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A Case Study of Factors Influencing Performance in the Practice Environment

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The performance environment of athletes has been defined as "the array of factors impacting individual and team performance in competitive situations. It includes only those factors that are temporally and organisationally related to the competitive situation" (Pain & Harwood, 2008, p. 2). Understanding the factors influencing performance within performance environments have been highlighted as being crucial in the long-term development of athletes (Fletcher & Streeter, 2016; Henriksen, Stambulova, & Roessler, 2010). As a result, research has sought to understand psychological factors influencing performance during competition (e.g., Gould, Greenleaf, Chung, & Guinan, 2002; Pain & Harwood, 2008). However, while this is an important step in understanding the broad range of factors that influence performance, proportionately speaking athletes spend the least amount of time in competitive environments, instead spending the majority of their time in practice environments. As such, a far greater understanding of the impact these practice environments can have upon athlete mental states is required if we are to truly understand the psychological factors that both influence and determine performance (Fletcher & Wagstaff, 2009).

Competitive athletes spend significant time engaged in deliberate practice activities that aim to develop sport-specific skills, physical fitness, and team strategies (Baker, Cote, & Abernethy, 2003). These sustained and extensive practice periods can provide on-going long-term emotional exposure (Baumeister, Vohs, DeWall, & Zhang, 2007) and provide important preparation (Arnold, Hewton, & Fletcher, 2015) that is essential to competitive performance. Previous athletic talent development research has sought to identify the variables present within such environments. However, this research has afforded limited attention to the psychological factors that influence athletes in these environments. (Henriksen et al., 2010). The study of organisational functioning within sport has highlighted the extent to which

emotions impact relationships within groups but this has not been specifically evaluated within the practice environment (Wagstaff, Fletcher, & Hanton, 2012).

Assessing the degree to which psychological factors in the practice environment can influence performance, outcomes can be problematic (Douglas & Carless, 2006). However, the study of affective states experienced over extended periods of time, such as in practice, have suggested a link to performance (Weiss & Cropanzano, 1996). Also, recent research suggests that 95% of total athlete time with their coach takes place in the practice environment (Wachsmuth, Jowett, & Harwood, 2018), suggesting that the coach-athlete dynamic will have the greatest impact in practice compared to other environments.

Previous research that has sought to understand factors influencing performance has focused on isolated performer perceptions when in direct competition (e.g., Thelwell, Weston, & Greenlees, 2007) or within a series of competitive matches (e.g., Pensgaard & Duda, 2002). Prominent factors reported in performance environment research include: coach and leadership factors (e.g., Fletcher & Hanton, 2003; Fletcher & Streeter, 2016); planning and logistical factors (e.g., Pain, Harwood, & Mullen, 2012); team cohesion and social factors (e.g., Noblet & Gifford, 2002); and physical preparation factors (e.g., Pain & Harwood, 2007). Though while reporting the direct effect of these environment-focused factors, these studies failed to account for the longitudinal impact of the practice environment.

As a result there is a significant gap in our understanding surrounding the performance influences emanating from the practice environment. The aim of the current study was to explore the psychological factors reported as influencing individual performers within the practice environment and contribute an initial framework of factors for further evaluation.

Method

PRACTICE ENVIRONMENT CASE STUDY

The Case Study Approach and Context

Case study approaches facilitate the empirical inquiry of contemporary phenomenon within real-world contexts where the experiences of individuals can provide measures for assessment (Yin, 2014). These approaches are especially useful when trying to identify phenomenon with limited current evidence by providing a holistic environmental assessment. The units of analysis within the current study were the participants and the varied positions they held. This allowed the phenomenon (psychological factors) in the certain case (practice environment) to be assessed using a variety of perceptual lenses (Baxter & Jack, 2008). This approach permits the individuality of participant experience to drive data collection and analysis, and not a distinctive set of method criteria (Sparkes & Smith, 2009).

The case was a purposively selected student-athlete practice environment sample of an AASE (Advanced Apprenticeship in Sporting Excellence) basketball team operating within a UK Sixth Form college competing in the Elite Academy Basketball League (EABL). The EABL has fifteen competing teams, but the study of a single practice environment allowed for a greater depth of analysis (Yin, 2011). The practice environment under investigation included coach led on-court basketball practice sessions, strength and conditioning (S&C) sessions, and practice specific activities (e.g., video analysis). All players were enrolled on full-time academic courses. The sample was indicative of a student-athlete group residing between the classifications of ‘semi-elite’ and ‘competitive elite’ (Swann, Moran, & Piggott, 2015). The team was in its seventh year of holding AASE status and competing in the EABL. The programme structure was particularly stable with the Head of Sport and the Head Coach having been involved since its inception. Players were far more transient being involved for a maximum of three years before leaving.

Participants

Fifteen participants aged between 16 to 43 years (M = 21.8, SD = 7.4) were recruited through purposeful sampling, which supplied a participant group that were knowledgeable and experienced in the phenomenon of interest (Cresswell & Plano Clark, 2011). They included ten registered EABL players who were aged between 16 to 19 years (M = 17.5, SD = 1), head basketball coach, assistant basketball coach, S&C coach, one academic teacher who resided within the sports department, and head of sport who operated in a directorial role. Experience within the practice environment under investigation was between 1 to 6 years (M = 2.9, SD = 1.4).

Procedure

Ethical approval for the study was gained via the University Ethics Committee at the Institution where the authors were resident at the time of the study. The Head of Sport and Head Coach were initially contacted and agreed to take part in the study, acting as gatekeepers who controlled access to the basketball squad. Participants were then contacted via email to inform them of the study's purpose and were emailed an information sheet. Before data collection began, all participants were explained their role within the study, assured their responses will remain confidential, given the chance to ask questions, and subsequently provided their signed informed consent.

Focus groups were adopted as the core data collection tool in the current study. This is because focus groups can be used to generate data through social interaction and group synergy that are often deeper and richer than one to one interviews, illuminate differences between perspectives, and, due to the size of the target group, generate large amounts of data in a relatively short time span (Rabiee, 2004). Focus groups can also make members feel comfortable with each other and engage in discussion with reactions and relationships between teammates being displayed for analysis (Rabiee, 2004). The focus groups took place during structured basketball practice times to provide convenience for the players. Players

were asked for their preferred day and those that had no preference were invited to join a specific group to ensure manageable participant numbers.

Data collection from non-playing members of the practice environment were gained from semi-structured interviews due to their limited availability through work commitments. It was beneficial to use interviews and focus groups as they captured perceptual data that was unique to the individual experience within the environment (Fletcher & Streeter, 2016). The first named author conducted all focus groups and interviews. A good rapport with participants had been built through previous regular professional contact, which can be advantageous in gaining trust and honest responses from participants (Braun, Clarke, & Weate, 2016).

The interview questions were formed from researcher knowledge and experience of the practice environment and supported by a review of available literature (Pain & Harwood, 2007). The interview and focus group question schedules related to the positive and negative performance influences perceived during practice (e.g., "What are the greatest positive impacts upon team performance during practice?"). Questioning was kept to a minimum and was guided by the question schedule rather than follow it rigidly. This encouraged participants to create their own lines of inquiry and allowed the focus group members to react to comments made by others (Rabiee, 2004). The researcher facilitated the path of discussion and only intervened if participants had exhausted all answers and a new question was needed or the discussion had moved away from the practice environment. Upon the discovery of an area of interest that suggested, for example, a possible explanation of an influence's cause or relationship within the environment, a deeper probing of the phenomenon was undertaken by further questioning.

The interview and focus group data collection period spanned a total of 58 days. During this period, the first named author undertook four direct observations of participants

within the practice environment. This acted as a reflexive instrument to allow a critical ongoing evaluation within an interpretative qualitative research study that was socially constructed (Hodge, Henry, & Smith, 2014). The observations were driven by the continued interview and focus group analysis that developed emergent themes during the data collection period. Field notes from the observations contributed to the keeping of a reflexive journal that encouraged a critical evaluation of the researcher's assumptions and influences on the analysis of interview and focus group data (Wagstaff et al., 2012).

Data Analysis and Methodological Rigor

The individual interviews (n = 5) ranged in duration from 61 to 88 minutes (M = 75.2) and focus groups (n = 2) from 93 to 107 minutes (M = 100). Although interview and focus group data were gathered through two distinct qualitative approaches, data analysis followed identical protocols. The data were analysed using an inductive thematic analysis approach provided for sport and exercise science as articulated by Braun et al. (2016). This produced analysis through intersection of researcher's theoretical assumptions, disciplinary knowledge, research skills and experience, and the content of the data themselves. Researcher's data interpretations were part of the analysis process and certain bias from previous knowledge was accepted (Smith & McGannon, 2017). The interviews and focus groups were recorded in their entirety and transcribed verbatim. Transcription was undertaken by the first named author and acted as a preliminary familiarisation activity to aid in the accuracy of participant interpretation (Bailey, 2008).

Inter-coder reliability was not undertaken during coding due to the inability for coders to apply theory-free knowledge (Smith & McGannon, 2017). Therefore, the first named author who had the most experience of the practice environment under investigation provided all coding. This also offered complex, layered, and rich rather than superficial interpretation (Morse, 2015). The initial phases of analysis were a process of immersion that involved

repeated reading to familiarise oneself with the text and initial coding of data (Braun et al., 2016). Coded data were added to a computerised spreadsheet for manual coding allowing for easy code manipulation and category placement. When coding the data, the original participant's message was carefully maintained to ensure data analysis held credibility and truth (Tracy, 2010). All coded data were labelled with a unique tag so that participant's comments could be linked back to the original contributor.

During coding, higher order themes were developed by capturing data into broad patterns and creating clusters of code by grouping similar data items. Following the initial completion of data coding and the development of higher order themes, which became the overarching themes, a revision of code placement was undertaken to ensure a coherent, organised, and accurate analysis of the data set has been accomplished (Braun et al., 2016). The establishment of themes provided detail to the meaning related to the central organising concept of the overarching themes. A further capturing of important facets of the central organising concepts took place to create subthemes that highlighted notable distinct patterns within the themes. Throughout data collection and analysis, direct observations of the practice environment were undertaken to observe the existence of the themes being generated during data analysis. Observations contributed towards the reflexive journal. This process aided in theme refinement through identifying researcher inclinations as well as the challenge of ensuring the phenomenon of the practice environment was held as the sole focus of analysis. Tracy's (2010) eight "big-tent" criteria for excellent qualitative research were applied to this study through a relativistic lens.

Results

Inductive thematic analysis yielded six overarching themes from the data set, which were: effort; individuality; status; preparation; team drive; and practice vision. The central organising concepts of each overarching theme is presented below with participant

quotations. A hierarchical content tree of overarching themes, themes, and subthemes of the practice environment can be found in table 1.

Effort

The influence of effort was widespread and could be defined by actions that held determination, focus, and exertion towards performance. High effort levels were generally stated as being more of a positive influence towards performance than performance outcomes. High effort levels were suggested to invoke high practice standards, as highlighted by the head coach who reflected that:

> It's very rare to find someone who takes it easy in practice and is then a consistently high performer. You usually find the hardest workers in practice have the best results. They have their standards of how hard they are going to work and compete. They have a high energy output and maintain it throughout their basketball.

Effort had a contagious effect, especially when player abilities were similar, as outlined by player 2 who suggested: "If I'm up against a teammate I'm competing with to get a starting spot and they are working really hard it makes me put in more effort".

Effort directed towards the team by others was perceived positively whereas effort towards one self was a negative influence, as highlighted by player 5 "He [teammate] would only look for himself to score, he only cared about himself. On the other hand, [name removed] would always have your back and they would go for the team". Finally, observations indicated that high effort levels were present when players were performing well. Players seemed more prone to a decrease in applied effort following a succession of individual or team errors.

Individuality

This theme included perceptual and subsequent behaviour differences in participants. For example, the following extract from the assistant coach discusses differences in player

perceptions: “Often it’s ingrained in them from influences like upbringing, personality, and characteristics. It’s how they are day to day, are they an introvert or extrovert?”. Observations indicated several differences amongst participants. Communication, style of play, self-confidence, and social interaction were amongst several participant individualities observable in practice. The degree of practice environment experience offered a difference among participants with a lack of experience leading players to be fearful and unconfident. The experience and knowledge the coaches had of individual player communication preferences also provided an influence upon performance, as outlined by the head coach:

> It could be that you can shout at them and they are ok, but more often than not they need to be spoken to on a level, an arm round the shoulder and just say you could have done this and this next time, and it can be resolved. I think communication is a big one. You need to know how they tick, how they operate.

Status

This theme was typified by the importance of success and failure displays in practice that led to internalised ability evaluations set against others in the group. An individual’s opinion of their playing ability seemed to produce a perceived ranking position in the team. Social status in and outside of the practice environment also provided an impact, as highlighted by player 6: “It’s great when you got good mates in the team. We all support each other far more. If I have a bad session it doesn’t bother me as much”.

Practice and competition performance was perceived to be influenced not only by current individual form but by current team form. Positive performance influences seemed to follow goal achievement and improvement, whereas negative influences followed failure, poor performance and mistakes. However, although teammate error was a negative influence, it also produced positive influences through providing a mechanism for reflection and social support. This point was illustrated by participant 4 who reflected:

> I try to be positive most of the time but in my head I feel angry and like why did they do that [make an error]? But then I just got to remember to shut my mouth and that I make mistakes too and they are trying their best so I try to be positive.

The success of tangible outcomes like shooting provided influence on current form. For example, player 3 stated: "Say that you are scoring, you feel like no one can stop you scoring. You keep scoring!".

Competition amongst teammates appeared to cause jealousy and served as a short-term negative influence when a player was out performed by a teammate. However, player 7 indicated it to be a motivating factor in the long-term: "I felt I was better than him, hands down. I didn't get selected and it annoyed me. I just had to focus and show the coach I'm better, which I did". Only when a teammate was performing well for the team was it perceived as a positive factor in the short-term. For example, player 7 went on to state: "He was playing well in training and started [the game], I didn't want him to do well but it was a big cup game and we went through. I actually played the next game and did really well".

Performance expectations that were higher than actual performance produced a negative influence upon performance. This was in player 1's reflections: "I put a lot of pressure on myself at practice but sometimes I set the standard too high". The coach's performance expectation of players set against the actualized performance was also a factor when aligned (positive) or when misaligned (negative). Finally, maintaining status was underpinned by the coping ability of players. If players had high coping ability they seemed better equipped to turn negative status influences into more positive ones.

Preparation

Preparation consisted of holistic approaches, practice preparation, and recovery. A short preparation period before practice, including what was done in the warm-up, provided initial practice performance influences. Players who had enough time to prepare for practice

felt better equipped compared to those who had to rush or were late. Waking up and going straight to practice was highlighted by player 1: "If you go from something else to practice you're already in the flow of the day, whereas to wake up, you then have to change". Practice preparations during the warm-up provided positive influences if players performed well, were focused, and received positive encouragement from others.

Preparation was not isolated to the moments leading up to practice, but involved all aspects of life. A belief that out-of-practice lifestyle decisions would affect practice performance was beneficial towards performance, as stated by the S&C Coach: "My expectation of S&C is that it's as crucial as the work done on court" and the teacher: "Their standards are higher in lessons in terms of attendance and productivity if they see it as worthwhile. Classroom success is success elsewhere". Players who understood they were not just there to play basketball but also gain an education, experienced positive performance in practice: "If I stay on top of my studies I feel more relaxed with my basketball" (player 6).

Adequate recovery led to perceived higher performance and was achieved by appropriate nutrition and rest, as player 1 reported: "I go to bed at the same time every night because I like to wake up early and have time before practice". Inadequate recovery led to physical and mental deficiency in practice that was stated to affect not only the player's performance, but that of others: "I feel like you say stuff when you are tired that you don't want to or that you wouldn't say when you are fresh. I feel like when I'm tired everything gets to me more, more emotionally, everything is deeper" (player 7).

Team Drive

The team drive overarching theme contained reference to the relationships and connectedness within the practice environment. It encompassed the themes of communication, performance feedback, support, and team cohesion. Generally, relationships that were positive, motivational, and encouraging influenced performance positively.

Negative communication within the environment provided negative performance influences. However, negative communication was cited as increasing the performance of a high ability player when effort was low: "I could give him serious crap. He wouldn't have his head in the game but that would pick him right up" (player 5).

The head coach indicated how improved resilience was gained through overcoming negative communication: "If you can overcome that person who is in your ear, if you can get above it mentally and deal with the challenging situation and still put in a great performance, it's going to make you more resilient". Player to player feedback influenced performance positively if it was constructive and direct. Coach to player feedback could be more critical if it held constructive elements, players were not singled out in front of the group, feedback was truthful, and players did not receive punishments.

Support was gained socially and structurally through organised programming. However, support was often found to be lacking away from scheduled practices. This negatively affected players with low independence who were unable to take responsibility for actions undertaken outside of practice. Emotional and behavioural alignment lead to the closeness of the group within the environment: "We lost a game we should have won. Next practice only a few of us were angry and annoyed. Most of the younger players didn't even seem bothered" (player 2). Practice observations following a team loss revealed increased group cohesion amongst the older players but the newer players were more isolated.

Practice Vision

This overarching theme captured concepts of goal types and how practice sessions were structured to meet them. A commitment to improve and develop seemed to enhance practice performance. Players wanting to partake only in activities that benefited them was cited by player 5: "I would help [a teammate] but deep down I'm thinking why am I doing this? If they ask me to help them, I'll just get bored and think why?". Players who held

individual and selfish goals that did not put team goals first were seen to influence performance negatively, as stated by the head coach: “You shouldn’t be out for yourself. It doesn’t actually help you achieve. If they [players] all support each other, and play hard for each other, then they all win”.

Match simulation was stated as a factor that developed performance through players practising when fatigued: “It’s good to compete at the end of a session as it’s just like it would be in a game, very physical and tough” (player 2). Experiencing negative situations during practice appeared to develop resilience that produced future performance benefits despite the negative short-term impact, as observed by the coach: “Players go hard at each other. Someone’s got to lose. But we expect the loser to respond next practice and be better”.

Discussion

The aim of this study was to investigate the psychological factors influencing performance during practice. The basketball practice environment under investigation revealed six overarching themes, which were: effort; status; individuality; preparation; team drive; and practice vision.

Effort was highlighted as an important variable in this study. Players prioritising effort over task ability seemed to produce better performance. This could be due to effort being more controllable than situational ability or talent (Douglas & Carless, 2006). The treating of players individually during team practice sessions, such as singling out with praise or criticism, seemed to damage the team ethos as reported by participants in this study. This is an observation supported by previous research indicating that coaching efforts towards the team over individual psychological variables is more influential upon performance (Pain et al., 2012). This suggests that although players may look to develop their individual ability in practice it is important for them to recognise their position as a member of a team.

Players held their own perceptions of their ability, which served to underpin their expectations about their own practice and performance outcomes. The relationship between expectations and performance has been previously reported in Olympic athletes but the complexities within practice require far more investigation (Greenleaf, Gould, & Dieffenbach, 2001). Previous research on sources of stress in sport conducted by Scanlan, Stein, and Ravizza (1991) suggested low personal performance expectancies can negatively affect performance. This view is somewhat contradicted by the results from the current study where high performance expectations were reported to impact performance negatively if the expected performance was not achieved. The long-term performance effects from setting high expectations is unknown and requires further research attention. Coaches with high player performance expectations that were not actualised were also cited as influencing performance negatively. Coaches who were flexible, instinctive, and able to adapt ineffective sessions within a constantly changing environment were seen as a positive (Nash & Collins, 2006).

The most important performance marker reported by participants in this study was the result of tangible practice objectives (e.g., scoring and winning drills), that offered an outlet for displaying ability (Harwood, Hardy, & Swain, 2000). Positive outcomes lead to positive performance influences whereas negative outcomes would cause players to experience a drop in performance, with the negative influence accentuated if the performance task was to be achieved independently. This result strengthens the need for players to achieve tasks with others team members. Within academy programmes where player development and competitiveness amongst teammates may be the fundamental priority, players still require an understanding of the need for the team "because the individual is produced by a successful team" (Mills, Butt, Maynard, & Harwood, 2012).

In the current study, emotion has reported to influence communication within practice and provided different outcomes when it was negative compared to stable responses when

communication was positive. Negative emotions have been reported to communicate threat, which could contain a future positive motivational element (Hatfield, Cacioppo, & Rapson, 1994), and was evident in the current study. Eccles and Tenenbaum (2004) suggested detrimental performance can occur with team members who are not fully aware of team functions and are unable to interpret teammate communication due to a lack of environment experience. Players in the current study have high turnover rates with new players entering the programme annually, which has been found to negatively impact performance (Noblet & Gifford, 2002).

A lack of emotional control was cited by participants as one reason for giving negative communication. The only time negative emotion was accepted by the whole group and provided positive performance influences was with its alignment. Any member of the team displaying misaligned emotions (e.g., pride in one's own performance following a loss where others felt anger and disappointment) would impact performance and team function negatively. The alignment of emotions has been cited in previous team performance research where performance outcomes were subject to the simultaneous emotional arousal within the team (De Boer & Badke-Schaub, 2008). Wagstaff et al. (2012) emphasised the importance of emotions, especially their contagious effects, in the relationships of individuals within a national sport organisation. They were found to be inherent within all social transactions and an inseparable part of everyday life within the organisation, which seems to be mirrored by the practice environment under investigation. Leaders within the practice environment, such as coaches and senior players, have a greater influence over the emotions of a group, which can be used to achieve greater alignment in practice (Sy, Côté, & Saavedra, 2005).

Poor practice facilities have been highlighted as a prominent source of stress in previous research, despite perceptual differences existing (Fletcher, Hanton, Mellalieu, & Neil, 2012; Pain et al., 2012). Pain and Harwood (2008) reported both players and coaches

finding poor facilities influenced performance negatively, while Fletcher and Streeter (2016) cited only players finding it as a factor. Facilities were only mentioned by the head of sport in the current study. This indicates that those who exist day to day within the practice environment (e.g., players and coaches) may not perceive it to be as influential upon performance compared to when in competitive settings.

Fatigue due to inadequate recovery (Meeusen et al., 2013) was cited as causing negative performance influences within practice. This was supported by previous research, which also suggested the negative influences of physical fatigue could be countered with effective recovery strategies (Pain & Harwood, 2007; Pain & Harwood, 2008). This should not be confused with the required fatigue felt by players during practice as this was cited as being necessary for match simulation activities. Physical discomfort during training has been cited as stress causing for athletes (McKay, Niven, Lavallee, & White, 2008) but simulated fatigue in practice was seen as a positive influence towards improved competition performance in the current study. It is unclear how fatigue during practice can influence performance in the long-term and its study requires further exploration.

Player participants held low levels of general independence and responsibility but received a lack of support when outside of designated practice. Evidence of this was seen with injured players who cited a lack of support as causing stress; a factor that has been found with professional athletes (Noblet & Gifford, 2002). The needed holistic approach to successful practice was seen with a poor decision by one player to go to bed late after eating a low nutritional meal, despite having early morning practice the following day. The decisions made outside of practice have been found to dictate sporting performance in the New Zealand rugby union team (Hodge et al., 2014) and appear to also occur with the basketball players in the current study.

Influencing performance factors emanating from the practice environment have historically been under researched. This may be due to the inability to accurately determine the effects of practice upon competition performance compared to factors that hold closer competition proximity. However, previous research suggests performance is influenced by environments where individuals exist, develop, and practice. The need to explore the practice environment is long overdue. As suggested at the start of this paper, participant perceptions were found to be conflicting and contradicting in several situational experiences. This conflict, coupled with the unique findings of this study, indicates the need to apply specific research attention towards the practice environment.

This study did not specifically evaluate the coping strategies participants used when confronted with negative performance influences, despite the high volume of negative influences reported. Future research may wish to evaluate coping strategies employed during practice such as the work undertaken by Massey, Meyer and Naylor (2013) with the self-regulation of mixed martial arts fighters. This study was not based on previous theory and future research attention towards the practice environment is required, such as that undertaken with the High Performance Environment model (Fletcher & Streeter, 2016). Future research should seek to confirm the existence of the factors identified in the current study within a larger participant population.

References

Arnold, R., Hewton, E., & Fletcher, D. (2015). Preparing our greatest team: The design and delivery of a preparation camp for the London 2012 Olympic Games. *Sport, Business and Management: An International Journal*, *5*(4), 386-407. doi: 10.1108/SBM-01-2014-0003

Baker, J., Côté, J., & Abernethy, B. (2003). Learning from the experts: Practice activities of expert decision makers in sport. *Research Quarterly for Exercise and Sport*, *74*(3), 342-347. doi: 10.1080/02701367.2003.10609101

Bailey, J. (2008). First steps in qualitative data analysis: transcribing. *Family Practice*, *25*(2), 127-131. doi: 10.1093/fampra/cmn003

Baumeister, R. F., Vohs, K. D., DeWall, C. N., & Zhang, L. (2007). How emotion shapes behavior: Feedback, anticipation, and reflection, rather than direct causation. *Personality and Social Psychology Review*, *11*(2), 167-203. doi: 10.1177/1088868307301033

Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report*, *13*(4), 544-559. Retrieved from https://nsuworks.nova.edu/tqr/vol13/iss4/2

Braun, V., Clarke, V., & Weate, P. (2016). Using thematic analysis in sport and exercise research. *Routledge Handbook of Qualitative Research in Sport and Exercise*, 191-205.

Cresswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed method research.* 2nd ed. Thousand Oaks, California: SAGE

De Boer, R. J., & Badke-Schaub, P. (2008). Emotional alignment in teams: How emotions support the design process. In *DS 48: Proceedings DESIGN 2008, the 10th International Design Conference, Dubrovnik, Croatia*.

Douglas, K., & Carless, D. (2006). *Performance environment research: Research report*. London: UK Sport Performance Environment Research.

Eccles, D. W., & Tenenbaum, G. (2004). Why an expert team is more than a team of experts: A social-cognitive conceptualization of team coordination and communication in sport. *Journal of Sport and Exercise Psychology*, *26*(4), 542-560. doi: 10.1123/jsep.26.4.542

Fletcher, D., & Hanton, S. (2003). Sources of organizational stress in elite sports performers. *The Sport Psychologist*, *17*(2), 175-195. doi: 10.1123/tsp.17.2.175

Fletcher, D., Hanton, S., Mellalieu, S. D., & Neil, R. (2012). A conceptual framework of organizational stressors in sport performers. *Scandinavian Journal of Medicine & Science in Sports*, *22*(4), 545-557. doi: 10.1111/j.1600-0838.2010.01242.x

Fletcher, D., & Streeter, A. (2016). A case study analysis of a high performance environment in elite swimming. *Journal of Change Management*, *16*(2), 123-141. doi: 10.1080/14697017.2015.1128470

Fletcher, D., & Wagstaff, C. R. (2009). Organizational psychology in elite sport: Its emergence, application and future. *Psychology of Sport and Exercise*, *10*(4), 427-434. doi: 10.1016/j.psychsport.2009.03.009

Gould, D., Greenleaf, C., Chung, Y., & Guinan, D. (2002). A survey of US Atlanta and Nagano Olympians: Variables perceived to influence performance. *Research Quarterly for Exercise and Sport*, *73*(2), 175-186. doi: 10.1080/02701367.2002.10609006

Greenleaf, C., Gould, D., & Dieffenbach, K. (2001). Factors influencing Olympic performance: interviews with Atlanta and Negano US Olympians. *Journal of Applied Sport Psychology*, *13*(2), 154-184. doi: 10.1080/104132001753149874

Harwood, C., Hardy, L., & Swain, A. (2000). Achievement goals in sport: A critique of conceptual and measurement issues. *Journal of Sport and Exercise Psychology*, *22*(3), 235-255. doi: 10.1123/jsep.22.3.235

Hatfield, E., Cacioppo, J. T., & Rapson, R. L. (1994). *Emotional contagion: Cambridge studies in emotion and social interaction*. Cambridge, UK: Cambridge University Press.

Henriksen, K., Stambulova, N., & Roessler, K. K. (2010). Holistic approach to athletic talent development environments: A successful sailing milieu. *Psychology of Sport and Exercise*, *11*(3), 212-222. doi: 10.1016/j.psychsport.2009.10.005

Hodge, K., Henry, G., & Smith, W. (2014). A case study of excellence in elite sport: Motivational climate in a world champion team. *The Sport Psychologist*, *28*(1), 60-74. doi: 10.1123/tsp.2013-0037

Massey, W. V., Meyer, B. B., & Naylor, A. H. (2013). Toward a grounded theory of self-regulation in mixed martial arts. *Psychology of Sport and Exercise*, *14*(1), 12-20. doi: 10.1016/j.psychsport.2012.06.008

McKay, J., Niven, A. G., Lavallee, D., & White, A. (2008). Sources of strain among elite UK track athletes. *The Sport Psychologist*, *22*(2), 143-163. doi: 10.1123/tsp.22.2.143

Meeusen, R., Duclos, M., Foster, C., Fry, A., Gleeson, M., Nieman, D., & Urhausen, A. (2013). Prevention, diagnosis, and treatment of the overtraining syndrome: joint consensus statement of the European College of Sport Science and the American College of Sports Medicine. *Medicine and Science in Sports and Exercise*, *45*(1), 186-205. doi: 10.1249/MSS.0b013e318279a10a

Mills, A., Butt, J., Maynard, I., & Harwood, C. (2012). Identifying factors perceived to influence the development of elite youth football academy players. *Journal of Sports Sciences*, *30*(15), 1593-1604. doi: 10.1080/02640414.2012.710753

Morse, J. M. (2015). Critical analysis of strategies for determining rigor in qualitative inquiry. *Qualitative health research*, *25*(9), 1212-1222. doi: 10.1177/1049732315588501

Nash, C., & Collins, D. (2006). Tacit knowledge in expert coaching: Science or art?. *Quest*, *58*(4), 465-477. doi: 10.1080/00336297.2006.10491894

Noblet, A. J., & Gifford, S. M. (2002). The sources of stress experienced by professional Australian footballers. *Journal of Applied Sport Psychology*, *14*(1), 1-13. doi: 10.1080/10413200209339007

Pain, M. A., & Harwood, C. (2007). The performance environment of the England youth soccer teams. *Journal of Sports Sciences*, *25*(12), 1307-1324. doi: 10.1080/02640410601059622

Pain, M. A., & Harwood, C. G. (2008). The performance environment of the England youth soccer teams: A quantitative investigation. *Journal of Sports Sciences*, *26*(11), 1157-1169. doi: 10.1080/02640410802101835

Pain, M. A., Harwood, C., & Mullen, R. (2012). Improving the performance environment of a soccer team during a competitive season: An exploratory action research study. *The Sport Psychologist*, *26*(3), 390-411. doi: 10.1123/tsp.26.3.390

Pensgaard, A. M., & Duda, J. L. (2002). "If we work hard, we can do it" a tale from an Olympic (gold) medalist. *Journal of Applied Sport Psychology*, *14*(3), 219-236. doi: 10.1080/10413200290103518

Rabiee, F. (2004). Focus-group interview and data analysis. *Proceedings of the Nutrition Society*, *63*(4), 655-660. doi: 10.1079/PNS2004399

Scanlan, T. K., Stein, G. L., & Ravizza, K. (1991). An in-depth study of former elite figure skaters: III. Sources of stress. *Journal of Sport and Exercise Psychology*, *13*(2), 103-120. doi: 10.1123/jsep.13.2.103

514 Smith, B., & McGannon, K. R. (2017). Developing rigor in qualitative research: Problems
515 and opportunities within sport and exercise psychology. *International Review of Sport*
516 *and Exercise Psychology*, 1-21. doi: 10.1080/1750984X.2017.1317357
517 Sparkes, A. C., & Smith, B. (2009). Judging the quality of qualitative inquiry: Criteriology
518 and relativism in action. *Psychology of Sport and Exercise*, *10*(5), 491-497. doi:
519 10.1016/j.psychsport.2009.02.006
520 Swann, C., Moran, A., & Piggott, D. (2015). Defining elite athletes: Issues in the study of
521 expert performance in sport psychology. *Psychology of Sport and Exercise*, *16*, 3-14.
522 doi: 10.1016/j.psychsport.2014.07.004
523 Sy, T., Côté, S., & Saavedra, R. (2005). The contagious leader: impact of the leader's mood
524 on the mood of group members, group affective tone, and group processes. *Journal of*
525 *Applied Psychology*, *90*(2), 295. doi: 10.1037/0021-9010.90.2.295
526 Thelwell, R. C., Weston, N. J., & Greenlees, I. A. (2007). Batting on a sticky wicket:
527 Identifying sources of stress and associated coping strategies for professional cricket
528 batsmen. *Psychology of Sport and Exercise*, *8*(2), 219-232. doi:
529 10.1016/j.psychsport.2006.04.002
530 Tracy, S. J. (2010). Qualitative quality: Eight “big-tent” criteria for excellent qualitative
531 research. *Qualitative Inquiry*, *16*(10), 837-851. doi: 10.1177/1077800410383121
532 Wachsmuth, S., Jowett, S., & Harwood, C. G. (2018). On understanding the nature of
533 interpersonal conflict between coaches and athletes. *Journal of Sports Sciences*, 1-8.
534 doi: 10.1080/02640414.2018.1428882
535 Wagstaff, C., Fletcher, D., & Hanton, S. (2012). Positive organizational psychology in sport:
536 An ethnography of organizational functioning in a national sport organization.
537 *Journal of Applied Sport Psychology*, *24*(1), 26-47. doi:
538 10.1080/10413200.2011.589423

539 Weiss, H. M., & Cropanzano, R. (1996). Affective events theory: A theoretical discussion of
540 the structure, causes and consequences of affective experiences at work. *Research in*
541 *Organisational Behaviour, 18,* 1-74.
542 Yin, R. K. (2011). *Applications of case study research* 3rd ed. SAGE.
543 Yin, R.K. (2014). *Case study research: design and methods*. 5th ed. Los Angeles, California:
544 SAGE

PRACTICE ENVIRONMENT CASE STUDY

545 Table 1.

546 *Hierarchical content tree of overarching themes, themes and subthemes of the practice*

547 *environment.*

Subthemes	Themes	Overarching Themes
High effort is primary focus High effort from others	Effort	Effort
Completion of practical skills Making improvements Current form Teammate mistakes and errors Team Performance Individual Teammate performance Mistakes and errors	Current performance level	
Ability status Social status Player status position Display of ability to others Match selection Difference in perceived ability and what others perceive	Status	Status
Intra-team competition Competition between individual players	Intra-team competition	
Coach performance expectation Player performance expectation	Performance expectation	

PRACTICE ENVIRONMENT CASE STUDY

Current focus Negative focus and reaction Attempting to control uncontrollable events Coping strategies	Coping ability	
Player individuality Previous experiences	Individuality	Individuality
Practice preparation Preparation during warm-up	Practice preparation	
Holistic approach Success away from basketball Non-basketball commitments Out of practice independence Weather	Holistic approach	Preparation
Fatigue Physical recovery Nutrition	Recovery	
Negative communication Communication and feedback from coaches Support, motivation and encouragement Knowledge of player communication preferences	Communication	
Feedback from teammates Praise and reward Coach attribution of performance success Reflection activities Receiving punishments	Performance feedback	Team Drive

PRACTICE ENVIRONMENT CASE STUDY

Support Independence support Responsibility and independence in practice	Support	
Team chemistry Emotional alignment Leadership	Team cohesion	
Adaptive coaches during practice Enjoyable practice Structure of practice Safe environment Information given by coaches Player led practice Challenging practice environment Equality amongst players Negative practice experience Simulating competitive match fatigue states Facilities and equipment	Practice structure	Practice Vision
Desire to improve and develop Activities that benefit own development and performance Tangible goals Not having goals or objectives Player goal alignment	Goal type	

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