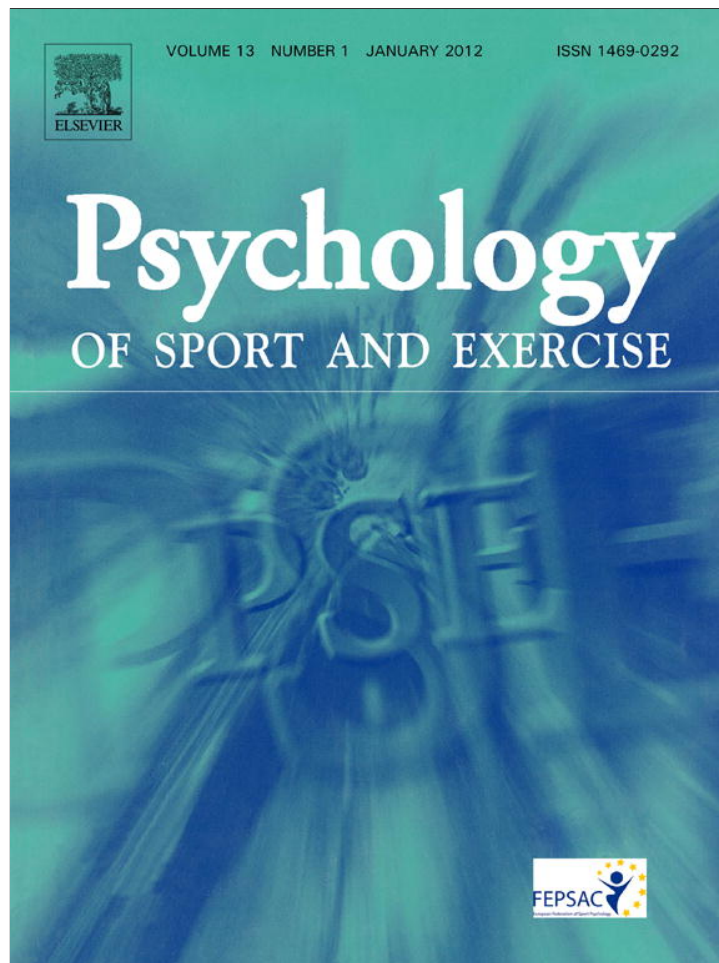


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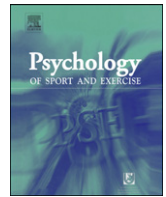
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The social environment and developmental experiences in elite youth soccer

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ABSTRACT

Objectives: We aimed to examine social-contextual correlates of players' developmental experiences in an elite youth soccer context. Specifically, we hypothesized that player perceptions of team cohesion and coach rapport would be positively associated with psychological need fulfillment. In turn, psychological need satisfaction was proposed to be positively related to adaptive developmental experiences in youth soccer (i.e., opportunities for leadership, emotional regulation, and goal setting), and negatively related to social exclusion.

Design: Cross-sectional.

Method: 133 male elite soccer players, aged between 11 and 18 years old, completed a self-report questionnaire assessing the variables of interest.

Results: Using path analysis and bootstrapping methods, we found support for the overall model fit of the hypothesized conceptual framework and specific study hypotheses.

Conclusions: This study utilizes strong theoretical foundations to underscore the role of the coach and team environment in facilitating positive youth outcomes, and highlights a potential mechanism that may explain these processes.

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Soccer is one of the most popular participatory sports in the United Kingdom (UK; [Sport England, 2010](#)) and children who show signs of talent and potential can be recruited into professional club academies from the age of eight. Within these academies children usually train on three evenings per week and play competitive matches at weekends, thus, soccer represents a meaningful part of these children's lives. Despite this physical, psychological, and temporal investment, only a fraction will successfully make the transition to adult professional soccer players. For those who do not succeed in making this switch, it is important that they have developed the necessary competencies to succeed in alternative life contexts, such as school, work, and interpersonal relationships. In attempting to achieve this goal, coaches and peers within elite soccer academies may play a significant role ([Conroy & Coatsworth, 2006](#); [Smith & McDonough, 2008](#)). With this in mind, we tested a conceptual model in which youth soccer players' perceptions of their coach's interpersonal rapport and the degree to which team mates are united in pursuing team goals (i.e., task cohesion), were proposed to be positively associated with fundamental psychological need satisfaction. In turn, psychological need fulfillment was suggested to be positively related to players' experiences of goal

setting, leadership opportunities, emotional regulation; and negatively related to their experiences of social exclusion.

Over the last decade, there has been significant interest in how organized youth sport can foster positive psycho-social developmental experiences (e.g., [Côté & Fraser-Thomas, 2011](#); [Danish, Hodge, Heke, & Taylor, 2003](#); [Gould & Carson, 2008](#)). The governing body of soccer in the UK (the Football Association) has also embraced this trend by supporting projects, such as *Street League* and *The Goals Project* that aim to develop important life skills in disadvantaged youth in parallel with soccer skills. However, this movement has minimally influenced elite youth soccer in the UK, where winning matches remains the primary focus ([Cushion & Jones, 2006](#)). In view of this, more attention on positive youth development in soccer academies seems warranted.

The term positive youth development has encapsulated the general facilitation of desirable consequences in young people ([Damon, 2004](#)). Within the present study, we focused on four developmental experiences that may be significant for adolescents' psycho-social development. First, we considered the degree to which adolescents set goals because this skill is a key facet of developing the core quality of initiative ([Larson, 2000](#)). Second, as controlling one's affective responses is integral to successful psycho-social functioning ([Zeman, Cassano, Perry-Parish, & Stegall, 2006](#)) and sports performance ([Jones, 2003](#)), we examined the

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extent to which players successfully regulated their emotions. This construct also represented the broader category of self-regulatory skills. To complement these two intrapersonal skills, we also wanted to tap into interpersonal and social experiences. Thus we explored adolescents' opportunities to demonstrate leadership and responsibility because young athletes and coaches perceived this to be an important life skill that can be developed through sport (Jones & Lavallee, 2009). Finally, given that feelings of isolation within one's peer group have been highlighted as a predictor of poor psychological health among children (e.g., van der Wal, de Wit, & Hirasing, 2003) and harmful interpersonal dynamics may exist within professional soccer academies (Cushion & Jones, 2006), we investigated the amount of social exclusion that adolescents experienced.

The primary objective of the present study was to provide practitioners and researchers with potential ways to optimize young elite soccer players' experiences of goal setting, leadership opportunities, and emotional regulation, while minimizing social exclusion. In line with Gould and Carson's (2008) recommendation to base positive youth development research on strong theoretical foundations, we proposed that self-determination theory (SDT; Ryan & Deci, 2007) may help to explain the psychological requirements for positive developmental experiences to occur. In particular, SDT proposes that environments that satisfy one's innate psychological needs for autonomy, competence, and relatedness will lead to more adaptive functioning and psychological growth (Ryan & Deci, 2000). Autonomy refers to feelings of self-governance and the internal endorsement of one's actions (deCharms, 1968). Competence refers to feelings of efficacious interaction with the environment (White, 1959). Relatedness refers to a sense of connectedness with one's social milieu (Baumeister & Leary, 1995).

SDT-based research has shown that satisfying adolescents' psychological needs may promote positive developmental outcomes. For example, Coatsworth and Conroy (2009) found that satisfaction of young swimmers' needs for competence was positively related to their self-esteem, goal setting experiences, and the degree to which they reflected on their sense of self. In a sample of adolescent female gymnasts, Gagné, Ryan, and Bargmann (2003) reported that fluctuations in satisfaction of the three psychological needs positively predicted changes in self-esteem. Outside of the youth setting, satisfaction of the three psychological needs has been positively and indirectly related to sportspersonship, and negatively related to antisocial moral attitudes in adult British athletes (Ntoumanis & Standage, 2009). Based on this empirical evidence, we proposed that players who reported higher psychological need satisfaction would experience more positive developmental experiences (i.e., set more goals, experience more opportunities for leadership, and regulate their emotions better), and feel less social exclusion, compared to their counterparts who reported lower psychological need satisfaction.

If fulfilling soccer players' psychological need for autonomy, competence, and relatedness can promote positive developmental experiences, how can coaches facilitate this process? Within the present study we examined two specific facets of the coach- and player-created social environment. First, we examined players' perceptions of the degree of rapport that coaches attempt to foster with players by showing understanding, being a good listener, and demonstrating concern for the holistic being of the player. Reinboth, Duda, and Ntoumanis (2004) reported a positive relationship between perceptions of coach social support and relatedness need satisfaction in a sample of adolescent cricket and soccer players. Further, adolescent baseball players whose coaches had received training on supportiveness and instructional effectiveness reported higher enjoyment and attraction among team mates, compared to players whose coaches had not received the

training (Smoll, Smith, Barnett, & Everett, 1993). Developing rapport with players may also satisfy players' need for competence and autonomy, as well as relatedness, given the interrelationships between the three psychological needs (Hagger, Chatzisarantis, & Harris, 2006; Ryan & Deci, 2000). For instance, building rapport may involve acknowledging and embracing players' values and beliefs (i.e., autonomy enhancing) and cooperatively working with players to achieve goals aligned with these values (i.e., competence enhancing). Indeed within the physical education context, students' perceptions of positive socio-emotional behaviors exhibited by physical education teachers have been positively associated with fulfillment of all three psychological needs (Taylor & Ntoumanis, 2007). Building on this research we hypothesized that perceptions of coach rapport will be positively related to players' psychological need satisfaction.

As well as coaches, team mates may be significant in shaping the overall interpersonal context within soccer academies; hence, we investigated the degree to which players perceive their team to be united in their pursuit of task-relevant goals (i.e., task cohesion). Previous research has shown a positive relationship between task cohesion and the psychological needs for autonomy, competence, and relatedness in a cross-sectional sample of non-elite young adult basketball players (Blanchard, Amiot, Perrault, Vallerand, & Provencher, 2009). We included this social-contextual variable to explore this relationship in the unique elite youth soccer environment. On the one hand, players are part of the same team and need to work as a unit to achieve competitive goals (i.e., winning matches). On the other hand, individual players need to stand out from their peers as they fight for the coach's respect and social status (Cushion & Jones, 2006), as well as limited squad places and contracts for next season. As a result, the influence of task cohesion on academy players' psychological needs seems to be worth investigating.

To summarize, we aimed to test a conceptual model in which players' perceptions of their coach's degree of rapport with players, and team's task cohesiveness were hypothesized to be positively associated with psychological need fulfillment. In turn, psychological need satisfaction was hypothesized to be positively related to players' goal setting, opportunities for leadership, and emotional regulation, but negatively related to feelings of social exclusion. Although some benefits may exist for examining each of the psychological needs independently, we examined psychological need satisfaction as a collective construct because of the substantial interrelationships between the three needs (Ryan & Deci, 2000), the previous empirical justification for adopting such an approach (Hagger et al., 2006), and with parsimony in mind. We also tested the indirect effects of the two environmental factors on the four developmental experiences via psychological need satisfaction. Scant research exists exploring how specific contextual factors can promote positive youth developmental experiences in an elite sport setting. Further, the mechanisms by which this process occurs have received little attention, hence, the present study offers both theoretical and applied extensions to current knowledge.

Method

Participants and procedures

Participants were 133 male soccer players from four youth academies associated with professional clubs in the UK (three from the second tier and one from the fourth tier of professional soccer in England). Mean age of the participants was 14.23 ($SD = 1.79$, range = 11–18 years). No data on ethnicity were collected; however, the participants were predominantly either of Black- or White-English ethnic origin.

After obtaining verbal permission from the directors of participating academies, parents or guardians of potential participants were contacted and an information sheet explaining the study was given to them. Parents then had the opportunity to decline participation on behalf of their child. Informed written assent was also obtained from the participants. Following an explanation of the study at the end of a scheduled coaching session, the participants were asked to anonymously and individually complete a multi-section questionnaire. A coach was present in the room at all times but did not engage with the participants during the data collection. The researcher responsible for data collection asked participants to answer honestly and emphasized that there were no right or wrong answers. Data collection lasted approximately 25 min.

Measures

Coach rapport

Six items from the personal rapport subscale of the Coach Behavior Scale for Sport (Côté, Baker, Hay, Yardley, & Sedgwick, 1997) were used in the present study. The original subscale comprised seven items, however, one item (“My coach is always available when I need him/her”) was shown to be psychometrically problematic in subsequent work (Côté et al., 1997). The items were answered using a 7-point scale, anchored by 1 (*never*) and 7 (*always*). An example item is “My coach is a good listener”. Côté, Yardley, Hay, Sedgwick, and Baker (1999) reported acceptable internal consistency, test–retest reliability, and factorial validity of the subscale in a sample of child and adult athletes from a variety of sports.

Task cohesion

The eight items from the task cohesion subscale of the Youth Sport Environment Questionnaire (YSEQ; Eys, Loughhead, Bray, & Carron, 2009) were used. The items were answered using a 9-point scale anchored by 1 (*strongly disagree*) and 9 (*strongly agree*). An example item is “We all share the same commitment to our team’s goals”. Eys et al. (2009) reported acceptable factorial validity in a sample of youth athletes.

Psychological need satisfaction

The nine items from the Basic Need Satisfaction in Relationships Scale (La Guardia, Ryan, Couchman, & Deci, 2000) adapted to reflect the soccer context were used in the present study. The items were answered using a 7-point scale anchored by 1 (*never*) and 7 (*always*). Example items are “I feel cared about” (relatedness), “I have a say in what happens and I can voice my opinion” (autonomy) and “I feel like a competent person” (competence). La Guardia et al. (2000; Study 2) reported acceptable factorial validity and internal consistency in a sample of undergraduate students. In line with these authors’ work we averaged the nine items to produce an overall composite need satisfaction score.

Developmental experiences

The four developmental experiences (i.e., goal setting, emotional regulation, leadership, and social exclusion) were measured using the respective subscales from the Youth Experiences Survey (version 2.0; Hansen & Larson, 2005). Each subscale contained three items, with the exception of emotional regulation, which contained four items. The items were answered using a 4-point scale anchored by 1 (*yes, definitely*) and 4 (*not at all*), however, scores were reversed prior to data analysis so that higher scores reflected greater experiences. Example items are “I set goals for myself in this activity” (goal setting), “I became better at handling fear and anxiety” (emotional regulation), “I learned about the

challenges of being a leader” (leadership), and “I felt left out” (social exclusion). Hansen and Larson (2005) reported adequate factorial and convergent validity, as well as acceptable internal consistency in a sample of adolescents.

Results

Preliminary analysis

Prior to analysis, missing values were replaced using an Expectation Maximization algorithm because no identifiable patterns in missing data were identified. Next, confirmatory factor analyses (CFA) with EQS software (version 6.1; Bentler, 2003) using the robust maximum likelihood method were carried out to examine the factorial structure of all scales. Hu and Bentler (1999) proposed that a comparative fit index (CFI) approaching .95, a standardized root-mean-square residual (SRMR) close to .08, and a root-mean-square error of approximation (RMSEA) close to .06 were indicative of satisfactory model fit. Results of the CFAs can be seen in Table 1. As shown, the subscales measuring task cohesion and emotional regulation were shown to have acceptable factor structure. However, the factorial structure of the coach rapport and psychological need satisfaction scales were poor. In such cases, removing indicators that loaded poorly on to their respective latent factor is justified because the original structure is still retained, but with only the best performing indicators (Hofmann, 1995). Inspection of the standardized loadings and modification indices suggested the removal of two items from the coach rapport subscale (“my coach shows understanding for me as a person” and “my coach is a good listener”), and the three negatively worded items in the psychological need satisfaction scale (“When I am with my coach, I often feel inadequate or incompetent”, “When I am with my coach, I often feel a lot of distance in our relationship”, and “When I am with my coach, I feel controlled and pressured to be certain ways”). These modifications resulted in both scales having an acceptable model fit. The scales measuring goal setting, leadership, and social exclusion included three items each, therefore, the number of variances and covariances within the proposed factor structure equaled the number of parameters to be estimated (i.e., six). As a result, the models had no degrees of freedom (i.e., they were just-identified) and could never be rejected, therefore, examining the model fit indices had no merit. Nonetheless, examination of the factor loadings revealed that all items loaded adequately on their respective latent factor (loadings ranged from .48 to .83).

Descriptive statistics, internal reliabilities, and correlation coefficients

As shown in Table 2, the participants reported moderate to high levels of all study variables, with the exception of relatively low

Table 1
Results of confirmatory factor analyses for all study variables.

Variable	Sattora–Bentler χ^2 (df)	CFI	SRMR	RMSEA
Coach rapport	50.35 (9)	.81	.12	.19
Modified coach rapport	2.86 (2)	.99	.04	.06
Task cohesion	29.32 (20)	.97	.05	.06
Psychological need satisfaction	68.40 (27)	.83	.09	.11
Modified psychological need satisfaction	19.37 (9)	.95	.05	.10
Emotional regulation	2.74 (2)	.99	.04	.05

Note. Results for leadership, goal setting, and social exclusion are not shown because the respective factorial models were just-identified (i.e., they had 0 df).

Table 2
Descriptive statistics, Cronbach's alphas and correlations between all variables.

Variable	Range	M	SD	α	1.	2.	3.	4.	5.	6.	7.
1. Coach rapport	1–7	5.11	1.35	.82	–						
2. Task cohesion	1–9	6.69	1.53	.88	.04	–					
3. Psych. need satisfaction	1–7	4.80	1.03	.81	.44**	.31**	–				
4. Emotional regulation	1–4	3.08	.73	.79	.12	.17*	.29**	–			
5. Leadership	1–4	3.12	.74	.73	.02	.17	.31**	.48**	–		
6. Goal setting	1–4	3.28	.60	.71	.01	.28**	.36**	.29**	.14	–	
7. Social exclusion	1–4	1.58	.82	.83	–.08	–.13	–.25**	–.20*	–.23**	–.12	–
8. Age	11–18	14.2	1.79	–	–.10	–.07	–.28**	.07	.02	–.11	.00

Note. * $p < .05$, ** $p < .01$.

scores of social exclusion. The Cronbach's alpha coefficients were above .70 for all variables indicating acceptable internal reliability. All correlation coefficients were in the expected direction. Specifically, coach rapport was positively correlated with psychological need satisfaction. Team cohesion was positively correlated with psychological need satisfaction, goal setting, and emotional regulation. Psychological need satisfaction was positively correlated with goal setting, emotional regulation, leadership, and negatively correlated with social exclusion. As age did not correlate with any of the outcome variables (i.e., the developmental experiences) it was not included in the path analysis.¹

Primary analysis

The hypothesized model was tested using the robust maximum likelihood estimation method due to non-normality of the data (Mardia's normalized estimate of multivariate kurtosis = 5.47). Given the sample size ($N = 133$), observed variables were used in the structural model to ensure an acceptable participants to parameter ratio. Moreover, to enhance confidence in our results we used the bootstrapping method to obtain a sampling distribution for each parameter based on 1000 sample replications (Kline, 2010). 95% confidence intervals (CIs) for each parameter estimate were calculated from these distributions. If zero did not fall within these CIs then it could be concluded that the parameter was statistically significant (Shrout & Bolger, 2002). Model fit indices showed that the hypothesized model was weak: Satorra–Bentler $\chi^2(15) = 32.97$; CFI = .80; SRMR = .10; RMSEA = .10. However, examination of the modification indices suggested the addition of a covariance path between the errors of emotional regulation and leadership skills. This path indicates shared variance between the two developmental experiences that is not accounted for by the predictors (Kline, 2010). As the developmental experiences in the path model are dependent variables, their interrelationship can only be presented by correlating their errors. This modification was implemented because it is conceptually defensible and did not represent an addition to merely obtain acceptable model fit (Byrne, 2006; see also the Discussion section). The fit of this revised model was acceptable: Satorra–Bentler $\chi^2(14) = 19.51$; CFI = .94; SRMR = .08; RMSEA = .06. This revised model can be seen in Fig. 1. Bootstrapped estimates shown in Table 3 revealed that, as hypothesized, players who report more coach rapport and task cohesion experienced greater psychological need satisfaction, compared to players who reported less coach rapport and task cohesion. In turn, psychological need satisfaction was positively associated with more goal setting experiences, leadership

opportunities, and better emotional regulation, as well as less social exclusion. Following the guidelines offered by Preacher and Hayes (2004), we also obtained bootstrapped estimates for the indirect effects of the two environmental factors on the four developmental experiences via psychological need satisfaction. Results showed that coach rapport indirectly predicted the four developmental experiences via psychological need satisfaction, and task cohesion indirectly predicted the three adaptive developmental experiences (i.e., goal setting, emotional regulation, and leadership), via psychological need satisfaction.

Finally, we ran a model with the direct effects from coach rapport and task cohesion to the four developmental experiences included, as well as the hypothesized indirect paths. CIs obtained from the bootstrapped distribution indicated that only the direct relationship between coach rapport and goal setting was statistically significant ($\beta = .21$; 95% CI = .01 to .39).

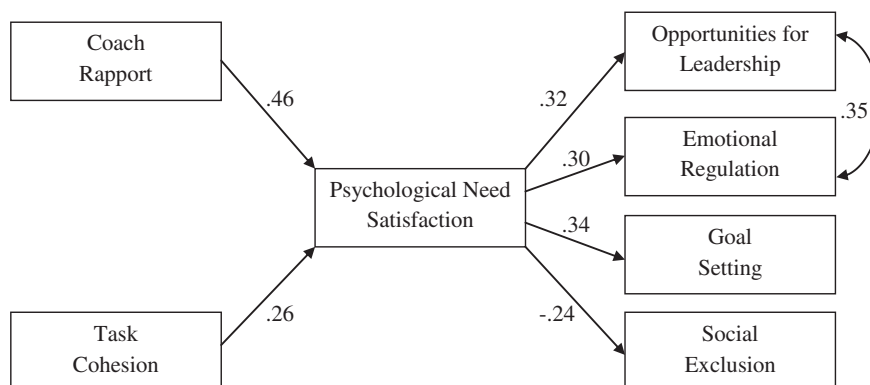
Discussion

In the present study we examined elite youth soccer players' perceptions of the extent to which coaches built up a rapport with players and how cohesive their team was in pursuing task-relevant goals. The relationships between these two contextual influences and players' psychological need satisfaction were investigated, as well as the association between psychological need satisfaction and four important developmental outcomes; namely goal setting, emotional regulation, leadership and (lack of) social exclusion. Overall, evidence was found for the existence of these relationships.

Our results supported the hypothesized positive relationship between psychological need satisfaction and goal setting. Coatsworth and Conroy (2009) similarly proposed that satisfying adolescent swimmers' psychological need for competence would lead to greater goal setting because their self-perceptions would be enhanced. This finding has particular significance given the central role goal setting plays in developing initiative (Larson, Hansen, & Moneta, 2006). Having a psychologically satisfying relationship with one's coach, therefore, may be an important interpersonal mechanism for the development of greater personal agency, attention, and effort toward the challenges that young soccer players encounter.

As well as enhanced goal setting, results from the present study showed that satisfying players' psychological needs was positively related to leadership and responsibility experiences. This finding extends a general proposal by self-determination theorists (i.e., that psychological need fulfillment will lead to optimal growth; Ryan & Deci, 2000) to the specific psycho-social development of elite youth soccer players. Players who are made to feel efficacious, valued, and autonomous by their coach may have a propensity to grasp opportunities to show leadership and take responsibility or they may be given more opportunities by the coach, compared to players whose needs are not fulfilled. Further, it seems that players who feel autonomous, specifically, within the coach–player relationship may have the opportunity to further satisfy their need for

¹ We also ran a model in which age was included as a covariate in the conceptual model. The Wald test (an indicator of parameters to be dropped) suggested that all the paths between age and the dependent variables should be fixed at zero (i.e., they were non-significant). The model fit was also significantly lower compared to the model without age included as a covariate ($\Delta\text{CFI} = .04$).



Note. All bootstrapped point estimates are standardized and significant ($p < .05$).

Fig. 1. Revised path model of perceptions of coach behavior, task cohesion, psychological need satisfaction, and four developmental experiences.

autonomy by taking responsibility for their own actions in the larger soccer academy context.

The outcomes of our analysis also shed light on the under researched processes concerning how youth activities can develop emotional skills. Specifically, the findings offer support for the proposed links between psychological need fulfillment and emotional regulation. Ryan, La Guardia, Solky-Butzel, Chirkov, and Kim (2005) reported that individuals who feel that their needs are supported in close interpersonal relationships are more likely to emotionally regulate through social support, compared to individuals whose needs are not fulfilled. We extend this research to the coach–athlete relationship and to more general forms of emotional regulation. Thus, soccer coaches who are sensitive to players’ needs for autonomy, competence and relatedness may help players manage the various and fluctuating emotions associated with high level soccer performance.

In addition to the relationships between psychological need satisfaction and the three positive developmental experiences, we also found a negative relationship between psychological need satisfaction and social exclusion. Of course, there is likely to be a reciprocal relationship, whereby feelings of social exclusion will lead to lower fulfillment of basic psychological needs (Gerber & Wheeler, 2009). Nonetheless, it is equally plausible that a sense of relatedness with one’s coach will lead to fewer experiences of

social exclusion. Moreover, highly competent and autonomous players may receive more attention and gain more social capital within the soccer academy context. Given the importance of positive social experiences in reducing antisocial behavior (e.g., DuBois & Silverthorn, 2005), encouraging coaches to form psychologically satisfying relationships with their players seems a worthy goal.

Overall, the positive relationships between players’ psychological need fulfillment and the three positive developmental experiences, as well as the negative relationship between psychological need satisfaction and social exclusion highlight the importance of coaching practices that foster autonomy, competence and relatedness within academy players. Within the present study, we found support for such a behavior, as well as emphasizing the importance of fostering task cohesion within teams.

In accordance with our hypothesis, the degree to which players perceived coaches to build rapport with them was positively related to their psychological need satisfaction. Other sport-based research has reported a relationship between socio-emotional support and relatedness need satisfaction (Reinboth et al., 2004). However, the setting of our study may have significant implications, as the professional football academy context may be somewhat devoid of supportiveness, care, and warmth (see Cushion & Jones, 2006). The results found in the present study imply that it may be fruitful to challenge this zeitgeist, as approachable and trustworthy coaches who demonstrate concern for their players may satisfy the psychological needs of young players, thus creating a foundation for positive youth development.

In line with research examining basketball teams (Blanchard et al., 2009), task cohesion was positively related to psychological need satisfaction. As mentioned previously, players within professional soccer academies are competing to some degree with team mates for social status and a limited number of places on the senior teams, which may impact upon the degree of cohesion within teams. The finding in the present study indicates that it may be important to counterbalance this potentially damaging competition by ensuring individuals work together to win matches, and are united in the pursuit of success. Coaches can achieve this by including all players in regular evaluative and discursive team meetings, as well as promoting emotional engagement through shared personal insights during team building activities (Holt & Dunn, 2006; Pain & Harwood, 2009). By enhancing cohesion in professional academies, players may be more likely to experience psychological need fulfillment, which may enhance the probability of positive developmental experiences.

As well as the hypothesized relationships, an additional path between the degree to which players experienced emotional

Table 3
Bootstrapped standardized point estimates of direct effects, covariances, and indirect effects within the final model.

Parameter	Point estimate (SE)	95% CI
<i>Direct effects</i>		
Coach rapport → Psych. needs	.46 (.08)	.30 to .60
Task cohesion → Psych. needs	.26 (.08)	.11 to .41
Psych. needs → Goal setting	.34 (.08)	.17 to .51
Psych. needs → Emotional regulation	.30 (.10)	.11 to .49
Psych. needs → Leadership skills	.32 (.09)	.15 to .48
Psych. needs → Social exclusion	-.24 (.11)	.02 to .45
<i>Covariance</i>		
Leadership skills → Emotional regulation	.35 (.09)	.15 to .54
<i>Indirect effects</i>		
Coach rapport → Goal setting	.16 (.04)	.08 to .24
Coach rapport → Emotional regulation	.14 (.05)	.05 to .24
Coach rapport → Leadership skills	.14 (.04)	.07 to .23
Coach rapport → Social exclusion	-.11 (.06)	.01 to .23
Task cohesion → Goal setting	.09 (.04)	.03 to .17
Task cohesion → Emotional regulation	.08 (.04)	.02 to .16
Task cohesion → Leadership skills	.08 (.04)	.02 to .16
Task cohesion → Social exclusion	-.06 (.03)	-.14 to .00

Note. CI = Confidence Interval. If the CI includes zero, then the point estimate is not statistically significant ($p < .05$).

regulation and leadership was added to the final conceptual model because research in workplace settings has consistently unearthed relationships between these two constructs (e.g., George, 2000; Palmer, Walls, Burgess, & Stough, 2000). With this evidence base in mind, we feel that the addition of this path was conceptually appropriate.

The collective findings in the study, including the significant indirect effects, support the proposal that players on united teams whose coaches have a good rapport with them are less likely to experience social exclusion, and more likely to experience successful emotional regulation, goal setting, and opportunities to lead, compared to players on fractious teams with emotionally distant coaches. Further, these relationships are mostly indirect through a psychologically fulfilling environment that supports players' needs for autonomy, competence, and relatedness. Many of these findings are unique within the youth sports setting, however, these conclusions should be considered in parallel with the limitations of the study. For instance, the study uses self-report data that cannot substantiate whether the coaches actually exhibited the types of behavior that were considered in this research. That said, self-report data are a worthy source of information because adolescents consciously engage with the social context (Hansen, Larson, & Dworkin, 2003; Larson, 2000) and one's perceptions of the social environment are of primary importance when considering the satisfaction of basic psychological needs (Deci & Ryan, 1987). Alternative measures of coach behavior, such as ratings from independent observers, may be used in future research to explore the degree of congruence between coach behaviors and players' perceptions of those behaviors, as well as potential moderating variables that influence the degree of congruence.

A second procedural limitation is the cross-sectional nature of the data; therefore, we cannot establish the direction of relationships among the study variables. Despite this drawback, the proposed conceptual model was well grounded on previous theorizing and empirical support, therefore, we feel justified in hypothesizing such associations. Longitudinal designs over a soccer season, for example, will allow researchers to explore the contextual and personal factors that influence change in developmental experiences over the season. Such studies should be undertaken with larger samples, compared to the present study, which will permit study variables to be modeled as latent factors, therefore, accounting for measurement error. Field experiments can also be utilized to establish the causality among the study variables. For example, the developmental effects of an intervention aimed at promoting positive coach behaviors may be compared against a control group in which coaches receive no such training.

Within the present study, it is important to note that we examined developmental experiences within a youth elite soccer setting. While the three positive experiences are largely seen as important for adolescents' development in the larger life context, they cannot be called a life skill because context transference was not measured in this research (Gould & Carson, 2008). Similarly, just because one is excluded in the soccer social setting does not mean that similar experiences will occur in the family and school domains. Future research may wish to investigate this potential transference across contexts. For example, can training soccer players to overcome setbacks in matches help them to do so in the classroom? Can learning how to regulate one's emotions in soccer help in the face of peer provocation in leisure-time? Such extensions to the present research may build upon the conclusion that players who perceive a cohesive team atmosphere, that their coaches psychologically prepare them for matches and have a good interpersonal rapport with them may gain positive developmental experiences because their psychological needs are fulfilled.

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