

What can students' perceived locus of causality tell us about their subjective vitality?

¹Vali Khalkhali* ; ²Rouhollah Sharifi; ³Sakineh Mohammad Beigi; ⁴Fatemeh Khalkhali

¹ PhD, Department of Psychology, Malayer Branch, Islamic Azad University, Malayer, Iran

² Shahid Beheshti Teacher Training Center, Eghlid, Iran

^{3,4} Organization of Education, Qazvin Province, Qazvin, Iran

Abstract

Subjective vitality as a positive experience in physical education (PE) can influence young people to adopt physically active adult lifestyles which can improve public health. Teachers can influence students' subjective vitality through the motivational strategies they use; it is thus pertinent and important to understand the motivational processes of adolescents in PE. In this study, the authors compared the subjective vitality in students with internal and external perceived locus of causality in physical education classrooms. 75 adolescents participated in the study. Subjects completed the perceived locus of causality and subjective vitality questionnaires. Results of t-test shown that students who had perceived locus of causality into the internal reported more subjective vitality than students who had experienced external perceived locus of causality. The findings highlight the importance more self determined forms of motivational strategies in PE. Motivational strategies that are autonomous or self-determined prompt internal locus of causality that may yield better vitality relative to non-self-determined strategies. Physical education teachers can promote their students' subjective vitality via their motivational styles which encourage internal perceived locus of causality in physical education.

Key Words: *Locus of Causality; Subjective Vitality; Physical Education; Self-Determination Theory.*

1. Introduction

According to the Self-Determination Theory of Deci and Ryan [1], Ryan and Fredric [2] presented a device under title "Subjective Vitality Scale". They characterized it as an entity full of energy, enthusiasm, aliveness, non-fatigue, weariness, and exhaustion, and proved that when the subjective vitality is in a lower level, irritability and fatigue will be created and it may not make completely use of potential to do activities. But when the subjective vitality is in a higher level, sufficient energy will be created to do such activities, and the mood is in a proper status, so all duties and activities are performed very good [3]. Ryan and Fredrick [2] defined subjective vitality as a mental experience full of life and energy. According to this theory, energy has a main role in subjective vitality. To retain well-being and subjective vitality, it is necessary to enjoy an optimum level of energy (more emphasized on mental energy), so we shall try to obtain and reconstruct it. Ryan and Fredrick [2] explain subjective vitality as a self originated energy, and believe that it is an internal energy, not an energy created by particular threat from the external environment. Subjective vitality differs from activation or energy per se because many forms of activation such as anger, anxiety, or arousal are either unrelated to subjective vitality, or negatively related to it. Instead, vitality represents energy that one can harness or regulate for purposive actions.

A great deal research [such as; 2; 4] found that subjective vitality has relation with psychological factors such as autonomy and relatedness. Ryan & Deci [3] expressed that on the strength of their research, autonomy and self-efficiency and competence are necessary for subjective well-being,

* Corresponding author. Tel.: +98-912-282-7792
E-mail address: V.Khalkhali@iau-malayer.ac.ir

psychological health, subjective vitality, educational performance and continuous presence in the institute. The learners, who supposed that their needs were satisfied in the institute, benefit from institutional adjustment and reveal higher educational motivation, self-control in educational issues. Harry & Ryan [5] stated that need to competence and experience caused that psychological health and vitality experience became strong. Kasser & Ryan [6] stated that there is meaningful and positive relation between mental health, well-being, and psychological factors, such as life satisfaction and positive mood, and subjective vitality. In a research, Bostic [7] declared that there is a high level relation between psychological adjustment, physical health and subjective vitality. In addition, growing evidence suggests that it is specifically the activated forms of positive affect associated with vitality that render people more resilient to physical and viral stressors and less vulnerable to illness [e.g., 8; 9; 10]. These consequences make vitality an important focus of research.

Self-determination theory is useful in understanding the motivational, cognitive and affective processes of adolescents in PE [SDT; 1; 4]. SDT proposes that human beings have innate psychological needs for autonomy (e.g., when they can freely choose to pursue an activity), competence (e.g., when they master the activity) and relatedness (e.g. when they feel connected and supported by significant people). According to this theory, social contexts differ in the way communicate with peoples. Within SDT [11], these contexts are described as being controlling versus autonomy-supportive. Studies among children have indicated that pressuring communication styles undermine persistence [12]. Such controlling environments produce an external locus of causality [13], thereby frustrating people's basic need for self-determination or autonomy, that is, their tendency to engage in a willing and volitional manner in an activity. A teacher's motivating style toward students can be conceptualized along a continuum that ranges from highly controlling to highly autonomy-supportive [14]. In general, autonomy-supportive teachers facilitate, whereas controlling teachers interfere with the congruence between students' self-determined inner motives and their classroom activity. Autonomy-supportive teachers facilitate this congruence by identifying and nurturing students' needs, interests, and preferences and by creating classroom opportunities for students to have these internal motives guide their learning and activity. In contrast, relatively controlling teachers interfere with students' inner motives because they tend to make salient a teacher-constructed instructional agenda that defines what students should think, feel, and do. To shape students' adherence toward that agenda, controlling teachers offer extrinsic incentives and pressuring language that essentially bypass students' inner motives.

Given that vitality is defined as a feeling of possessing energy available to one's self, Ryan and Frederick [2] reasoned that it should be higher when successfully completing autonomously motivated actions than when successfully completing controlled ones. The linkage between self-determined versus controlled motivations and subjective vitality has been suggested by other studies as well. Sheldon and Kasser [15] found that personal strivings that were less self-determined were associated with lower subjective vitality. Sheldon, Ryan, and Reis [16] found support for the association of self-determination and vitality in a 2-weeklong diary study of college students. These theoretical views and empirical findings suggest that behaviors that are autonomous or self-determined may yield better enhanced vitality relative to non-self-determined activities (e.g., being controlled), even when one controls for competence or goal success. In summary, our aim in this article is to compare the subjective vitality in students with internal and external perceived locus of causality in physical education classrooms.

2. Method

2.1. Participants

The initial student sample contained 112 eleventh grad male students. However, students who did not complete the entire questionnaire were excluded from the analyses. Hence, all analyses were based on a final sample of 75 students (age: $M = 15.31$, $SD = 0.81$).

2.2. Measures

Firstly, all measures were translated into Persian and Cronbach's alpha coefficients were calculated to assess their internal reliability.

Perceived Locus of Causality scale. Students' Perceived Locus of Causality was assessed using Goudas, and his colleagues' Perceived Locus of Causality scale [PLOC; 17]. The students in the present study responded to 17 items (four items for external regulation and interjected regulation and three items for identified regulation, intrinsic motivation and motivation) measured on scales ranging from 1 (strongly disagree) to 7 (strongly agree). Each item followed the stem "I take part in PE." Examples of the questions are "because PE is fun" (intrinsic motivation), "because I want to learn sport skills" (identified regulation), "because I would feel bad about myself if I did not" (interjected regulation), "because I will get into trouble if I do not" (external regulation), and "but I do not see why we should have PE" (motivation). The reliability of this instrument (Cronbach's alpha) in this survey was 0.78.

Subjective Vitality Scale. This scale has been developed by Ryan & Frederick [2]. This scale measures the energy and enthusiasm of individuals for the life enjoyment and for having better performance. Sample items include "I feel energized right now" and "At this moment, I feel alive and vital". The reliability of this instrument (Cronbach's alpha) in this survey was 0.81. The internal consistency of this scale in Ryan & Frederick research has been reported 0.96. This scale consists of 6-item survey assessing feelings of aliveness and energy on 7-point Liker-type scales.

2.3. Procedure

Permission for the study was obtained by the physical education teachers. First author attended in participants' regular classes and administered the questionnaire during in their regular classrooms. The administrator used standardized instructions. Subjects were assured about the confidentiality of their answers. The questionnaire was administrated with the absence of physical education teacher. After answering students' questions, the administrators asked the students to complete the questionnaire, and later thanked them for their participation.

3. Results

The data collected were analyzed in two parts. Firstly, descriptive statistics were computed. In addition, descriptive statistics were computed followed by t test. Table 1 presents the means and standard deviations of subjects.

Table 1. The means and standard deviations of subjects' subjective vitality scores

	Subjective Vitality		
External locus of causality	M: 3.42	S: 1.89	n : 34
Internal locus of causality	M: 5.24	S: 1.78	n : 41

A t test for independent groups indicated that participants' degree of subjective vitality significantly differed across their perceived locus of causality (Table 2).

Table 2. A t test results

	M	S	t (observed)	t (critical)	df	α
External locus of causality	3.42	1.89	4.35	2.67	73	0.01
Internal locus of causality	5.24	1.78				

T test (see table 2) indicated that participants who perceived locus of causality internally at physical education classroom reported more subjective vitality compared with participants who perceived locus of causality externally.

4. Discussion

In study we tested the hypothesis that conditions designed to foster an internal perceived locus of causality would result in greater enhancement of subjective vitality relative to conditions conducive to an external perceived locus of causality. SDT posits that the teacher motivational style (i.e., autonomy-supportive vs. controlling) could explain variance in children's motivation, well-being, vitality and performance. It was predicted that vitality would be differentially influenced by type of perceived locus of causality. Results supported the hypothesis. Results indicated that those with internally locus of causality felt more subjective vitality. Self-regulated activity can help enhance subjective vitality relative to engaging in more controlled activity, a finding important to those concerned with fostering

feelings of energy and well-being. These findings are consistent with Khalkhali & Golestaneh [18], Hollebeak, J., & Amorose, A. J. [19] and Vansteenkiste, M., Soenens, B., & Lens, W. [20].

On the basis of SDT, we reasoned that external perceived locus of causality would undermine subjective vitality by frustrating students' basic need for self-determination or autonomy, that is, their tendency to engage in a willing and volitional manner in an activity. Internal perceived locus of causality was found to promote students' subjective vitality because students regulate their participation in a more autonomous manner.

In PE, many students engage in the activities because they are told to do so by the teacher, that is, their behaviors are mostly externally regulated. As such, the onus is on the teachers to adopt appropriate motivational strategies that may enhance subjective vitality in PE. Deci and Ryan [21] recommended that to facilitate autonomous regulation, the PE teacher may provide students with the required information regarding a skill or tactic and then allowing the students choice in the way they wish to execute the task, or the scope that they like to adopt regarding the tactics and game plan.

5. Conclusion

Despite the limitations, the findings from the present study have important implications. They suggest that how students perceive locus of causality to regulate their activity participation is a predictor of their subjective vitality. Internal perceived locus of causality condition would increase subjective vitality by satisfy need to autonomous for engaging in a physical activity.

From a practical point of view, since perceived locus of causality could influences on subjective vitality, autonomy-supportive motivational style should be encouraged to promote subjective vitality in students. Autonomy-supportive motivational style may be developed by providing the students with a rationale as to the importance of physical activity, thereby fostering identification [22]. In addition, Deci and Ryan [21] highlighted that when providing the students with a meaningful rationale for the activity, that there should be some expression of empathy or acknowledgement of the students' concerns so that the students feel understood and accepted.. Use of appropriate expression of choice and support, promote class structures that are autonomy-supportive and curriculum that are interesting and relevant to the students.

Limitations and Future Research

The current study is not without its limitations. First, it was not an experimental research; we could not manipulate variables. Second, we used a single measure of subjective vitality. Hence, future research might examine whether the present findings among early adolescents could be generalized across different types of activities. Third, the cross-sectional nature of research design which only allowed for a slice-in-time study. Fourth, the role of perceived autonomy support from PE teachers tells only part of the picture in terms of the influences of innate psychological needs on pupils' motivation in PE. Hence, future research might make an experimental research and examine whether the present findings among early adolescents could be generalized across different situations. Moreover, Future studies can look at the influence of all the three innate psychological needs and/or perceived autonomy support from parents and/or peers as well.

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