Original Article

Exercise Motivation of College Students in Relation to their Health-Related Physical Fitness

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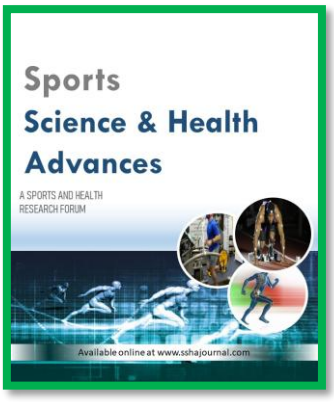

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Abstract

Based on Self termination Theory (SDT), this study aimed to examine the relationship betwe- en self-determination motivation for health-related fitness and perceived learning abilities am ong female college students in physical education. To assess even regulatory motivational styles, questionnaires were used to self-regulate training to measure four motivational styles: exogenous motivation, introduced motivation, identification, and essential motivation. Health-related fitness was assessed using the Aaphherd Test (1980). These tests werem conducted in 50 female sports students aged 17-25. Descriptive statistics and correlations were used to analyze the data. Results showed that exogenous motivational styles among students demonstrated a significant and negative relationship with flexibility (hips).

Keywords: motivational styles, flexibility and Health related fitness.

Introduction

The importance of physical education (PE) in contemporary education system is now recognized worldwide. It is widely acknowledged that Physical Education (PE) can play a potentially important role in enhancing public health by creating positive attitudes toward exercise and by promoting health-related fitness programmes. However, these initiatives will have limited success if students are not motivated to participate actively in their PE lessons (Ntoumanis,2001).

Sallis and McKenzie (1991) argued that positive experiences in Physical Education could influence youngsters to adopt physically active adult lifestyles which can improve public health. It is, therefore, important to understand the motivational, cognitive, and affective processes that can determine whether children/young people will regard Physical Education as a valuable, enjoyable, and rewarding experience, or as a worthless, boring, and humiliating one. Physical education may have an important educational contribution to students' personal development. It provides opportunities for enjoyment, for learning new motor skills and for co-operating with others. Therefore, it is important to examine students' motivation for participation in physical education classes (Hassandra et al.2003).

Biddle and Nigg (2000), in a review of several prominent theories of exercise behaviour, specifically highlighted the need for theoretically based research on the motivational processes linked to the commencement and continuation of physical activity.

To this direction, the self-determination approach to motivation (Deci & Ryan, 1985, 1991) can be particularly helpful. This theoretical perspective has been applied successfully to education and sport and

has shown the important role of different types of motivation in inducing a number of different cognitive, behavioural, and affective outcomes (Ntoumanis,2001).

Self-determination theory (SDT: Deci & Ryan, 1985, 1991) is a popular theoretical framework for the investigation of motivation in exercise psychology. One aspect of the theory that has generated particular interest is its multidimensional conceptualization of intrinsic and extrinsic motivation. According to SDT, there are varying forms of motivation that represent qualitatively different ways in which a behavior can be regulated. The theory proposes that these forms of regulation lie along a continuum ranging from completely non-self-determined to completely self-determined regulation. The six different forms of regulation are labeled: a motivation, external regulation, introjection, identification, integration, and intrinsic regulation (Markland and Tobin,2004). The self-determination continuum moves from more autonomous regulations to more controlling reasons for engagement in physical activity. The most self-determined behavioural regulation is intrinsic motivation. Intrinsic regulation is fuelled by the feelings of fun, personal challenge, and satisfaction endemic to the activity. The intrinsically motivated individual participates in the activity for no other reason other than what the behavior provides itself. This type of regulation is entirely autonomous. Identified regulation is further along the self-determination continuum, as action is motivated by an appreciation of valued outcomes and is volitional.

However, although the behavior may be internalized when identified regulations are operating, it still is not completely self-determined because action is taken to achieve personal goals rather than for the joy of the activity itself. Introjected regulation refers to a more internal cause of behavior whereby the individual internalizes the reasons for acting but is not truly self-determined. Typically, in this case, the individual is acting out of avoidance of negative feelings (e.g. guilt) but an introjected regulation is also evident when individuals want to prove to themselves and others that they can demonstrate a positive attribute or state. External regulation of behaviour is controlled by rewards and threats and reflects low self-determination on the continuum (Markland and Tobin,2004).

In conjunction with the different regulatory qualities, Deci and Ryan (1985) have proposed that a state of amotivation can also exist. Amotivation is similar in nature to learned helplessness in that the individual has very little or no motivation to engage in an activity and sees no contingency between one's actions and the activity's outcomes. Amotivation is placed at the least selfdetermined end of the regulation continuum (Markland and Tobin,2004).

Intrinsic motivation (IM) has been one of the concepts studied in motivational research in physical education. According to Deci and Ryan (1985), intrinsically motivated behaviors are engaged in for their own sake, for the pleasure and satisfaction derived from the process of engaging in the activity. Intrinsically motivated behaviors are associated with psychological wellbeing, interest, enjoyment, fun, and persistence (Ryan & Deci, 2000).

Daley and Duda (2006) in a cross-sectional survey design with a sample consisting of 409 (158 men, 251 women) university undergraduates aged 18-30 years, found that men and women who were more self-determined reported being more physically active over the previous 3 months. These results suggest that self-determination may have an important role to play in the adoption and maintenance of health promoting behaviors in young adults.

Despite the growing support for such propositions, Vallerand (2001) has indicated that limited attention has been afforded to these aspects of SDT's framework in physical activity research. The lack of attention to the self-determined motivation and health related fitness relationship in physical education is surprising, given the longstanding interest in learning about the motivational underpinnings of physical activity, sports and exercise (Fox, 1997).

Considering the scarcity of research in this area, overall purpose of this investigation was to examine the link between Motivational styles and health related fitness.

Hypotheses

Keeping in view the stated objectives, the following hypotheses were formulated. Identified and intrinsic motivation was expected to be positively related with the dimensions of health-related fitness and a non-directional hypothesis was framed between extrinsic regulation, introjected motivation, and dimensions of health-related fitness.

Method

Present study was conducted on 50 nonprofessional female physical education students of DAV College Kanpur Uttar Pradesh those were engaged in regular exercise behavior. The age of subjects ranged from 18-25 years,

Tools

Exercise Self-Regulation Questionnaire developed by Ryan, & Connell (1989) was used to find out the reasons why a person exercises regularly or engages in other such physical activities. Questionnaire provides responses that represent external regulation, interjected regulation, identified regulation, and intrinsic motivation.

Health Related fitness test of American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD, 1980) was used to measure health related physical fitness of the subjects. The test was composed of Nine Minute Run and Walk, Skin fold measurements (Triceps and Sub scapular), Modified Sit-Ups and Sit and reach tests.

Level of participation in sports, i.e state /inter college participation and National/International participation were also considered.

Findings and Discussion

TABLE 1 Means And S.D's Of The Total Sample (N=50)

S. NO	VARIABLES	MEAN	STANDARD DEVIATION
1	External motivation	8.82	4.46
2	Introjected motivation	9.94	4.62
3	Identified motivation	23.10	3.44
4	Internal motivation	20.80	3.89
5	LOP	23.20	4.49
6	Abdominal strength	1.26	0.44
7	Flexibility	18.96	7.35
8	Cardiorespiratory	30.78	4.71
9	Triceps	1108.00	243.14
10	Subscapular	8.76	4.53
11	BMI	10.05	5.16

In line with the hypotheses stated, the data were processed. A perusal of intercorrelation matrix (Table-1) showed that participants scored highest on Identified motivation which implies that the exercisers in the present study seem to engage in their physical activities because they personally find it valuable or important to their self, more so than other motives. A perusal of inter correlation matrix (Table-2) for the sample indicated that External motivation was negatively and significantly related with the dimension of flexibility ($p<.01$) and with the level of participation of the students ($p<.01$). No significant relationships emerged between any other dimension of motivation and the dimensions of health-related fitness.

Table 2 Intercorrelation Matrix for The Total Sample (N=50)

(LOP- Level of Participation (State or National/International))

	External	Introjected	Identified	Internal	LOP	Abdominal	Flexibility	Cardio	Triceps	Subscapular	BMI
External M	1.00	0.58	0.06	0.12	-0.39**	0.14	-0.37**	0.04	-0.10	0.09	-0.10
Introjected M		1.00	0.24	0.51	-0.09	0.14	-0.14	0.18	-0.22	-0.12	-0.10
Identified M			1.00	0.62	0.06	-0.18	-0.08	0.19	-0.12	-0.15	-0.05
Internal M				1.00	0.09	0.03	0.09	0.16	-0.03	-0.07	0.00
LOP					1.00	0.05	0.32	0.26	-0.13	-0.11	1.43
Abdominal						1.00	0.18	0.11	-0.32	-0.23	-0.11
Flexibility							1.00	0.17	-0.06	-0.08	0.03
Cardio								1.00	-0.02	-0.02	0.16
Triceps									1.00	0.85	0.57**
Subscapular										1.00	0.59**
BMI											1.00

Self-determination theory has become a popular framework for examining motivational issues in physical activity contexts. Past research in the physical domain and other settings has indicated that positive motivational consequences (e.g. behavioural persistence, task involvement, enhanced psychological well-being, and quality of life) are positively associated with more autonomous regulations and/or negatively linked to more controlling regulations (e.g. Ryan & Deci, 2000, Reinboth, Duda, & Ntoumanis, 2004). The practical importance of this distinction between motives has emerging support in the physical activity domain, with more self-determined motives distinguishing physically active from inactive adults (Landry & Solomon, 2004), predicting greater frequency of weekly exercise participation (Wilson et al.,2004) and underpinning prolonged sport involvement (Pelletier et al., 2001). Several researchers have reported that self-determined identified and intrinsic regulations are positively related to future intention to exercise, current exercise behaviour, and physical fitness in adults and young people in both exercise and leisure ontexts (e.g. Wilson & Rodgers, 2004) and physical education contexts (e.g. Standage, Duda, & Ntoumanis, 2003).

Though in the present study , intrinsic and identified motivation did not emerge as significant correlates of health related fitness, yet we cannot completely negate the role of self determined motivational style in physical education, since we obtained a significant relationship between external motivation, flexibility and level of participation. Although with a small sample size, the present investigation provides evidence that Extrinsic motivation to exercise may not be very conducive for one's flexibility (though the present analysis do not demonstrate cause and effect) as there's a negative relationship between the two.

The present results are based on data from a homogeneous sample and also the small sample size. As such, future work would do well to extend the findings to more diverse populations. More researches should be done in order to explore these concepts and their correlates. Future work may also throw some light vis-à-vis how one's motivation plays a role in one's level of participation at a particular level.

Conflict of Interest: No Conflict of Interest Declared among authors

References

Biddle, S.J., & Nigg, C.R. (2000). Theories of exercise behaviour. International Journal of Sport Psychology, 31, 290-304.

Daley, A., & Duda, J. L. (2006). Self-determination, stage of readiness to change for exercise, and frequency of physical activity in young people. European Journal of Sport Science, 6, 231e243.

Deci, E. L., & Ryan, R. M. (1985). Intrinsic motivation and self-determination in human behavior. New York: Plenum.

Deci, E., & Ryan, R. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. Psychological Inquiry, 11, 227–268.

Fox, K. R. (1997). The physical self: From motivation to well-being. Champaign, IL: Human Kinetics.

Grajek, M.; Sas-Nowosiel, K.; Sobczyk, K.; Dzialach, E.; Bialek-Dratwa, A.; Gorski, M.; Kobza, J. Motivation to engage in physical activity among heath sciences students. J. Phys. Educ. Sport 2021, 21, 140–144

Hassandra, M.,Goudas,M. and Chroni,S. (2003). Examining factors associated with intrinsic motivation in physical education: a qualitative approach. Psychology of Sport and Exercise. pp. 211–223.

Landry, J. B., & Solomon, M. A. (2004). African American women's self determination across the stages of change for exercise. Journal of Sport & Exercise Psychology, 26, 457–469.

Markland, D., & Tobin, V. (2004). A modification of the Behavioral Regulation in Exercise Questionnaire to include an assessment of amotivation. Journal of Sport and Exercise Psychology, 26, 191-196.

Ntoumanis, N. (2001). A self-determination approach to the understanding of motivation in physical education. British Journal of Educational Psychology, 71, 225 – 242.

Pelletier, L. G., Fortier, M. S., Vallerand, R. J., & Brière, N. M. (2001). Associations among perceived autonomy support, forms of self-regulation, and persistence: A prospective study. Motivation & Emotion, 25, 279–306.

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 & Exercise, 7, 269–286.

Reinboth, M., Duda, J. L., & Ntoumanis, N. (2004). Dimensions of coaching behavior, need satisfaction, and the psychological and physical welfare of young athletes. Motivation & Emotion, 28, 297–313.

Ryan, R. M. (1995). Psychological needs and the facilitation of integrative processes. Journal of Personality, 63, 397-427.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. American Psychologist, 55, 68-78.

Ryan, R.M., & Connell, J.P. (1989). Perceived locus of causality and internalization: Examining reasons for acting in two domains. Journal of Personality and Social Psychology, 57, 749-761.

Sallis, J.F., & McKenzie, T.L. (1991). Physical education's role in public health. Research Quarterly for Exercise and Sport, 62, 124± 137.Sarrazin, P., Vallerand, R. J., Guillet, E.,

Standage, M., Duda, J. L., & Ntoumanis, N. (2003). Predicting motivational regulations in physical education: The interplay between dispositional goal orientations, motivational climate and perceived competence. Journal of Sports Sciences, 21, 631 –647.

Sánchez-Herrera, S., Cubero, J., Feu, S., & Durán-Vinagre, M. Á. (2022). Motivation regarding physical exercise among health science university students. International journal of environmental research and public health, 19(11), 6524.

Pelletier, L. G., & Cury, F. (2002). Motivation and dropout in female handballers: A 21-month prospective study. European Journal of Social Psychology, 32, 395–418.

Vallerand, R. J. (2001). A hierarchical model of intrinsic and extrinsic motivation in sport and exercise. In G. C. Roberts (Ed.), Advances in motivation in sport and exercise (pp. 263–319). Champaign, IL: Human Kinetics.

Watson, D., Clark, L.A and Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect. The PANAS scales. Journal of Personality and Social Psychology, 54 (6), 1063-1070.

Wilson, P. M., Rodgers, W. M., Fraser, S. N., & Murray, T. C. (2004). Relationships between exercise regulations and motivational consequences in university students. Research Quarterly for Exercise & Sport, 75, 81–91.