STUDENTS' EVALUATION OF TEACHERS: THROUGH THE LENS OF SELF-DETERMINATION THEORY

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Summery

The purpose of this study was to examine the relationship of students' perceived value of schooling, self-determined motivation and academic performance with evaluation of teachers, on the basis of self-determination theory. The subjects were 365 Iranian college students. Questionnaires were used to assess perceived basic psychological needs satisfaction, perceived value of schooling, academic self-regulation, academic performance and evaluation of teacher. The results of regression analysis showed that the perceived basic psychological needs satisfaction and value of schooling and more self-determined forms of motivation in the classrooms predict more positive evaluation of teachers. The results also showed that academic performance couldn't predict students' evaluation of their teachers. The findings highlight the importance of value of schooling in fostering more self determined forms of motivation at university.

Key Words: evaluation of teachers; self-determination theory; value of schooling; self-determined motivation; academic performance

1. Introduction

It is well known that students' rating of instructors is perhaps the most widely used method of assessing instructor effectiveness [1, 2, 3, 4 & 5]. Student evaluations of their education have gained importance as competition to attract and keep students has become more intense among the ever-proliferating number of institutes of higher education. For the past century, students' relationship to their schools and teachers has been once of the most widespread topics of educational research. Cashin [6] cites over 1300 separate studies on student evaluations of teachers alone. Many issues concerning validity of student evaluations have been examined including bias [7], which was found to be minimally present based on the grade the student expected to receive [1, 8, 9, 10 & 11], and student characteristics (e.g., grade point average, academic ability, gender, age); which some studies found did not affect student evaluations (1, 3, 4 & 12], and some studies found did affect student evaluations [13 & 5].

Although many studies have focused on comparative relations according to group differences such as gender, socioeconomic status, type of school, and achievements [14, 15, 16 & 10], there is still little consensus as to what will help students form the most positive assessments of their classes and their instructors. Student evaluations have been the subject of much controversy concerning whether they indicate actual quality in learning and teaching, or if students favor teachers and courses with little work and easy grading [17, 18, 13 & 19].

Since students are the recipients and raters of instruction, they can provide an important, unique, and necessary perspective on judging teacher effectiveness. Student evaluations are commonly used to make decisions regarding faculty salary, awards, and promotion and tenure; therefore, it is imperative to consider all the major variables that can influence student evaluations. In light of these matter, the question then becomes: might there be a "shortlist" of common factors or causes underlying this bewildering diversity? In his comprehensive survey, Lewy [20] noted the meagerness and non-cumulative character of studies regarding the students' relation to their schools as well as the absence of a theoretical framework that would allow for interpretation of the research data. There has been little attention given to the structural nature of the evaluation [21]. In the present article, we try to use of Deci and Ryan's [22] self-determination theory as a theorietical framwork to investigation of factors or causes underlying of students evaluation of theachers.

A motivational theory that has been successfully applied in educational settings is self-determination theory (SDT, 23, 2, 24, 25 &]. Self-determination theory [22] can be used as a framework to understand the motivational influences underlying students' evaluation of their teachers. Self-determination theory, when applied to education, is about fostering in students an interest in learning, a valuing of education, and a confidence in personal capabilities. According to this theory, students become actively engaged in educational activities to the extent that classroom endeavors affirm their competencies and prove themselves to be interesting and relevant to students' lives [27].

Self-determination theory [23] distinguishes three kinds of motivation: intrinsic motivation, extrinsic motivation, and amotivation, situated along a continuum ranging from high to low selfdetermination, and which vary according to the degree of behavioral regulation. Thus, amotivation refers to the absence of the evaluation of teacher to act and this may be because the person does not feel competent, cannot see the contingencies between the behaviors performed and the expected results, or does not value the activity. Intrinsic motivation represents the highest degree of selfdetermined motivation and occurs in the situations in which individuals feel free to commit to activities they find interesting and/or fun and that offer them the chance to learn. Lastly, extrinsic motivation, in contrast, takes place when people carry out a task because they value the results associated with it (e.g., public acknowledgement, extrinsic rewards) more than the activity itself. However, within extrinsic motivation there is a continuum. External regulation is when the behavior is controlled by external conditionalities. Introjected regulation is when the external conditionalities have been internalized to some extent. Identified regulation is when the outcomes of the behavior are consciously valued by the individual. Integrated regulation is when the outcomes of the behavior are fully congruent with the individuals' other values. External and introjected regulations are relatively controlled forms of regulation, whereas identified, integrated, and intrinsic regulation are relatively autonomous forms of regulation [22].

According to the SDT [28], the transformation of external regulation into self-determined forms of regulation, as well as the stability of self-determined (intrinsic) motivation depends on three aspects [29]: The satisfaction of the basic, innate psychological needs for support of autonomy, support of competence, and social support. SDT proposes that human beings have innate psychological needs for autonomy, competence and relatedness. According to Gagne [30] people are more likely to be intrinsically motivated, doing an activity simply for the enjoyment they derive from it, when they can freely choose to pursue an activity (autonomy/choice), when they master the activity (competence) and when they feel connected and supported by significant people, such as a manager, a parent, a teacher or teammates (relatedness). Yet, the significance of the three basic needs for the explanation of action and experience can vary depending on the situation and the cultural context [22].

Intrapersonal and interpersonal contexts that support the satisfaction of these needs will promote a person's enjoyment of activities and the autonomous self-regulation of behaviors [23]. According to this theory, social contexts differ in the way communicate with peoples. Within SDT [22] these contexts are described as being controlling versus autonomy-supportive. Environments that support students' needs for competence and self-determination constitute autonomy-supportive environments, whereas those that neglect and frustrate these needs constitute controlling environments.

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 [22].

When students have autonomy supportive teachers [31 & 32] or when students perceive their teachers to be relatively autonomy supportive [33 & 25], students report relatively high levels of

self-determination [24], competence [26], and valuing of school [26 & 27]. Autonomy-supportive teachers are able to facilitate these positive educational and developmental outcomes in their students because they find ways to involve and satisfy their students' psychological needs (for autonomy, competence, and relatedness) during instruction [27].

These motivational resources, when supported and nurtured in the classroom, provide students with the motivational foundation they need to value their teacher positively [2]. The degree to which needs to autonomy, competence, and relatedness are satisfied by teachers influences on students' self-determined motivationthat show the perceived loci of causality of individuals' behavioral goals and reflect qualitatively different reasons for the behavior chosen. Controlling environments produce an external locus of causality, 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 [34]. Assessing each behavioral regulation separately may provide further insight into how adolescents differ in their motivational profiles [35 & 36].

A large number of studies have yielded that the self-determined types of motivation (intrinsic motivation and identified regulation) were associated with positive outcomes in academic settings, such as higher concentration in the class [37] and effort [38], the evaluation of teachers for high school attendance [33]. More autonomous regulation has been found to positively predict sustained participation (e.g. 39, 40 & 41]. These results show that the students' self-determination for school attendance and valuing of school is associated with positive outcomes. So the examination of Iranian students' self-determination in classroom and its impact on their evaluation of teacher for school attendance it is of great interest.

The purpose of this study was to examine the relationships between students' perceived value of schooling, self-determined motivation and school performance with their evaluation of their teachers. Based on the SDT framework, we hypothesized that: a) perceived value of schooling predicts students' positive evaluation of teachers, b) self-determined motivation predicts students' positive evaluation of teacher, and d) perceived value of schooling, self-determined motivation, and academic performance predict students' positive evaluation of teacher.

2. Method

2.1. Participants

As students' perceived value of schooling, self-determined motivation and academic performance was used to predict students' evaluation of their teachers, a correlational research used. The initial student sample contained 392 Iranian colleg students. Students who did not complete the entire questionnaire were excluded from the analyses. Hence, all analyses were based on a final sample of 365 students (age: M = 20.31, SD = 2.3, range =18–25 years).

2.2. Measures

Firstly, all measures were translated into Farsi and Cronbach's alpha coefficients were calculated to assess their internal reliability. Questionnaires were anonymous and contain no demographic data on the students. Therefore, results can only be evaluated as a whole. Differences in evaluation of the school along gender, ethnic, religious or socioeconomic lines cannot be evaluated.

Perceived value of schooling. In order to assessing the school perceived value, we used of three-item scale of Deci and Ryan [42]. These items are "most of the things I learn in a school have a value", "I valued activities and related work to the school", and "it is completely clear that what I learn in school, how much are valuable and applicable for my future". Deci and Ryan [42] reported the reliability of this scale 0.80 ($\alpha = .80$). The calculated coefficient alpha for this scale in this study is 0.82($\alpha = .82$). Alphas in this study were $\alpha = .82$.

self-determined motivation. Students reported their motivational regulations using Perceived Locus of Causality scale (PLOC), a questionnaire developed by Goudas, Biddle, & Fox [43]. The questionnaire begins with the stem, "The reason I go to this class is . . . ," and provides a list of 16 different reasons to go to school, each with its own 1–7 response scale. Each motivational regulation contained four items. Subscales in the questionnaire were intrinsic motivation (e.g., "Because I enjoy learning new things"),

identified regulation (e.g., "Because I think that this class will help me better prepare for the career I have chosen"), introjected regulation (e.g., "To show myself that I am an intelligent person"), external regulation (e.g., "Because I need to find a high-paying job later on"), and amotivation (e.g., "I can't see why I go to this class and frankly I couldn't care less"). Again, previous research has demonstrated the internal consistency of the five subscales (e.g.,44). In the present study the Cronbach's alpha coefficients were $\alpha = .85$ (external regulation), $\alpha = .76$ (introjected regulation), $\alpha = .73$ (identified regulation), $\alpha = .83$ (intrinsic motivation), and $\alpha = .81$ (amotivation).

Academic performance. Students were asked to complete three items that measured their anticipated academic performance ($\alpha = .79$): "In terms of academic performance, I expect to do well," "In terms of academic performance, I expect to do better than most of my classmates," and "My expectancies for career success are very, very high."

Teacher evaluation. Islamic azad university teacher standard evaluation sheet which students complete that at the end of each course was used to assess students evaluations of their teachers.

2.3. Procedure

The questionnaires were administrated in the aoutumn, permission for the study was obtained by the teachers and students. Author administered the questionnaire during students' regular class periods and in their regular classrooms. The administrators used standardized instructions, and explained that the purpose of the study was "to understand students' perspectives on school." Subjects were assured about the confidentially of their answers. Questionnaires were administrated with the absence of teacher. Only, participants who were volunteer completed questionnaires.

3. Results:

Two parts of data analysis were performed on this data set. Firstly, descriptive statistics were computed. In addition, analysis of regression was computed followed by descriptive statistics. Each enables us to examine different aspects of the data and together present us with a rich and complex view of how students at the college evaluated their educational experience.

Table 1. The means and standard deviations of the variabales

Scales	Samples	M	SD
Perceived value of schooling	365	15.9	3.66
Self-determined motivation	365	54.1	7.92
Academic performance	365	3.4	1.25
Teacher evaluation	365	74.1	7.80

Table 2 presents the correlations matrix among the perceived value of schooling, self-determined motivation, academic performance and evaluation of teacher.

Table 2. Correlation between perceived value of schooling, self-determined motivation, academic performance and evaluation of teacher

	1	2	3	4
Perceived value of schooling (1)	1	0.318**	0.185*	0.226*
Self-determined motivation (2)		1	0.269**	0.536**
Academic performance (3)			1	0.046
Evaluation of teacher (4)				1

^{**}P< 001

As table 2 shows, the positive correlation was observed among perceived value of schooling and self-determined motivation to evaluation of teacher, and positive correlation, but not significant, was observed between academic performance and evaluation of teacher.. For verification of multiple correlation between predictor (independent) variables and dependent variable, a statistical multiple regression methods has been used in survey.

^{*}P<.005

Table 3. Square value of coefficient of multiple correlation for predictor variables

R	R^2	Adjusted R ²	Standard Error of the Estimate
0.541	0.292	0.263	3.57

As can be seen in above table, predictor variables were accounting for an additional 0.263 of e variance of evaluation of teacher.

Table 4. Sum of square analysis and results

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Source	SS	MS	df	F	Sig
Regression	826.639	275.546	3	24.096	0.000
Resident	4128.251	11.435	361		

The F value was significant, F (3, 361) = 24.096, p<0.000. It shows predictor (independent) variables can predict variance of dependent variable significantly.

Table 5. Coefficients of regression equations based on perceived value of schooling, self-determined motivation, academic performance and evaluation of teacher

	Un-standardized		Standardized			
Variables	Coefficient		Coefficient Coefficient		t	Sig
	β	SE β	β			
Perceived value of schooling	0.215	0.055	0.379	4.35	0.000	
Self-determined motivation	0.302	0.074	0.430	6.648	0.000	
Academic performance	0.021	0.012	0.082	0.054	0.208	
Constant	13.86	0.62	-	22.34	0.000	

Table 5 shows self-determined motivation is strongest predictor of evaluation of teacher. In the second, perceived value of schooling is positively strongest predictor of evaluation of teacher. Academic performance has not shown significant correlation, with evaluation of teacher.

4. Discussion

Autonomy-supportive teachers are able to facilitate these positive educational and developmental outcomes in their students because they find ways to involve and satisfy their students' psychological needs (for autonomy, competence, and relatedness) during instruction [27]. According to SDT, students' perceptions of self-determination and competence constitute students' internal motivational resources that support their engagement and persistence in school. when students have autonomy supportive teachers or when students perceive their teachers to be relatively autonomy supportive students report relatively high levels of self-determination, competence and valuing of school. Teachers play important role in helping students develop these supportive environments through the provision of academic activities which are interesting for students, relevant to their lives, and affirm their competencies. In this study, we tested the hypothesis that perceived value of schooling, self-determined motivation, and academic performance would have positive relationship with evaluation of teachers.

Results supported the hypothesis. We found that when students value schooloing and perceived that needs for self-determination are being satisfied, and then they become vulnerable to begin formulating positive evaluation of their teachers. Students' perception of classroom as autonomy supportive climate and school value predict their evaluation of their teachers. Self-regulated motivation can help predict evaluation of teacher positively. These findings are consistent with previous research [2 & 27]. However, academic performance was shown no significant relationship with evaluation of teacher. On the basis of SDT, we reasoned that more self-determined forms of self-determined motivationwould predict evaluation of teacher positively by reducing an external perceived locus of

causality for engaging in school, which can satisfy their needs for self-determination and autonomy. In contrast, when students feel less self-determined in classroom, that is, pressured to participate in instructional activities (external and introjected regulations) or feel that instructional activities are a waste of their time (amotivation), they are more likely to adopt negative evaluation of their teachers.

In classroom, the onus is on the teachers to adopt appropriate motivational strategies that may improve value of schooling and enhance more self-determined forms of behavioral regulations. The implication here for teachers, the importance of being autonomy-supportive in order to foster more self-determined forms of behavioral regulations and value to school . According to Ryan and Deci [23] experience of autonomy facilitates internalization.

Contrary to the our predictions, an insignificant relation between academic performance and students' evaluation of teachers emerged. Providing an explanation on bases SDT for this finding is difficult. As a possible explanation, academic performance comes from learning styles and cognitive strategies, that university students have acquired during their academic years. But evaluation of teachers mostly shows students-teacher emotional and motivational relationship, and teacher motivational ways to motive students for academic activity looks more important factor in teacher evaluation.

5. Conclusion

According to the findings, students' perception of need for self-determination and perceived value of schooling is a strong predictor of their evaluation of teachers. This finding is important because it shows that evaluation of teachers is also a motivation issue. Perceived self-determination and perceived value of schooling accounted for 29% of the variance in evaluation of teachers, which show substantial portion of evaluation of teachers also arise from motivational resources. This findings are particularly important considering the significant role of teachers in promoting motivational resources and how this can in turn positive evaluation of teacher.

From an applied perspective, our findings insist on motivational intervention strategy to enhance positive evaluation of teacher. When teachers provide their students with autonomy-supportive environments and affirm their competencies, they provide a classroom climate which nurtures students' perceptions of competence and more self-determined forms of self-determined motivationthat in turn reduce negative evaluation of teacher and university. Nevertheless, these motivational resources should be encouraged to promote positive evaluation. Teachers must find ways to support students' interests, connect lessons to students' lives, and affirm students' competencies. In practice, doing so means providing opportunities for choice (e.g., offer a wide variety of relevant activities, with rationales for doing them), provide increased opportunities for student input (e.g., allowing students to play different roles in the lesson, and making decisions with regard to how they want to carry out the activities), respect students' agendas, and empathize and acknowledge the students' concerns, feelings and questions.

Limitations and Future Research. The current study is not without its limitations. First, we conducted a cross-sectional research and the cross-sectional nature of research design which only allowed for a slice-in-time study, but as getting perception of self-determination and perceived value of schooling takes time and formulating an positive evaluation of teacher occur over time, it would be better use a longitudinal research design. Second, we used a single measure of evaluation of teacher. That is, we did not assess students' actual evaluation behaviors. Third, we didn't study three needs of innate psychological needs (need for autonomy, competence and relatedness). Hence, future research might use a longitudinal research design, and assess students' actual evaluation behaviors. Future research might study students' perceptions of school climate, parents and school administrators and also examine relationship between all innate psychological needs and evaluation of teacher.

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References:

- 1. Centra, J. & Gaubatz, N. (2000) Is there gender bias in student evaluations of teaching? *Journal of Higher Education*, 71(1), 17–33.
- 2. Filak, V,. Sheldon, K. (2003). Student psychological need satisfaction and college teacher-course evaluations. *Educational Psychology*, 23, 3, 236-247.
- 3. Beran, T.N., and J.L. Rokosh (2009). The Consequential Validity of Student Ratings: What Do Instructors Really Think? *Alberta Journal of Educational Research* 55(4): 497-511.
- 4. Madden, T.J., Dillon, W.R., & Leak, R. L. (2010). Students' Evaluation of teaching: Concerns of Item Diagnosticity. *Journal of Marketing Education*, 32, 264-274.
- 5. Sproula, R., & Valsan, C. (2009). The student evaluation of teaching: Its failure as a research program, and as an administrative guide. *Economic Inferences*, 11, 125-150.
- 6. Cashin, W. E. (1988). *Student ratings of teaching: a summary of the research* (Manhattan, KS, Kansas State University Center for Faculty Evaluation and Development).
- 7. Marsh, H. W. (1987). Students' evaluations of university teaching: research findings, methodological issues, and directions for future research. *International Journal of Educational Research*, 11, 253–388.
- 8. Mukherji, S., & N. Rustagi. (2008). Teaching Evaluations: Perceptions of Students and Faculty. *Journal of College Teaching & Learning* 5(9): 45-54.
- 9. Parpala, A., S. Lindblom Yläänne and H. Rytköönen (2011): Students Conceptions of Good Teaching in Three Different Disciplines. *Assessment & Evaluation in Higher Education* 36(5): 549-563.
- 10. Remedios, R., and D. A. Lieberman. (2008). I Liked Your Course Because You Taught Me Well: The Influence of Grades, Workload, Expectations and Goals on Students' Evaluations of Teaching. *British Educational Research Journal* 34: 91-115
- 11. Kherfi, S. (2011). Whose Opinion Is It Anyway? Determinants of Participation in Student Evaluation of Teaching. *Journal of Economic Education* 42(1): 19-30.
- 12. McPherson, M. A., R. T. Jewell and M. Kim. (2009). What Determines Student Evaluation Scores? A Random Effects Analysis of Undergraduate Economics Classes. *Eastern Economic Journal* 35: 37–51.
- 13. Pounder, J.S. (2007). Is student evaluation of teaching worthwhile? An analytical framework for answering the question. *Quality Assurance in Education*, 15, 178 191.
- 14. Radmacher, S. & Martin, D. (2001). Identifying significant predictors of students evaluations of faculty through hierarchical regression analysis. *Journal of Psychology*, 135(3), 259–269.
- 15. Schmidt, R. (2003). Comparing the student evaluation of 60 rural and urban type high schools in Southern California. *Education*, 123(3), 450.
- 16. Beran, T., and C. Violato (2009). Student Ratings of Teaching Effectiveness: Student Engagement and Course Characteristics. *The Canadian Journal of Higher Education*, 39:1-13.
- 17. Marsh, H. W. & Roche, L. A. (2000). Effects of grading leniency and low workloads on students' evaluations of teaching: popular myth, bias, validity or innocent bystanders? *Journal of Educational Psychology*, 92, 202–228.
- 18. Johnson, V. E. (2003). Grade inflation: a crisis in college education. New York, Springer Verlag. personality and attitudinal characteristics: A review and synthesis. *Research in Higher Education*, 24, 139-173.
- 19. Carrell, S.E., & West, J.E. (2010). Does professor quality matter? Evidence from random assignment of students to professors. *Journal of Political Economy*, 118, 409-432.
- 20. Lewy, S. (1985). *Lawful roles of facets in social theories*, in: D. Canter (Ed.) Facet theory: approaches to social research (New York, Springer Verlag), 59–96.
- 21. Cohen, E, H. (2005). Student evaluations of course and teacher: factor analysis and SSA approaches. Assessment & *Evaluation in Higher Education* Vol. 30, No. 2, April 2005, pp. 123–136

- 22. Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227–268.
- 23. Ryan, R. M., & Deci, E. L. (2000). Overview of self-determination theory: An organismic dialectical perspective. In E. L. Deci & R. M. Ryan (Eds.), Handbook of self-determination research (pp. 3–33). Rochester, NY: University of Rochester.
- 24. Khalkhali, Vali & Golestaneh, Seiyed Moosa. (2011). Examining the impact of teacher' motivational style and competition on students' subjective vitality in physical education. *GESJ: Education Science and Psychology* 2011 | No.1(18)
- 25. Khalkhali, Vali (2012). Behavioral Regulations: What is Physical Education Role in Students' Physically Active Lifestyle? *International Online Journal of Educational Sciences*, 2012, 4(2), 265-272.
- 26. Khalkhali, Vali, Sharifi, Rouhollah & Nikyar, Ali (20133). Students' Intentions to Persist in, Versus Dropout of High School: What Self-determined Motivation Tells Us about It? *International Online Journal of Educational Sciences*, 2013, 5 (2), 282-290
- 27. Hardre, P. L., & Reeve, J. (2003). A motivational model of rural students' intentions to persist in, versus drop out of, high school. Journal of Educational Psychology, 95, 347–356. Kaplan, M., Mets, L. & Cook, C. (2002). Questions frequently asked about student ratings forms: summary of research findings. Ann Arbor, MI, University of Michigan, Center for Research on Learning and Teaching.
- 28. Deci, E. L., & Ryan, R. M. (2002). *Handbook of self-determination research*. In E. L. Deci, & R. M. Ryan (Eds.), *Overview of self-determination theory: An organismic dialectical perspective* (pp. 3–33). Rochester, NY: The University of Rochester Press.
- 29. Black, A. E., & Deci, E. L. (2000). The effects of instructors' autonomy support and students' autonomous motivation on learning organic chemistry: A self-determination theory perspective. *Science Education*, 84, 740 756.
- 30. Gagne, M. (2003). The role of support and autonomy orientation in prosocial behavior engagement. *Motivation and Emotion*, 27, 199–223.
- 31. Vansteenkiste, M., Simons, J., Lens, W., Soenens, B., & Matos, L. (2005). Examining the motivational impact of intrinsic versus extrinsic goal framing and autonomy-supportive versus internally controlling communication style up on early adolescents academic achievement. *Child Development*, 76,483501.
- 32. Khalkhali, Vali, Golestaneh, Seiyed Moosa (2011). The impact of teacher' motivationalstyle and competition result on students' subjective vitality and happiness in physical education. *Procedia Social and Behavioral Sciences*, 15 (2011) 2989–2995.
- 33. Lim, B. S. & Wang, C. K. (2009). Perceived autonomy support, behavioural regulations in physical education and physical activity intention. *Psychology of Sport and Exercise 10*, 52–60
- 34. Chatzisarantis, N. L. D., Hagger, M. S., Biddle, S. J. H., Smith, B., & Wang, J. C. K. (2003). A metaanalysis of perceived locus of causality in exercise, sport, and physical education contexts. *Journal of Sport and Exercise Psychology*, 25, 284–306.
- 35. Wang, C. K. J., & Biddle, S. J. H. (2001). Young people's motivational profiles in physical activity: a cluster analysis. *Journal of Sport and Exercise Psychology*, 23, 1–22.
- 36. Wang, C. K. J., Chatzisarantis, N. L. D., Spray, C. M., & Biddle, S. J. H. (2002). Achievement goal profiles in school physical education: differences in self-determination, sport ability beliefs, and physical activity. *British Journal of Educational Psychology*, 72, 433–445.
- 37. Standage, M., Duda, J. L., & Ntoumanis, N. (2003). A model of contextual motivation in physical education: using constructs from self-determination and achievement goal theories to predict physical activity intentions. *Journal of Educational Psychology*, 95, 97–110.
- 38. Ntoumanis, N. (2001). A self-determination approach to the understanding of motivation in physical education. *British Journal of Educational Psychology*, 71, 225–242.
- 39. Daley, A.J., & Duda, J.L. (2006). Self-determination, stage of readiness for exercise, and frequency of physical activity in young people. *European Journal of Sport Science*, 6, 231–243.
- 40. Fortier, M.S., Sweet, S.N., O'Sullivan, T.L., & Williams, G.C. (2007). A self-determination process model of physical activity adoption in the context of a randomized controlled trial. *Psychology of Sport and Exercise*, 8, 741–757.

ISSN 1512-1801

- 41. Hagger, M.S., & Chatzisarantis, N.L.D. (2009). Integrating the theory of planned behavior and self-determination theory in health behavior: A meta-analysis. *British Journal of Health Psychology*, 14, 275–302.
- 42. Deci, E. L., & Ryan, R. M. (1991). *A motivational approach to self: Integration in personality*. In R. Dienstbier (Ed.), Nebraskasym-posium on motivation: Vol. 38. Perspectives on motivation (pp. 237–288). Lincoln: University of Nebraska Press.
- 43. Goudas, M., Biddle, S. J. H., & Fox, K. R. (1994). Perceived locus of causality, goal orientations, and perceived competence in school physical education classes. *British Journal of Educational Psychology*, 64, 453–463.

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