1   Running Head: Motivational climate in young sports performers

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6   A qualitative investigation exploring the motivational climate in early-career sports participants:

7   Coach, parent and peer influences on sport motivation

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24   Keywords: Motivational climate, achievement-motivation, self-determination, youth, coaches,

25   parents, peers, inductive analysis.

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1   Abstract

2   Objectives: The objectives of this research were a) to explore the applicability of 'motivational

3   climate' research to early-career athletes under the age of twelve, b) to re-examine the concept of

4   'motivational climate' in the light of recent scientific developments, and c) to concurrently study the

5   influences of coaches, parents and peers on athletic motivation.

6   Design and Method: Using a qualitative design, 40 participants (7-11 years of age) from various

7   sports were interviewed in focus groups, using a semi-structured format to investigate the roles

8   played by coaches, parents, and peers in influencing athlete motivation. An inductive content

9   analysis was conducted to determine which behaviours among these social agents influenced key

10   motivational outcomes.

11   Findings: The analysis indicated that young athletes experience a motivational climate which shows

12   consistencies with existing models of motivation; suggesting this population is worthy of further

13   study. The influences of coaches related most strongly to the manner in which they perform their

14   roles of instruction and assessment, whereas parents' influences were most salient in terms of the

15   way they support the child's participation and learning. Both parents and coaches exerted influences

16   through their leadership styles, affective responses and pre-performance behaviours. Peers

17   influenced participants' motivation through competitive behaviours, collaborative behaviours,

18   evaluative communications and through their social relationships.

19   Conclusions: This study provides an insight into the motivational climate experienced by young

20   athletes and helps to delineate the different roles of social agents in influencing their motivation at

21   this early stage of development.

1   A qualitative investigation exploring the motivational climate in early-career sports participants:

2   Coach, parent and peer influences on sport motivation

3   Children's early involvement in organised sport is often considered to be a key opportunity for

4   the development of movement skills, social skills, self esteem, and the maintenance of health

5   through physical activity (Stryer, Tofler & Lapchick, 1998; Zaff, Moore, Papillo & Williams, 2003).

6   Consequently, children's motivation to participate in sport is a key consideration for researchers,

7   coaches, parents and teachers alike. Fundamentally, if we want children to engage in sport from an

8   early age and progress to reach their full potential, then it is arguably vital to 'get it right' during

9   these influential formative years. In fact, there are many important reasons to study the experiences

10   of early-career athletes. First, motor abilities (such as co-ordination, reaction time and balance) are

11   most receptive to development at younger ages (e.g., Loko, Aule, Sikkut, Ereline, & Viru, 2000).

12   Second, participation in sport is likely to be an important opportunity to improve these basic motor

13   skills. Third, being able to create and maintain an optimal motivational climate amongst early-career

14   athletes is likely to increase participation, enjoyment, and motor learning (cf. Theeboom, De Knop,

15   & Weiss, 1995). These considerations highlight the importance of being able to understand and

16   influence the environment surrounding early-career athletes in order to produce optimal motivation

17   and associated benefits.

18   There is increasing evidence that peers and parents in the sporting context, as well as coaches,

19   all play important roles in influencing motivation (e.g., Allen, 2006; Allen & Hodge, 2006; Gurland

20   & Grolnick, 2005; Ullrich-French & Smith, 2006; Vazou, Ntoumanis, & Duda, 2005; White, 1996).

21   Hence, this paper examines the motivational influences of coaches, parents and peers in the early

22   career of sport participants.

23   Several models of athletic career progression exist, beginning with Bloom (1985), and

24   including Côté (1999) and Wylleman, Alfermann, and Lavallee (2004). In each case, the early

25   career is characterised by participants who are generally prompted to try different sports (often by

26   their parents) to see if they either enjoy it, have some talent or gift, or ideally both. The emphasis is

27   more on 'play' and games than deliberate practice and children in the 'initiation/sampling' stage are

28   generally 6-13 years of age (Côté, 1999). Also, according to Wylleman et al. (2004), sport-career

1   initiators are commonly at primary school, and their key social influences come from parents, peers

2   and siblings (where applicable).

3   Roberts (2001) argued that motivation is best understood from a social cognitive perspective,

4   not as a function of energisation or arousal per se, but rather as a function of the goals behind the

5   motivated activity. Likewise, Deci and Ryan (2000) succinctly summarised that motivation concerns

6   the 'why' question of behaviour. Hence, when studying the social influences on motivation of young

7   athletes participating in sport, one is examining the reasons behind motivated actions and the ways

8   in which coaches, parents and peers can influence these reasons. These three social agents, taken

9   together, may be influential across the vast majority of the athlete's sporting experience. Taking, as a

10   guide, Vallerand's hierarchical model of intrinsic and extrinsic motivation (Vallerand, 1997),

11   parents will be a relatively global and omnipresent influence, whereas coaches and peers are likely

12   to exert motivational influences both at the contextual (generally within sport, but not at school or at

13   home), and also at the situational levels (specific instances at a particular moment in time). A study

14   that is able to describe and convey a sample of these motivational influences would arguably be

15   relevant to both Vallerand's theory, and any of the following theories of motivation in sport.

16   *Motivational climate and achievement goal theory*

17   The motivational influence exerted by key social agents is often referred to as the

18   'motivational climate' – which is a term that originated in achievement goal theory (Ames, 1992;

19   Nicholls, 1989). In this conceptualisation, sport participants' *state* goals are determined by the

20   interaction of their 'goal orientation' (a tendency or proneness in individuals towards adopting

21   certain achievement goals; Roberts, 2001), with the situational goal climate (the specific pragmatic

22   and social situations in which the achievement task is defined; Ames, 1992). The traditional

23   dichotomous achievement goal framework defines these goals in one of two ways: performance/ego

24   goals emphasise normative evaluations and outperforming others; mastery/task goals emphasise

25   effort, personal improvement and task mastery (Nicholls, 1989). Within motivational climate

26   research, these different definitions of competence, and related goal adoptions, have been correlated

27   to different motivational outcomes and behaviours, including positive affect, negative affect,

28   perceived competence, strategies used (e.g., cheating, self-teaching), sportspersonship, the

1   deployment of mental skills, actual motor improvement, and experience of 'flow' (for reviews, see

2   Duda & Whitehead, 1998; Harwood, Spray, & Keegan, 2008).

3   Nicholls' contribution to achievement goal theory emerged from a systematic programme of

4   research that examined how young children gradually learn to differentiate between effort, task

5   difficulty and luck in achievement tasks. According to Nicholls (1989), children below the age of

6   11-12 are not able to differentiate between ability and effort, and so cannot become ego-involved

7   (i.e., they cannot be interested in demonstrating superior *ability* with less or equal effort). As such,

8   all children are proposed to only experience task involvement until they come to realise that ability

9   and effort can be inversely related. This has been the assumption in the majority of research into

10   motivational climates (e.g., Vazou *et al.*, 2005) and so early career sport participants under the age

11   of 12, i.e. those who are characteristically initiating their sporting careers, have rarely been studied.

12   Ames' research led to a consideration of the ways in which teachers and coaches can

13   emphasise achievement goals (Ames, 1992; Ames & Archer, 1988). The acronym TARGET was

14   coined to denote the variety of relevant teaching behaviours: Tasks, Authority, Recognition,

15   Groupings, Evaluation and Timing. A task-climate would include collaborative tasks, democratic

16   leadership, recognition for effort and improvement, mixed ability groupings, individual evaluation,

17   and sufficient time for everyone to learn a skill. An ego-climate would include competitive tasks,

18   autocratic leadership, recognition of normative ability, segregation by ability, normative evaluation,

19   and time for only the more advanced students to complete a task. In most coaching environments,

20   however, the above behaviours are likely to occur interchangeably depending on the circumstances,

21   and so it is unlikely that an exclusively ego or task climate will be perceived.

22   The TARGET framework was initially used to inform interventions and assess motivational

23   outcomes (e.g., Seifriz, Duda, & Chi, 1992), but it has also contributed to the development of

24   several questionnaires measuring how athletes perceive their motivational climate (e.g., Ames &

25   Archer, 1988; Newton, Duda, & Yin, 2000; Papaioannou, 1994; Seifriz et al., 1992). Results from

26   studies utilising these questionnaires have shown that perceived climate is often associated with

27   important motivational variables. However, Duda and Whitehead (1998) highlighted a number of

28   limitations of the questionnaire approach to studying motivational climate, not least that

1   researchers tended to only present the results of composite mastery or performance scores and not

2   the underpinning subscales; precluding options to explore any differences between subscales (and

3   therefore limiting understanding). Additionally, the subtleties of measuring the perceptions of how

4   a group of athletes feel their coaches, parents and peers emphasise one-or-another definition of

5   competence, and then trying to use this for applied interventions are slowly beginning to

6   undermine the utility of a questionnaire-based approach (for a discussion, see Papaioannou,

7   Milosis, Kosmidou, & Tsigilis, 2007). As a consequence, it may be beneficial to examine

8   motivational climate by qualitatively assessing influences of coaches, parents and peers together,

9   with a view to arriving at specific applied recommendations that can inform interventions.

10   Returning to the consideration of Nicholls' work (Nicholls, 1989), if it is the case that children

11   become able to differentiate between effort and ability at around the age of 12, and therefore able to

12   truly experience ego involvement, there may be a strong argument in favour of making the

13   motivational climate around this age strongly mastery-oriented, such that the salience of ego goals

14   and their associated negative motivational impact might be reduced (Harwood et al., 2008). Smith,

15   Cumming and Smoll (2008) recently developed a questionnaire to assess perceived achievement

16   goal climates with athletes between 9-14 years of age (the Motivational Climate Scale for Youth

17   Sports; MCSYS). However, this study explicitly used the dichotomous framework ('mastery' vs.

18   'ego' goals) to develop a two-factor model; effectively creating a PMCSQ-2 for use with young

19   performers. This differentiates it from the current paper, which uses a qualitative approach in an

20   attempt to access the potentially unique and rich phenomenon of the motivational climate in youth

21   sport. In this respect, the current study is intended to complement existing research by providing a

22   detailed account of the behaviours and actions that contribute to motivation in young athletes.

23   *Theoretical developments: Approach and avoidance goals*

24   In its original conceptualisation, achievement goal theory did not specifically differentiate

25   social and self-awareness considerations from purely competence-based goals – meaning their

26   influence could not be separately assessed (Elliot & Thrash, 2001). Elliot and colleagues (e.g., Elliot,

27   2005) have argued that the achievement goal construct should focus solely on whether the aim is to

28   demonstrate competence (approach valenced goal) or to avoid demonstrating incompetence

1   (avoidance valenced goal) – being careful to theoretically and empirically separate goals from the

2   reasons underpinning their pursuit. Elliot (1997, 1999) asserted that equivocal findings in the

3   achievement goal literature concerning the motivational impact of performance goals were partly a

4   result of the failure to distinguish both approach and avoidance forms of normatively-defined goals

5   (and partly a result of the inclusion of social and self-awareness considerations within the

6   measurement of goals). Elliot (1997; Elliot & Church, 1997) proposed a trichotomous model

7   (mastery goals, performance-avoidance goals, and performance-approach goals) and, more recently,

8   a two-by-two model in which mastery goals are further divided into mastery-approach and mastery-

9   avoidance, giving two dimensions (valence and definition) and four possible goals (performance-

10   approach, performance-avoidance, mastery-approach, mastery-avoidance; Elliot & McGregor,

11   2001). In Elliot and Church's (1997) hierarchical model of achievement goals, intrapersonal and

12   situational antecedents are hypothesised to influence the adoption of any of the four goals. Although

13   one of the antecedents posited is 'motivational climate', there is currently a dearth of research that

14   examines how key social agents can influence the adoption of approach versus avoidance goals in

15   sport. In physical education, Barkousis *et al.* (2007) used the LAPOPECQ (a dichotomous measure

16   of perceived motivational climate; Papaioannou, 1994) to predict trichotomous goal-adoptions and

17   found that the subscale 'worry about mistakes' (a performance-climate subscale) was a positive

18   predictor of both mastery- and performance-avoidance goals. This research suggests that students in

19   these classes were able to differentiate between positive and negative situational/contextual cues,

20   and also indicates a growing need to reconcile separate models of achievement motivation within

21   motivational climate research, particularly in sport.

22   *Social goals in achievement contexts*

23   Maehr and Nicholls (1980) included in their original theoretical framework of achievement

24   goals a 'social approval goal orientation' in addition to task and ego goal orientations. They

25   suggested that a social approval goal orientation emphasises the desire for acceptance by

26   significant others through conformity to norms while displaying maximal effort. More recently,

27   Urdan and Maehr (1995) called for the reconsideration of social goal orientations in describing

28   and explaining achievement behaviour. Social goals may include social welfare goals (i.e., to

1   benefit the larger society by becoming a productive member), social responsibility (i.e., to be

2   conscientious), social affiliation (i.e., to feel a sense of belonging), social relationship goals, and

3   social status goals (Urdan & Maehr, 1995; Wentzel, 1993). Allen (2006) has reported that

4   friendships and group memberships are key motivating factors in sport, whilst Ullrich-French and

5   Smith (2006) noted that the quality of friendship and peer acceptance also influenced motivational

6   variables such as enjoyment and perceived competence.

7   Given the variety of conceptually and qualitatively distinct types of relationship that are

8   possible between an athlete and their coach, parents and peers, there is likely to be a corresponding

9   variety of possible social goals. For example, peer relationships are relationships between relative

10   equals, while athlete-adult relationships may often represent imbalances in power, and this is likely

11   to impact upon the social goals adopted by the athlete in each instance, as well as the ways in which

12   motivational goals are endorsed, perceived, adopted and reinforced. Significant others in sport

13   represent consistent sources of motivation (Weiss & Ferrer-Caja, 2002) and, whilst research is

14   ongoing into the specific nature and impact of social relationships in sport, it is clear that social goals

15   are very relevant to the phenomenon of the social motivational climate.

16   *Theoretical developments: Is the construct of motivational climate broadening?*

17   To date, the construct of motivational climate has been studied with regard to the

18   dichotomous model of achievement goals, with a mastery climate hypothesised to induce task

19   goals, and a performance climate to induce ego goals. The majority of this research has assessed

20   the perceived influence of coaches, teachers and parents on athletes' motivation in sport (e.g.,

21   White, 1996; Williams, 1998), although more recent work has examined the influence of peers

22   (Ntoumanis & Vazou, 2006; Vazou et al., 2005). While this body of work has led to some debate

23   concerning the conceptualisation of achievement goals and the mechanisms by which they are

24   invoked or adopted, motivational climate has continued to be studied using the performance/ego

25   versus mastery/task dichotomy. Exceptions to this general tendency are Mageau and Vallerand

26   (2003), who presented a model of coaching that highlighted the importance of autonomy support

27   in improving athletic motivation, and Allen and Hodge (2006), who reviewed an array of evidence

28   suggesting that our conceptualisation of motivational climate should be expanded to include the

1   self-determination theory (SDT; Deci & Ryan, 2000) constructs of relatedness ("a concern about

2   connections with others and the quality of our interpersonal relationships." p. 268) and autonomy

3   (the degree to which athletes "engage in the activity for their own valued reasons and feel that they

4   have freely chosen to be involved" p. 267), in addition to competence. Mageau and Vallerand cite

5   research specifying that autonomy supportive behaviours may include offering choices, providing

6   a rationale for decisions/tasks, acknowledging the athlete's feelings, allowing independent training,

7   giving non-controlling competence feedback, and avoiding controlling behaviours such as tangible

8   rewards. Whilst they are less clear in specifying relatedness-supportive behaviours, examples

9   include forming a supportive, warm relationship with athletes and encouraging the formation of

10   friendships within teams. Deci, Vallerand, Pellettier and Ryan (1991) summarised their position,

11   that: "motivation, performance, and development will be maximized within social contexts that

12   provide people the opportunity to satisfy their basic psychological needs for competence,

13   relatedness, and autonomy" (p. 327-328).

14   To the extent that social contexts do not allow satisfaction of the three basic psychological

15   needs, they will diminish motivation, impair the natural developmental process, and lead to

16   alienation and poorer performance. It should be noted that SDT is not mutually exclusive from

17   achievement goal theory. Indeed, Ntoumanis (2001) used regression analysis to link task-

18   orientations to more self-determined forms of motivation, whilst ego-orientations were linked with

19   low self-determined forms of motivation. This is consistent with both theoretical underpinning and

20   research findings, because the controlling features of an ego goal are proposed to undermine

21   autonomy, foster an external locus of causality, and undermine attempts at collaboration; whereas

22   task goals facilitate autonomy, collaboration, and perceptions of competence (Brunel, 1999).

23   A problem that remains is that there is no comprehensive evidence pertaining to the variety of

24   behaviours of key social agents that impact upon the perception of whether psychological needs

25   are satisfied or thwarted. Various papers and reviews (e.g., Deci, *et al.*, 1991) offer insights but a),

26   there are many conceptually similar variables proposed with no easy way of distinguishing

27   between them, and b), the level of specificity required for designing and delivering effective

28   interventions is often lacking.

1   In summary, the justification for the current study is based around a) the identified lack

2   of research studying motivational climates perceived by *young athletes,* defined both in terms

3   of age (<12 years old) and career progress (<3 years)*,* b) recent theoretical developments

4   such as the introduction of approach-avoidance goals and the proposed inclusion of SDT

5   constructs within motivational climate research, and c) the implications of these

6   developments for current tools used in the measurement of motivational climate.

7   Consequently, the current research set out to identify the specific motivationally-relevant

8   behaviours of coaches, parents and peers that are perceived to influence the motivation of

9   athletes at the beginning of their sporting careers.

10   Method

11   *Participants*

12   The study obtained ethical clearance from the ethics committee of a British University. Eight

13   focus groups were conducted containing 40 sport participants (19 females and 21 males), recruited

14   from 17 sports, with an age range of 7 years 6 months up to 11 years 4 months (Mean = 9 years 7

15   months, SD = 1 year 2 months). The participants were recruited from local schools by writing to the

16   head-teacher, explaining the study, and requesting to interview school pupils who played sport in

17   their spare time, outside of school PE. If consent was granted, children who met these criteria were

18   taken out of class and interviewed at the school site, one class at a time. Ability levels ranged from

19   absolute beginners up to and including those with 2-3 years experience and the vast majority of

20   participants were competing in more than one sport. Using Côté's (1999) model of career

21   development, all participants were considered to be career 'initiators' and met the following criteria:

22   1) Short career, usually less than 3 years, 2) Not specialised into, or committed to, one single sport,

23   and 3) Any talent or skills have not been formally recognised (e.g., not selected for any

24   representative sides).

25   *Data collection: Procedure*

26   A focus-group approach was chosen in order to maximise the experience within each group

27   and also to meet child-protection and ethical considerations. Groups were always mixed-gender and

28   drawn from the same year-group (cf. Stewart & Shamdasani, 1990). Focus groups are proposed to

1   be highly appropriate in situations where the research is aiming to generate new ideas, language and

2   applications and they can also help to embolden young participants to offer their opinions

3   (Greenbaum, 1998). All focus groups were conducted on school premises by the first author and

4   lasted between 40 and 65mins. An interview guide was used which had been piloted with a

5   representative sample of athletes from varying levels. The style of asking questions was adapted

6   following this piloting to be more accessible and pictorial aids were also introduced to represent a

7   coach, parents and team-mates (cf. Stewart & Shamdasani, 1990). Feedback was also sought from

8   primary school teachers regarding the comprehension level required to understand the questions. All

9   FGIs were audio-recorded and transcribed verbatim. The FGI began with a statement of what was

10   being studied and a brief explanation of the concept of motivation and situational goals. Following

11   this, participants provided their names and ages for the tape and listed the sports they participated in

12   outside of school (and any attainments achieved). This process facilitated subsequent questions and

13   transcription - it also acted to 'break the ice'.

14   After this initial phase, the interview continued with questions intended to assess the

15   influences (positive and negative) of coaches, parents and peers on the main dimensions of

16   motivated behaviour reported by Roberts (2001). These included effort, persistence, choosing

17   challenging tasks, concentration, and enjoyment. Sample questions included: "What things can your

18   coach do, or say to make you really want to try hard in your sport, and never give up?", "How can

19   your parents, either of them [make your enjoy your sport / focus you on learning new skills / help

20   you to keep tying, even when you're struggling]?" and "Let's talk about the people who are friends

21   playing your sport. How can your team-mates make you want to try harder, and never give up?" The

22   interview finished with some summary questions such as: "If you could write a wish-list to your

23   coach and say 'To make me try hard all the time, to make me really want to come back every week,

24   this is how you should be'; what sort of things would go on that list?" and "What are the most

25   important things people can do to make sure you try hard in/enjoy your sport?". Participants were

26   always encouraged to seek clarification if they did not understand or were unsure. The sections

27   relating to coaches, parents and peers were asked in a counterbalanced order between interviews in

28   an attempt to alleviate any effects of fatigue or boredom. Additionally, when addressing the

1   influence of coaches, participants were instructed to focus on their coaches during organised sport

2   and not their school teachers.

3   Participants were allowed to respond freely and debates were encouraged when participants

4   had different perspectives. If questions intended for later in the interview were discussed this was

5   not prevented by the interviewer. Probes were included to facilitate deeper exploration and focus on

6   themes and questions-of-interest that arose from previous interviews (see Data Analysis section).

7   Thus, while the interview possessed structure, there was flexibility in how questions were asked and

8   followed up, allowing depth of exploration and better rapport. The interviewer had attended training

9   in child protection and made informal assessments of any potentially challenging reports, although

10   no further action was judged to be necessary in any instance.

11   *Data analysis*

12   The process of data analysis started after the first interview, with the interviewer reflecting on

13   the responses given and sharing these reflections with the other researchers. As a result of such

14   processes, the data gathered became increasingly focused around emerging themes and questions.

15   An eight-step procedure was adopted to prepare and analyse the qualitative data and to maximise the

16   trustworthiness of the analysis: 1) transcribe FGIs verbatim (in total, yielding 220 pages of single

17   spaced text); 2) read and re-read transcripts for familiarisation (also listening to tapes); 3) divide

18   quotes into those concerning coaches, parents and peers; 4) perform a thorough inductive content

19   analysis within each domain drawing from the basic premises of Grounded Theory (Strauss &

20   Corbin, 1998). This was performed using QSR N-Vivo7 software (QSR, 2002); 5) inter-rated

21   checking was conducted wherein a random sample of 6 manuscripts was also coded by co-

22   researchers and colleagues and differences between these codings were considered during the initial

23   coding of the remaining data. An inter-rater agreement of 82% was observed, which is relatively

24   high (e.g., 81% in Weiss, Smith & Theeboom, 1996). Additionally, the second and third authors

25   independently checked the initial and focused codings, 6) internal and external member checking

26   were carried out to assess the accuracy of manuscripts, interpretations and the relevance of the

27   resulting analysis. During the interview, member checking consisted of the researcher restating,

28   summarizing, or paraphrasing the information received from respondents to ensure that what was

1   heard was correct. Following data collection, a sample of transcripts were sent back to the

2   participating schools to check the accuracy with participants, and also findings were presented to a

3   new set of participants, asking for commentary and incorporating these comments into the findings

4   where necessary; 7) an iterative consensus validation process was conducted with two members of

5   the research team to ensure the integration of codings into particular categories made the most

6   analytic sense. Members of the research team asked critical questions and encouraging the first

7   author to reflect during the different stages of the inquiry, and 8) a peer debrief was conducted with

8   the remaining researchers throughout the analysis as well as in review of the final analysis.

9   This structured use of multiple sources of data, investigators and theoretical viewpoints is

10   proposed to facilitate a triangulation of the subject matter which is less susceptible to individual bias

11   (Biddle *et al.*, 2001). There were 769 initial codings and these were formed into 492 focused

12   codings that were then used to sift through larger amounts of data. Within the inductive process, all

13   identified codes represented the interpreted meanings of the athletes' responses. Some codes were

14   directly named after the participants' own words, whilst others were named after concepts existing

15   in the literature that were representative. In the latter case, processes of private reflection, consensus

16   validation and peer review were utilised to ensure that these codes and the categories they

17   represented were embodied in the data and not forced upon it (cf. Strauss & Corbin, 1998).

18   The process of filling out emergent categories was assisted by constant comparison

19   procedures, wherein initial codes were compared to more focused codes (already integrated into

20   emerging categories) and were either added to them or used eventually to develop new categories.

21   This recursive coding of properties, interactions and contexts/situations ('processes') was carried out

22   until no new information about a category seemed to emerge (Strauss & Corbin, 1998). For the

23   purposes of this particular study, the analysis focused on motivationally relevant sources and forms

24   of perceived influence that were common across the range of participants (cf. Holt & Dunn, 2004).

25   Results

26   With a view to highlighting the potential integration of coach, parent and peer influences,

27   Table 1 was constructed to highlight higher-order themes (HOTs) that showed strong

28   correspondence, and the results will be presented in a format matching this; listing congruent themes

1   which related to all 3 social agents, then themes which showed similarities under any 2 social

2   agents, and finally the themes that emerged and appeared unique to one social agent. Where

3   quotations are provided, the participant's reference is given in the form [GENDER-AGE-SPORTS].

4   *Coach, parent and peer commonalities*

5   The concept of 'feedback'/'evaluative communication' emerged separately in all three

6   dimensions of the analysis. Whilst in the coaching dimension, a more defined 'feedback' theme

7   emerged, the parent and peer dimensions produced slightly broader themes that were termed

8   'evaluative behaviours' or 'evaluative communications'. These HOTs have been grouped together in

9   the presentation of findings in order to facilitate the integrated consideration of how multiple social

10   agents influence athlete motivation (see also Table 1).

11   Overall, both coaches and parents were found to influence athlete motivation either through

12   verbal feedback or behavioural reinforcement. In each instance, verbal feedback was divided into

13   'positive feedback', which was generally reported to be a positive influence on motivation, and

14   'negative feedback' which was generally thought to have a demotivating effect, and perhaps pertain

15   to avoidance-valenced goals, for example (regarding the coach): "I mean you get worried if you

16   forget to do one of the things [criticisms]. You're trying so hard to do those things that it just goes

17   blank out of your mind" [F10.8-SWIM/DANCE]. However, one caveat to this was that one participant

18   reported an *'I'll show him!'* reaction in response to criticism: "Prove him wrong yeah. Like, if he

19   says 'You can't do it. These guys are so better than you', then you wanna prove him wrong" [M8.4-

20   SOCCER/SWIM]. Within 'parent criticism', negative feedback was generally reported as relating to

21   negative affective responses and the undermining of motivation, whereas constructive criticism was

22   linked to the adoption of mastery and approach goals and was less associated with negative feelings

23   or cognitions.

24   Participants reported, even at this young age, that coach feedback could convey ability beliefs (cf.

25   Dweck, 1999) and although this was not referred to regarding parents within the focus groups, it is a

26   possibility worth entertaining. Specifically, labelling-summative comments (such as 'you're not very

27   good at that') convey the message that the child's ability is fixed. In contrast, constructive-formative

28   comments (for example 'if you just adjust your position you'll have a better chance') convey the

1   message that the child's ability is incremental and can be improved with effort and/or persistence.

2   For example:

3   Summative feedback: Like say you've gone wrong and they didn't tell you where you're

4   going wrong, you could sort of worry and think "well I don't know where I've gone

5   wrong so I don't know how to make myself get better"... ...They just said "you've gone

6   wrong" [F-10.3-DANCE/BALLET]

7   'Behavioural reinforcement' simply referred to the use of rewards and punishments to try and

8   influence the child's behaviour. Regarding parents, effort-contingent reinforcement (for example,

9   sweets or money for trying regardless of result) was reported in generally positive terms, whereas

10   outcome-contingent reinforcement (for example, sweets or money for winning or achieving a high

11   place) was reported as having mixed influences, from increasing pressure (e.g., regarding parents:

12   "If it's quite a big reward, like a new Playstation game, and you like miss, you're like really upset

13   with yourself… it might have been your only chance to get it. And you've missed it" [M-9.3-

14   SOCCER/TENNIS/CRICKET]) to potentially providing an added incentive. Within behavioural

15   reinforcement, coaches were reported to: 1) punish mistakes (which often related to negative affect,

16   fear and the adoption of avoidance goals), 2) punish unsporting behaviour, 3) reward normative

17   success (which was reported as having mixed effects, particularly on the individuals not receiving

18   rewards) and 4) offer rewards for effort (which was generally reported to promote effort and

19   participation and encourage persistence); for example (regarding the coach): "If you like do

20   something a bit wrong, but you really tried, she says 'That was excellent' and 'That was really,

21   really good', and she keeps saying things like 'Keep trying'. But if you're not trying... she doesn't

22   say anything" [F10-SWIM/ATHLETICS].

23   In contrast to coaches and parents, the HOT 'peer evaluative communication' was best

24   analysed as a function of their chronological occurrence, and so were labelled 'immediate reactions

25   to mistakes' and 'post-hoc comments'. 'Immediate reactions to mistakes' could include either

26   'anger' or 'tolerance'; with anger likely to induce avoidance motivation, negative affect and

27   interpersonal conflict, whilst 'tolerance of mistakes' at least avoided these negative consequences

28   and was generally reported in positive terms. 'Post-hoc comments' contained: 1) 'praise and positive

1   feedback' and 2) 'criticism and negative feedback', which were similar in their content and

2   consequences to the analogous coaching and parenting themes. In addition a theme emerged that

3   was labelled: 3) 'discussing team selections', which related to the endorsement of normative

4   definitions of competence, for example:

5   I talk to my mates like "Oh I really want to get picked for this team... I don't think this person

6   should be picked, and this person shouldn't be, because this person isn't very good, and this

7   person is" and we talk about who should get picked. [M-8.10-TENNIS/SWIM]

8   *Coach and parent commonalities*

9   *Leadership style*: Both coaches and parents of young athletes are placed in a position of

10   strong leadership due the young athlete's heavy dependence upon adults for both instruction and

11   pragmatic support. As such, the leadership HOT in both dimensions related to the manner in which

12   this leadership is undertaken. The central distinction was between a controlling/autocratic style and

13   an autonomy supportive/democratic style. The emergent categories within this dimension included

14   'collaborative style' (e.g., regarding the coach: "They won't persuade you to be put in any position,

15   like if you're really rubbish at goalkeeper then they won't persuade you to go in goal, they might ask

16   you where you want to play"[M8.4-SOCCER/SWIM]), and 'controlling style' (e.g., regarding the coach;

17   "Well they don't ask me where I want to go. Maxy [coach] says 'Back in defence', and I'm like

18   'Oh'…"[M7.7-SOCCER/RUGBY]). Within the coaching climate, 'maintaining discipline' was generally

19   valued by participants because it meant disruptions were prevented and more could be taught during

20   a session/lesson, for example: "I don't think he's strict enough… The other people are trying to

21   concentrate, but then you get these like really naughty people who are trying to like mess up the

22   lesson... and he doesn't do anything!" [F10.0-SWIM/ATHLETICS]

23   Controlling style was further subdivided in each dimension, however the sub-categories

24   emerged differently for parents and coaches, perhaps as a function of the different roles they perform

25   (see Table 1).

26   *Emotional and affective responses*: This theme was separated from such themes as feedback

27   and evaluation as they did not always have an evaluative component, but reflected the tendency of

28   the coach or parent to show negative affect, positive affect, or tolerance.. This was reported by

1   participants as a determinant of their motivation/goal adoption, as a function of the affective

2   responses the child may anticipate at any given moment and the consequences they would expect.

3   Within this HOT were three emergent categories common to both parents and coaches: 'propensity

4   for anger' (e.g., "They can really hurt your feelings when they shout at you, I hate shouting" [M8.0-

5   SOCCER/SWIM/RUGBY]), 'positive affective style' (e.g., regarding the coach; "He laughs with you and

6   makes you motivated and it's like he's a nice person it's just that he wants us to win he wants us to

7   do better" [M.10.6-SOCCER/TENNIS]; regarding parents: "They're just like 'I'm so proud of you', and you

8   know you've done something right. They always make you feel glad" [M-9.3B-SWIM/TENNIS/SOCCER]) and

9   'tolerance of failures' (e.g., "Like they're not as hard really when you fail, they're a bit more easier"

10   [M7.11-SOCCER/SWIM]) and "Like if you… say you keep on, can't doing it [sic] they don't shout at you"

11   [M-7.11-SOCCER/SWIM]).

12   *Pre-performance motivating behaviours:* This theme specifically represents the behaviours

13   undertaken in the period immediately before competitive performances, intended to motivate the

14   participants. The four main emergent categories were:

15   (a) 'encouraging effort and mastery': which further subdivided into 'improvement emphasis',

16   for example: "He [coach] doesn't care about the results he just wants to help us get

17   improving" [M11.3-SOCCER/RUNNING]; and 'encouraging participation', for example: "They say

18   like, it doesn't matter where you come as long as you like do your personal best" [M11.4-

19   ATHL/SOCCER/ BADMNTN]);

20   (b) 'encouraging rivalry and competition' (which further subdivided into 'building up

21   rivalries' and 'focus on winning'),

22   (c) 'approach-based motivations' (which revolved around showing belief, building confidence

23   and highlighting desirable possibilities, for example: "They say, maybe [playing well]

24   that'll put you in *this* place and you've never been *there* before" [M-8.0-SOCCER/RUGBY/SWIM].),

25   and:

26   (d) 'avoidance and negative motivations', which was specific to the coaching climate in this

27   analysis. This theme was subdivided into 'avoidance goals' and 'emphasising negative

28   consequences', for example: "Like by saying 'oh we're gonna go to the bottom of the

1   league if we don't win the match'. We was tempted to give up at some points [sic]." [M8.4-

2   SOCCER/SWIM]·

3   *Themes unique to the coach*

4   *Instructional and pedagogic considerations:* This HOT referred to the way the coach goes

5   about the regular duties of coaching, such as teaching, planning and implementing drills, making

6   team selections, placing participants into groups and much more. As can be seen in Table 1, this

7   HOT is made up of seven emergent categories; detailed below.

8   'Equal treatment and perceived fairness', pertained to either preferential treatment of

9   participants (e.g., favouring athletes demonstrating normative ability or a family relationship by

10   sparing them punishments for bad behaviour), which was reported as undermining the motivation of

11   others, or the equal treatment of the group, which was preferred by participants.

12   'One-to-one coaching' related to the time spent by coaches giving instruction, attention,

13   evaluation and feedback individually. This coaching behaviour was construed as having a very

14   positive influence on motivation, for example:

15   If you try and do something hard, they just come to you and help you... …And that helps me

16   feel better with my technique because they're just focussing on me and helping me. [F-9.3-

17   GYMNAST/TENNIS]

18   'Grouping of athletes' emerged as an important theme, however, as opposed to being

19   strongly related to any goal adoption, or even being generally positive or negative, the issue of

20   heterogeneous versus homogeneous groupings was raised and explored without being consistently

21   linked to any motivational outcome or achievement goal.

22   'Task design' related to all aspects of the drills and practices that the coach organises during

23   their practice sessions. Fundamentally, the very nature of the tasks that the participants undertake

24   was reported as having an influence on their motivation. Competitive tasks such as short

25   competitions at the end of practice were seen as motivating and as good practice for real

26   competition. This is in contrast to the pre-competition theme of 'promoting competition and rivalry'

27   which was generally seen as pressurising and negative. In addition, highly competitive practice

28   sessions were not discussed, only small competitions at the end of practice. This may be consistent

1   with the increased focus on skill development at this young age. 'Variety and fun' was an important

2   aspect of task design, with a general agreement that a variety of fun tasks maintains good motivation

3   throughout training sessions, for example "And they try to make it fun for you so you learn what

4   they're saying and you have fun at the same time" [M9.6-TAE-KWON-DO/SOCCER/SWIMMING]. In contrast,

5   'repetitive drills emphasising a single skill' were perceived as either boring, or as creating pressure

6   to execute the skill perfectly in subsequent attempts, for example: "If they're like concentrating on

7   one thing, and saying 'You've got to do this thing, otherwise you can't be in', and you'll think about

8   that loads, and forget all about your technique" [M-8.10-TENNIS/SWIM]. Finally, it was perceived to be

9   important that tasks, where possible, were at an optimal level to challenge the participants; not too

10 easy and not too difficult.

11   Selection was a contentious and important issue even at this young age, with participants

12 generally focussing on the tendency of coaches to use selection as an incentive by creating

13 competition for places and offering 'promotion' to higher groups for normatively more able athletes.

14 Competition for places was generally seen as having a negative impact on motivation, except by

15 those who were consistently selected.

16   'Evaluation criteria' emerged as a theme relating to how athletes feel they are evaluated by

17 their coach and was separated from feedback, wherein the outcome of the evaluation would be

18 communicated to the athlete. It seemed that athletes could infer how they were being evaluated

19 without necessarily receiving feedback, and this was also reported to influence motivation. Coaches

20 who generally emphasise effort, improvement and good skills were inferred to evaluate this way:

21 "It's what they say because like, my Tae-kwon-do teacher he says like at the end of the day if

22 you've done your best then that's all that matters" [M-9.6-TAE-KWON-DO/SOCCER/SWIM]. In contrast,

23 coaches could be seen to evaluate normatively if they focused on results and outcomes: "The

24 manager, doesn't care about good play, all he wants is the result" [M11.3-SOCCER/RUNNING]. Finally, one

25 potentially novel finding was that participants in this study were very sensitive to being evaluated by

26 coaches seeking to 'fault-find'. This was related to fear-of-failure and avoidance motivation, for

27 example:

1   There's loads and loads of black-belts in the room. All staring at you, doing your thing. So

2   you're practicing and you don't know, you don't know whether you've passed or not and

3   you're not sure of one move, and I just feel a bit weird if I don't know that set move, and if

4   I'm gonna do it right or wrong. [M-9.6-TAE-KWON-DO/SOCCER/SWIM]

5   *Themes unique to parents*

6   *Parent support and facilitation*: This HOT referred to the supportive role carried out by

7   parents in transporting their children to training and competitions, purchasing equipment, and

8   offering 'moral support' from the sidelines. Within 'parent support and facilitation' were the

9   emergent categories of 'material and emotional support', 'unconditional support' and 'watching-

10   spectating'; each of these is exemplified below:

11   Material and emotional support: [Talking about parents] If you've had like a really tough day

12   at work and you came back and your child wanted to go to swimming practice or anything and

13   you couldn't be bothered to go, you've still got to take the child because they might actually

14   turn out to be an Olympic swimmer… … your parents have got to believe in you. [M11.4-

15   SOCCER/ BADMNTN]

16   Watching-spectating: Like if you're in a match, a netball match or badminton match, they'll

17   come along and support you, which makes you want to do better and make us win.

18   [F11-DANCE/SWIM/ATHL]

19   *Parent play-and-teach behaviours*: This HOT described the activities and behaviours

20   undertaken by parents away from the context of organised sport, aimed at developing or improving

21   the child's competence. It seemed that while coaches actively plan sessions and teach skills, the role

22   of parents was to facilitate practice and play, and join in with play activities in order to help the child

23   develop. The emergent categories were entitled: 'facilitation of practice' (which was further

24   subdivided into 'encouraging practice' and 'garden play'), 'balance of instruction and practice/play',

25   wherein children preferred to receive less instruction from parents and instead simply play, and

26   'conflicting advice to the coach', wherein offering conflicting advice to the coach was reported as

27   confusing, overloading, and detrimental to motivation. 'Encouraging practice' and 'Garden play'

1   were two particularly strong themes that seemed to be highly representative of the parenting role at

2   this stage of sporting development:

3   Encouraging practice: They're always like "Practice your gymnastics now, practice your

4   tennis now", and then you get better in your next lesson, because they told you to practice…

5   ...you can do something that you couldn't do before. [F9.3-GYMNASTICS/TENNIS].

6   'Garden play': And then you like bring them into the back garden and show them and they'll

7   say "Yeah brilliant that's really good" and you get more motivated and you use it in the game

8   as well. [M-11.3-SOCCER/RUNNING]

9   And: They just say - like quickly - how you can do it, and then, if you do it like once or twice,

10   and then you realise that you can do it really easily. And, like, they keep doing that and you

11   keep getting better at different things. [M-8.9-TENNIS/SOCCER/CRICKET/RUGBY]

12 *Themes unique to peers*

13   *Peer relationships and social interactions:* Within this HOT, the emergent categories were

14 labelled 'linking competence to social outcomes' (e.g., "Saying mean things [like]... um, "You're

15 in the wrong group"…and "That's rubbish! You're not being my friend any more" [F-7.5-

16 DANCE/SWIM]), 'separating competence from social outcomes' – wherein no link was made between

17 skill-level, normative ability or sporting outcomes and friendship, 'friendship and affiliation' –

18 which was reported as a key motivating factor, and 'group identity and perceived belonging',

19 which was also reported as a key motivating factor..

20   By implying that poor performance may have implications for making or losing friends,

21 peers are able to endorse and promote a definition of competence, which may then impact on the

22 adoption of goals. In contrast, by keeping social outcomes separate and remaining friends

23 regardless of competence, this link would not be created.

24   *Competition amongst peers*: This HOT reflects any behaviour that peers may exhibit in

25 performance situations (chiefly training and competing) that were perceived to be promoting

26 normative evaluations of competence. The emergent categories within this theme were labelled:

27 'boasting and pride', 'negative reactions to defeat', 'peers playing well', 'rivalry and conflict' and

28 'competitive behaviours'.

1   'Boasting and pride' represented any attempts by athletes to draw attention to their

2   normative success, often by mocking those they have beaten. The effects described varied from

3   undermining motivation (e.g., "That makes you think 'Oh why am I bothering then?'" [F11-

4   DANCE/SWIM/ATHLETICS], to also include provoking increased effort (e.g., "It could make you feel

5   angry, or it could make you feel 'I'm going to be as good as you' and then try harder." [F-9.3-

6   GYMNAST/TENNIS]). 'Negative reactions to defeat' included anger, criticism and the withdrawal of

7   friendship, which seemed to prompt athletes to infer competitiveness in peers. 'Peers playing well'

8   related to when team-mates or opponents execute good skills. The participants in the following

9   example described the effect as one of pressurising instead of inspiring or leading-by-example

10   (described elsewhere): "Yeah because like in swimming [relay] like if you're the last one to go

11   and like all your team-mates have made you be in front then they're like depending on you and

12   that makes you feel like… pressure" [F-11- TENNIS/ BADMNTN/SWIM]. Such a theme may have very

13   different effects depending on the nature of the sport, be it an interactive, co-active or independent

14   sport. This highlights the heavy interdependence of constructs in determining motivational

15   outcomes. 'Rivalry and conflict' was similar to 'boasting and pride' but could occur between peers

16   at any time and did not necessarily originate from a normatively more able athlete towards those

17   they had defeated. Fundamentally, the theme revolves around normative comparisons and often

18   attempting to gain some advantage by upsetting an opponent. For example:

19   Sometimes like if you fall out with them a bit and they say like 'I bet you can't do it' then

20   that can make you want to try hard and go and do it more, to prove them wrong… …Even if

21   you're like best of friends it can turn to rivalry [M11.4-ATHL/SOCCER/BADMNTN].

22   Once again, the effects of these behaviours could equally undermine and/or increase

23   motivation, provoke normative or mastery definitions of competence, and induce approach or

24   avoidance goal adoptions.

25   *Peer collaboration and altruistic behaviours*: This HOT reflects any behaviours that peers

26   may exhibit in performance situations (training and competing) that increased the likelihood of

27   collaboration or increased the chances of another peer performing well or improving. The emergent

1   categories in this theme were labelled: 'building confidence in each other', 'emotional and moral

2   support', 'collaborative play and learning', 'emphasising effort' and 'encouraging practice'.

3   'Building confidence in each other' was generally a pre-performance behaviour, and involved

4   making statements such as 'we believe in you' and 'you can do it'. The reported effects ranged

5   from increased confidence and shifts towards approach goals, to also include feeling pressurised. It

6   was also generally perceived to be an act of kindness and friendship.

7   'Emotional and moral support' referred to behaviours such as clapping, pat-on-the-back and

8   verbal persuasion to keep each other's 'heads up' and was included in this category due to its

9   tendency to occur in performance situations more than other contexts. These were also perceived

10   as acts of friendship and quite often as having a positive influence on motivation. 'Emphasising

11   effort' (e.g., "They go 'just try your best, even if you miss, it doesn't really matter'" [M-9.3-

12   SOCCER/TENNIS/CRICKET] and 'encouraging practice, both emerged and showed good consistency with

13   similar themes identified elsewhere (see discussion). 'Collaborative play and learning' referred to

14   acts of collaboration *not only* in order to improve skill or understanding (e.g., "Showing you how

15   to do it. Like with my friend she just helped me learn, and showed me how to do things, and then

16   in the end, I just thought I'd be really good at it" [F-9.3-GYMNAST/TENNIS]), *but also* during matches and

17   competitions (e.g., "Because I know that like they want to win, and so they will pass to me, they're

18   not just gonna shoot and miss. They're going to pass to someone in a better position than

19   themselves" [M-9.3-SOCCER/TENNIS/CRICKET]).

20   General discussion

21   This study set out to produce a detailed description of the motivationally-relevant behaviours

22   of coaches, parents and peers in early-career sport performers. Three key objectives drove this

23   research: 1) an interest in appraising the relevance and applicability of 'motivational climate' to

24   athletes under 12 years of age, 2) consideration to the broadness of the concept of 'motivational

25   climate' by using an inductive approach to reveal relevant motivational constructs that may currently

26   lie beyond the lens of dichotomous framework of achievement goals (Ames, 1992), and 3) a deeper

27   understanding of the potentially separate but also integrated motivational roles of coaches, parents

28   and peers at this early athletic stage.

1   The focus groups yielded highly pertinent and rich data offering a comprehensive

2 representation of the specific behaviours by which key social agents are reported to influence the

3 motivation of young athletes. The results serve to reinforce the importance of studying 'motivational

4 climate' at this developmental stage and offer insights into how coach-, parent- and peer-climate

5 interventions might be extended in terms of existing practical content (e.g., Smith, Smoll &

6 Cumming, 2007) .

7   Further, although an open-minded, inductive approach was purposefully pursued, several of

8 the emerging themes and concepts resonated very clearly with the range of motivational theories

9 reviewed earlier. For example, the HOT 'coach instruction and pedagogic considerations'

10 demonstrated consistency with Ames' TARGET framework, as well as offering potentially fruitful

11 additions. For example, the theme of coach 'evaluation criteria' contained references to both mastery-

12 based and normative evaluations, as-well-as 'fault finding'. Themes associated with 'pre-performance

13 motivating behaviours', from both parents and coaches, showed consistencies with the trichotomous

14 or 2x2 models (Elliot & McGregor, 2001), whilst the HOTs of 'leadership style' and 'emotional

15 responses' were congruent with aspects of autonomy support and relatedness support, within SDT

16 (Deci & Ryan, 2000). Components of the peer climate showed similarities to those cited in Vazou *et*

17 *al*. (2005) as well as recognisable links to social goals (cf. Urdan & Maehr, 995; Wentzel, 1993).

18   Overall, at this early age, it appears that coaches and parents have a relatively strong influence

19 on athlete motivation, perhaps due to their singular positions of authority. Their influences are also

20 comparable in nature, which is proposed to be a function of the similar roles they perform (for

21 example: where their roles differ, their influences differ too). Peer influences appeared to be

22 qualitatively very different to coaches and parents, and perhaps less consistent, as a function of the

23 sheer number and variability of peer relationships. This inconsistent and disparate influence of peers

24 might lead to the proposition that, relative to parents and coaches, the influence of peers on

25 motivation in young athletes at this specific stage may be less significant.

26   Whilst there were very few indications of interactional overlaps between social agents (e.g.,

27 parents 'conflicting information to the coach' was the only sub-category to clearly suggest the

28 importance of collaboration between social agents), there were interesting commonalities that

1   emerged between agents. Parents and coaches showed the strongest similarities, with leadership

2   style, evaluation/feedback, emotional and affective responses, and pre-performance motivating

3   behaviours emerging in both dimensions. For example, the evaluation/feedback aspects of coaching

4   and parenting were quite comparable, with both verbal feedback and behavioural reinforcement

5   figuring strongly. As was the case with peer evaluative communications, the clearest divide was

6   between positive and negative evaluations, with fewer references to normative-versus-mastery

7   definitions of competence. The strong similarities between the coach and parent dimensions are

8   most likely to reflect the highly comparable positions of leadership and responsibility they hold

9   when dealing with such young athletes. Not only are coaches and parents likely to be the key

10   decision makers during the young athlete's participation (determining drills, games, practice time,

11   offering lifts, buying equipment), they are also charged with ensuring the athlete's safety, as well as

12   (most likely) being held in high esteem by the athlete.

13   In contrast to the peers' dimension, and also to older athletes, these role-related aspects appear

14   to be pivotal in establishing the motivationally-relevant behaviours that these agents can perform, as

15   well as the likely perception and impact of these behaviours. Ongoing research comparing young

16   athletes with older and 'elite' populations is likely to expand on these role-related differences and

17   research examining the changing roles, relationships, and power-relations across the athletic career

18   is recommended on the basis of these findings.

19   *Beyond competence motivation – autonomy and relatedness in sport*

20   The conceptualisation of climate is determined heavily by whether one considers sport to be

21   a context where competence goals dominate (cf. Roberts, 2001), or whether one acknowledges that

22   participation in sport may, at any time, involve goals pertaining to other motivational constructs such

23   as relatedness and autonomy. Several recent papers have argued that sport does encompass the

24   pursuits of competence, autonomy and relatedness alike (e.g., Allen & Hodge, 2006; Mageau &

25   Vallerand, 2003). Despite these arguments having never been applied to the motivational climate of

26   7-11 year olds, the current findings provide evidence that all three of the constructs suggested in

27   Deci and Ryan's (2000) SDT are important in determining the motivation of very young athletes.

1   Among coaches and parents, supporting autonomy could be evidenced through collaborative

2   leadership styles (or threatening a child's autonomy needs with autocratic leadership styles), whilst

3   the supporting of relatedness was evidenced by facilitating the formation of friendships and the

4   establishing of group identities. Among peers, 'friendship and affiliation' and 'group identity and

5   belonging' bear a strong resemblance to the social motivations identified by Allen (2006) and

6   Ullrich-French and Smith (2006); whilst the linking (or not) of competence to social outcomes is an

7   interesting finding amongst participants at such a young age, although it is consistent with findings

8   elsewhere (e.g., Evans & Roberts, 1987; Skinner & Piek, 2001). One area worthy of future research

9   was the apparent cross-over between these domains, such that relatedness could be used to

10   incentivise a competence goal, or autonomy supportive behaviour might contribute to an improved

11   relationship (cf. Gurland & Grolnick, 2005). Further research into these interactive effects is likely

12   to improve our overall understanding of the social motivational processes that are active within the

13   sporting milieu. Such research could perhaps build on similar work conducted in academic

14   motivation (e.g., Wentzel, 1993; Wentzel & Wigfield, 1998) which has shown that high-achievers

15   frequently pursue both academic and social goals, whereas lower achievers display a unique

16   "unwillingness to try to conform to the social and normative standards of the classroom" (1998, p.

17   162). Emerging research in sport has found links between quality of friendship and peer acceptance

18   with enjoyment and perceived competence (e.g., Allen, 2006; Ullrich-French & Smith, 2006).

19   In sum, the experiences of these young athletes spoke not only to the significance of

20   performance-versus-mastery definitions of competence, and approach-versus-avoidance valences,

21   but also to the social goals and autonomy goals that may be supported and endorsed

22   (or undermined and threatened) by key social agents across a variety of contexts and situations. This

23   ultimately led to themes pertaining to contexts and situations.

24   Throughout the findings of this study, single behaviours (and themes) from coaches, parents and

25   peers were related to various, and sometimes conflicting, motivational impacts. For example,

26   depending on the respondent, the source and the context; negative feedback was reported as

27   producing reduced motivation, avoidance-based motivation, improvement and mastery,

28   anger/frustration, damaging relationships, 'being honest' and even being controlling (undermining

1   autonomy). This suggests that the relationship between the behaviours of social agents and their

2   impact on motivation is likely to be moderated by a number of contextual and interpersonal

3   factors. Moreover, a persistent and dominant theme across the analysis was that of 'positivity'

4   i.e., positive feedback, positive affective responses, positive pre-competition talks (pep-talks),

5   encouragement, collaboration/support and fun (e.g., in training) were consistently and

6   positively linked with athlete motivation, regardless of the social agent or context. Among

7   young participants commencing their athletic careers, considerations of positivity should

8   arguably be central, even above technical proficiency or 'getting noticed' (e.g., by scouts), if we

9   wish to promote enjoyment and continued participation.

10   *Limitations*

11   It is important to remain cognisant that a 'detailed description' is all the study set out to

12   achieve and any reference to motivational outcomes such as goal adoptions, affective,

13   cognitive and behavioural responses must be interpreted cautiously due to the qualitative nature

14   of the investigation. Other limitations of the study include the young age of some of the

15   participants, which may have influenced their ability to recall and articulate their experiences

16   effectively and, equally, the use of focus groups may have introduced limitations such as social

17   desirability, perhaps preventing the participants from being openly critical of coaches, parents

18   or peers. Whilst the quality and depth of the responses provided would suggest these were not

19   serious problems, they must be considered in evaluating the findings of the study. It was also

20   impossible to establish the relative impact of each social agent in the current qualitative study,

21   although the findings should contribute to future research that may address this issue.

22   *Recommendations and implications*

23   Whilst appropriately acknowledging the concerns of Duda and Whitehead (1998) related to

24   the range of questionnaires assessing motivational climate, the specific age group concerned, as-

25   well-as the relevance of other constructs, suggest that the development of a broader measure or

26   procedure is essential in order to progress our understanding of how the social environment shapes

27   the motivation of young sport performers. Such a measure may help to determine the relative

28   importance of each social agent, which has so far been difficult to establish. It may also enable

1   researchers to examine the effects of apparently contradictory behaviours between coaches, parents

2   and peers and find some way of modelling how these multiple variables determine children's

3   motivation in sport. The data-driven approach in the current research cautions against the influence

4   of having a single dominant framework or theory driving the developing model of motivational

5   climate

6   From the perspective of applied intervention research, this study encourages practitioners and

7   academics to devote time to studying themes and behaviours across social agents in a manner that

8   will enhance the content of educational programmes. At one level, this includes offering appropriate

9   insights into adaptive and maladaptive contextually relevant behaviours to coaches and parents. A

10   second level of intervention lies in educating coaches and parents about the effective management of

11   peers (in their sessions) and peer responses to the young child-athlete. A third level may also include

12   working directly with the child-athlete and his/her peers on the development of an effective peer

13   climate (e.g. what makes a good teammate, who makes you want to try hard and improve?). Recent

14   and successful intervention work using the dichotomous model of motivational climate has focused

15   on the Mastery Approach to Coaching (MAC - Smith, Smoll & Cumming, 2007) to enhancing

16   athlete development. This intervention utilises a coach behaviour/education workshop approach,

17   whereas the results here suggest the potential benefits and value of a wider and multi-level (multi-

18   agent) programme.

19   In conclusion, the results from the current study attest to the multifaceted influence of

20   coaches, parents and peers on the motivation of early-career sports participants. Moreover, we

21   suggest that a data-driven approach to conducting future studies of motivational climate holds

22   promise in the light of recent developments within the motivation literature.

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