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Based on the hierarchical model of intrinsic and extrinsic motivation (Vallerand, 1997), the purpose of the present research was to propose and test a model that posits that individuals' perceptions of autonomy support from their supervisor in an activity (e.g., coach, teacher) and their global autonomous motivation jointly promote their autonomous (contextual) motivation toward the activity. In turn, contextual autonomous motivation positively predicts interest in the activity, whereas it negatively predicts intentions to drop out of the activity. In Study 1, the model was tested with a sample of 206 competitive athletes registered in the French Skiing Federation. In Study 2, a short longitudinal design was used, and the sample was composed of 206 French high school students (128 female, 78 male). Results from structural equation modeling analyses supported the hypothesized model. These results provided support for the hierarchical model of intrinsic and extrinsic motivation (Vallerand, 1997). The implications of the findings and future research avenues are discussed in light of the hierarchical model and self-determination theory.

Over the past 30 years, much support has been garnered for the psychological processes proposed by self-determination theory (SDT; Deci & Ryan, 1985) in order to explain motivation and outcomes in a wide range of contexts including education, work, and sport. Grounded in this framework, numerous studies have shown that supervisors' behaviors have a significant influence on subordinates' motivation (for a review, see Guay, Ratelle, & Chantal, 2008) and that motivation is

significantly linked to various cognitive, affective, and behavioral outcomes (e.g., Gillet, Berjot, & Gobancé, 2009; Stephan, Fouquereau, & Fernandez, 2008).

In the present research, we focused on the role of supervisors' autonomy-supportive behaviors and subordinates' motivation in the prediction of interest and intentions to drop out and tested a hypothesized model based on the motivational sequence described by Vallerand (1997) in his hierarchical model of intrinsic and extrinsic motivation (HMIEM). We tested the proposed model in two different real-life settings among competitive athletes (Study 1) and high school students

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(Study 2) using two different methodologies (i.e., cross-sectional and longitudinal designs).

THE HIERARCHICAL MODEL OF INTRINSIC AND EXTRINSIC MOTIVATION

Based on SDT (Deci & Ryan, 1985), Vallerand (1997, 2007) posited that a complete analysis of a full range of motivational processes should include three forms of motivation, namely, intrinsic motivation, extrinsic motivation, and amotivation. Intrinsic motivation pertains to a behavior that is engaged in out of pleasure. By contrast, someone who is extrinsically motivated takes part in activities for instrumental reasons (e.g., gaining fame and rewards, avoiding punishments). Finally, amotivation refers to a relative absence of motivation. According to Deci and Ryan (1985), these three forms of motivational self-regulations can be situated along a continuum ranging from high to low levels of self-determination. Intrinsic motivation is the most self-determined (or autonomous) style of motivation, whereas amotivation is the least autonomous regulation embraced by SDT. Four different types of extrinsic motivation are situated between intrinsic motivation and amotivation on the self-determination continuum. External and introjected regulations are non-self-determined (or controlled) forms of motivation, whereas identified and integrated regulations are autonomous forms of motivation.

Another postulate of the HMIEM is that intrinsic motivation, extrinsic motivation, and amotivation exist at three levels of generality: global, contextual, and situational. Motivation at the global level is similar to a personality trait and refers to a general motivational orientation. Contextual motivation refers to an individual's motivation in a specific context (e.g., sport, education, work). Finally, situational motivation refers to the motivation individuals experience in a specific activity at a particular point in time.

Motivational Determinants

The HMIEM (Vallerand, 1997) also posits that motivation at any level can result from both social factors and top-down effects from motivation at the higher proximal level. First, it is postulated that autonomous forms of motivation should be enhanced by autonomy-supportive contexts. Among all these social factors, autonomy support from teachers or coaches constitutes a key variable in the SDT framework (Deci & Ryan, 1987). Supervisors are said to be autonomy supportive when they take individuals' perspective and provide opportunities for choice and participation in the decision-making process while minimizing the use of pressure (see Mageau & Vallerand, 2003; Reeve, 2002). Some studies in sport (e.g., Gillet, Vallerand, Paty,

Gobancé, & Berjot, 2010; Smith, Ntoumanis, & Duda, 2007) and in education (e.g., Reeve, 2006; Sierens, Vansteenkiste, Goossens, Soenens, & Dochy, 2009) have confirmed that coach and teacher autonomy support has a positive influence on autonomous motivation.

The HMIEM also posits that contextual motivation results from intrapersonal factors such as top-down effects from motivation at the proximal level higher up in the hierarchy (i.e., global motivation). Research has supported this top-down effect in sport (Blanchard, Mask, Vallerand, de la Sablonnière, & Provencher, 2007; Gillet, Vallerand, Amoura, & Baldes, 2010), exercise (Lavigne et al., Angot, 2009, Study 1), and education (Lavigne et al., 2009, Study 2; Lavigne & Vallerand, 2010) from the contextual to the situational levels. However, the impact of global motivation on contextual motivation has received little empirical attention (e.g., Guay, Mageau, & Vallerand, 2003), and little research has looked at the top-down effects between global and contextual motivation in either the sport or educational domain (see Guay et al., 2003, for an exception in education).

Black and Deci (2000) have assessed both intrapersonal (i.e., global motivation) and social (i.e., instructors' autonomy support) determinants of contextual motivation (i.e., students' motivation for learning organic chemistry). However, these authors have not examined the combined effects of global motivation and autonomy support on contextual motivation. To date, there has been a lack of studies exploring this joint influence, and one of the purposes of the present research was thus to look at the combined role of contextual factors and global motivation in the prediction of contextual motivation.

Motivational Consequences

A final point of interest of the HMIEM (Vallerand, 1997) is that consequences are hypothesized to be decreasingly favorable from autonomous motivation to controlled forms of motivation and amotivation, at the three levels of the hierarchy. Numerous studies have confirmed that higher levels of autonomous motivation result in more favorable outcomes (for reviews in education and sport, see Niemiec & Ryan, 2009; Vallerand, 2007). For instance, in a study with collegiate basketball players, Blanchard and her colleagues (2007, Study 2) showed that autonomous motivation toward basketball was positively related to interest in the sport activity. Results from a prospective study conducted by Sarrazin, Vallerand, Guillet, Pelletier, and Cury (2002) with French handball women also revealed that the more autonomous the athletes' handball motivation, the lower their intentions to drop out from the activity. Other investigations in sport and education have shown that autonomous motivation was positively related to interest (e.g., Goudas, Biddle, & Fox, 1994; Guay, Vallerand, & Blanchard, 2000) and

negatively associated with dropout intentions (e.g., Otis, Grouzet, & Pelletier, 2005; Vallerand, Fortier, & Guay, 1997).

THE PRESENT RESEARCH

The main purpose of the present research was to conduct two studies, using both cross-sectional (Study 1) and longitudinal (Study 2) designs, to test an integrative model dealing with how supervisors' autonomy support and individuals' global motivation may influence contextual motivation that, in turn, predicts interest and intentions to drop out of the activity. Specifically, based on the HMIEM (Vallerand, 1997) and past studies just described, we investigated in Study 1 how athletes' global autonomous motivation and perceptions of autonomy support from their coach predicted their contextual autonomous motivation toward their sport activity. In addition, we looked at the role of autonomous motivation in sport as a predictor of interest and intentions to drop out of sport activity. To enhance the validity and generalization of the hypothesized model, Study 2 sought to replicate the results of Study 1 in another setting (i.e., the education domain). Although these two contexts are similar in that they represent two achievement domains wherein learning is strongly emphasized, they nevertheless differ in at least one important way. Specifically, although sport is voluntary in nature, school is compulsory at least until 16 years of age. Thus, replicating the results of Study 1 in the education context would provide important evidence for the validity of the proposed model. Furthermore, Study 2 improved upon Study 1 by using a longitudinal design and including control variables to look more closely at changes in outcomes.

Although past research has looked at the determinants of interest and dropout intentions, global and contextual motivation as well as contextual interpersonal determinants (e.g., coach autonomy support) and outcomes (e.g., interest, intentions to drop out) have not been assessed in the same study. Thus, although a number of prior investigations have empirically demonstrated the validity of some of the paths of the hypothesized model (e.g., Blanchard et al., 2007; see Vallerand, 2007), no research to date has tested the overall model. We thus believe that the present research should allow us to test several postulates of the HMIEM and could lead to important theoretical and applied benefits for real-life settings.

STUDY 1

The purpose of Study 1 was to test a model that incorporates athletes' perceptions of coach autonomy support,

global and contextual motivation, and two outcomes (i.e., interest and intentions to drop out). First, it was hypothesized that athletes' perceptions of coach autonomy support should positively predict their autonomous sport motivation (i.e., contextual level). Second, based on the top-down effect (Vallerand, 1997), athletes' autonomous global motivation should have a positive impact on their autonomous contextual motivation. Finally, athletes' contextual autonomous motivation should be linked positively to interest, and negatively to intentions to drop out.

Method

Participants

Participants were 206 French competitive athletes (70 female, 136 male) registered in the French Skiing Federation and represented a variety of sports (e.g., alpine skiing, cross-country skiing, freestyle skiing, biathlon, ski jumping). The mean age for these participants was 31.11 years ($SD = 12.74$) and the average number of years of participation in their respective sport was 18.75 years ($SD = 11.81$).

Procedure

This study was conducted in collaboration with the French Skiing Federation (around 130,000 athletes registered in this Federation) in order to better understand the determinants and outcomes associated with sport motivation. A call for voluntary participation was posted on the official website of the French Skiing Federation, and an electronic message was sent to competitive athletes registered in the Federation at the end of a competitive season. After obtaining their informed consent, participants were asked to complete a questionnaire via an online survey. They were informed that there were no right or wrong answers and that their answers would be kept confidential. IP addresses were checked to detect potential duplicate responders, and no such duplicates were identified. Participation was voluntary, and no incentive was offered for athletes to take part in the present study. Each participant took 15 to 20 min to complete the questionnaire.

Measures

Global motivation. Athletes' motivation at the global level was evaluated using the French version of the Global Motivation Scale (Guay, Blais, Vallerand, & Pelletier, 1999; Guay et al., 2003). This questionnaire contains 28 items that assess the constructs of intrinsic motivation, identified regulation, introjected regulation, external regulation, and amotivation toward life in general (e.g., "In general, I do things in order to feel pleasant

emotions,” intrinsic motivation; “In general, I do things because otherwise I would feel guilty for not doing them,” introjected regulation). All items are measured on a 7-point Likert scale ranging from 1 (*does not correspond at all*) to 7 (*corresponds exactly*). Results from past studies confirmed the factor structure of the scale and revealed an adequate level of internal consistency as well as satisfactory test–retest reliability (e.g., Guay et al., 1999; Guay et al., 2003). The different subscales were combined into a composite index of self-determined motivation (e.g., Grolnick & Ryan, 1987; Ryan & Connell, 1989), which reflects the extent to which athletes’ motivation is more or less self-determined. Weights are given to the motivational items according to their respective placement on the self-determination continuum (Deci & Ryan, 1985). Specifically, the self-determination index ($\alpha = .82$) was created by multiplying each intrinsic motivation item by a weight of +2 and then summing all items, each identified regulation item by +1, each introjected and external regulations item by –1 (divided by 2), and each amotivation item by –2. Thus, the higher the self-determination index, the higher one’s global autonomous motivation.

Perceived coach autonomy support. Athletes’ perceptions of coach autonomy support were assessed using the Perceived Autonomy Support Scale for Sport Settings (Gillet, Vallerand, Paty, et al., 2010). This questionnaire is a 12-item self-report measure assessing the extent to which athletes perceive their coach to be autonomy-supportive (e.g., “I feel that my coach provides me with choices, options, and opportunities regarding how to do this sport activity”; “I feel I am able to share my experiences in this sport activity with my coach”). Answers are given on a 7-point Likert scale anchored by 1 (*strongly disagree*) and 7 (*strongly agree*). Results from two studies conducted by Gillet, Vallerand, Paty, et al. (2010) with competitive athletes showed that this scale constitutes a valid and reliable tool to assess perceived autonomy support from the coach. Specifically, support for a unidimensional structure was obtained through factor analyses. Convergent validity of the instrument was obtained through significant and positive

correlations with autonomous motivation. Finally, the temporal stability of the scale was found to be adequate (see Gillet, Vallerand, Amoura, et al., 2010; Gillet, Vallerand, Paty, et al., 2010). In the present study, internal consistency of the scale was satisfactory ($\alpha = .87$).

Contextual motivation. Athletes’ contextual motivation toward sport was assessed with the French version of the Sport Motivation Scale (SMS; Brière, Vallerand, Blais, & Pelletier, 1995). Participants were asked, “Why do you practice your sport?” and then asked to respond to each of the 28 items (e.g., “For the pleasure I feel in living exciting experiences”; “To show others how good I am good at my sport”) on a 7-point Likert scale with anchors ranging from 1 (*does not correspond at all*) to 7 (*corresponds completely*). Like the Global Motivation Scale (Guay et al., 2003), this questionnaire measures intrinsic motivation, identified regulation, introjected regulation, external regulation, and amotivation. Thus, a contextual self-determined motivation index ($\alpha = .84$) was constructed similarly to the global self-determined motivation index. The SMS has been found to be reliable and valid (for a review, see Pelletier & Sarrazin, 2007).

Motivational outcomes. Interest and intentions to drop out of sport were measured with 7-point Likert scales. Two items were used to assess interest (“I am often bored when practicing my sport,” “I usually find my sport activity very boring,” reversed). Intentions to drop out were also measured with two items (“I often intend to drop out from my sport,” “I am determined to continue participating in my sport,” reversed). The correlations among the two items of each subscale were .44 and .51 for interest and intentions to drop out, respectively.

Results and Discussion

The proposed model was tested in a path analysis using LISREL 8.80 with maximum likelihood estimation. It was composed of two exogenous variables (i.e., global autonomous motivation and coach autonomy support) and three endogenous variables (i.e., contextual

TABLE 1
Means, Standard Deviations, and Correlations Among the Variables (Study 1)

Variables	Range	M	SD	1	2	3	4	5
1. Perceived coach autonomy support	1 to 7	5.29	1.31	—				
2. Global autonomous motivation	–18 to 18	8.56	3.75	.17*	—			
3. Contextual autonomous motivation	–18 to 18	8.53	3.33	.44**	.48**	—		
4. Interest (Log)	0 to 1.95	1.91	0.08	.18*	.28**	.43**	—	
5. Intentions to drop out (Log)	0 to 1.95	0.36	0.43	–.23*	–.28**	–.59**	–.47**	—

* $p < .05$. ** $p < .001$.

autonomous motivation, interest, and intentions to drop out). Because the distribution of the interest and intentions to drop out measures was skewed, a logarithmic transformation was applied (Hair, Anderson, Tatham, & Black, 1998). Table 1 presents the correlation matrix with means and standard deviations involving all five variables. Paths were specified according to hypotheses derived from the HMIEM (Vallerand, 1997). In addition, an error covariance was added between the scores of interest and intentions to drop out because an athlete who experience interest in an activity is less likely to have intentions to drop out from this activity (see Sarrazin et al., 2002). All paths were significant and the model showed good fit indices. The chi-square value was not significant, $\chi^2(5, N = 206) = 2.10, p = .83$, and the other fit indices were satisfactory: comparative fit index (CFI) = 1.00, incremental fit index (IFI) = 1.00, goodness of fit index (GFI) = 1.00, standardized root mean square residual (SRMR) = .02, and root mean square error of approximation (RMSEA) = .00.

As shown in Figure 1, the path between global autonomous motivation and autonomous motivation at the contextual level ($\gamma = .42$), and that between coach autonomy support and autonomous contextual motivation ($\gamma = .37$) were significant and positive. Contextual autonomous motivation positively predicted interest ($\beta = .43$), whereas intentions to drop out were negatively predicted by autonomous motivation at the contextual level ($\beta = -.59$).

Overall, the results of Study 1 provided support for the proposed model and thus yielded additional support for the HMIEM. First, the present results revealed that both the top-down effect (from global motivation to contextual motivation) and the predictive role of contextual factors (from the coach's autonomy support to contextual motivation) were found to predict contextual motivation. Second, interest in the sport activity was significantly and positively predicted by athletes' autonomous contextual motivation, whereas intentions to

drop out of sport were negatively predicted by autonomous contextual motivation. Thus, overall, as predicted by the HMIEM and in line with SDT, the more autonomous the motivation, the more positive the outcomes.

STUDY 2

Results from Study 1 provided support for the hypothesized model. However, a cross-sectional design was used. Clearly a longitudinal design would be necessary to more clearly test whether the proposed model can account for changes in outcome variables. In addition, a time interval between the social and personal (global motivation) factors and contextual motivation would provide additional support for the role of these factors as determinants of contextual motivation. Finally, the validity and generalization of the proposed model would be enhanced if it could be shown to be applicable to settings other than sport. The purpose of Study 2 was thus to replicate the results of Study 1 in another achievement context, namely, education, using a longitudinal design. Specifically, student's global motivation and perceptions of teacher autonomy support as well as their interest in school and intentions to drop out of school were assessed at Time 1. At Time 2 (i.e., 6 months later), we measured students' contextual motivation as well as their interest and intentions to drop out. It was hypothesized that students' global autonomous motivation and perceptions of autonomy support at Time 1 would predict their contextual autonomous motivation 6 months later. In addition, it was hypothesized that contextual autonomous motivation would be positively related to interest, and negatively to intentions to drop out at Time 2, even if we controlled for the effects of prior interest and intentions to drop out at Time 1.

Method

Participants and Procedure

To ensure anonymity and confidentiality of participants' answers, Time 1 and Time 2 cases were matched on the basis of class identification and date of birth. Because not all students were present during data collection on the two occasions and not all participants provided proper dates of birth, many cases could not be matched. At Time 1 (6–8 weeks into the academic year), a research assistant administered the questionnaires (i.e., global motivation, perceptions of teacher autonomy support, interest, and intentions to drop out) to 265 high school students (147 girls, 117 boys; 1 participant did not indicate gender). Six months after Time 1 (i.e., Time 2), the same person visited the same classes and administered the questionnaires (i.e., contextual motivation,

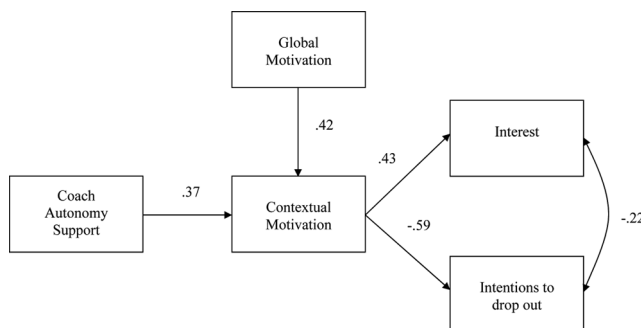


FIGURE 1 Results of the path analysis (Study 1). Note. All coefficients were standardized and were significant ($p < .05$).

interest, and intentions to drop out) to 220 students who were present (132 girls, 88 boys). Administration of the questionnaires took place in a classroom under the supervision of the research assistant and required approximately 20 min to complete at Time 1 and 10 min at Time 2. Participation was voluntary, and participants were assured that their answers would be kept in confidence. They were also offered the option to withdraw from the investigation at any time. Based on these reports, 206 students could successfully be matched for Time 1 and Time 2 responses. Hence, the following analyses are based on the records of 206 students (128 girls, 78 boys) with a mean age of 15.12 years ($SD = 0.56$ years).

Measures

Global motivation. An 18-item version of the Global Motivation Scale (Guay et al., 2003) was used to assess students' intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, and amotivation toward life in general at Time 1. This version of the scale contains 18 items with three items per subscale. The different subscales were combined into a composite index of self-determined motivation (e.g., Grolnick & Ryan, 1987; Ryan & Connell, 1989; $\alpha = .84$) using the following formula: $3 \times \text{Intrinsic Motivation} + 2 \times \text{Integrated Regulation} + 1 \times \text{Identified Regulation} - 1 \times \text{Introjected Regulation} - 2 \times \text{External Regulation} - 3 \times \text{Amotivation}$.

Perceived teacher autonomy support. As in Study 1, participants completed, at Time 1, the Perceived Autonomy Support Scale for Sport Settings (Gillet, Vallerand, Paty, et al., 2010) adapted to the educational setting. Cronbach's alpha was .89.

Contextual motivation. The Physical Education Motivation Scale (Sarrazin et al., 2007; Tessier, Sarrazin, & Ntoumanis, 2010) was used to assess intrinsic motivation, integrated regulation, identified regulation,

introjected regulation, external motivation, and amotivation toward education at Time 2. The scale was modified in the present study to assess contextual motivation toward education. Specifically, we replaced "physical education" with "school." This scale comprises 26 items, and responses are made on a 7-point scale ranging from 1 (*never*) to 7 (*always*). This scale has demonstrated acceptable reliability and validity in past research (e.g., Chalabaev, Sarrazin, Trouilloud, & Jussim, 2009; Tessier, Sarrazin, & Ntoumanis, 2008). The six subscales were also combined into an index of self-determined motivation ($\alpha = .82$) using the same formula used with the Global Motivation Scale (Guay et al., 2003).

Motivational outcomes. The two outcomes (i.e., interest and intentions to drop out) were measured with 7-point scales. Interest was measured with five items (e.g., "I would describe the courses as very interesting") from the Intrinsic Motivation Inventory (Ryan, 1982). Cronbach alphas were .86 at Time 1 and .83 at Time 2. Dropout intentions were assessed by four items (e.g., "I will probably stop my studies next year") used by Kuvaas (2006). Cronbach's alpha coefficients were .86 at Time 1 and .79 at Time 2.

Results and Discussion

A path analysis model (Kline, 2005) was conducted on the data. As in Study 1, a logarithmic transformation was applied to interest and intentions to drop out measures. Correlation matrix, means, and standard deviations for the study variables are shown in Table 2. The hypothesized model was tested with LISREL 8.80. The covariance matrix served as the database for the path analysis and the method of estimation was maximum likelihood. The model contains four exogenous variables (i.e., global autonomous motivation, perceived autonomy support, interest, and intentions to drop out assessed at Time 1) and three endogenous variables (i.e., contextual autonomous motivation, interest, and intentions to drop out assessed at Time 2). Paths

TABLE 2
Means, Standard Deviations, and Correlations for Study Variables (Study 2)

Variables	Range	M	SD	1	2	3	4	5	6	7
1. Perceived autonomy support Time 1	1 to 7	3.87	1.18	—						
2. Global autonomous motivation Time 1	-36 to 36	5.74	7.32	.34***	—					
3. Contextual autonomous motivation Time 2	-36 to 36	5.53	10.24	.36***	.36***	—				
4. Interest Time 1 (Log)	0 to 1.95	1.32	0.37	.49***	.35***	.44***	—			
5. Interest Time 2 (Log)	0 to 1.95	1.21	0.43	.31***	.33***	.68***	.43***	—		
6. Intentions to drop out Time 1 (Log)	0 to 1.95	0.20	0.41	-.25***	-.17*	-.34***	-.45***	-.23**	—	
7. Intentions to drop out Time 2 (Log)	0 to 1.95	0.26	0.47	-.14*	-.09	-.33***	-.26***	-.26***	.47***	—

* $p < .05$. ** $p < .01$. *** $p < .001$.

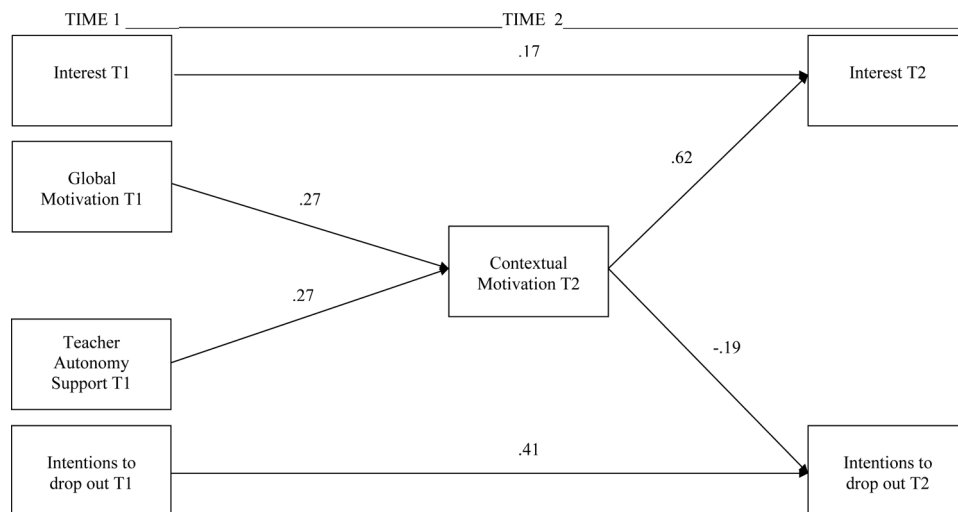


FIGURE 2 Results of the path analysis (Study 2). *Note.* All coefficients were standardized and were significant ($p < .05$).

were specified according to the hypotheses. No covariances among the residuals of the observed variables were specified. Although the chi-square value was significant, $\chi^2(15, N = 206) = 25.95, p < .05$, the other fit indices revealed a satisfactory fit of the model to the data: CFI = .98, IFI = .98, GFI = .97, SRMR = .07, and RMSEA = .06. Figure 2 displays the results of the path analysis. Global autonomous motivation ($\gamma = .27$) and perceived autonomy support ($\gamma = .27$) at Time 1 positively predicted contextual autonomous motivation at Time 2 that, in turn, predicted changes in interest ($\beta = .62$) and dropout intentions ($\beta = -.19$).

Overall, results from Study 2 provided a strong empirical support for the hypothesized model. Indeed, as in Study 1, contextual autonomous motivation was significantly and positively predicted by global autonomous motivation and perceptions of autonomy support. Furthermore, contextual autonomous motivation predicted interest and intentions to drop out even if we controlled for the influence of interest and intentions to drop out assessed 6 months before. Therefore, our results revealed that the hypothesized model is valid in two different settings (i.e., sport and education) and that contextual autonomous motivation predicts changes in interest and intentions to drop out.

GENERAL DISCUSSION

The general purpose of the present research was to test an integrative model that posits that contextual factors (i.e., coach and teacher autonomy support) and global motivation jointly predict contextual motivation that, in turn, predicts interest and dropout intentions. The model was supported in two studies conducted in sport

(Study 1) and education (Study 2) using cross-sectional (Study 1) and longitudinal designs (Study 2). These findings lead to a number of implications.

A first implication is that the present results provide support for several postulates of the HMIEM (Vallerand, 1997). Indeed, in line with the HMIEM, results of both studies revealed that perceptions of autonomy support positively predicted contextual autonomous motivation in two different settings. These findings are in line with SDT and past research in sport (e.g., Smith et al., 2007) and educational (e.g., Sierens et al., 2009) settings which have shown that autonomy-supportive behaviors positively influence autonomous motivation. The present findings also provide support for the fact that outcomes are hypothesized by the HMIEM to be influenced by the type of motivation most relevant to the outcomes. Thus, contextual motivation (and not global motivation) was found to affect contextual outcomes. This is the first research to test and support this hypothesis.

Second, results from both studies also provided support for the top-down effect proposed by the HMIEM. These results are consistent with prior studies in sport (e.g., Blanchard et al., 2007) and in education (e.g., Lavigne & Vallerand, 2010), which have found that motivation at a given level was influenced by motivation at the proximal level higher up in the hierarchy. Of major importance is the fact that the results of Study 1 are the first to test and support the top-down effect from global to contextual motivation in a sport setting. Thus, future research is needed to replicate these findings and determine their generality. Finally, this study is the first to show that the effects from the social factors (autonomy support) and the top-down effects both can take place simultaneously. Thus, each effect is not reducible to an effect uncontrolled for from the second variable.

Both social and intrapersonal effects on motivation take place independently.

A third implication for the HMIEM is that the present findings supported the significant and adaptive influence of contextual autonomous motivation on interest and intentions to drop out. More precisely, results of Study 1 showed that contextual autonomous motivation positively predicted the experience of interest and negatively dropout intentions. Of major importance are the results of Study 2 that replicated those of Study 1 in a different (educational) context while using a longitudinal design that allowed us to control for prior interest and dropout intentions. These findings are in line with past research on the role of motivation in the prediction of interest, dropout intentions, and actual dropout behavior in both education and sport settings (e.g., Blanchard et al., 2007, Study 2; Vallerand et al., 1997). More generally, the present results provided support for the HMIEM, SDT postulates, and many other studies in various settings which have shown that the more self-determined the motivation, the more adaptive the outcomes.

Although the present results provided support for the hypothesized model, some limitations should be taken in consideration when interpreting the findings. First, the methodological design used in both studies was correlational in nature. Thus, causality cannot be inferred from the present results. Future research using experimental designs should be conducted in order to better understand the effects of motivation on interest and intentions to drop out. Second, all the outcomes assessed in the present research were assessed with self-report measures. Such measures can be influenced by social desirability. It is therefore important that the present results be replicated with objective assessments of outcomes such as actual dropout behavior. Finally, future research could consider using both intentions to drop out and actual dropout behavior because intentions represent a proximal predictor of behavior (Ajzen, 1985; for an example, see Vallerand et al., 1997).

In sum, the present results provide strong support for the HMIEM (Vallerand, 1997) and SDT (Deci & Ryan, 1985) frameworks and contribute to a better understanding of the role of social and personal factors in motivational processes and outcomes. Future research is needed, however, to investigate how such motivational processes operate in other settings and with different outcomes.

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