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# Relationships Between the Coach-Created Motivational Climate and Athlete Engagement in Youth Sport

Thomas Curran,<sup>1</sup> Andrew P. Hill,<sup>2</sup> Howard K. Hall,<sup>2</sup> and Gareth E. Jowett<sup>2</sup>

<sup>1</sup>University of Bath; <sup>2</sup>York St John University

Youth sport is a source of well-being for adolescents, yet experiences vary and attrition can be high. We sought to better understand the coach behaviors that foster positive experiences in youth sport by examining relationships between the motivational climate and athlete engagement (*viz.*, confidence, dedication, enthusiasm, and vigor). We reasoned that a mastery climate (emphasis on effort and learning) would correspond with higher engagement, whereas a performance climate (emphasis on ability and outcome) was expected to correspond with lower engagement. Two-hundred sixty adolescent soccer players completed measures of engagement and perceived coach motivational climate. All dimensions of engagement were positively predicted by a mastery climate. Furthermore, cognitive aspects of engagement were positively predicted by a performance climate. Canonical correlation analysis indicated that a composite of engagement was positively associated with a mastery climate. Results suggest that a mastery climate offers a means of promoting higher levels of overall engagement.

**Keywords:** motivation, mastery, performance, achievement goal theory

Youth sports are instrumental in adolescents' development. They contribute to enhanced motor competence, physical self-concept and self-esteem, as well as providing opportunities to learn better emotion regulation and develop peer relationships (Eime, Young, Harvey, Charity, & Payne, 2013). Yet youth sport experiences are not always positive and it is well documented that disinterest fosters high levels of attrition beyond adolescence (Boiché & Sarrazin, 2009; Duda, 2013; Petlichkoff, 1996). Anecdotal and empirical accounts point to coach behaviors as sources of variability in the youth sport experience (Brackenridge, Pitchford & Wilson, 2011; Curran, Hill & Niemiec, 2013). Hence, understanding how coach behaviors shape positive experiences in youth sport is important so that adolescents maintain their participation into adulthood.

## Engagement in Sport

One way to conceptualize adolescents' positive experiences in sport is through the notion of engagement. Numerous approaches to engagement have been proposed (see Appleton, Christenson & Furlong, 2008).

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Thomas Curran is with the Department for Health, University of Bath, Claverton Down, Bath, UK. Andrew P. Hill, Howard K. Hall, and Gareth E. Jowett are with the Faculty of Health and Life Sciences, York St John University, York, UK. Address author correspondence to Thomas Curran at [t.curran@bath.ac.uk](mailto:t.curran@bath.ac.uk)

Borrowing from Schaufeli and colleagues' (Schaufeli, Salanova, Gonzalez-Roma & Bakker, 2002) work engagement model, a sport-specific conceptualization of athlete engagement is offered by Lonsdale and colleagues (Lonsdale, Hodge & Jackson, 2007a; Lonsdale, Hodge & Raedeke, 2007b). According to these authors, athlete engagement is an enduring and relatively stable experiential state, which refers to generalized positive cognitions and affect about one's sport. On the basis of interview content and factor analyses using data from elite adult athletes, Lonsdale and colleagues characterize athlete engagement by four interrelated dimensions: vigor, dedication, confidence and enthusiasm.

Vigor reflects a state of mental and physical liveliness in sport. Dedication refers to a desire to invest effort and time toward personally meaningful goals in sport. Confidence reflects a belief in one's ability to accomplish things in sport. Enthusiasm refers to feelings of excitement and enjoyment in sport (Lonsdale et al., 2007a). Collectively, these dimensions are thought to converge to provide a fulfilling and positive experience that contributes, in part, to continued sports participation. In line with this idea, total athlete engagement is associated with a number of outcomes linked to persistence such as higher flow (Hodge, Lonsdale & Jackson, 2009) and self-regulation in elite adult athletes (Martin & Malone, 2013), as well as lower burnout in college athletes (DeFreese & Smith, 2013).

Engagement is purported to emerge from high quality motivation (Schaufeli et al., 2002). It is thought to arise when people perceive they govern their actions, as opposed to being coerced, and endorse learning, rather

than outcome, goals (van Beek, Hu, Schaufeli, Taris & Schreurs, 2012; Tuominen-Soini, Salmela-Aro & Niemivirta, 2012). Accordingly, perceptions of control are considered extremely important when seeking to develop a sense of engagement among athletes (Hodge et al., 2009). These perceptions of control are likely to be influenced by a range of social-motivational factors. Of particular relevance here are coach behaviors that encapsulate the motivational climate (Ames, 1992). The current study therefore builds on previous research by examining relationships between the coach-created motivational climate and athletes' engagement in youth sport.

### The Coach-Created Motivational Climate

The motivational climate created by the coach is important for the quality of motivation exhibited by athletes (Duda & Hall, 2001). According to achievement goal theory (Ames, 1992), the motivational climate encompasses either a mastery or performance focus. A mastery focus refers to a climate in which athletes perceive that effort, cooperation, learning and improvement are emphasized by the coach (Newton, Duda & Yin, 2000). Mastery climates value self-development and promote the notion that effort is synonymous with ability. A performance focus, on the other hand, refers to a climate in which intrateam competition, social comparison and interpersonal evaluation are emphasized by the coach (Newton et al., 2000). Performance climates value normative success and promote the notion that effort and ability are differentiated concepts.

Given their divergent properties, mastery and performance climates are expected to predict very different motivational outcomes for athletes. When coaches create a mastery climate they emphasize the processing of achievement information in a self-referenced fashion. This engenders in athletes a heightened perception of control over their actions and outcomes in sport (Duda & Hall, 2001). By contrast, when coaches create a performance climate they emphasize the processing of achievement information in a normative manner. Unlike a mastery climate, this actively diminishes athletes' perceptions of control over their actions and outcomes in sport (Duda & Hall, 2001). Whether a coach promotes a mastery or performance climate, then, has significant motivational implications for athletes.

Numerous studies in sport and physical education support the differing outcomes of each climate. A mastery climate correlates positively with learning goals, competence, enjoyment, satisfaction and effort (Kavussanu & Roberts, 1996; Reinboth & Duda, 2006; van de Pol, Kavussanu & Ring, 2012). It also correlates with lower outcome goals, anxiety, worry and boredom (Pensgaard & Roberts, 2000; Smith, Smoll & Cumming, 2007; Walling, Duda & Chi, 1993). A performance climate correlates negatively with learning goals, enjoyment, satisfaction and effort (Carpenter & Morgan, 1999; Newton et al., 2000; Walling et al., 1993). It also correlates with higher outcome goals, anxiety, tension and distress (Pensgaard & Roberts, 2000; Smith et al., 2007; van de Pol et al.,

2012). When statistically combined, irrespective of a performance climate, a mastery climate corresponds with adaptive outcomes (e.g., learning goals, enjoyment; Treasure, 1997). This is not the case for a performance climate, which yields maladaptive outcomes (e.g., outcome goals, anxiety) only when a mastery climate is low (Carpenter & Morgan, 1999).

In light of the outcomes associated with the climates, it is likely that they will exhibit different relationships with athlete engagement. Specifically, higher athlete engagement should correspond with a higher mastery climate. This is because a mastery climate facilitates perceptions of control that are instrumental to athlete engagement. Indeed, higher self-regulation and learning goals characterize the motivational consequences of a mastery climate in sport (Ntoumanis & Biddle, 1999), as well as the dimensions of engagement (Hodge et al., 2009; Martin & Malone, 2013; Tuominen-Soini et al., 2012). Hence, a mastery climate and athlete engagement should be expected to share a positive relationship.

A performance climate and athlete engagement should, on the other hand, correspond negatively. This is because the consequences of a performance climate, such as outcome goals, anxiety and tension, are antagonistic to athlete engagement. Research is, again, supportive of this idea. Studies indicate that a belief in ability, preoccupation with social status and outcome goals encapsulate the motivational processes associated with a performance climate (Ntoumanis & Biddle, 1999). This ego-involvement, in turn, is likely to interfere with the perceptions of control that positively contribute to engagement (Hodge et al., 2009; Martin & Malone, 2013; Tuominen-Soini et al., 2012). Hence, a performance climate should be expected to share a negative relationship with athlete engagement.

### The Present Study

The present study sought to examine relationships between the motivational climate and athlete engagement. We hypothesized that a mastery climate would positively correspond with athlete engagement. By contrast, it was hypothesized that a performance climate would negatively correspond with athlete engagement. It was expected that these relationships would emerge at the univariate (each dimension of the motivational climate correlating with each dimension of athlete engagement separately) and multivariate levels (both dimensions of the motivational climate correlating with dimensions of athlete engagement simultaneously).

## Method

### Participants and Procedure

Ethical approval was obtained from the relevant university ethics committee before participant recruitment. The participants were two-hundred and sixty youth recreational soccer players from the North of England (150 female;  $M_{\text{age}} = 13.53$  years,  $SD = 1.27$ , range = 11–16)

for whom we had received parental consent to administer a multisection questionnaire. They reported that they had been playing soccer for an average of 5.59 ( $SD = 2.31$ ) years, and had been attached to their clubs for an average of 3.47 ( $SD = 2.20$ ) years.

## Instruments

**Coach-Created Motivational Climate.** To assess perceptions of the coach motivational climate, the Perceived Motivational Climate in Sport Questionnaire-2 (PMCSQ-2; Newton et al., 2000) was used. This instrument measures perceptions of a mastery (17 items; e.g., “the coach wants us to try new things”) and performance (16 items; e.g., “the coach gets mad when a player makes a mistake”) climate created by coaches. Responses are given on a 5-point Likert scale that ranges from 1 (*strongly disagree*) to 5 (*strongly agree*). Confirmatory factor analysis revealed good model fit,  $\chi^2(8) = 18.05$ ,  $p < .05$ ; CFI = .99; RMSEA = .07 (.03–.12); SRMR = .04, high intercorrelation ( $r = -.47$ ) and high composite reliabilities (mastery  $\rho = .86$ ; performance  $\rho = .83$ ) for the two-factor motivational climate model in this sample.

**Athlete Engagement.** Athlete engagement was measured with the Athlete Engagement Questionnaire (AEQ; Lonsdale et al., 2007a). This measure consists of 4 subscales, each with 4 items, that assess confidence (e.g., “I believe I am capable of accomplishing my goals in sport”), dedication (e.g., “I am determined to achieve my goals in sport”), enthusiasm (e.g., “I feel excited about my sport”) and vigor (e.g., “I feel really alive when I participate in my sport”). Participants respond on a 5-point Likert scale ranging from 1 (*almost never*) to 5 (*almost always*). Confirmatory factor analysis revealed adequate model fit,  $\chi^2(33) = 105.51$ ,  $p < .01$ ; CFI = .91; RMSEA = .08 (.07–.10); SRMR = .05, high intercorrelations ( $r = .76$  to  $.93$ ) and high composite reliabilities ( $\rho = .84$  to  $.88$ ) for the four-factor engagement model in this sample.

## Results

### Preliminary Analyses

Missing value analysis revealed that there were 173 complete cases and 87 incomplete cases. Participants

whose percentage of item nonresponse exceeded 5% were removed ( $N = 6$ ). Of the remaining sample, none of the participants had more than 3 items missing ( $M = 1.00$ ,  $SD = 0.47$ , range = 1–3). Missing values were replaced with the mean of the nonmissing items in the respective subscale. Two significant univariate and 7 significant multivariate outliers were removed ( $p < .001$ ). The remaining sample was 245 (146 female;  $M_{age} = 13.51$  years;  $SD = 1.26$ ; range = 11–16). The study measures exhibited adequate internal reliability (Cronbach’s  $\alpha > .70$ ). Furthermore, the zero-order correlations were largely in the expected directions (see Table 1).

### Primary Analyses

Four hierarchical multiple regression analyses were employed to examine univariate relationships (Table 2). The first hierarchical regression indicated that dimensions of the coach motivational climate explained 23% of variance in confidence,  $F(2, 244) = 38.30$ ,  $p < .01$ . A mastery climate positively predicted confidence ( $\beta = .53$ ,  $p < .01$ ). Likewise, a performance climate also positively predicted confidence ( $\beta = .17$ ,  $p < .01$ ). The second hierarchical regression indicated that the coach motivational climate explained 31% of variance in dedication,  $F(2, 244) = 15.63$ ,  $p < .01$ . A mastery climate positively predicted dedication ( $\beta = .59$ ,  $p < .01$ ). Similarly, a performance climate also positively predicted dedication ( $\beta = .13$ ,  $p < .05$ ). The third hierarchical regression indicated that the dimensions of coach motivational climate explained 34% of variance in enthusiasm,  $F(2, 244) = 61.66$ ,  $p < .01$ . Here, a mastery climate positively predicted enthusiasm ( $\beta = .61$ ,  $p < .01$ ). Finally, the fourth hierarchical regression indicated that the dimensions of coach motivational climate explained 34% of variance in vigor,  $F(2, 244) = 63.47$ ,  $p < .01$ . Here, a mastery climate positively predicted vigor ( $\beta = .61$ ,  $p < .01$ ).

Next, a canonical correlation was employed to examine multivariate relationships. The first canonical variate was a linear composite of confidence, dedication, enthusiasm and vigor. The second canonical variate was a linear composite of mastery climate and performance climate. One canonical function emerged;  $R_c = .65$ ,  $R_c^2 = .42$ , Wilks’s  $\Lambda = .57$ ,  $p < .01$ . The canonical loadings for this function revealed that confidence ( $r_s = -.75$ ), dedication ( $r_s$

**Table 1** Descriptive Statistics and Bivariate Correlations

		<i>M</i>	<i>SD</i>	$\alpha$	1	2	3	4	5	6
1	Confidence	3.72	.72	.81	—					
2	Dedication	3.94	.64	.79	.71**	—				
3	Enthusiasm	3.91	.67	.74	.55**	.66**	—			
4	Vigor	4.25	.57	.81	.65**	.66**	.71**	—		
5	Mastery climate	3.99	.67	.87	.47**	.54**	.58**	.58**	—	
6	Performance climate	2.36	.55	.82	-.03	-.09	-.14*	-.16*	-.38**	—

\* $p < .05$ ; \*\* $p < .01$ .

**Table 2 The Predictive Ability of the Coach-Created Motivational Climate in Relation to the Dimensions of Athlete Engagement**

Variable	<i>b</i> 95% BCa CI	$\beta$	$r_{y,x1(x2)}$
<i>Confidence</i> , $F(2, 244) = 38.30$ , $p < .01$ ; $R = .49$ ; $R^2 = .24$ ; $R^2_{adj} = .23$			
Mastery climate	.69 [.56, .84]	.53**	.24
Performance climate	.18 [.06, .29]	.17**	.02
<i>Dedication</i> , $F(2, 244) = 15.63$ , $p < .01$ ; $R = .56$ ; $R^2 = .31$ ; $R^2_{adj} = .30$			
Mastery climate	.69 [.57, .82]	.59**	.29
Performance climate	.12 [.01, .22]	.13*	.01
<i>Enthusiasm</i> , $F(2, 244) = 61.66$ , $p < .01$ ; $R = .58$ ; $R^2 = .34$ ; $R^2_{adj} = .33$			
Mastery climate	.64 [.52, .77]	.61**	.32
Performance climate	.08 [-.01, .17]	.09	.01
<i>Vigor</i> , $F(2, 244) = 63.47$ , $p < .01$ ; $R = .59$ ; $R^2 = .34$ ; $R^2_{adj} = .34$			
Mastery climate	.75 [.63, .89]	.61**	.31
Performance climate	.07 [-.04, .19]	.07	.04

Note. *R*, multiple regression coefficient; *b*, beta coefficient;  $\beta$ , standardized beta coefficient;  $r_{y,x1(x2)}$ , estimate of unique variance explained per predictor variable in the regression model, where values represent the square of the part-correlation coefficients for each predictor.

\* $p < .05$ ; \*\* $p < .01$ .

= -.85), enthusiasm ( $r_s = -.90$ ) and vigor ( $r_s = -.90$ ) made primary contributions to the first canonical variate. Mastery climate was the only primary contributor to the second canonical variate ( $r_s = -.99$ ). The corresponding negative loadings of confidence, dedication, vigor and enthusiasm on the first canonical variate and of mastery climate on the second canonical variate indicate athlete engagement is positively associated with a mastery climate.

## Discussion

This study examined relationships between the coach-created motivational climate and athlete engagement. A mastery climate was expected to positively correspond with the dimensions of athlete engagement. A performance climate was expected to negatively correspond with the dimensions of athlete engagement. At the univariate level, all dimensions of engagement were positively correlated with a mastery climate. Unexpectedly, confidence and dedication were also positively correlated with a performance climate (no other relationships emerged). In the multivariate analysis, a positive relationship emerged whereby lower levels of athlete engagement corresponded with lower levels of a mastery climate.

The findings support the notion that a focus on coach behavior can help understand the motivational correlates of athlete engagement. That is, a coach-created mastery climate positively corresponded with confidence, dedication, enthusiasm and vigor. This was evident at a univariate level and at a multivariate level. Previous research has found that the motivational properties of athlete engagement include higher self-regulation, efficacy, volition and social connectedness (Hodge et al., 2009; Martin & Malone, 2013). As illustrated here, a mastery focused

motivational climate can be added to these potential antecedents and warrants consideration when seeking to increase athlete engagement. More broadly, the findings add to a substantial amount of research illustrating that a focus on effort and learning offers the best means of promoting positive experiences in youth sport and hence this philosophy should be central to future coach interventions (see Duda, 2013).

As for a performance climate, univariate analyses provided some unexpected findings. A performance climate positively corresponded with confidence and dedication, and was unrelated to enthusiasm and vigor. These relationships reflect covariance with the dimension of engagement, having controlled for a mastery climate, and suggests that something akin to a “pure” (viz., residual) performance focus has the potential to promote more cognitive elements of engagement. This is similar to other research which has found that a performance climate can promote behavioral intentions following success (Standage, Duda & Ntoumanis, 2003). It is notable, however, that the variances explained by a performance climate were small and it did not correlate with more affective engagement (enthusiasm and vigor). Moreover, no relationship was evident at a multivariate level. As such, whether a performance climate is likely to promote engagement in the long term is unclear. Research suggests otherwise, particularly if achievement difficulties arise (Duda & Hall, 2001).

The results must be interpreted in context of the study's limitations. Notably, as the study is cross-sectional, no casual inference can be made and it remains unclear whether the motivational climate precedes athlete engagement in time. Future research will need to include a temporal element to test causal precedence. Furthermore,

this study tested only direct relationships between the motivational climate and athlete engagement. Yet the relationship is likely to operate through mediators (e.g., dispositional achievement goals) and subsequent studies should examine potential process models. Lastly the homogeneity of our sample (young soccer participants) limits the generalizability of the findings, and we did not control for potential gender bias. Research indicates that the climates can be perceived differently as a function of gender (Ntoumanis & Biddle, 1999) and studies are needed to test whether the climate-engagement relationship is invariant across males and females.

## Conclusion

While perceptions of both mastery and performance climate are associated with athlete engagement, only a mastery climate is associated with the full array of positive cognitions and affect.

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## References

- Ames, C. (1992). Achievement goals, motivational climate, and motivational processes. In G.C. Roberts (Ed.), *Motivation in sports and exercise* (pp. 161–176). Champaign, IL: Human Kinetics.
- Appleton, J.J., Christenson, S.L., & Furlong, M.J. (2008). Student engagement with school: Critical conceptual and methodological issues of the construct. *Psychology in the Schools, 45*, 369–386. doi:10.1002/pits.20303
- Boiché, J.C.S., & Sarrazin, P.G. (2009). Proximal and distal factors associated with dropout versus maintained participation in organized sport. *Journal of Sports Science and Medicine, 8*, 9–16. PubMed
- Brackenridge, C., Pitchford, A., & Wilson, M. (2011). Respect: results of a pilot project designed to improve behaviour in English football. *Managing Leisure, 16*, 175–191. doi:10.1080/13606719.2011.583406
- Carpenter, P.J., & Morgan, K. (1999). Motivational climate, personal goal perspectives, and cognitive and affective responses in physical education classes. *European Journal of Physical Education, 4*, 31–44. doi:10.1080/1740898990040103
- Curran, T., Hill, A.P., & Niemiec, C.P. (2013). A conditional process model of children's behavioral engagement and behavioral disaffection in sport based on self-determination theory. *Journal of Sport & Exercise Psychology, 35*, 30–43. PubMed
- DeFreese, J.D., & Smith, A.L. (2013). Areas of worklife and the athlete burnout–engagement relationship. *Journal of Applied Sport Psychology, 25*, 180–196. doi:10.1080/10413200.2012.705414
- Duda, J.L. (2013). The conceptual and empirical foundations of empowering Coaching: Setting the stage for the PAPA project. *International Journal of Sport and Exercise Psychology, 11*, 311–318. doi:10.1080/1612197X.2013.839414
- Duda, J.L., & Hall, H.K. (2001). Achievement goal theory in sport: Recent extensions and future directions. In R.N. Singer, H.A. Hausenblas, & C.M. Janelle (Eds.), *Handbook of research in sport psychology* (pp. 417–434). New York: John Wiley and Sons.
- Eime, R.M., Young, J.A., Harvey, J.T., Charity, M.J., & Payne, W.R. (2013). A systematic review of the psychological and social benefits of participation in sport for children and adolescents: Informing development of a conceptual model of health through sport. *International Journal of Behavioral Nutrition and Physical Activity, 10*, 98. PubMed doi:10.1186/1479-5868-10-98
- Hodge, K., Lonsdale, C., & Jackson, S.A. (2009). Athlete engagement in elite sport: An exploratory investigation of antecedents and consequences. *The Sport Psychologist, 23*, 186–202.
- Kavussanu, M., & Roberts, G.C. (1996). Motivation in physical activity contexts: The relationship of perceived motivational climate to intrinsic motivation and self-efficacy. *Journal of Sport & Exercise Psychology, 18*, 264–280.
- Lonsdale, C., Hodge, K., & Jackson, S.A. (2007a). Athlete engagement: II. Development and initial validation of the Athlete Engagement Questionnaire. *International Journal of Sport Psychology, 38*, 471–492.
- Lonsdale, C., Hodge, K., & Raedeke, T.D. (2007b). Athlete engagement: I. A qualitative investigation of relevance and dimensions. *International Journal of Sport Psychology, 38*, 451–470.
- Martin, J.J., & Malone, L.A. (2013). Elite wheelchair rugby players' mental skills and sport engagement. *Journal of Clinical Sports Psychology, 7*, 253–263.
- Newton, M., Duda, J.L., & Yin, Z. (2000). Examination of the psychometric properties of the Perceived Motivational Climate in Sport Questionnaire-2 in a sample of female athletes. *Journal of Sports Sciences, 18*, 275–290. PubMed doi:10.1080/026404100365018
- Ntoumanis, N., & Biddle, S.J. (1999). A review of motivational climate in physical activity. *Journal of Sports Sciences, 17*, 643–665. PubMed doi:10.1080/026404199365678
- Pensgaard, A.M., & Roberts, G.C. (2000). The relationship between motivational climate, perceived ability and sources of distress among elite athletes. *Journal of Sports Sciences, 18*, 191–200. PubMed doi:10.1080/026404100365090
- Petlichkoff, L.M. (1996). The drop-out dilemma in youth sports. In O. Bar-Or (Ed.), *The child and adolescent athlete* (pp. 418–430). Cambridge, MA: Blackwell Science.
- Reinboth, M., & Duda, J.L. (2006). Perceived motivational climate, need satisfaction and indices of well-being in team sports: A longitudinal perspective. *Psychology of Sport and Exercise, 7*, 269–286. doi:10.1016/j.psychsport.2005.06.002
- Schaufeli, W.B., Salanova, M., González-Romá, V., & Bakker, A.B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic

- approach. *Journal of Happiness Studies*, 3, 71–92. doi:10.1023/A:1015630930326
- Smith, R.E., Smoll, F.L., & Cumming, S.P. (2007). Effects of a motivational climate intervention for coaches on young athletes' sport performance anxiety. *Journal of Sport & Exercise Psychology*, 29, 39–59. PubMed
- Standage, M., Duda, J.L., & Ntoumanis, N. (2003). A model of contextual motivation in physical education: Using constructs from self-determination and achievement goal theories to predict physical activity intentions. *Journal of Educational Psychology*, 95, 97–110. doi:10.1037/0022-0663.95.1.97
- Treasure, D. (1997). Perceptions of the motivational climate and elementary school children's cognitive and affective responses. *Journal of Sport & Exercise Psychology*, 19, 278–290.
- Tuominen-Soini, H., Salmela-Aro, K., & Niemivirta, M. (2012). Achievement goal orientations and academic well-being across the transition to upper secondary education. *Learning and Individual Differences*, 22, 290–305. doi:10.1016/j.lindif.2012.01.002
- Van Beek, I., Hu, Q., Schaufeli, W.B., Taris, T.W., & Schreurs, B.H. (2012). For fun, love, or money: What drives workaholic, engaged, and burned-out employees at work? *Applied Psychology*, 61, 30–55. doi:10.1111/j.1464-0597.2011.00454.x
- Van de Pol, P.K., Kavussanu, M., & Ring, C. (2012). Goal orientations, perceived motivational climate, and motivational outcomes in football: A comparison between training and competition contexts. *Psychology of Sport and Exercise*, 13, 491–499. doi:10.1016/j.psychsport.2011.12.002
- Walling, M.D., Duda, J.L., & Chi, L. (1993). The Perceived Motivational Climate in Sport Questionnaire: Construct and predictive validity. *Journal of Sport & Exercise Psychology*, 15, 172–183.

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