

FOSTERING ATHLETE ENGAGEMENT THROUGH PSYCHOLOGICAL NEED SATISFACTION: A narrative review

PROMOVENDO O ENGAJAMENTO DO ATLETA POR MEIO DA SATISFAÇÃO DAS NECESSIDADES PSICOLÓGICAS: uma revisão narrativa

Annabelle Ross¹

Marcos Alencar Abaide Balbinotti²

Abstract

Sport psychology research has increasingly highlighted the importance of athlete motivation and commitment, particularly within the framework of Self-Determination Theory (SDT). This narrative review explores the role of psychological needs satisfaction (autonomy, competence, and relatedness) in fostering athletes' self-determined motivation and sport engagement. The coach-athlete relationship plays a pivotal role in creating a motivational climate that supports the satisfaction of these needs. Specifically, autonomy-supportive coaching behaviors, democratic leadership, and task-oriented (mastery) motivational climate have been linked to higher levels of athlete engagement and intrinsic motivation. This review highlights the necessity of implementing coaching strategies that prioritize psychological need fulfillment to enhance athletes' motivation and, in turn, sustained commitment to sport.

Keywords: Athlete Engagement; Psychological Need; Coaches; Motivational Climate.

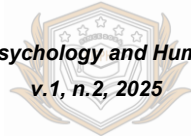
Resumo

A pesquisa em psicologia do esporte tem destacado cada vez mais a importância da motivação e do comprometimento dos atletas, particularmente no contexto da Teoria da Autodeterminação (TSD). Esta revisão narrativa explora o papel da satisfação das necessidades psicológicas (autonomia, competência e relacionamento) no fomento da motivação autodeterminada e do engajamento esportivo dos atletas. O relacionamento treinador-atleta desempenha um papel fundamental na criação de um clima motivacional que apoia a satisfação dessas necessidades. Especificamente, comportamentos de treinamento que apoiam a autonomia, liderança democrática e clima motivacional orientado para a tarefa (domínio) têm sido associados a níveis mais elevados de engajamento e motivação intrínseca dos atletas. Esta revisão destaca a necessidade de implementar estratégias de treinamento que priorizem o atendimento das necessidades psicológicas para aumentar a motivação dos atletas e, por sua vez, o comprometimento sustentado com o esporte.

Palavras-chave: Engajamento do Atleta; Necessidade Psicológica; Treinadores; Clima Motivacional.

¹ Université du Québec à Trois-Rivières – UQTR; annabelle.ross@uqtr.ca

² Université du Québec à Trois-Rivières – UQTR, Département de psychologie;
marcos.balbinotti@uqtr.ca



1 INTRODUCTION

In recent decades, sports psychology has emerged, and scientific literature has become more interested by sports and physical activities. Athletes have received an important consideration from society due to the increase in popularity of the sport (Mohamadi Turkmani *et al.*, 2022). The coach-athlete relationship has become, by the same token, one of the most studied components in sports psychology. This relationship is established when an athlete partners with a coach who will allow him to have a better chance of success in his sport (Jowett, 2009).

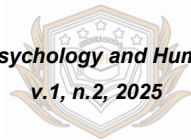
The quality of the coach-athlete relationship is essential and represents a priority in order to enable athletes to achieve their sporting goals (Mageau; Vallerand, 2003). This is indeed a determining factor in the athletes' environment (McGee; DeFreese, 2019) since this relationship plays an important role both in the physical development of the athlete and at the psychosocial level (e.g. positive communication, satisfaction and motivation of athletes) (Güllü, 2019).

The quality of the coach-athlete relationship would also play a role in the satisfaction of the psychological needs of athletes (Jowett *et al.*, 2017), therefore, this is essential to generate a high level of self-determination and to ensure that the athletes continue in their sport (Moss, 2020). Coaches have many roles to play for athletes. This narrative review therefore aims to explore the role of coaches in satisfying the psychological needs of their athletes to promote their sport commitment. This narrative review will allow us to meet or not this objective.

2 LITERATURE REVIEW

2.1 Self-Determination Theory and athlete engagement

According to Self-Determination Theory (SDT), human beings are born to be active, self-motivated and to develop through integrative processes (Deci; Ryan, 2012, p. 417). The SDT also presents motivation types along a continuum anchored by non-self-determined to self-determined behaviors (Deci; Ryan, 2000). This theory is divided into different types of motivation such as amotivation, controlled motivation and autonomous motivation (Gillet; Vallerand, 2016). Amotivation refers to the person's inability to associate their behaviors with their consequences (Gillet; Vallerand, 2016).



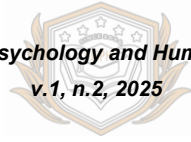
Amotivation also refers to the lack of intentionality and goals in performing the activity, which could lead to feelings of incompetence (Vallerand *et al.*, 2007). Controlled motivation implies that the individual feels some form of pressure to do his or her choices (Gillet; Vallerand, 2016). It mainly refers to a low level of autonomy (Hagger; Chatzisarantis, 2007), which normally leads to non-self-determined behaviors (Deci; Ryan, 2000). Finally, autonomous motivation represents a higher level of internalization, which normally leads to more self-determined behaviors (Deci; Ryan, 2000).

Autonomous motivation is, for its part, favored by the satisfaction of three fundamental psychological needs (Deci; Ryan, 1985; Ryan; Deci, 2000a, 2002). Self-determination theory has a fundamental principle according to which individuals practicing an activity by choice, therefore those with a high level of autonomy (autonomous motivation), generally obtain better consequences than those with a lower level of autonomy (controlled motivation) (Treasure *et al.*, 2007, p. 156).

2.2 Psychological needs

Self-determination theory (SDT) (Deci; Ryan, 1985, 2000) provides an essential framework for understanding the factors that promote athletes' sport commitment by emphasizing the satisfaction of three psychological needs: autonomy, competence, and relatedness. The need of autonomy corresponds to feeling in control of one's decisions and behaviors. In other words, the athlete must feel that they have free choice (Deci; Ryan, 1985; Ryan; Deci, 2000a, 2002) in all aspects related to their training as well as their sport performance (Treasure *et al.*, 2007, p. 165). The need of competence refers to feeling effective in one's behaviors (Deci; Ryan, 1985; Ryan; Deci, 2000a).

For the athlete, competence refers to having the opportunity and being able to feel effective in their sport (Ryan; Deci, 2002). Finally, the need of relatedness represents feeling connected to others (Deci; Ryan, 1985; Ryan; Deci, 2000a), respected by others (Deci; Ryan, 2000; Ryan; Deci, 2000a) and maintaining meaningful relationships (Ryan; Deci, 2002). In sport, the need of relatedness also refers mutual aid between teammates, coaches, etc. (Ryan; Deci, 2002). Satisfaction of psychological needs is essential in athletes' sport commitment.



2.3 Athlete sport's commitment

An athlete's sport commitment is defined as a psychological state that allows athletes to continue to progress in their sport over time (Scanlan *et al.*, 1993) and that positive emotions are linked to it (Hodge *et al.*, 2009). Researchers have identified two types of sport commitment in athletes: enthusiastic commitment and constrained commitment (Scanlan *et al.*, 2016).

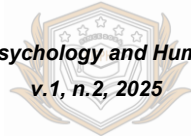
Enthusiastic commitment refers to athletes having the desire and determination to continue to progress in their sport, while constrained commitment refers to athletes perceiving an obligation to continue to progress in their sport. In short, athletes can therefore continue to progress in their sport because they want to do so or because they have to do so (Scanlan *et al.*, 2016).

Athletes are also committed to a very specific goal (e.g., the sport organization, teammates, coaches, etc.) (O'Neil; Hodge, 2020). Sport engagement represents one of the central concepts in sport psychology, influencing in particular the performance, perseverance as well as the well-being of athletes (Scanlan *et al.*, 2016) and the satisfaction of psychological needs plays a key role in this process (Hodge *et al.*, 2009).

2.4 From motivation to commitment: the role of psychological needs

Autonomous motivation, as described above, is essential to understanding the process of athlete engagement. Indeed, athletes choose to engage in sporting activities that meet their three psychological needs and, once their needs are satisfied, they engage in a more self-determined way (Amorose, 2007, p. 211). Motivated behaviors will therefore allow the satisfaction of these psychological needs, which is a necessity for athletes' self-determination (Ryan; Deci, 2000b). With autonomous motivation that meets their basic needs, athletes choose to continue practicing their sport in a consistent, enjoyable (Moss, 2020) and deliberate way (Deci; Ryan, 1985; Ryan; Deci, 2002).

Satisfaction of psychological needs represents a positive stimulating experience (Hodge *et al.*, 2009), thus leading to stronger motivated motivation and engagement, while their frustration can lead to disengagement (e.g., burnout) and psychological exhaustion in athletes (Bartholomew *et al.*, 2011). Hodge and colleagues (2009)



concluded that satisfaction of psychological needs in athletes was positively related to their sport engagement.

A second study concluded that, among the three basic needs, satisfaction of competence and autonomy needs would be a good predictor of athletes' sport engagement (McGee; DeFreese, 2019). An interesting finding is that competence need satisfaction was directly and indirectly linked to effects on behavioral engagement (Edmunds *et al.*, 2007, p. 39).

2.5 Coaches' role in psychological needs satisfaction to promote athlete engagement

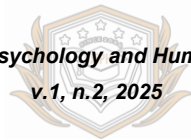
Coaches play a major role in satisfying the psychological needs and, consequently, in the sport commitment of athletes. Indeed, the satisfaction of athletes' psychological needs seems to be, in part, orchestrated, directly or indirectly, by coaches (Amorose, 2007, p. 211) or through their behaviors (Mageau; Vallerand, 2003).

Coaches can contribute in different ways to their athletes' sport commitment; however, it is essential to establish a training climate that meets psychological needs (Treasure *et al.*, 2007, p. 164). For example, maintaining a quality coach-athlete relationship allows to develop autonomy support from coaches as well as an engaging motivational climate (Jowett, 2009; Mageau; Vallerand, 2003). The coach's leadership style can also play a role in the level of athlete commitment.

2.6 Coaches' leadership

The leadership style of a coach is important for athletes (Gullu *et al.*, 2020), and it must be considered that the coach's behaviors vary depending on each athlete in front of him (Mageau; Vallerand, 2003). The coach must maintain a structure by demonstrating an adapted leadership style (Edmunds *et al.*, 2007, p. 46) and satisfying the athlete's psychological needs. Consequently, democratic leadership represents including the athlete in decision-making, giving him choices, and listening to and considering his suggestions (Hollembek; Amorose, 2005).

These same authors concluded that the democratic leadership style was positively linked to the satisfaction of the need of autonomy, which is, in turn, positively



linked to intrinsic motivation (autonomous motivation) (Hollembeak; Amorose, 2005) and, moreover, to the athletes' sport commitment. Indeed, studies have concluded that athletes who perceived their coach as democratic had a higher level of intrinsic motivation (autonomous motivation) and better satisfaction of their need of autonomy (Amorose, 2007, p. 216; Amorose; Horn, 2000). The coach adopting a democratic style also promotes autonomy support of his athletes (Hollembeak; Amorose, 2005).

2.7 Autonomy support

Autonomy support refers to the fact that a person of authority (e.g., coach) creates a climate of support, attention, and understanding (Deci; Ryan, 1985). There are different ways to support the autonomy of athletes, for example, a coach can offer choices, be supportive, encourage quality, consider feelings and opinions, etc. (Edmunds *et al.*, 2007, p. 46; Mageau; Vallerand, 2003), without using pressure or attempts to control the other (Deci; Ryan, 1985).

Autonomy support from coaches promotes, in athletes, their commitment and well-being by stimulating the satisfaction of psychological needs (Reeve, 2015) as well as their autonomous motivation (Edmunds *et al.*, 2007, p. 49). Lemelin and colleagues' (2022) study indicates that autonomy support has many benefits for athletes participating in different sports and at different levels.

In fact, one study concluded that perceived autonomy support from coaches positively predicted satisfaction of psychological needs in athletes (Edmunds *et al.*, 2007, p. 37). A second study concluded that perceived autonomy support from coaches positively predicted satisfaction of three psychological needs in athletes, which in turn positively predicted athletes' sport engagement (Curran *et al.*, 2014). O'Neil and Hodge (2020) concluded that there was a strong positive association between autonomy support and enthusiastic engagement, so athletes continue because they want to.

2.8 Motivational climate

The coach plays a fundamental role in the formation of a motivational climate among his athletes (Hein; Jõesaar, 2015). Indeed, the quality of the coach-athlete relationship is positively associated with the motivational climate established by the

coach (Olympiou *et al.*, 2008). The motivational climate is multidimensional (Duda, 2013) and corresponds to the characteristics of an environment that construct a sequence of objectives task- or ego-oriented (Ames; Archer, 1988).

The motivational climate focused on task-oriented (mastery) represents the efforts as well as the experience of improvement while that focused on ego-oriented takes precedence in superiority and the demonstration of skills (Duda; Appleton, 2016). Although there are two styles of motivational climate, the results of a study concluded that the coach had a dominant profile, but this does not imply the absence of the second profile (Ortiz Marholz *et al.*, 2016).

The motivational climate can be more or less empowering or disempowering depending on the characteristics put forward more by the coach (Duda, 2013). In order to obtain an empowering motivational climate, coaches must build a sequence of task-oriented objectives and support the autonomy of their athletes (Duda, 2013), their dominant profile must therefore be one focused on mastery (Ortiz Marholz *et al.*, 2016).

Amorose (2007, p. 218) concluded that a task-oriented (mastery) motivational climate positively predicted the satisfaction of the three psychological needs (autonomy, competence and belonging), which was positively associated with the level of self-determination of athletes. Several studies also conclude that a task-oriented (mastery) motivational climate favored athletes' sporting commitment (Leo *et al.*, 2009; Lukwu; Luján, 2011; Sánchez-Oliva *et al.*, 2012).

3 CONCLUSION

This narrative review highlights the importance of the coach-athlete relationship in the development and maintenance of athletes' sport commitment. More specifically, this narrative review concludes that the coach plays a determining role in satisfying athletes' fundamental psychological needs by establishing an optimal motivational climate, supporting their autonomy and maintaining an appropriate leadership style. These favorable conditions contribute directly to sport commitment, making the positive relationship between the coach and the athlete a key factor in maintaining sporting practice.

The theoretical and empirical work reviewed confirms that the satisfaction of fundamental psychological needs is strongly associated with sport commitment (Deci; Ryan, 2000; Vallerand, 2007). However, despite these advances, some gaps persist

in the literature, including a lack of longitudinal studies to assess the evolution of these mechanisms over time. A better understanding of these processes could provide valuable insights for interventions aimed at optimizing coach-athlete relationships and maximizing athlete commitment.

In summary, this narrative review highlights that sport engagement is not solely the result of individual factors but is largely influenced by the quality of the social and motivational environment established by the coach. Thus, future research should explore these dynamics further and examine in more detail the strategies that foster a coach-athlete relationship conducive to long-term motivation and engagement.

REFERENCES

AMES, C.; ARCHER, J. Metas de desempenho em sala de aula: estratégias de aprendizagem e processos de motivação dos alunos. **Journal of Educational Psychology**, v. 80, n. 3, p. 260, 1988.

AMOROSE, A. J. Eficácia do coaching: explorando a relação entre o comportamento de coaching e a motivação autodeterminada. In: HAGGER, M. S.; CHATZISARANTIS, N. L. D. (Orgs.). *Motivação intrínseca e autodeterminação no exercício e no esporte*. Champaign: Human Kinetics, 2007. p. 209-228.

AMOROSE, A. J.; HORN, T. S. Motivação intrínseca: relações com gênero, status de bolsa de estudos e percepções sobre o comportamento de seus treinadores em atletas universitários. **Journal of Sport and Exercise Psychology**, v. 22, n. 1, p. 63-84, 2000.

BARTHOLOMEW, K. J.; NTOUMANIS, N.; RYAN, R. M.; THØGERSEN-NTOUMANI, C. Frustração de necessidades psicológicas no contexto esportivo: avaliando o lado obscuro da experiência atlética. **Journal of Sport and Exercise Psychology**, v. 33, n. 1, p. 75-102, 2011.

CURRAN, T.; HILL, A. P.; HALL, H. K.; JOWETT, G. E. Comportamentos percebidos do treinador e engajamento e desinteresse dos atletas no esporte juvenil: o papel mediador das necessidades psicológicas. **International Journal of Sport Psychology**, v. 45, n. 6, p. 559-580, 2014. Disponível em: <https://doi.org/10.7352/IJSP2014.45.559>.

DECI, E. L.; RYAN, R. M. **Motivação intrínseca e autodeterminação no comportamento humano**. New York: Plenum Press, 1985.

DECI, E. L.; RYAN, R. M. O “o quê” e o “por quê” da busca por objetivos: necessidades humanas e a autodeterminação do comportamento. **Psychological Inquiry**, v. 11, n. 4, p. 227-268, 2000. Disponível em: https://doi.org/10.1207/S15327965PLI1104_01.

DECI, E. L.; RYAN, R. M. Teoria da autodeterminação. In: VAN LANGE, P. A. M.; KRUGLANSKI, A. W.; HIGGINS, E. T. (Eds.). **Handbook of theories of social psychology**. Thousand Oaks: Sage, 2012. v. 1, p. 416-436.

DUDA, J. L. Os fundamentos conceituais e empíricos do Empowering Coaching™: preparando o cenário para o projeto PAPA. **International Journal of Sport and Exercise Psychology**, v. 11, n. 4, p. 311-318, 2013. Disponível em: <https://doi.org/10.1080/1612197X.2013.839414>.

DUDA, J. L.; APPLETON, P. R. Climas de coaching fortalecedores e desempoderadores: conceitualização, considerações sobre mensuração e implicações para a intervenção. In: SCHINKE, R. J.; McGANNON, K. R.; SMITH, B. (Eds.). **Routledge research in sport and exercise psychology**. London: Elsevier, 2016. p. 373-388.

EDMUNDS, J. K.; NTOUMANIS, N.; DUDA, J. L. Suporte de autonomia percebida e satisfação de necessidades psicológicas no exercício. In: HAGGER, M. S.; CHATZISARANTIS, N. L. D. (Orgs.). **Motivação intrínseca e autodeterminação no exercício e no esporte**. Champaign: Human Kinetics, 2007. p. 35-52.

GILLET, N.; VALLERAND, R. Os efeitos da motivação sobre o desempenho esportivo no que diz respeito à teoria da autodeterminação: em relação a uma abordagem intra-individual. **Psychologie Française**, v. 61, n. 4, p. 257-271, 2016. Disponível em: <https://doi.org/10.1016/j.psfr.2014.01.001>.

GÜLLÜ, S. O efeito da relação treinador-atleta na paixão pelo esporte: o caso de jogadores de handebol masculino na Superliga. **Journal of Education and Training Studies**, v. 7, n. 1, p. 38-47, 2019. Disponível em: <https://doi.org/10.11114/jets.v7i1.3724>.

GULLU, S.; KESKIN, B.; ATES, O.; HANBAY, E. Relação treinador-atleta e paixão pelo esporte em esportes individuais. **Acta Kinesiologica**, v. 14, n. 1, p. 9-15, 2020.

HAGGER, M. S.; CHATZISARANTIS, N. L. D. **Motivação intrínseca e autodeterminação no exercício e no esporte**. Champaign: Human Kinetics, 2007.

HEIN, V.; JÕESAAR, H. Como o apoio à autonomia percebido por adultos e o clima motivacional dos pares estão relacionados à motivação autodeterminada entre jovens atletas. **International Journal of Sport and Exercise Psychology**, v. 13, n. 3, p. 193-204, 2015. Disponível em: <https://doi.org/10.1080/1612197X.2014.947304>.

HODGE, K.; LONSDALE, C.; JACKSON, S. A. Engajamento de atletas no esporte de elite: uma investigação exploratória de antecedentes e consequências. **The Sport Psychologist**, v. 23, n. 2, p. 186-202, 2009. Disponível em: <https://doi.org/10.1123/tsp.23.2.186>.

HOLLEMBEAK, J.; AMOROSE, A. J. Comportamentos percebidos de treinadores e motivação intrínseca de atletas universitários: um teste da teoria da autodeterminação. **Journal of Applied Sport Psychology**, v. 17, n. 1, p. 20-36, 2005. Disponível em: <https://doi.org/10.1080/10413200590907540>.

JOWETT, S. Validando medidas de relacionamento treinador-atleta com a rede nomológica. **Measurement in Physical Education and Exercise Science**, v. 13, n. 1, p. 34-51, 2009. Disponível em: <https://doi.org/10.1080/10913670802609136>.

JOWETT, S. et al. Processos motivacionais na relação treinador-atleta: uma abordagem multicultural de autodeterminação. **Psychology of Sport and Exercise**, v. 32, p. 143-152, 2017. Disponível em: <https://doi.org/10.1016/j.psychsport.2017.06.004>.

LEMELIN, E. et al. Apoio à autonomia em contextos esportivos: o papel de pais e treinadores na promoção do bem-estar e do desempenho dos atletas. **Psychology of Sport, Exercise and Performance**, 2022. Disponível em: <https://doi.org/10.1037/spy0000287>.

LEO, F. M. et al. Influência do clima motivacional criado pelo treinador no comprometimento esportivo de jovens basquetebolistas. **Revista de Psicología del Deporte**, v. 18, supl., p. 375-378, 2009.

LUKWU, R. M.; LUJÁN, J. F. G. Compromisso e adesão ao esporte: uma análise sócio-cognitiva (Compromiso deportivo y adhesión: un análisis cognitivo social). **Revista Internacional de Ciencias del Deporte**, v. 7, n. 25, p. 277-286, 2011. Disponível em: <https://doi.org/10.5232/ricyde2011.02503>.

MAGEAU, G. A.; VALLERAND, R. J. A relação treinador-atleta: um modelo motivacional. **Journal of Sports Sciences**, v. 21, n. 11, p. 883-904, 2003. Disponível em: <https://doi.org/10.1080/0264041031000140374>.

MC GEE, V.; DEFRESE, J. A relação treinador-atleta e os resultados psicológicos dos atletas. **Journal of Clinical Sport Psychology**, v. 13, n. 1, p. 152-174, 2019. Disponível em: <https://doi.org/10.1123/jcsp.2018-0010>.

MOHAMADI TURKMANI, E.; SAFARI JAFARLOO, H. R.; DEGHAN GHAFAROKHI, A. Estilos de vida de atletas de elite: do consumismo ao profissionalismo. **PLoS One**, v. 17, n. 9, e0269287, 2022. Disponível em: <https://doi.org/10.1371/journal.pone.0269287>.

MOSS, D. A. **Motivações para melhorias entre atletas profissionais de elite que atuam na Europa**: um estudo quantitativo. Tese (Doutorado) – Capella University, 2020.

O'NEIL, L.; HODGE, K. Comprometimento no esporte: o papel do estilo de treinamento e da motivação autônoma versus controlada. **Journal of Applied Sport Psychology**, v. 32, n. 6, p. 607-617, 2020. Disponível em: <https://doi.org/10.1080/10413200.2019.1581302>.

OLYMPIOU, A.; JOWETT, S.; DUDA, J. L. A interface psicológica entre o clima motivacional criado pelo treinador e a relação treinador-atleta em esportes coletivos. **The Sport Psychologist**, v. 22, n. 4, p. 423-438, 2008.

ORTIZ MARHOLZ, P. et al. Papel desempenhado pelo treinador no comprometimento dos jogadores adolescentes. **Studia Psychologica**, v. 58, n. 3, p. 184-198, 2016. Disponível em: <https://doi.org/10.21909/sp.2016.03.716>.

REEVE, J. Oferecendo e invocando apoio à autonomia em relacionamentos hierárquicos. **Social and Personality Psychology Compass**, v. 9, n. 8, p. 406-418, 2015. Disponível em: <https://doi.org/10.1111/spc3.12189>.

RYAN, R. M.; DECI, E. L. Os lados mais sombrios e mais brilhantes da existência humana: necessidades psicológicas básicas como um conceito unificador. **Psychological Inquiry**, v. 11, n. 4, p. 319-338, 2000a. Disponível em: https://doi.org/10.1207/S15327965PLI1104_03.

RYAN, R. M.; DECI, E. L. Teoria da autodeterminação e a facilitação da motivação intrínseca, do desenvolvimento social e do bem-estar. **American Psychologist**, v. 55, n. 1, p. 68, 2000b. Disponível em: <https://doi.org/10.1037/0003-066X.55.1.68>.

RYAN, R. M.; DECI, E. L. Visão geral da teoria da autodeterminação: uma perspectiva dialética organísmica. In: DECI, E. L.; RYAN, R. M. (Eds.). **Handbook of self-determination research**. Rochester: University of Rochester Press, 2002. p. 3-33.

SÁNCHEZ-OLIVA, D. et al. Analisando a implicação esportiva em jovens jogadores de baloncesto: uma análise a partir da teoria da autodeterminação. **Cuadernos de Psicología del Deporte**, v. 12, n. 1, 2012.

SCANLAN, T. K. et al. Uma introdução ao modelo de comprometimento esportivo. **Journal of Sport and Exercise Psychology**, v. 15, n. 1, p. 1-15, 1993. Disponível em: <https://doi.org/10.1123/jsep.15.1.1>.

SCANLAN, T. K. et al. O desenvolvimento do questionário de comprometimento com o esporte-2 (versão em inglês). **Psychology of Sport and Exercise**, v. 22, p. 233-246, 2016. Disponível em: <https://doi.org/10.1016/j.psychsport.2015.08.002>.

TREASURE, D. C. et al. Motivação no esporte de elite: uma perspectiva de autodeterminação. In: HAGGER, M. S.; CHATZISARANTIS, N. L. D. (Orgs.). **Motivação intrínseca e autodeterminação no exercício e no esporte**. Champaign: Human Kinetics, 2007. p. 153-166.

VALLERAND, R. J. Motivação intrínseca e extrínseca no esporte e na atividade física: uma revisão e um olhar para o futuro. In: TENENBAUM, G.; EKLUND, R. C. (Eds.). **Handbook of sport psychology**. Hoboken: Wiley, 2007. p. 59-83.

VALLERAND, R. J. et al. Sobre o papel da paixão no desempenho. **Journal of Personality**, v. 75, n. 3, p. 505-534, 2007. Disponível em: <https://doi.org/10.1111/j.1467-6494.2007.00447.x>.