

AUTONOMY SUPPORT IN STRENGTH AND CONDITIONING

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Abstract

Previous research and commentary has underscored the importance of providing support for autonomy and promote physical and psychological well-being amongst exercisers and athletes. Autonomy support concerns the degree to which actions perceived to emanate from significant others which are supportive of individual choices, recognize the difficulty of behavioral change, and engage with others in an empathic manner. In the sport-training context, the coach plays an important role in nurturing the need for autonomy, the need for relatedness and the need for competence to facilitate self-determined motivational orientation. The overall aim of this article is to discuss the implications of providing autonomy support for individuals engaged in strength and conditioning activities.

Key words: performance enhancement training, sports psychology, coaching

Autonomy Support in Strength and Conditioning

From the perspective of Self Determination Theory, competitive sport participation seeks to satisfy the innate psychological needs: competence, relatedness and autonomy to experience optimal growth, integrity and well-being (D'arripe-Longueville, Pantaleon, & Smith, 2006). The evolution of sport competition paved the way to the different considerations (physiological, psychological, technical and tactical) in pursuit of optimal athletic performance. Strength and conditioning is a sub-activity in the physiological preparation that aims to establish the metabolic efficiency in a sport. The nature of this sport specialization training produces a "winning at all cost" environment that leads to a more antithetical process to the ideals of Self Determination Theory, thus, providing limited or no opportunities for athletes to experience psychological well-being. Recent research showed that when individuals experience autonomous reasons for an activity, persistence and adherence to that activity are manifested (Almagro, Sáenz-López, & Moreno, 2010; Lim & Wang, 2009; Ntoumanis, & Duda, 2008; Wilson & Rodges, 2004). On the other hand, less self-determined motivation outcomes are achieved when individuals perceive controlling actions in an activity. The purpose of this paper is to present a coaching intervention in strength and conditioning which is based on the principles of autonomy support. It is suggested that autonomy-supportive behaviors will help mediate the maladaptive outcomes of this training technique.

Self-Determination Theory and Autonomy

Central to the Self-Determination Theory is the idea of how inherent growth tendencies and

psychological needs operate in the endorsement of human behavior (Ryan & Deci, 2000). SDT is also concerned with how social processes undermine or promote the different types of motivation which has identifiable consequences in social functioning and well being. Basic Needs Theory, a sub-theory of Self-Determination Theory, posits three psychological needs: relatedness, competence and autonomy. Among the three, autonomy is likely the most controversial need within the applied psychology literature (Deci & Ryan, 2002; Ryan, 1995). Its nature as a need has been criticized for its independence, integration, effect on culture, illusory, selfishness, approach and avoidance principle that comes in conflict with the interest of SDT (Ryan, 1995).

Autonomy is the experience of volition, ownership and initiator of one's own action and is facilitated when people are not coercively or seductively controlled and choices are afforded when possible (Ryan, 1995; Ryan & Deci, 2000). The experience of autonomy is the key to integrating behaviors into one's self and is necessary to experience self determination (Ryan & Deci, 2000). The three major themes related to autonomy are: personal autonomy, relational autonomy and lack of autonomy (Kimball, 2007). Relational autonomy acknowledges the effect of people's self concept in influencing relationships, mutual dependencies and power dynamics (Christman, 2004). According to Kimball (2007), relatedness emerged as the key factor in decision-making of athletes. When athletes experience reciprocal care, respect and trust the more influential others were in their decision-making process. Athletes were more likely to want to follow coaches' instructions on where to be, what to do and when to do it if they felt cared

for outside the playing field and if their coaches appeared to have their best interest in mind. Lastly, lack of autonomy is the experience of contingencies that deprive the furtherance of autonomous regulations.

Autonomy Support in Sport and Exercise Settings

Autonomy support happens when a significant other takes the target's perspective, provides choice, reflects the target's feelings, and encouraging the target's initiative (Pelletier, Fortier, Vallerand, & Bričre, 2001). When a significant other is autonomy-supportive, there is a greater likelihood that the need for autonomy will be satisfied and as a result, motivation will be more internalized or self determined in nature (Deci & Ryan, 2002). Mageau and Vallerand (2003) suggested that an autonomy-supportive environment by coaches provide opportunities for choices and taking initiatives; rationale for rules and limits; display non-controlling competence feedback; acknowledge the feelings and opinions of the athletes; avoid motivational strategies that control the athletes; and, preventing athletes in ego involvement. A study by Conroy and Coatsworth (2007) on 165 youth aged 7-18 years old participating in a recreational summer swimming league presented two forms of autonomy support conditions: interest in athletes' input and praise for autonomous behavior. Although both forms supported autonomy need satisfaction, praise related intervention predicted a higher score in competence and relatedness needs.

Autonomy support has been shown to improve prosocial behaviors (Gagne', Ryan, & Bargmann, 2003). In physical education settings, perceived autonomy support enhances students' intentions and initiation to be physically active outside school (Lim & Wang, 2009). Supporting the field of research in autonomy supportive conditions, Muraven, Gagne' & Rossman (2008) demonstrated a more self-controlled behavior on participants in autonomy supportive environment compared to participants performing under more controlling setting. This may be a result of subjective vitality, a positive energetic vital state, which increases during autonomous supportive environment. When a person feels more autonomous, he or she exerts less effort than when he or she feels forced to exert self-control by external conditions. Subsequently, autonomy supportive interventions promote replenishment of strength at a much faster rate which leads to better performance in self-control tasks.

Perceptions of autonomy are changed when individuals participate in sport environment. In the collegiate sport setting, when an individual "signs the dotted line", an identity shift occurs for them to develop a sense of who they are while balancing the demands of their desires and the obligations enforced by the structure of the sport (Kimball,

2007). It may be proposed that autonomy support decreases the occurrence of catastrophic identity shift while adjusting to one's personal demands and sport obligations. This is projected through the sense of competence which may be improved or sustained during the critical exercise and sport experience.

There have been several research studies presenting the role of autonomy support in sport on psychological well-being. For example, D'Arripe-Longueville et al. (2006) presented the role of autonomy supportive environment in promoting sportpersonship among 321 young judo athletes in France. The researchers observed that the young group (Age 8-10) reported a higher sportpersonship compared to the adolescent group. This research suggests that age can be a factor in the perception of autonomy support that could lead to attaining a certain level of sportpersonship. Another study by Gagne et al. (2003) demonstrated an improved quality of female adolescent gymnasts' motivation during autonomy supportive conditions. The previous study was supported by Amorose & Anderson-Butcher (2007) which discovered a significant indirect effect on the athletes' motivational orientation with the mediating effect consistent for males and females and for high school and college athletes.

Autonomy supportive conditions' effect on well-being through sport participation may also be predicted in the motivational climate demonstrated by the coach (Newton, Duda & Yin, 2000). A task-involving motivational climate encourages cooperative learning, role importance and effort/improvement. An ego-involving motivational climate emphasizes punishment, favoritism and rivalry among team members. Vazou, Ntoumanis & Duda (2006) conducted a study with 493 young athletes from different individual and team sports on the effect of autonomy supportive environment through promoting a task-involving motivational climate in the affective and behavioral processes of the athletes. The results demonstrated that a task-involving coach and peer motivational climate resulted in positive perceptions of physical self-worth, enjoyment and effort. However, when athletes perceived an ego-involving climate, higher levels of competitive state anxiety were reported. Congruent findings by Reinboth & Duda (2006) reported an increased satisfaction of the need for autonomy, competence and relatedness among 128 British university athletes when perceptions of a task-involving climate emerged. The satisfaction of the need for autonomy within the internal perceived locus of causality served as a positive predictor in subjective vitality.

In exercise settings, Edmunds, Ntoumanis, & Duda (2005) conducted a research study to determine the effects of an exercise instructor's autonomy-supportive style compared to a controlling style. Results demonstrated increases in need satisfaction

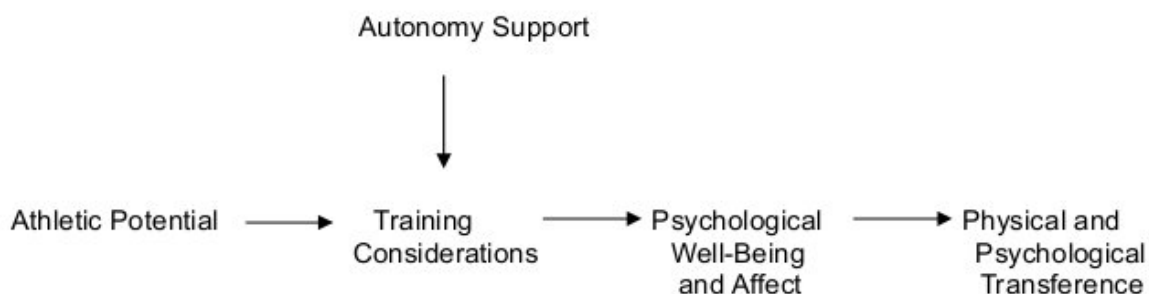
and adaptive outcomes in the autonomy-supportive condition. However, no significant difference was observed between both interventions in the most autonomous form of external regulation. This non-dependent intervention factor effect was related to the internalized exercise effect of the participants. Thus, a non-voluntary participation or low internalization process was recommended to produce successful intervention effects. Furthermore, a study by Wilson & Rodgers (2004) examined the role of perceived autonomy support from friends in predicting the behavioral intentions of women toward exercise. The results of the study revealed that perceived autonomy support from friends promoted exercise adherence among

women for the next four months. The exercise behavioral intention in the previous study has been related to the mechanism of identified regulation.

Role of Autonomy Support in Sport Training Environments: A Proposed Model

Athletic performance may be dependent on two potentials: psychological and physiological. When a social condition, autonomy support, is applied in different training environments, psychological and physiological potential transference in performance are achieved. This mechanism of transference can be explained by psychological well being and affect from autonomy-supportive conditions (Diagram 1).

Diagram 1. Proposed Model for the Role of Autonomy Support on Physiological and Psychological Transference



Practical Approach in Autonomy Support in Strength and Conditioning

For the strength and conditioning professional to be autonomy supportive, behavioral strategies have been suggested by researchers (Conroy & Coatsworth, 2007; Mageau and Vallerand, 2003; Deci & Ryan, 2002; Pelletier et al., 2001).

Firstly, the strength and conditioning professional may try to rationalize the role of strength and conditioning in sport. Although the term "strength and conditioning" may be intuitive to some, coach and athletes often misunderstand the purpose of strength and conditioning in sport. Therefore, empirical data demonstrating the positive effects of strength and conditioning on movement competency, strength and power development and systematic overloading of the athlete may need to be presented. Next, the strength and conditioning coach may further assist with the periodization of training by providing a general layout on what to expect with regard to the adaptation from strength and conditioning sessions at various times within an annual plan (Bompa & Carrera, 2005). It is at this meeting that the coach and athlete should be encouraged to ask questions and a consensus of opinion should be achieved.

An example of specific autonomy support in strength and conditioning is when an athlete comes to the strength and conditioning coach with the desire to improve his or her functional strength. An autonomy-supportive behavior would offer a number of strategies appropriate to the athlete's training age and movement ability. The strength and conditioning coach should design a strength training program utilizing exercises to meet the athlete's goal without sacrificing the overall training goals. During strength and conditioning sessions, the strength and conditioning coach should offer an open ear to the athlete's feelings, provide continuous feedback and make specific player program adjustments accordingly. Once the athlete internalizes the role of strength and conditioning in his or her identity by expressing interest in the sessions, the strength and conditioning professional should progress need satisfaction into a higher level. Greater levels of internalization could be evident by examining the changes in concomitant motivation for the strength or conditioning activity at hand with a suitable instrument such as the Sports Motivation Scale (Pelletier et al., 1995). A possible situation in this context is to include an athlete's decisions in designing a strength and conditioning program. This scenario is controversial and time consuming but may be best practiced

when dealing with world class athletes with significant training history.

During strength and conditioning sessions, the strength and conditioning coach should try to avoid controlling languages in portraying messages or correcting movement technique. The suggested language would be, "You may try to" rather than "You have to". Many factors have been identified to influence an athlete's movement competency, specifically, awareness changes in muscle length, strength, stiffness, and patterns of participation

that arise from repeated movements and sustained postures (Sahrmann, 2002). The "try to" phrase creates a more motivating environment, encouraging the athlete to perform things at his or her own pace. Using the phrase, "trying to" rather than "having to" should lead to a more autonomous behavioral regulation. Trying seeks a long term learning process that would hopefully be translated not only in performance setting but also in life. Suggestions on autonomy support in strength and conditioning is displayed on Table1.

Table 1. Suggestions on Autonomy Support in Strength and Conditioning

Try....	Avoid....
Listening to athletes	Showing acts of discontentment, discouragement and anger
Encouraging proper hydration and nutrition	"I know what I'm doing, Just do it" mentality
Emphatizing with muscle discomfort during adaptation training stage	"keep on doing it, it's all in the mind" mentality
Watching and providing positive feedback during training	emphasizing weaknesses without trying to find ways to overcome them
Quantifying progress	

Autonomy Support in Strength and Conditioning: Future Direction

Application of autonomy support in strength and conditioning training may be able to extend the psychological benefits of this training intervention in competitive sport participation. Further research in determining the possible role of specific training

preparation in aiding overall sport motivation through needs satisfaction is encouraged. Practitioners who wish to apply autonomy support in strength and conditioning are advised to consider the athlete and sports performance environment different prior to application.

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PODRŠKA NEZAVISNOSTI U KONDICIJSKOJ PRIPREMI

Stručni rad

Sažetak

Priješnja istraživanja i komentari su naglasili značaj pružanja podrške razvoju nezavisnosti i promicanja fizičke i psihičke dobrobiti kod vježbača i sportista. Razvoj nezavisnosti se tiče stepena spoznaje važnosti akcija kod onih koji blagonaklono gledaju na individualne izbore, prepoznaje težinu promjene ponašanja i odnosa sa drugima na značajan način. U sportsko-trenerskom smislu trener igra važnu ulogu u razvoju potrebe za nezavisnošću, potrebe za pripadnošću i potrebe za samoodređivanjem motivacijske orijentacije. Krajnji cilj ovog članka je da raspravlja o posljedicama pružanja podrške razvoja nezavisnosti pojedinaca uključenih u aktivnosti razvoja snage i kondicije.

Ključne riječi: *trening poboljšanja izvedbi, sportska psihologija, treniranje.*

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