A Grounded Theory of Music Use in the Psychological Preparation

of Academy Soccer Players

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Abstract

The main objectives of the present study were (a) to examine soccer players' use of music to psychologically prepare for performance, and (b) to present a grounded theory to illuminate this phenomenon. Thirty-four academy soccer players (M_{age} = 17.9 years, SD = 1.6 years) were selected from a UK Premier League soccer club. Individual and group-based questionnaires, reflective journals, and interviews were administered. Corbin and Strauss's (2015) variant of grounded theory was adopted, which is underpinned by pragmatism and symbolic interactionism. Data were analyzed using open, axial, and selective coding. Moreover, the data were continually compared with previous literature to verify methodological coherence, propose new methods, and develop a substantive grounded theory model. The findings document the use of music as a stimulant and regulator of emotion prior to performance, as well as its propensity to develop shared meanings and contribute to a sense of group identity. The analysis brought to light personal, group, and task-related factors that moderate the influence of music on the psychological state of young soccer players. A unique finding to emerge was the degree to which the music preferences of senior players were readily accepted by junior players. The present study provides evidence of the role that naturalistic research can play in fathoming and harnessing the emotive and enculteured power of music within the social spheres of elite team sports. All emergent concepts can be used as a template to guide soccer players and practitioners in the use of music and frame future research efforts.

Keywords: athletic performance, grounded theory, music, qualitative research, soccer

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Music permeates many aspects of sporting culture and is a stimulus that has become

firmly embedded within athletes' pre-event routines, either on an individual or collective

basis (Karageorghis, 2017). The wide availability of technologies such as smartphones and

ergonomically-designed mp3 players enables athletes to create their own listening bubble but

also for team leaders to have immediate access to music selections that might be deemed

appropriate for those in their charge. For many years, the application of music in sport has

been rather haphazard in nature but with the publication of conceptual frameworks,

measurement instruments, and numerous empirical investigations, there are now stronger

foundations to underpin the use of music in athletes' psychological preparation (Clark,

Baker, & Taylor, 2016; Pain, Harwood, & Anderson, 2011; Smirmaul, 2017).

Soccer, also known as Association Football, is firmly established as one of the

world's most popular spectator sports and is characterized by a long-established music

culture (Karageorghis, 2017). The large number of onlookers present at stadia may expose

elite players to elevated levels of perceived pressure due to heightened activation and

awareness of social judgments (Geukes, Harvey, Trezise, & Mesagno, 2017). Perceived

pressure can bear positive or negative influence on how players execute critical skills and

those who are able to handle psychological pressures are most likely to perform at a level that

approaches their potential (Gee, 2010).

An optimal preparation state for a successful performance will entail a different

constellation of emotions for each athlete and it has long been known that there is no "one

size fits all" approach to mental preparation (see Raglin, 2001). The literature is replete with

strategies that are purported to aid athletes' preparation and engender an optimal mental state.

Examples include meditation, centering, imagery, and goal-setting. However, music listening

as a psychological preparation strategy (i.e., enhancing the feeling that one is ready to play) in soccer has received little research attention (cf. Pain et al., 2011).

Music listening can be used as a means by which to manipulate psychological states with the ultimate goal of enhancing athletes' performances (Bishop, Karageorghis, & Loizou, 2007). Bishop et al. (2007) examined music use among young tennis players using a variety of methods that included interviews, diaries, and observations. They developed a grounded theory that addressed the use of music to manipulate emotional states in the pretraining and precompetition phases. Their study was criticized by Weed (2009) on the basis of insufficient consideration of epistemology and ontology, and a lack of constant comparison of the data. The latter serves to ensure that the emerging theory is firmly grounded in the data (Holt, 2016). Through their philosophical and methodological approach, the present researchers sought to address these and other weaknesses identified by Weed.

The use of well-selected music has been suggested to elicit positive affective states, aid arousal regulation, induce a flow state, increase task enjoyment, engender task-relevant imagery, and prompt positive self-talk (Karageorghis, 2017). Accordingly, the potential benefits for elite soccer players, who are routinely faced with high travel demands and a great deal of downtime, are manifold. The present study focuses specifically on *pretask* music that is used prior to training or competition to serve a "psych-up" or "psych-down" function. Such music can facilitate attainment of an optimal level of activation in soccer players, particularly when combined with motivational imagery (Pain et al., 2011).

Pretask stimulative music appears to promote motivational imagery, elevate psychomotor activation, and increase the incidence of both positive self-talk and flow (Bishop et al., 2007). It has been shown repeatedly that music-related interventions can force attentional focus toward the pleasant environmental sensory cues inherent to music and thus enhance sensory experience (Karageorghis, Ekkekakis, Bird, & Bigliassi, 2017).

Interestingly, the documented effects of music have yet to be examined systematically in a soccer context and there is currently no firm conceptual or empirical basis to the practices that players commonly espouse. Technological advances such as online music streaming are making highly personalized music delivery ever-more accessible.

There have been questions posed—not only in the realm of sport psychology—regarding what the use of modern technologies does to common socialization processes and social interaction (Karageorghis, 2017; Pain et al., 2011). It is conceivable that a personal music-playing device can be used to optimally regulate the emotions of an individual athlete but what of the collective effort and task-interdependence that is germane to a sport such as soccer? We currently know little about the use of music for psychological preparation in team sports when compared to individual sports (Smirmaul, 2017). Specifically, how its use aids the individual player and how it might facilitate group processes. There are issues pertaining to who administers the music (i.e., whether it is self-administered or imposed), how the music is delivered (i.e., via personal headphones or PA system), and who the key agents are in the selection of music (e.g., individual players, senior players, coaches, etc.).

The reason for the dearth of research may be that sport science researchers' access to players is often restricted (Reilly, 2007, p. 170) or researchers embedded within soccer clubs do not necessarily have a scientific interest in music-related interventions. The publicly evident use of personal listening devices by elite players in the modern game leads to the question of how such players are using music to influence their psychological state, if indeed this is their motivation. There is also proliferating anecdotal evidence of the use of music in the locker room during the prematch phase (e.g., Pain et al., 2011); the goal being to enhance *ésprit de corps* and engender a common sense of purpose. Can hitherto unanticipated and productive information be gleaned about the application of music in elite sport that would

spawn further research? There is a need for research that might eventually be used to educate players in the *functional* or task-oriented use of music in soccer (see Karageorghis, 2017).

Given the aforementioned salience of individual factors and group dynamics (i.e., the system of behaviors that occur within a social group), the present study addressed individual psychological preparation in tandem with the social processes that underlie music-related interventions. The main aim was to develop a substantive grounded theory to further the understanding of young soccer players' use of music to psychologically prepare for performance. A secondary aim was to gain a formative understanding of the players' music choices and responses, while considering group dynamics as possible moderators.

Method

Grounded Theory

Grounded theory is considered a "total methodology" that delineates a collection of principles that span the entire research process, from start (e.g., conceptualization) to finish (e.g., product of the research; Weed, 2009). It represents an appropriate methodology when there is a lack of theory to explain social processes within a specific context (Corbin & Strauss, 2015; Weed, 2017) and has been frequently drawn upon to elucidate the experiences of elite athletes (e.g., Cruickshank, Collins, & Minten, 2014). In the present context, the stated objective to further understanding of the use of music for psychological preparation at individual and group levels renders the grounded theory approach particularly apposite.

Many variants of grounded theory have been developed in accord with different philosophical positions (for reviews, see Holt, 2016; Weed, 2017). Corbin and Strauss's (2015) variant of grounded theory was employed in this study and is underpinned by pragmatism and symbolic interactionism. The pragmatist position views all knowledge as provisional and encourages researchers to consider which methodologies can provide the greatest applied impact to the groups that they examine (Corbin & Strauss, 2015). Moreover,

pragmatists reject the assumption of an objective reality and acknowledge that individuals

enter a research site with preconceptions of the topic under investigation (Bryant, 2009).

Symbolic interactionism maintains the view that individuals actively shape their own realities

and act in accord with the meaning they ascribe to entities based on a shared process of social

construction (Blumer, 1969).

Corbin and Strauss's (2015) variant of grounded theory seemed particularly suitable

given the researchers' desire to examine the possible moderating influence of social

processes (i.e., group dynamics) on academy soccer players' responses to music. Moreover,

this variant of grounded theory was chosen because it is underpinned by a philosophical

position that is congruent with the researchers' beliefs. For example, we believe that all

knowledge should be critiqued according to its usefulness in a given context. A core theme of

the symbolic interactionist approach is that the meanings people ascribe to things are

modifiable and open to reappraisal based on social interaction (Blumer, 1969).

Research Site

The study was conducted at the training ground of an English Premiership soccer

academy that catered for players in the age range 8–23 years. The academy has ~110

registered players and, each week, those in the present sample trained on 5 days, had a match

on 1 day, and recovered on 1 day. Those in the under-18 category were obliged to undergo a

full-time education program until the age of 16 years and a Business and Technology

Education Council (BTEC) qualification thereafter. Academy players are supported by a

multidisciplinary team ($N = 32$) of coaches, sport scientists, performance analysists,

physiotherapists, and kit staff. It was anticipated that this site would serve to expedite the

recruitment process, enable cross-case comparisons, allow for refinement of ideas through

additional recruitment, and ultimately enhance the "relevance" of the resultant theory (Holt,

2016). Initial access to the site was gained by the third author who was a work placement

student at the club during the period of data collection. In accordance with Corbin and Strauss's (2015) variant of grounded theory, a thorough working knowledge of the research site enabled him to better understand the subtle meanings embedded in the data collected. We delimited the study to a single site given that, from the outset, we were not granted access to other sites by the soccer club management.

Participants and Sampling

Potential participants were contacted by the third author at the soccer training ground and invited to take part in the study. Inclusion criteria specified that individuals were formally contracted to the academy, were homogeneous in terms of age (range: 16–23 years), had a sufficient working knowledge of English to provide written and oral responses to a researcher, and routinely made use of music as part of their psychological preparation. One of the core components of grounded theory is that the researcher engages in an iterative process between data collection and analysis (Corbin & Strauss, 2015; Holt, 2016). Therefore, incoming data were continually compared with previous literature to verify methodological coherence, propose new iterations of data collection, and develop a substantive theory (Corbin & Strauss, 2015; Weed, 2009). This process was aided by theoretical sampling, wherein additional participants were recruited to refine and develop theoretical ideas and concepts (Weed, 2017). This approach differs to conventional sampling methods because it is responsive to incoming data and not established prior to commencement of the research (Corbin & Strauss, 2015).

Theoretical sampling was based entirely on the emergence of new concepts to achieve theoretical saturation, wherein the collection of further data appeared to be counterproductive (i.e., conceptual duplication; Corbin & Strauss, 2015). The five principles of saturation (theoretical sampling, cohesive sample, sample all variations, complete theory, and comprehensive theoretical model) were followed in order to establish when recruitment of

new participants should be terminated (Morse, 1995). Adhering to the principles of theoretical saturation enhanced the congruence between the resultant theory and relevant soccer-related phenomena (i.e., "fit"; Weed, 2017). The overall sample consisted of 34 male participants (M_{age} = 17.9 years, SD = 1.6 years; see Figure 1), 15 of whom were professionals and 19 were scholars ($M_{time\ with\ the\ club}$ = 5.9 years, SD = 2.5 years). The ethnicities represented were White UK/Irish (n = 16), Afro-Caribbean (n = 13), and mixed race (n = 5).

Figure 1

Data Collection

After obtaining ethical approval from the first author's institution, players who expressed an interest in sharing their experiences of using music to aid psychological preparation for soccer were contacted by telephone. The third author met with each participant and they read an information sheet prior to providing written informed consent.

Questionnaires. During the first iteration of data collection, a questionnaire was administered to gather preliminary information about players' use of music individually and as a group. It was hoped that the musical selections specified by participants could be used to facilitate discussion during subsequent forms of data collection. The individual section of the questionnaire was adapted from Bishop et al.'s (2007) work with junior tennis players in order to address psychological preparation in a broad sense. Nineteen participants (M_{age} = 17.6 years; SD = 1.2 years) were asked to provide either one or two music tracks they felt would elicit some of the five key psychological preparation components drawn from Hardy, Jones, and Gould (1996, pp. 43–202). These components of self-efficacy, motivation, activation, managing stress and anxiety, and maintaining concentration and attention were explained to participants on the questionnaire by use of layman's terms.

The questionnaire was theoretically sensitized using psychological preparation literature from the sport and exercise domains (Karageorghis, 2016). It is noteworthy that

literature was brought from the outset and certainly constrained theoretical knowledge that could emerge from the data (theoretical sensitivity). In order to complete the first iteration of data collection, the individual sample questionnaire was adapted, and 24 participants (M_{age} = 17.9 years; SD = 1.8 years) were theoretically sampled on the basis that they had used personally-compiled playlists for psychological preparation (see Figure 1). They were asked to share these playlists with the third author, in addition to the earlier provided tracks, and to provide music videos (cf. Bishop et al., 2007). The symbolic interactionist position suggests that meaning arises from the process of interacting with others (Blumer, 1969). Accordingly, participants self-formed groups of 3 or 4 and, using the group questionnaire, listed three tracks they felt would enhance group cohesion (i.e., perception of unity) and team work.

Reflective journal. The second iteration of data collection involved the completion of a daily reflective journal over a 1-week period. Eleven participants (M_{age} = 17.2 years; SD = 0.9 years; see Figure 1) who provided the most elaborate/fulsome responses to the questionnaires during the first iteration of data collection were asked to complete the journal. They completed a summary of a memorable music-listening episode from each day, and were encouraged to use their own words and familiar cultural reference points during this process. One of the key tenets of the symbolic interactionist approach is that an individual's unique perspective of events influences how they act and behave (Blumer, 1969). Accordingly, minimal information was provided regarding which information participants could record in the reflective journal, in an attempt to encourage their unique perspectives to emerge.

Individuals received two daily reminders via *WhatsApp* on their smartphones and decided upon the completion mode of their reflective journals from video-log (Vlog), social networking (e.g., *Twitter, WhatsApp, Facebook*), voice notes, or digital notes. The reflective journals were sent privately to the third author who transcribed the content verbatim. Participants engaged in at least one training session or competitive match during the period in

which they were theoretically sampled to complete the reflective journal (Weed, 2010). The present authors analyzed the initial journal responses, created concepts and categories, examined the level of theoretical saturation, and then added depth to gaps in the developing substantive theory by recruiting additional participants (Corbin & Strauss, 2015).

Interviews and observations. Nine participants (M_{age} = 17.2 years; SD = 0.8 years) who provided the most detailed accounts of their music listening habits in their reflective journal were administered an individual interview ($M_{duration}$ = 34:33 min; SD = 7:14 min; see Figure 1). The size of the sample was not predetermined; rather those participants who had earlier provided the richest detail were interviewed first, with interviewees added until theoretical saturation had been reached. There was particular focus on the themes of group cohesion and team atmosphere during this phase of data collection (see Figure 1). Participants' responses to the questionnaire and reflective journal, and a review of literature highlighted a range of concepts and categories upon which a semistructured interview guide could be developed. In line with Corbin and Strauss's (2015) variant of grounded theory, the guide did not represent a rigid document; rather a flexible, evolutionary set of questions that incorporated numerous "points of departure" (Holt, 2016). Examples of such evolutionary questions included "How does instrumental music help in terms of your mental preparation?" when probing the perceived benefits of instrumental music, and "How exactly do the lyrics help you in dealing with stress?" in relation to exploring the effects of lyrics.

Interviews took place in a quiet room at the club and were conducted by the third author. Participants were instructed to select their favorite track provided in response to the earlier questionnaire, and adjust the sound intensity to the level they would typically use to engender their desired psychological state. Thereafter, participants listened to their selected track via over-ear headphones (Beats by Dre Studio Headphones, Monster Inc., Culver City, California) that were connected to a smartphone (iPhone 6, Apple Inc., California).

As the process of data collection and analysis progressed, it became apparent that categories relating to the group's musical selections had not attained an adequate level of theoretical saturation (Corbin & Strauss, 2015). Accordingly, the interview guide was updated in order to ascertain the experiences of the group as a whole. Nine players (M_{age} = 17.6 years; SD = 1.3 years) were recruited for this interview before an adequate level of theoretical saturation had been reached (see Figure 1). Participants formed three groups of three, and each group was interviewed separately by the third author ($M_{duration}$ = 32:40 min; SD = 4:09 min). Prior to the interview, each group was asked to consider factors that pertain to selecting music for the group as a whole. They were then required to select one memorable track identified from the group questionnaire, which was subsequently played via speakers (Beats Pill by Dre, Monster Inc., Culver City, California).

Interviews were recorded using a laptop webcam (MacBook Pro 13-inch, Apple Inc., Cupertino, California). The video recordings facilitated collection of observational data, wherein the third author recorded changes in participants' facial expressions, behavior (e.g., smiling, increased liveliness), and other nonverbal communication (cf. Bishop et al., 2007). Each interview was transcribed verbatim, yielding 71 pages of single-spaced text.

Data Analysis

Questionnaire, reflective journal, interview, and observational data were organized using qualitative analysis software (NVivo for Mac 11.2.2), and analyzed in accord with the coding techniques specified by Corbin and Strauss (2015). This process entailed collecting raw data and then using progressive coding techniques that enabled a shift from description, through conceptual ordering, to theorizing. In accordance with the iterative process of data collection and analysis (Holt, 2016), initial questionnaire data were analyzed, and this analysis informed the collection of reflective journal and additional data via interviews and observations. Data derived from the individual sample (i.e., individual questionnaires,

reflective journals, individual interviews, and observations) were initially subjected to the processes of open and axial coding (see Corbin & Strauss, 2015; Holt, 2016) in order to develop a series of concepts, subcategories, and higher-order categories. Group data were subjected to the same process. The second and third authors completed all coding procedures. Similarities and differences between the two samples were identified leading to the combination of both data sets to develop the final theoretical integration (i.e., constant comparison; Weed, 2009; 2017). Prior to the data collection process, a thorough literature review was completed in order to sensitize the researchers to scholarly works addressing the role of music in the sport and exercise domain (see Karageorghis, 2017 for review), and on the grounded theory process with particular emphasis on the domain of sport and exercise psychology (see Holt, 2016; Weed, 2017).

After reading each transcript to gain a sense of context and to navigate participants' unique perspectives, open coding took place (Corbin & Strauss, 2015). This is a process through which concepts are identified and their dimensions and properties revealed (Holt & Dunn, 2004). Data relating to how music might be used to manipulate psychological states were identified in the reflective journal and interview guides, and the research team sought to distinguish between different psychological states (e.g., activation, relaxation, and happiness). Thereafter, axial coding was used to reassemble the data that were broken down during open coding analysis (Corbin & Strauss, 1990). Concepts were organized into categories, subcategories, and higher-order categories. Subsequently, connections were formed so that the data started to form an explanation of how soccer players used music in their psychological preparation. Once axial coding had been completed with the individual data set, the group data were introduced as a further source for analysis.

The data were subsequently analyzed using selective coding, an analytical process that combines and enhances categories, with the aim of forming a larger theoretical model

(Weed, 2010). Theoretical integration was achieved through developing relationships among categories and comparing them with the extant literature (e.g., Hallett & Lamont, 2015; Karageorghis et al., 2017). A key consideration during this stage of analysis was that the resultant theory should be able to explain, interpret, and predict how academy soccer players use music to aid their psychological preparation (i.e., "work"; Weed, 2017). Moreover, we strived to ensure that the resultant theory could accommodate future empirical research (i.e., "modifiability"; Weed, 2017). The open and axial coding work was completed by the two analysts both independently (in the first instance) and collaboratively to explore the meaning ascribed to the codes. In instances of any disagreements during the coding process, the first author served as a mediator to achieve resolution. Member reflections were elicited to generate additional data and insight into how soccer players used music to facilitate their psychological preparation (see Smith & McGannon, 2017).

Memos were used throughout the entire research process, which enabled the third author to keep a written log of emerging insights and questions as the substantive theory developed (Corbin & Strauss, 2015; Weed, 2017). In concert with pragmatism and symbolic interactionism, the memos served as a sensitizing and practical tool that facilitated self-awareness of constructed meanings throughout the research process (Bryant, 2009; Mead, 1934). A possible version of the substantive theory was diagrammed prior to the commencement of data collection as a means by which to encourage theoretical thinking (Holt, 2016). In addition to employing such verification strategies, the resultant grounded theory was evaluated using the quality criteria of "fit" (i.e., do the concepts and theory resemble the relevant soccer-related phenomena?), "work" (i.e., does it offer analytical explanations of how soccer players use music to aid their psychological preparation?), "relevance" (i.e., does it deal with genuine concerns of players?), and "modifiability" (i.e., is it open to further development to accommodate new insights?). Notably, concepts such as

validity and reliability are not applicable to grounded theory methodology (Weed, 2017).

Results and Discussion

This section will outline key findings and present the emergent grounded theory with appropriate reference to related literature, in line with Corbin and Strauss's (2015) grounded theory approach. The results led to identification of three general effects (group cohesion, performance gains, and psychological effects) by which music can influence the psychological preparation of academy soccer players (see core category in the center of Figure 2). Each of these effects are expounded herein, with reference to sources of data, to illustrate pathways that are relevant to the elicitation of psychological responses. The emergent theory is predicated on aspects of the musical stimulus, associations that players have with music, three sets of moderators under the rubrics of group, task-related, and personal factors, and a core category labelled effects of music.

Figure 2

Figure 2 presents a substantive grounded theory model of young soccer players' use of music in psychological preparation. The model indicates that the music components (top of the outer ring) and extramusical association factors (i.e., determinants of music for psychological preparation; bottom of the outer ring) are moderated by group, task-related, and personal factors, which interact with each other and impact upon the effects of music in terms of group cohesion, performance gains, and psychological parameters (see core category in center of Figure 2). The rich data spawned by the present study indicate that group factors such as music selectors, social cohesion, and team atmosphere serve as moderators in this process and thus have the propensity to influence the effects of music on psychological responses (core category). There were several quotes that facilitated the researchers' assessment of the integration of factors and their theorized interrelationship:

Today in the gym I felt very fatigued and a bit aggravated, and not as though I could get through the gym session. Then _____ [another player] put on *Post To Be* by Omarion

and he knows that's my tune. As soon as the boys in the gym and I heard it, we were all buzzing and it got me motivated …..the track managed to make me laugh and I was in a happier and more positive mood because banter can heal almost everything with the boys at _____ FC. After that, I was ready for the challenges that were set for me in the gym. (Participant 6; reflective journal)

Group interview data indicated that a negative team atmosphere caused by undesirable social events (e.g., a quarrel among the players) might have a deleterious effect on the way in which players deal with demanding routines (e.g., traveling to distant away games). In such instances, the potential effects of music that are generally induced by its constituents, such as melody and harmony, can be ameliorated by group factors. Interestingly, as revealed in all data sources, academy soccer players also use music as a means by which to deal with emotionally significant factors and bolster group cohesion (i.e., it can elicit a therapeutic and unifying effect).

Determinants of Music for Psychological Preparation

Young academy players' music selections were influenced by a range of situational considerations, such as the type of training they were engaged in, the outcome of the previous match or training session, and their location (see Task-Related Factors in Figure 2). When probed about selections used prior to training and competition, participants indicated that they tended to select stimulative and upbeat music:

> Then, just before I'm going out, I will listen to a little bit of rap, something more upbeat, more of a background music that gets you pumped up. (Participant 4; individual interview)

The use of music as a pretask strategy can be applied to optimize activation levels and facilitate task-relevant imagery (Pain et al., 2011). This approach is supported in neurological terms by the fact that music can activate many subcortical and superficial regions of the brain (Juslin, 2013). Slow-tempo music lowers activation levels, whereas faster music typically elevates activation (Chanda & Levitin, 2013). It has been suggested that the more activation a situation requires, the more stimulative the music should be (Hutchinson & Sherman, 2014).

Accordingly, soccer-related tasks are hypothesized to demand relatively high levels of activation. This might explain the prevalence of stimulative music (e.g., gangsta rap) during the pretask phase as a means by which to elicit an optimal psychological state.

> Say if like we won, then maybe I would listen to faster music, more like party tunes. (Participant 5; individual interview)

> If I didn't perform well, I would listen to a calm song… If I haven't done well, my brain wouldn't be interested in an upbeat song, it wouldn't mix, it wouldn't feel right with the mood. (Participant 4; individual interview)

Such statements illustrate how match outcomes influenced players' emotional state and cognitions, resulting in music selections that matched their states of mind. This finding is in accord with psychomusicological evidence that suggests that people select music to better express and cope with a present emotional state rather than to alter it depending on situational demands (Koelsch, 2010). Nonetheless, the data revealed that a fast tempo is not always required in order to attain an optimal mindset:

> Some songs motivate me and make me ready and alert and therefore I feel confident. Then there is also the calming/composed ones that make you feel confident because you are focused and ready. (Participant 1; reflective journal)

The "iso" principle of music use as a form of therapy has been propagated as a means by which individuals can ameliorate a negative emotional state (Heiderscheit & Madson, 2015). The principle is applied by selecting tracks that match players' emotional states then vectoring the music toward a contrasting state (e.g., from sadness to happiness). Albeit that we duly acknowledge the bias of being psychomusicological researchers in sport (cf. Bryant, 2009), we suggest this technique may be useful for psychological preparation, as a shift to more positive emotional states is generally associated with superior performance (Beedie, Terry, & Lane, 2000).

Music Components. Music components were key determinants of music selection (see top of outer ring in Figure 2). Factors including lyrics, tempo, instrumentation, and

melody were implicated in the elicitation of psychological responses such as greater self-

confidence and motivation:

> The beat of the chorus with the instruments that are slightly higher pitched within those beats are the ones that give that sense of confidence. (Participant 1; reflective journal)

> …feeling a bit doubtful about the future…to get me out of this psychological state I listened to "Drake – *The Catch Up*"… "James Blake" sings a melody quietly saying 'could it be the way that I'll catch up' repeatedly …this part of the tune started to make me feel more positive and motivated… it elevated my mindset and put me in a state of motivation and focus. (Participant 5; reflective journal)

Some participants indicated that musical components are the foremost determinants of

musical response:

> The type of music I listen to ...I focus attention on the beat and rhythm and if I like the beat then I like the song. (Participant 8; reflective journal)

Moreover, that music tempo (see Music Components in the outer ring of Figure 2) is an

essential constituent in terms of regulating activation levels. Musical selections that were

characterized by slow tempi often induced low-activation (i.e., relaxation) states:

> There is also a quiet trumpet within the song that matches the piano to create that calming feeling. (Participant 1; reflective journal)

> Participants detailed that music tempo in combination with lyrics are responsible for

evoking certain psychological responses. To interrogate this notion, the researchers employed

self-correction techniques (i.e., verification strategy) as a means by which to adjust the

emerging substantive theory (Holt & Tamminen, 2010). When participants listened to the

300 Violin Orchestra by Jorge Quintero (no lyrics; 100 bpm), they were not able to clearly

articulate how the music took effect when probed about their emotional response:

> It felt like I was getting ready to go to war, it was the violins, it was getting me prepared for something, it's like a game song. (Participant 5; individual interview)

> I would say it does [motivate me], but I can't tell you why. (Participant 1; individual interview)

Instrumental music similar to the *300 Violin Orchestra* track stimulated positive self-talk for

several participants. Having been posed with evolutionary questions pertaining to the effects

of instrumental music, participants stated that it encouraged them to conceive their own task-related lyrics:

> When there are no lyrics, you're not listening to someone speak, you are making the lyrics in your own mind, you are thinking of what you are going to do in a match, and it's getting you ready and energized, and it's definitely a way to help you perform better. (Participant 7; individual interview)

Contemporary researchers in the area of music and physical activity have suggested that the affirmative lyrical content of music can elicit positive self-talk (e.g., Clark, Baker, & Taylor, 2016; Karageorghis, 2016). However, the present data indicate that *instrumental* music may also have a facilitative effect on self-talk strategies. Specifically, it may serve to create an auditory and emotional backdrop against which the listener can actively forge new ideas and narratives (Sparkes & Smith, 2014). The absence of lyrics might provide a *blank page* whereon the athlete is free to *draw* and avoid the influence of words or the stories relayed by artists. These cognitions may, in turn, lead to positive self-talk that can increase self-efficacy and ameliorate cognitive anxiety (Hatzigeorgiadis, Zourbanos, Mpoumpaki, & Theodorakis, 2009). Given the influence of instrumental music, the principle of modifiability has been successfully applied to adjust the substantive theory based on the premise that participants' reality can sometimes contradict previous findings (Holt, 2016).

Extramusical Association. A process of self-characterization can be evoked by certain lyrics, enabling players to visualize themselves in the story relayed by the artist (see bottom of the outer circle in Figure 2). In such instances, a process of musical transference occurs between the artist and listener. The listener becomes empathically present, promoting awareness through reflection of the artist's emotions, strengths, and struggles (Juslin, 2013). When music is delivered, an individual initially processes the musical components, such as pitch and tempo (Warren, 2008), which can subsequently influence core affect and perceptions of dominance (Bradley & Lang, 1994). Complex emotions, narratives, and long-term memories are awakened by the interaction of diverse musical components such as lyrics

and melody (Zatorre & Salimpoor, 2013). In such instances, memories, emotions, and self-characterization occur in tandem, as a response to the music exposure. Such complexities were illustrated in the present data:

> You feel the emotional stress within the family from the little girl using "Daddy" throughout the song. The chorus included "don't feel my pain" and is repeated, which is quite touching because you feel the connection within the song between the two different characters by these bits of speech and it helps you to understand the struggle they are going through. (Participant 1; reflective journal)

Probing in regard to specific lyrics that elicited a more motivated state provided rich data:

> Then he talks about how you have only one shot to make this opportunity that he has been given. You have one shot to impress everybody, and if he fails, he would not have been the rapper he is today, so it is similar to me, as I might only have one opportunity to play, so I have to be ready to take that one opportunity. (Participant 4; individual interview)

A memory-related phenomenon manifested for a participant who associated a particular musical excerpt with a childhood event:

> …I remember listening to it [a certain piece of music] in Congo; my parents told me I used to get up and dance to this song. (Participant 4; individual interview)

In such instances, long-term memories can also evoke associative emotions because of the neural connection between the respective regions of the brain (Koelsch, 2014). An important characteristic of episodic memory is that people tend to recall more memories from their youth and early adulthood (Juslin, 2013). This may be explained by the fact that many self-defining and emotionally-laden experiences occur at this stage of development (Conway & Holmes, 2004). Embracing this notion, albeit with our acknowledged bias as psychomusicological researchers, we contend that music can play an important part in young academy soccer players' development of self-identity (Blumer, 1969).

Music can also awaken recollections of positive performances in young soccer players. Through probing about formative listening experiences, it became evident that players may be aware that a salient memory (both in emotional and performance terms) is being encoded for future recall:

> Yeah I remember listening to it before when I was small when we were playing Chelsea and I ended up playing very well. So then it was almost like a routine, and I listened to similar songs like that before games and that. (Participant 4; individual interview)

The ability to use music to evoke emotions that are associated with positive performances may lead to increased levels of self-efficacy, given that past achievements are considered to be the primary source of this construct (Bandura, 1986).

Familiarity has been identified as an important moderator of liking for music (North, Hargreaves, & Hargreaves, 2004); it was cited by Participant 4 as a factor that bears influence on emotional responses to music. Evolutionary questions regarding how music made the players feel, revealed that this identification can apply even if a player is not directly familiar with a piece but recognizes a structural element of it:

> …it [a piece of music] is so cool, makes me feel happy, I want to dance because of the African-type beat I'm used to. (Participant 4; individual interview)

Music selections that are familiar and exploit cultural and personal associations may yield greater benefits (cf. Karageorghis. 2016). Familiarity plays a crucial role in moderating the influence of music on activation levels, and is more likely to stimulate higher levels of activation than nonfamiliar music (Kreutz, Ott, Teichmann, Osawa, & Vaitl, 2007). Through questioning players in regard to musical familiarity, no evidence emerged to suggest that unfamiliar music aided the elicitation of an optimal preparatory state:

> Downloaded YG's new album, My Krazy Life, and listened to that on the way to training. Not as good as I thought it was… I didn't feel amazing when I trained, I felt like I wasn't pumped up enough to train and wasn't feeling motivated today. (Participant 7; reflective journal)

This finding suggests that familiar music might be more suitable for a pre-event routine, and is consistent with research indicating that familiar, liked, or self-selected music can optimize psychological and physiological responses (Rentfrow, Goldberg, & Levitin, 2011). It is possible that familiar music is effective, not simply because it is known (i.e., an "exposure" effect) but because it has been selected and curated by players to some extent.

Task-Related Factors

Participants listened to music as a sensory strategy to influence their psychological states before matches/training sessions (see Figure 2). Probing in relation to time of application indicated that music use led to variations in levels of activation:

> When I listen to music in the morning, it makes me feel refreshed …in a sense where if I didn't listen to it I would be in sleep mode. I also like listening to my music loud so it wakes me up. (Participant 7; reflective journal)

Participants were well aware that an appropriate level of activation was necessary for them to perform optimally. Accordingly, they sought strategies that would enable them to achieve their desired level. In the case of extremely high or low activation, participants would partially lose control of their movements; electrophysiological studies detail how responses are affected by an impaired recruitment of motor units (see Noteboom, Barnholt, & Enoka, 2001). The present participants reported the use of music as a facilitative strategy to achieve optimal levels of activation and prevent poor skill execution (see Figure 2). Participants revealed that there were interrelationships between the music components, personal factors, and task-related factors:

> I listen to a bit of Eminem and Kanye West before the game. I like these types of songs. The rap part motivates me, as it's quick and prepares my mind and body for the game. The fast music matches my state of mind – wanting to get ready and being alert. Particularly *Blood On The Leaves* by Kanye West when the middle part …this is a big part of the song where I start to imagine being in the zone …and it also gives you confidence. (Participant 1; reflective journal)

Personal Factors

Multiple data sources revealed that extrinsic motivation represents one of the most salient factors driving the use of music among young soccer players. Participants used music as a strategy to influence their psychological state and subsequently perform to a higher standard. Probing about players' motives revealed that match/selection outcomes are strongly associated with long-term lifestyle changes and personal success:

The song [*Pour It Up* by Rihanna] helped change my mood from a tired, lazy one and focused my mind on reaching "dollar signs" and to get money. It takes hard work. This for me is a good song to get motivated as the beat in the background along with her voice create a powerful deep thought of me wanting to be successful and have money. (Participant 4; reflective journal)

A reoccurring theme among players was the use of music to cope with environmental stressors and it emerged that young academy soccer players face a range of stressors such as injuries, bad performances, nonselection, lack of form, and not achieving their full potential (see also Pain & Harwood, 2008). Music is suggested as a means by which to enable people to assuage negative emotions in favor of positive counterparts (e.g., Särkämö et al., 2008). Sedative pieces reduce the activity of the sympathetic nervous system, which, in turn, serves to reduce the frequency of heartbeats (Conrad et al., 2007). Due to the almost linear relationship between the activities of the central nervous system and visceral organs, participants usually report a reduction in state anxiety and stress-related feelings after listening to sedative music (Jiang, Zhou, Rickson, & Jiang, 2013). Overall, music can be used as an effective strategy to cope with stressors, enabling young academy soccer players to engage in more adaptive cognitive appraisals. This process may lead to an improved sense of well-being as well as positive affective states; both are indicative of successful engagement in a competitive sport environment (Lundqvist, 2011).

The present data indicate that participants engaged in similar daily activities and had similar listening habits to one another. This similarity might be explained by the fact that they were homogeneous in terms of their demographic profile and sociocultural background (see Karageorghis, 2017). Such similarities were brought to light through probing in relation to musical preferences:

…within a team, let's say our team, there are 12 players, you are all at a similar age, same gender, you all have reasonably similar personalities, because you are all in the same sport, and you all have the same patterns of behavior. (Participant 1; individual interview)

Individual questionnaire data indicated that participants preferred musical genres they referred to as hip-hop (50%), R&B (15%), pop (10%), and grime (9%). Selection was influenced by personal factors such as age, gender, and personality (Karageorghis, 2016).

Group Factors

The results of the present study indicated that music plays a pivotal role in enhancing group cohesion in elite soccer with probable wider application to other team sports. Players indicated that the ideal locations for music listening in a group were in the gym or the locker room before a match; if music were not played in the locker room then psychological preparation could be compromised. Questioning about the possible removal of music indicated how it had become an environmental norm in such instances:

> It probably would [be dead], it would ruin the atmosphere, and music is something everyone can zone in to, especially if it's good tunes that everyone can relate to. (Participant 12; group interview)

Among this group of players, music is an essential part of their pre-event routine, thus preparing for performance without the use of music may lead to a sense that preparation is inadequate. This finding suggests that coaches and practitioners should allow athletes time to prepare for competition prior to, *and* after discussing tactics and game strategy.

When questioned about training-related music applications, academy soccer players indicated that music listening in the gym was important for performance, as it has the potential to increase effort expenditure:

> Maybe because it creates a good atmosphere, and in the gym, it's not everyone's favorite thing, but with a good atmosphere and good music on, it motivates you, and it can push everyone on. (Participant 12; group interview)

The finding linking music usage with the outlay of effort is consistent with research suggesting that music can be used to improve work output in the gym as well as exercise adherence (Clark et al., 2016). Players suggested that music could make gym-based training tasks more pleasurable, which may explain, in part, their purported increase in work output.

Data from the group interviews regarding who selected the music, indicated that a senior member of the squad usually takes the initiative in terms of selection:

> The senior members of the squad [select the music]. (Participant 14; group interview)

> You wouldn't get the youngsters coming in the dressing room and playing their music, it's gotta be someone who has been about. (Participant 15; group interview)

In terms of creating the desired atmosphere within a group setting, some participants indicated that the music should suit the needs of the group leaders (see Figure 2); one of the most novel findings to emerge. This finding chimes with the literature on social identity (Tajfel, 1974); in particular the notion that in-group members derive much of their self-concept from the norms sanctioned by leading figures within a group. Probing regarding the influence of group leaders on music selection indicated that if they are happy with the music, the team will experience an attendant increase in collective efficacy and morale:

> If you get the main characters in the dressing room that like the music, then you get a better vibe around the place. You always have people who are usually louder before games. If you can get the majority of the dressing room upbeat and the majority of the main characters enjoying the music, then everyone enjoys the music. The leaders can boost the morale and the confidence of the team. (Participant 12; group interview)

The finding pertaining to the musical predilections of the protagonists within the group indicates that a surge of enthusiasm in a small group of players within the squad may result in a positive effect among the remainder of the group and even those who may not necessarily express liking for the piece; resulting in psychological and behavioral consequences (i.e., increased activation and motivation levels; cf. Karageorghis, 2016). Likewise, if the music motivates a group leader, this motivation may influence other members of the group through the nonverbal communication displayed by the leader (Priest & Karageorghis, 2008). This is in accordance with the symbolic interactionist theme "action and interaction" whereby meanings that individuals attach to things are modified on the basis of social interaction (Mead, 1934). Moreover, this finding may aid practitioners in empowering group leaders to

select music, which will have positive knock-on effects on more junior members of the group (see Karageorghis et al., 2017).

When probed about the specifics of selecting music for a group setting, participants pointed out that playlists should not be monotonous and that some heterogeneity in selections is needed in order to satisfy the needs of the majority of players:

> …you have to mix it [playlist] up, you can't just bang out the same tunes, and it just gets boring…It can vary, it's not dependent on the genre really, if you play the same genre not everyone might like it, so I think it has to be mixed up. (Participant 15; group interview)

The highly idiosyncratic nature of music appreciation means that each individual is likely to experience different responses to a given piece of music (North et al., 2004). The tendency to respond individually renders music selection within a sports group a significant challenge (see Karageorghis et al., 2017). A novel finding derived from the group interviews is that a playlist that incorporates a range of genres may be more suitable for a group of athletes who express varied preferences.

Core Category: Effects of Music

Data from the group interviews indicated that music could be used as a strategy to intimidate other teams (see Figure 2). When questioned about their psychological preparation, players detailed how certain pieces could invigorate their team, and that other teams would perceive this territorially-driven psychological change:

> I like when the music is still being played as you come out onto the tunnel and the other team is there and they can hear your music, so they know that you are pumped up for it…I hate when you don't have music on before the game and you can hear the other team listening to music, that's the worst. (Participant 13; individual interview)

> Yeah [music] bothered the other teams, the other teams were fuming that we had our music on. (Participant 16; individual interview)

Soccer players identified that the effects of music prevail beyond the initial listening period (see Figure 2). This phenomenon has been referred to as "residual effects of music" (Bigliassi et al., 2015, p. 209). Probing related to the salience of lyrics indicated, as might be

expected, that the residual effects of highly arousing stimuli appear to be most salient

immediately following cessation of the stimulus:

> …if I listen to a new tune before a match, I will listen to the lyrics and think it's a good tune. It gets me more in the mood to play football, and I am listening to the beat when I am playing, and I am in the rhythm. (Participant 7; individual interview)

Residual effects were also experienced on the pitch after participants had listened to

music to prepare psychologically. The term "earworm" has been applied to indicate the

phenomenon wherein a piece of music is repeated internally without conscious control

(Williamson et al., 2011). Questioning pertaining to musical memories revealed that the

lyrics can become *stuck in a player's head* and be used as a form of positive affirmation to

influence their mental state:

> When he says, "Cause I'm only 27 and I'm only getting better, if I haven't passed you yet, watch me catch up now." I like that lyric a lot, during games sometimes I say lyrics to myself, and I just kept saying that and I had a good game… It makes me feel how the song makes me feel. If the song gets me excited, I'll be excited, if the song makes me calm, I'll feel calm on the pitch. (Participant 5; individual interview)

The music-related positive and task-related affirmations that are repeated by the participants

while playing may have a similar effect to more traditional forms of self-talk. The use of self-

talk plays a significant role in focusing attention and can also be effective in directly

enhancing athletic performance (Hatzigeorgiadis et al., 2009). Practitioners might apply this

finding in helping athletes to select music that contains task-related affirmations or

inspirational references from popular culture as a means through which to promote/generate

task-relevant imagery and self-talk (see Karageorghis et al., 2017).

Physical reactions. Participants demonstrated varied physical reactions while

listening to music and webcam recordings indicated that they were influenced by specific

musical selections. During individual music listening episodes, the observational data

revealed that most players smiled and sang along with the lyrics. When they visualized

themselves in a match-playing situation, they exhibited a focused stare, indicating that they

were in a state of preparation. Physiological responses associated with precompetition

anxiety were evident during music-listening episodes (e.g., deep breathing and muscle

tension). During group music-listening episodes, players exhibited a tendency to laugh,

dance, or even sing lyrics in unison. Positive physiological responses are theorized herein to

contribute to the desired atmosphere in the gym and locker room, leading to enhanced

perceptions of collective efficacy, cohesion, and outlay of effort.

   Negative effects of music. Not all effects of music were deemed to be positive in

nature. Young academy players suggested that slow-tempo music and distracting lyrics prior

to a match were not ideal in terms of their psychological preparation. Such music could

decrease their levels of activation and compromise task-relevant focus. Likewise, some

pieces of music elicited negative effects on the group. In such instances, some soccer players

did not appreciate the track selected by other players and exhibited a negative response

(preceding question: "Can music affect your performance negatively?"):

> Yeah, if you are listening to negative stuff, and if it's too calm and slow before a game with your eyes closed, you may feel low, so when you go out on the pitch you won't feel ready, you will feel too calm. (Participant 5; individual interview)

Some players indicated their disquiet in regard to the apparent "group norm" of rap music

and voiced concerns in regard to the lifestyle-negative messages relayed in the lyrics:

> Some rap music, the stuff they say and the lifestyle that they talk about can influence people in the wrong way. (Participant 4; individual interview)

   The present findings indicate that sedative music (<80 bpm) used as a pretask strategy

may not be ideal for psychological preparation. As the music tempo is a determinant of

activation levels, slow-tempo music may not engender the levels of activation required for

optimal performance (Bishop, Wright, & Karageorghis, 2014). The use of sedative music as a

pretask strategy can be useful if a player is experiencing high levels of state anxiety and may

thus need to relax (Karageorghis et al., 2017; Karageorghis & Terry, 2011).

Limitations

The first two forms of data collection in the present study entailed the use of individual and group questionnaires. It could be argued the initial use of this form of data collection had a constraining or prescriptive influence on the emergent substantive theory. However, Corbin and Strauss's (2015) variant of grounded theory accepts that researchers' training, knowledge, and biases are woven into the research process (Bryant, 2009). To enhance sensitivity, we used multiple forms of data in constructing the substantive theory (see Figure 1) with the three forms that followed (reflective journal, individual interview, and group interview) being far more open-ended and less prescriptive in nature (Corbin & Strauss, 2015). In accordance with the symbolic interactionism standpoint (Blumer, 1969), this ensured that the unique perspectives of the participants could emerge throughout the iterative grounded theory process. The study was focused on one Premiership soccer academy team, one age group, and one research site. Accordingly, the researchers' explicit aim was to develop a substantive theory that would be applicable to the specific group and location in which the research was conducted (Holt, 2016; Weed, 2017).

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Conclusions and Recommendations

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The main objective of this study was to examine academy soccer players' use of music in their psychological preparation for training and competitive performance using Corbin and Strauss's (2015) grounded theory approach. All emergent concepts can be used as a template to (a) guide soccer players and practitioners in the use of music in soccer and (b) as a means by which to frame future research efforts. Data obtained from questionnaires, reflective journals, interviews (individual and group), and observations were analyzed and integrated to generate a substantive grounded theory of the phenomena that came to light (see Figure 2). Bishop et al.'s (2007) study was used as a template to guide this study, and the subsequent suggestions of Weed (2009, 2010, 2017) and Holt (2016) were drawn upon, to

ensure that the requirements of grounded theory were adhered to throughout the research process. The theory predicts how determinants of music for psychological preparation in soccer are moderated by personal, group, and task-related factors in terms of how they influence the effects of music on players (e.g., individual and group-level psychological responses). In keeping with a symbolic interactionist perspective, the theory emphasizes the interrelationships or reciprocity among group, task-related, and personal factors in predicting the effects of music (core category).

The pragmatist approach upon which the Corbin and Strauss's (2015) variant of grounded theory is founded, views all knowledge as "provisional" on the basis of its usefulness (Bryant, 2009). Researchers are encouraged to test and modify the substantive theory in other soccer academies in order to establish its generalizability. This represents application of the difference principle (Bryant, 2009) and will build on the provisional nature of the knowledge (Corbin & Strauss, 2015), leading to the proposition of a more formal grounded theory (Holt, 2016; Weed, 2017). Moreover, researchers might consider using open-ended methods of data collection in the early stages of a study, and, should they wish to use questionnaires, to leave these until the latter stages to perhaps probe specific concepts that emerge from earlier analyses.

The present study has indicated that music is able to elicit a range of psychological and group-level psychological responses among academy soccer players. All participants indicated that music could be employed as a useful performance-enhancing tool. Due to similar demographic profiles, players' listening habits were relatively consistent, as were their psychological and behavioral responses (do Nascimento, Gomes, Mota, Aparecida, & de Melo, 2016). Academy players were influenced by a broad array of personal and situational factors in their music choices. Moreover, they apparently use music to manipulate emotional responses to daily life situations and deal with a range of environmental stressors.

Pretask music selection is highly idiosyncratic; nonetheless, a general recommendation for soccer players is the selection of stimulative and familiar music that exploits personal, cultural, and task-related factors (cf. Karageorghis, 2016). The use of stimulative, upbeat music can optimize activation levels and facilitate task-relevant imagery. Instrumental music can also be used as a pretask strategy to promote positive self-talk and encourage participants to create their own task-related internal dialogue.

Music in the gym has the potential to increase motivation, while the use of music in the locker room can create a desirable atmosphere and bolster the sense of group cohesion through shared reference points and emotional contagion (Juslin, 2013). This is particularly the case when selection is channeled through leading members of the group; a finding that was among the most novel to emerge in the present study. Moreover, music selection should be varied in order to meet the majority of players' musical preferences.

Taken holistically, the present findings demonstrate a vibrant and reflexive matrix of emotional, behavioral, and cognitive responses to music in young soccer players. There is considerable scope for future research to test and refine the grounded theory presented herein (see Figure 2). The role of music is perhaps more symbolic (Priest & Karageorghis, 2008), imaginative (Bishop et al., 2007), and figurative (Hallett & Lamont, 2015) than previously thought; it intersects with the narrative of players' lives and the way that meanings are at once both intensely private, yet shared and negotiated among the group. Accordingly, the meaning of the music is a dynamic, dialectical, and dualistic phenomenon that outstrips the concepts pervading a literature driven by the empirical and nomothetic. The perspectives of players are constructed by their own socialized understandings and may belie other, no less valid, implicit knowledge and attitudes to which even they will not be fully cognizant. Nevertheless, the grounded theory approach offers a tantalizing flank into a profoundly human phenomenon.

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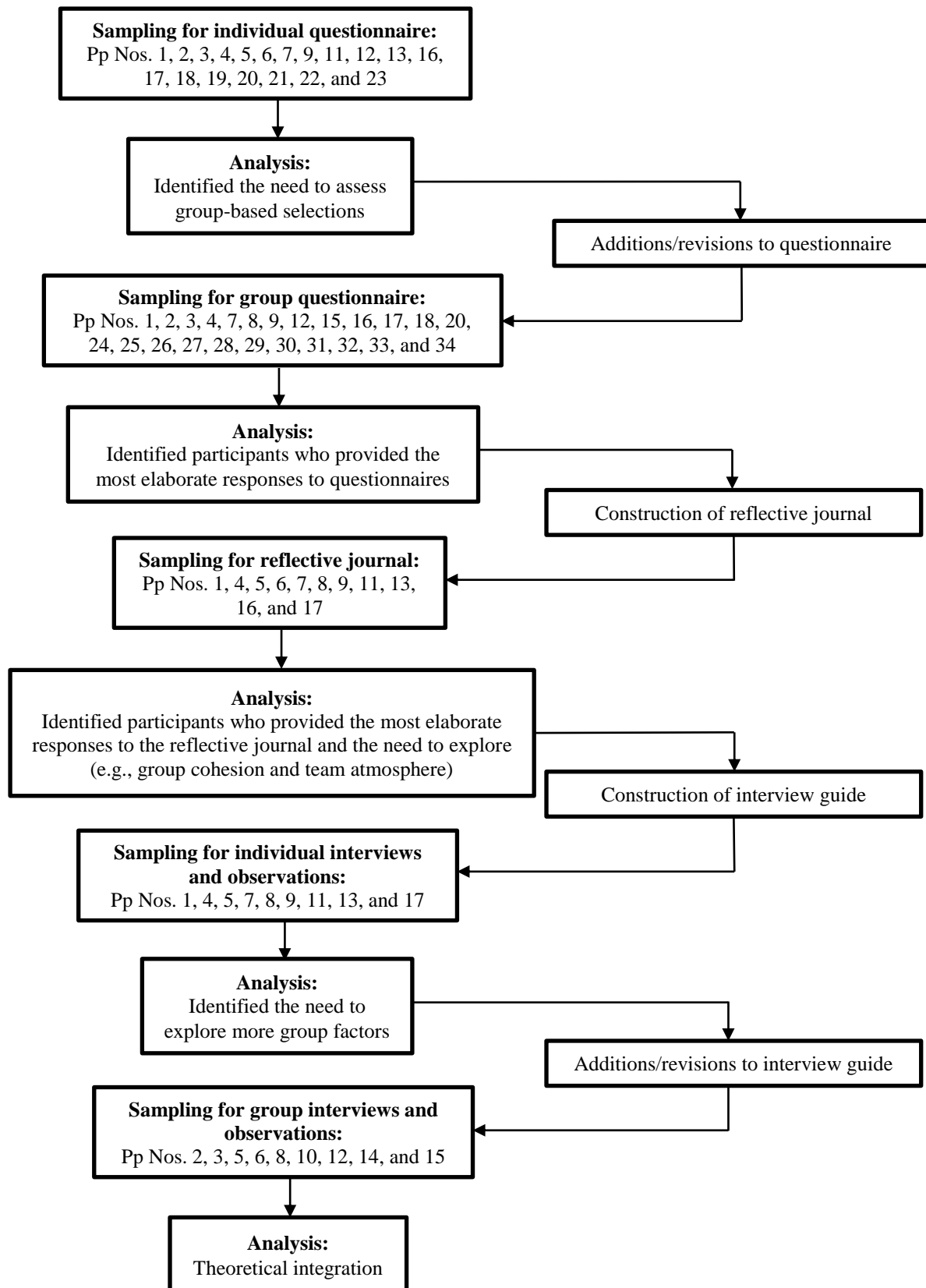
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Sampling for individual questionnaire:
Pp Nos. 1, 2, 3, 4, 5, 6, 7, 9, 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, and 23

Analysis:
Identified the need to assess group-based selections

Additions/revisions to questionnaire

Sampling for group questionnaire:
Pp Nos. 1, 2, 3, 4, 7, 8, 9, 12, 15, 16, 17, 18, 20, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, and 34

Analysis:
Identified participants who provided the most elaborate responses to questionnaires

Construction of reflective journal

Sampling for reflective journal:
Pp Nos. 1, 4, 5, 6, 7, 8, 9, 11, 13, 16, and 17

Analysis:
Identified participants who provided the most elaborate responses to the reflective journal and the need to explore (e.g., group cohesion and team atmosphere)

Construction of interview guide

Sampling for individual interviews and observations:
Pp Nos. 1, 4, 5, 7, 8, 9, 11, 13, and 17

Analysis:
Identified the need to explore more group factors

Additions/revisions to interview guide

Sampling for group interviews and observations:
Pp Nos. 2, 3, 5, 6, 8, 10, 12, 14, and 15

Analysis:
Theoretical integration

Figure 1. Forms of data collection, rationale for inclusion of participants, and participants sampled for each iteration of data collection. *Note.* Pp Nos. = participant numbers.
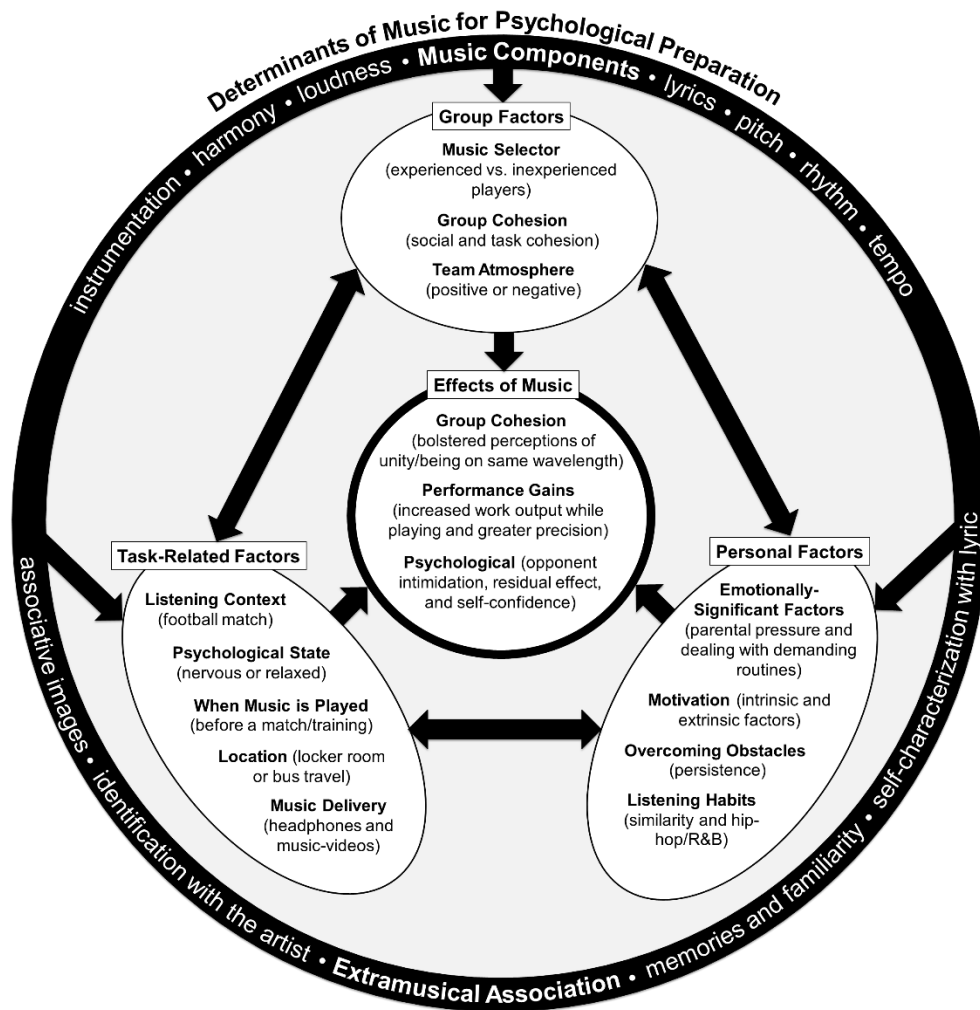
Figure 2. A grounded theory model of young soccer players' use of music in psychological preparation. *Note.* The parenthetical detail under each factor in the ovals and under each effect in the core category represents examples from the raw data and is thus not exhaustive.