Psychology of Sport and Exercise 28 (2017) 11–23

Contents lists available at ScienceDirect

Psychology of Sport and Exercise

journal homepage: www.elsevier.com/locate/psychsport

Effectiveness of a need supportive teaching training program on the developmental change process of graduate teaching assistants' created motivational climate

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ARTICLE INFO

Article history:
Received 6 December 2015
Received in revised form
23 September 2016
Accepted 23 September 2016
Available online 25 September 2016

Keywords:
Autonomy supportive
Graduate teaching
Pedagogy

ABSTRACT

Objectives: There is a common trend to train physical education teachers and coaches in need supportive teaching behaviors, however, little research has been done with graduate teaching assistants (GTAs) in college and university physical activity programs. The purpose of this study was to test the effects of a need supportive teaching training program on GTAs' ability to promote need support in college and university physical activity courses.
Design: Longitudinal and correlational.
Method: Participants were twelve GTAs from a midsized southeastern university in the United States, trained to deliver instruction in a positive motivational climate via in-person meetings, self-study materials, and tri-weekly meetings with researchers.
Results: Multi-level modeling revealed that the learning environment created by the GTAs improved across the duration of the study, with most of the growth between baseline and the first four intervention data points. Partial correlations seemed to indicate that these changes were influential among students, as evidenced through measurement of perceived autonomy support and motivational regulations.
Conclusions: Results revealed that the behavioral change process was carried out quickly (from the beginning of the training), suddenly (rather than gradually), and then leveled off until the end of the semester. These results provide some promise in being able to effectively train GTAs to be need supportive in a relatively short amount of time.

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1. Introduction

Instructional Physical Activity Programs (or sometimes referred to as Basic Instructional Programs) have traditionally played an important role in higher education institutions. Their presence serves as a foundation for students to lead a physically active lifestyle by providing the skills and knowledge that encourage physical activity and, overall, improve students' health and wellness behaviors (Jenkins, Jenkins, Collums, & Werhonig, 2006). Research suggests that the more physically active students are during their college and university career, the more likely they are to maintain their physical activity level (Sparling & Snow, 2002). Instructional physical activity programs have a wide variety of instructors teaching in this setting, including full time faculty, adjunct faculty, coaches and graduate teaching assistants (Sweeney, 2011). Many large institutions utilize graduate teaching assistants (GTAs) from the kinesiology discipline to teach the undergraduate physical activity classes and thereby encounter challenges to preparing these traditional young professionals for the classroom (Russell, 2010). Typical GTAs come in with distinct content knowledge or pedagogical content knowledge in the movement forms they are asked to teach. However, the instructional physical activity program

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http://dx.doi.org/10.1016/j.psychsport.2016.09.008
1469-0292/Published by Elsevier Ltd.

advisor or director(s) are left with the task of imparting the GTA with the pedagogical knowledge (i.e., knowledge of how to teach) [1] needed to be successful in the college and university setting. In addition, the GTA is responsible for creating a learning environment that can potentially influence motivation for physical activity after the course has ended. Thus, a major focus of this study was to test the use a specific training program, grounded in self-determination theory, to enhance motivational climate and student motivation.

2. Training programs for graduate teaching assistants

There are many different approaches with training and evaluating GTAs in physical activity programs (Russell, 2009, 2011). Their goal is to provide instructors with strategies they can use to make sport/fitness experiences more positive for students. However, very little research exists that supports the effectiveness of the training programs, some of which do not include structured development of pedagogical knowledge. Further, if pedagogical knowledge is developed, it is unclear whether such training is grounded in theoretical frameworks that deal specifically with enhancing motivation. One approach, which has seen success in traditional physical education (PE) courses and sport coaching, is to go beyond the provision of strategies, developing teachers' or coaches' conceptual understanding of motivational processes and their consequences in terms of positive sport/fitness experiences. Coupled with skill knowledge, the instructor can alter their communication with students. In such approach, it is assumed that this improved pedagogical knowledge will make it more likely that the "good practices" will be adopted, maintained and generalized to different situations (Duda, 2013).

3. Self-determination theory and motivational climate

Centered on the "why" of behavior, self-determination theory (SDT; Deci & Ryan, 1985, 2000) is one of the most relevant contemporary theories of motivation to support such an approach to training. One of the main postulates of SDT is that the degree of satisfaction of psychological basic needs (autonomy, competence, and relatedness) induces different types of motivation. According to SDT (see Ryan & Deci, 2000), individuals are motivated on a continuum from intrinsic motivation (engaging in an activity for fun or enjoyment) to amotivation (not engaging in an activity because of lack of interest). In between these extremes are four types of extrinsic motivation, which vary based on their degree of self-regulation; integrated regulation (valuing an activity for its potential benefits to the self), identified regulation (engaging in an activity because it is useful or important), introjected regulation (engaging in an activity due to shame or guilt), and external regulation (engaging in an activity for external reward). Within the continuum, it is possible for individuals to have varying levels of each type of extrinsic and intrinsic motivation.

Considering instructional physical activity programs, courses are set up in similar ways to post-secondary physical education, whereby students receive grades as extrinsic rewards for performance. This may limit the amount of intrinsic motivation a student may hold, and possibly influence levels of the external regulation they experience, even though they are able to choose which activity course they would like to participate in. Much of this could depend on how the instructor delivers the course. As such, an examination of motivational climate is warranted.

According to SDT, the motivational climate – defined as the social environment created by an authority figure (e.g., the teacher, the coach) – has the potential to influence an individual's motivational regulations for participating to an activity via the satisfaction or undermining of his/her basic psychological needs (Deci & Ryan, 2000). Further, Duda (2013) describes the motivational climate as one that includes the coach's words and actions as well as how he/she structures the learning environment. This includes the way the instructor communicates with students, the activities the instructor chooses to present, as well as the manner in which instructions are given. The motivational climate is a recurring and enduring pattern (Reeve & Cheon, 2014). For some coaches who tend to be prescriptive over and insistent about what athletes should think, feel and do, the need-thwarting aspect is particularly salient, whereas for other coaches who tend to be respectful of athletes' perspectives and supportive to their initiatives, the need-supportive aspect is more salient. A coach or PE teacher's motivational climate is an important feature because students of need-supportive teachers, compared to those of need-thwarting teachers, benefit in important and wide-reaching ways including greater need satisfaction, intrinsic motivation, and engagement in healthy behaviors such as physical activity participation (Cheon, Reeve, & Moon, 2012).

In the SDT literature, the motivational climate has been described traditionally as having six distinct dimensions: autonomy support, control, relatedness support, relatedness thwarting, structure, and chaos (Reeve, Jang, Carrell, Jeon, & Barch, 2004; Skinner & Edge, 2002). Regardless of the dimension, it is typically witnessed in the way a coach communicates with his/her athletes. Within the autonomy support dimension, coaches vitalize players' inner motivational resources, rely on informational language, provide explanatory rationales, display patience to allow players time to work in their own way, and acknowledge players' expressions of negative affect and accept that such complaining may be a valid reaction to coach-imposed requests (Reeve & Cheon, 2014). The controlling dimension includes offering tangible rewards, providing feedback that is controlling, exerting personal control over most of the practice time, promoting ego involvement, and using intimidation and conditional regard (Bartholomew, Ntoumanis, & Thogersen-Ntoumani, 2009). Relatedness support refers to interpersonal involvement (Skinner & Edge, 2002), which is clearly observed when teachers encourage caring, acceptance, inclusion, trust, and respect of their students (Van den Berghe, Vansteenkiste, Cardon, Kirk, & Haerens, 2012). In addition, coaches who utilize this behavior do so in a warm, positive, consistent manner that is not based on contingencies. Relatedness thwarting refers to hostility (Skinner & Edge, 2002), which is characterized as exhibiting behaviors that are cold, critical, and marked by acceptance being contingent upon desirable behavior(s) (Smith et al., 2015). One behavior, the use of conditional regard is at the border of both controlling and relatedness thwarting. Indeed, conditional regard can be see as internally controlling when a teacher use it to pressure students by appealing their self-worth (De Meyer, Soenens, Aelterman, De Bourdeaudhuij, & Haerens, 2016), or as relatedness thwarting when student's acceptance by the teacher is contingent upon desirable behavior (Smith et al., 2015). Thus, conditional regard could be a characteristic of controlling or need thwarting dimensions, based on how it is perceived and processed by the student or athlete, or by an external coder. Structure is identified as the coach's ability to provide athletes with clear instructions and organization to tasks along guidance throughout the learning process and specific expectations for each task (Jang, Reeve, & Deci, 2010; Skinner & Edge, 2002). Finally, chaos is represented as an environment that is confusing and lacking direction and prevents individuals from being effective and results in non-desirable outcomes (Skinner & Edge, 2002).

[1] In the literature on teacher professional development, pedagogical knowledge is a critical component of teaching effectiveness (see Shulman, 1987).