doesn't really affect me."

Interviewer: "What music would you personally choose to play to prepare before a match?"

Interviewee: *"If I was to choose music to listen to before a game it would be the Rocky tune or "Eye Of The Tiger" and some Guns And Roses just because it has a more aggressive beat to it, and lyrics. However, as I only think music affects me at the time of listening to it, I don't think that I will choose a selection myself."*

Interviewer: *"What do you feel makes a song motivational in terms of musical characteristics?"*

Interviewee: *"Music that has that aggressive beat and lyrics can sometimes bring the hairs up on the back of your neck, which at the time feels like a small release of adrenaline. This sub-sides though quite quickly which confirms to myself that music is only motivational whilst you are listening to it."*

Interviewer: *"Do you look to feel more energised from listening to music in the changing room?"*

Interviewee: *"I don't look to feel energised by listening to music."*

Interviewer: "Do you find music that has external meaning more influential on performance than music that has a fast tempo and rhythm?"

Interviewee: "A song like *Swing Low Sweet Chariot* would motivate me more than any other music as of its meaning to rugby as I'm English, so music that has external meaning I find most influential."

Interviewer: "How would you feel if no music was played during a pre-task routine?"

Interviewee: "I would not be concerned if no music was played before a pre-task routine as most of my time playing rugby music has not been played."

Interviewer: "How important do you feel music is on your personal performance?"

Interviewee: "I don't feel music is important on my own performance as I have played more without music in the changing room and put in some great performances."

Interviewer: "How important do you feel music is on the teams' cohesive performance?"

Interviewee: *"Music is important for the team, as certain individuals must get something out of it as they always listen on their iPods before a game. I feel that anything that helps an individual players' helps the team."*

Interviewer: *"How prepared do you feel to play after listening to the music, do you feel more ready to play after listening to music?"*

Interviewee: *"I personally don't feel any more prepared or less prepared after listening to music."*

Interviewer: *"To what extent do you feel utilising music affects the match?"*

Interviewee: *"I don't feel utilising music affects the match at all, as the buzz you get from music sub-sides too quickly to take it into a game with you. Music should not be played leading right up to kick off as this will get in the way of the verbal discussion of what we are going to do in the game."*

Interviewer: *"Would you like to say anything else related to the subject or anything we have discussed here today?"*

Interviewee: *"I feel I have been pretty negative about the use of music before a game. I do however believe music can help me indirectly, because if it helps even one member of the team that is a positive for me and the rest of the team. I also believe music could help your physical performance but only whilst you are actually listening to it, this would be a hard thing to do during rugby."*

Participant 15

Interviewer: *"You have rated familiarity really high as 9 why is that (Dizzee Rascal)."*

Interviewee: *"When you really know the song it just really helps and gets you going doesn't it."*

Interviewer: *"You have rated tempo and danceability both as 9 why do you find them motivating?"*

Interviewee: *"It was the sort of song that I would listen to on a night out and it makes me move and it does the same before a game and wakes me up."*

Interviewer: "So you didn't know the pendulum song as well, is that why you have rated the tempo, familiarity and danceability lower?"

Interviewee: "Yea I didn't really know the song but it was alright it still had that fast beat so it was ok."

Interviewer: "At what point does music start playing within the changing room?"

Interviewee: "When I turn up with the iPod docking speakers!! And a player with music on their phone turns up. For most games I usually text players which I know have music on their phone to check they will have music to play. If KO is 3pm we usually ask players to meet 1.15pm so I hope that the music starts to play at 1.15pm or very soon after."

Interviewer: "Who is in charge of what is played, is it a team decision or does someone just randomly put something on?"

Interviewee: "It varies. Most of the time it is the player who player music off their phone. In the past we have created a play list following requests given over Facebook. Most of the time it is more random than organized, where we just play the music a player has on his phone."

Interviewer: *"What is played on a typical day?"*

Interviewee: *"It varies but always music with an up tempo beat. Think we have played songs such as Fort minor "Remember The Name", Yeah Yeah Yeahs – "Heads Will Roll."*

Interviewer: *"Does everyone listen to the same song? Do you notice people listening to their own music with iPods?"*

Interviewee: *"When the speakers are on everyone in the changing room has the opportunity to listen to it, but there are some players that choose to play their own. I don't think we can always get everyone to listen to the music, as some players like to have their own individual pre match music through headphones so they are not disrupted by others. The head phones not only let them play their own music but act as a barrier so that other players know not to interrupt their pre match preparation."*

Interviewer: *"How long is the team exposed to music during the pre-task routine?"*

Interviewee: "Approximately 30 – 45 minutes prior to squad warm up and then approximately 15 minutes after warm up and prior to team talk right before the match."

Interviewer: "Do you feel the team is exposed long enough to music before leaving the changing room?"

Interviewee: "I think the amount of time the team' are exposed to music is long enough. For me the music is more about making sure there is no quite moments in the changing room and stimulating/motivating players. As long as we get the music playing as soon as, or even just before, players arrive at the arranged meet time."

Interviewer: "How do you feel the music affects your mind-set, mood, emotion or how your' feeling."

Interviewee: "I feel music helps me focus and get my game head on. I believe music prior to the game creates the right mood in the changing room. I think it not only helps players relax but also increase arousal levels in the right way for playing."

Interviewer: "How do you feel the music influences your mental preparation for the match?"

Interviewee: "Same as before."

Interviewer: "Do you feel music is impacting on team unity and getting everyone on the same thought process?"

Interviewee: "I think the music is now part of our pre-match preparations to the extent that it is just as important as the physical warm up. On the rare occasion we have not had the facilities to play music it's noticed by the players and we need to think about how we ensure there is no awkward quiet moments in the changing rooms."

Interviewer: "How important do you feel is it for the team to use music to mentally prepare themselves?"

Interviewee: "I think it's very important that players have music in the changing room to mentally prepare for games; the music creates the right tempo/atmosphere in the changing room so players are physically and mentally prepared for the game. I think music has the ability to get in touch with players sub consciousness so it can improve their mental state by increasing their concentration and focus before the pre match warm up and team talk before game."

Interviewer: "How do you feel music affects you physical ability?"

Interviewee: *"I think that the music helps prepare players mentally for playing, this in turn impacts on physical ability. If we are better mentally focused we will play physically better, so yes I think the music helps us tackle harder and run faster."*

Interviewer: *"How do you feel music influences your physical state do you feel the need to do anything in particular while listening to music in the changing room?"*

Interviewee: *"Before the squad warm up I think I use the music to help me relax. After the warm up and before the team talk I sometimes feel myself mentally and physically jumping to the beat. As captain I also feel as though I need to say things to the players at this point and the music helps with not having any silences. But it then also has the desired effect when turned off for the team talk, as the changing room goes quiet and players know to focus on what the coaches say about the tactics for the game."*

Interviewer: *"How do you feel the music is holding affect on the teams' physical ability?"*

Interviewee: *"I'm not sure if you could say the music has a holding affect beyond preparing us for the game and the initial 10 minutes of*

the game. However, if music better prepares us for the game we will start the game to the best of our ability, which will then have a holding affect on the rest of the game. This links to our confidence and self-belief, if we start well we are probably more likely to do better at scrums and mauls."

Interviewer: *"How do you feel music is affective the teams' physical behaviour? Do you notice anything in particular in the changing room from other players and how does that affect you?"*

Interviewee: *"As I think it mentally prepares them I do notice players more physically aroused when the music is playing but like I have said I don't think this is solely due to the music, the music makes our pre match routine better."*

Interviewer: *"Summarise what you feel about the music played during pre-task routines?"*

Interviewee: *"I think everyone has their preferred music choice and we would never be able to meet everyone's needs/interests. In general I think the music which we play does the job in preparing us for the game."*

Interviewer: "What music would you personally choose to play to prepare before a match?"

Interviewee: "I personally have no preference to the specific song which is played. As long as it is popular with the majority of the players. As long as it also has the desired effect of inspiring, motivating and focusing players for the warm up and game."

Interviewer: "What do you feel makes a song motivational?"

Interviewee: "Song such as the Rocky theme song are very cliché in suggesting motivational songs but in answering this question I think it is a good example. This song instantly installs the plot of the film and how through the ups and down, hard work and determination result in success. I think the best songs are those which players can relate to in either having heard the song before or even better if the song is related to a successful experience. Within this the song obviously needs to have high tempo and inspirational lyrics."

Interviewer: "Do you look to feel more energised from listening to music in the changing room?"

Interviewee: "I think I look more energised and I definitely feel more energised."

Interviewer: "Do you find music that has external meaning more influential on performance than music that has a fast tempo and rhythm?"

Interviewee: "Yes, this is what I was saying above about rocky theme tune. If there is an external meaning to the song then I believe it will intrinsically affect players. Swing low sweet chariots is a perfect example as it obviously relates to our national team and the players would relate to this. However, some may think it a bit cheesy played in the changing rooms."

Interviewer: "How would you feel if no music was played during a pre-task routine?"

Interviewee: "I wouldn't like this. When we have not been able to play music due to facilities not being available. For example, at one away game we set up the speakers and then someone from the away side must have cut the power. It just doesn't feel right without the music in the changing rooms. I suppose it is something we have become used too."

Interviewer: "How important do you feel music is on your personal performance?"

Interviewee: *"I feel music is very important to my personal performance for all the reasons that I have said. I genuinely believe it motivates me mentally and helps me get the right attitude and improves my physical preparation for games."*

Interviewer: *"How important do you feel music is on the teams' cohesive performance?"*

Interviewee: *"The fact that we are all in the changing room at the same time and that we all listen to the music means that we are sharing an experience and it brings us together."*

Interviewer: *"How prepared do you feel to play after listening to the music?"*

Interviewee: *"Yes, I definitely feel more prepared from listening to the music."*

Interviewer: *"To what extent do you feel using music affects the match?"*

Interviewee: *"I personally believe the music prepares us for our mental and physical state for when the whistle goes to begin the game and it might last as long as the first 10 minutes."*

Interviewer: *"Would you like to say anything else related to the subject or anything we have discussed here today?"*

Interviewee: *"I truly believe that music has a positive impact on players' mental and physical state, preparing us for the pre match warm up and team talk before the game. It is now a key feature in our pre match preparations."*