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Role conflict and academic procrastination: A self-determination perspective

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Abstract

The purpose of the present study was to propose and test a model of role conflict and academic procrastination. This model posits that non-self-determined motivations toward school and interpersonal relationships are positively related to role conflict between these two life domains. In turn, role conflict between school and interpersonal relationships is expected to be positively related to academic procrastination. Participants were 292 university students. Results from structural equation modeling supported the model. It thus appears that self-determination and role conflict are important to foster our understanding of academic procrastination. Theoretical implications of the findings are discussed. Copyright © 2002 John Wiley & Sons, Ltd.

Academic procrastination is typically defined as an irrational tendency to delay in the beginning and/or completion of an academic task. Students may have the intention to perform an academic activity within the desired or expected time frame, yet failing to motivate themselves to do so (Ferrari, 1998; Lay, 1986, 1995). A large percentage of students suffer from academic procrastination and the negative consequences related to this dilatory behavior. For instance, academic procrastination is associated with poor academic performance (Beswick, Rothblum, & Mann, 1988; Tice & Baumeister, 1997), depression (Sadler & Sacks, 1993), dejection (Lay, 1995), lack of punctuality, difficulties in following directions (Lay, 1986; Rothblum, Solomon, & Murakami, 1986; Solomon & Rothblum, 1984), and an increase in health problems as the semester deadlines approach (Tice & Baumeister, 1997).

In addition, numerous studies draw attention to the circumstances under which students are likely to procrastinate. For instance, when asked to report why they procrastinate, college students offered reasons related to task aversiveness and fear of failure (Solomon & Rothblum, 1984). Moreover, research showed that academic procrastination could stem from less effort on the task (Sadler & Buley, 1999), low self-efficacy (Haycock, McCarthy, & Skay, 1998), low task capability (Milgram, Marshevsky, & Sadeh, 1995), high level of performance anxiety (Ferrari, 1991a; Flett, Hewitt, &

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Martin, 1995; Milgram & Toubiana, 1999; Solomon & Rothblum, 1984), and non-self-determined academic motivation (Senécal, Koestner, & Vallerand, 1995). In addition, academic procrastination may be affected by personality characteristics such as trait of procrastination, socially prescribed perfectionism (Sadler & Sacks, 1993), concern for a favorable public impression (Ferrari, 1991b), and low levels of conscientiousness (Schouwenburg & Lay, 1995).

In the present study, we focus on determinants of academic procrastination. More precisely, we test a model which posits that non-self-determined motivation toward school and interpersonal relationships is positively related to role conflict between these two life domains. In turn, role conflict between school and interpersonal relationships is expected to be positively related to academic procrastination. In line with Deci and Ryan's (1985) Self-Determination Theory, academic self-determined motivation implies performing school activities out of choice and personal interest. In contrast, non-self-determined academic motivation means that students feel obliged to perform school activities because of internal (e.g. guilt) or external (e.g. reward) pressures. The questions answered via this model represent critical issues in academic procrastination research for at least two reasons. First, until now, no research has attempted to verify the dynamic interplay between processes occurring in different life contexts to understand academic procrastination. Second, no studies have tried to verify how self-determination across roles may produce lower levels of conflict and academic procrastination. Although, Senécal et al. (1995) showed that students who are self-determined in their student's role (i.e. acting out of choice and pleasure) procrastinate less than those who are non-self-determined, this study have not integrated self-determination in another role and role conflict to better understand academic procrastination.

In introducing this study, we first summarize the need to pay attention to role conflict to understand academic procrastination. We then emphasize the role of self-determination in order to understand role conflict and academic procrastination.

ROLE CONFLICT AND ACADEMIC PROCRASTINATION

Research has typically linked academic procrastination to a variety of academic variables without considering what happens in other life contexts (e.g. Haycock et al., 1998; Milgram & Toubiana, 1999; Sadler & Buley, 1999). Nevertheless, students do not have only one significant life context (or role) in their day-to-day life but multiple ones. For instance, research conducted with college students indicated that they devoted not only a lot of time to their academic curriculum but also to their interpersonal relationships (Blais, Vallerand, Pelletier, & Brière, 'Construction et validation de l'Inventaire de motivation dans les relations interpersonnelles', unpublished manuscript, 1994; Vallerand, 1997). Thus, it seems reasonable to believe that students' academic and interpersonal roles may sometimes be incompatible and thus create role conflict, which in turn may produce higher levels of academic procrastination. Role conflict is defined by the amount of conflict that exists between self-identities. In the present study, we assessed role conflict by asking participants to rate the amount of conflict felt within student and friend roles. This procedure is an extension of the methodology used by Sheldon, Ryan, Rawsthorne, and Ilardi (1997) and Emmons and King (1988) in their studies of role conflict.

For instance, a student may feel conflict between studying for an exam and going out with friends to a party. The student may then experience conflicting emotions and have difficulty in sustaining his initiative in pursuing academic goals and thus postpone his exam study. Senécal, Vallerand, and Guay (2001) provided some indirect support for the hypothesis that role conflict leads to academic procrastination. They showed that family and worker roles could interfere to produce role conflict

and emotional exhaustion. In addition, Emmons and King (1988) reported that conflict and ambivalence were associated with high levels of negative affect, depression, neuroticism, and psychosomatic complaints.

THE FUNCTION OF SELF-DETERMINATION IN ROLE CONFLICT AND ACADEMIC PROCRASTINATION

It should be noted that some students would not feel much conflict between roles. That is, despite the pressure that their friends may put on themselves to go out, some students would keep on studying their exam. We believe that students who are self-determined in their student and interpersonal roles would be resilient to such a conflict. According to Self-Determination Theory (Deci & Ryan, 1985), behaviors are regulated by five types of motivation that lie on a self-determination continuum. From low to high levels of self-determination, the different types of motivation are: amotivation, external regulation, introjected regulation, identified regulation, and intrinsic motivation.

Amotivation (Deci & Ryan, 1985) pertains to the lack of intentionality and therefore refers to the relative absence of motivation. This concept is similar to learned helplessness (Abramson, Seligman, & Teasdale, 1978) because amotivated individuals experience feelings of incompetence and expectancies of uncontrollability. *External regulation* refers to extrinsic motivation as typically defined in the literature. That is, behaviors are regulated through external means such as rewards and constraints. *Introjected regulation* refers to individuals that perform activities for internal pressures such as guilt and anxiety. *Identified regulation* refers to behaviors that are valued, judged important, and perceived as chosen by the individual. Finally, *intrinsic motivation* refers to engaging in an activity for itself, and to experience the pleasure and satisfaction derived from participation (e.g. Deci & Ryan, 1985).

In the present study, we expect that students who are regulated through intrinsic motivation and identified regulation toward their interpersonal relationships and their scholastic work would experience low levels of role conflict and academic procrastination. However, students who are motivated through external regulation, introjected regulation or those who are amotivated would experience high levels of role conflict and academic procrastination. That is, students who are self-determined (i.e. intrinsic and identified regulation) in their scholastic work and in their interpersonal relationships would experience less conflict between these two roles because these roles are harmoniously integrated in their self structure.

We reviewed the literature and we found only two articles on the relation between role conflict and self-determination. Sheldon et al. (1997) revealed that in situations where different roles are solicited simultaneously, it appears that people experience low conflict between roles when they feel self-determined across roles. More specifically, these authors showed that the more people are self-determined toward their roles (student and friend), the more they are satisfied and feel authentic. Authenticity means to be true to, or to act in accord with, oneself. Thus, individuals who behave in consistent accordance with their own selves are more self-determined because they act in accordance with their own choice and decision. These persons are less prone to act in accordance with what others want for them. They feel more autonomous and self-expressive across roles and are more prone to integrate various roles and functions (Ryan, 1993). In turn, they experience less role conflict, less anxiety, less stress, and less depression (Donahue, Robins, Roberts, & John, 1993). In addition, Senécal et al. (2001) showed that being self-determined in family and worker roles produced lower conflict between these roles. It thus appears that when motivation toward different roles are not harmoniously integrated (i.e. non-self-determined), they may produce negative consequences (see Sheldon & Kasser, 1995; Sheldon et al., 1997).

In sum, we propose and test a model positing that low levels of self-determined motivation across academic and interpersonal roles (i.e. low levels of intrinsic and identified regulation but high levels of introjected and external regulations and amotivation) are associated with high levels of conflict between these roles. In turn, role conflict is expected to be positively related to academic procrastination. This model would be tested via structural equation modeling analyses. Hence, this study has the potential to advance procrastination research and practice.

METHOD

Participants

Participants were 295 French–Canadian university students. Among them, 95 came from the Law faculty (75.8% women and 24.2% men), and 174 from the School of Psychology (79.3% women and 20.7% men), 13 students came from other faculties and 13 did not mention their faculty. The total sample was composed of 223 women and 69 men. Three participants did not mention their gender. Mean age of the participants was 19 years.

Procedure

Students were met in class during the fall semester and were asked to complete a self-report questionnaire. Students were informed that the purpose of the study was to gain a better understanding of their feelings, attitudes and behaviors related to their interpersonal relationships and school activities. The questionnaire took 35 minutes to complete and confidentiality was guaranteed.

Measures

The Academic Motivation Scale (AMS)

Students completed the French version of the AMS (Vallerand, Blais, Brière, & Pelletier, 1989). The AMS assesses students' motivational orientation toward education. This instrument is composed of seven subscales of four items each, assessing three types of intrinsic motivation (IM-knowledge, IM-stimulation, and IM-accomplishment; see Vallerand, 1997, for a definition), three types of extrinsic motivation (identified, introjected, and external regulation), and amotivation. In the present study, we assessed only five types of motivation through 15 items: intrinsic motivation to know, external regulation, introjected regulation, identified regulation, and amotivation. Items were rated on a 7-point Likert-type scale where students indicate the extent to which each item represents a possible reason to the following question: 'Why do you go to school? ' For instance, an intrinsic motivation reason was 'Because my studies allow me to continue to learn about many things that interest me'.

Self-determined school motivation (i.e. performing school activities out of choice and pleasure) was obtained by integrating the information from the different motivational subscales. Following the procedure commonly used in the Self-Determination Theory literature (e.g. Senécal & Guay, 2000; Fortier, Vallerand, & Guay, 1995; Grolnick & Ryan, 1987; Vallerand, 1997), items of the five subscales were used to compute the self-determination indices toward school. This was done by ascribing each item a specific weight and then summing the products. Consequently, intrinsic motivation and

identified regulation items were assigned respectively the score of +2 and +1 (higher self-determined forms of motivation) whereas amotivation and the two other types of extrinsic motivation (introjected and external regulation) were attributed respectively the weights of −2 and −1. There were three items for each motivational subscale and consequently three indicators per motivational construct were computed using the following formula: ((2 × intrinsic motivation + identified regulation) − (introjected regulation + external regulation/2) + 2 × amotivation). The standardized Cronbach alpha for the three indicators was 0.88.

The Interpersonal Motivation Inventory (IMI)

This scale was developed and validated in French by Blais et al., unpublished manuscript (1994). The IMI measures intrinsic motivation, identified regulation, introjected regulation, external regulation, and amotivation toward interpersonal relationships. The original version consists of a 26-item scale. In the present study, we assessed the five types of motivation through 15 items. Items were rated on a 7-point Likert-type scale where students indicate the extent to which each item represent a possible reason to the following question: 'Why do you have relations with your friends?' For instance, an intrinsic motivation reason was 'Because I have lots of fun with my friends'. Interpersonal self-determination indices were computed using the formula used for the AMS. The standardized Cronbach alpha for the three indicators was 0.92.

Role Conflict Measure

This scale was adapted from the role conflict measure of Sheldon et al. (1997). It assesses the extent to which interpersonal relationships interfere with academic activities. This measure is composed of 5 items (i.e. to what extent does your role as a student interfere or is discordant with your role as a friend? How hard is it to behave in your friend's role and that things go satisfactorily in your student's role) that were rated on 7-point scale (1—not at all to 7—extremely). The standardized Cronbach alpha for this scale was 0.82.

Academic Procrastination

We used the Procrastination Assessment Scale-Student (PASS) to assess academic procrastination. This scale has been developed and validated by Solomon and Rothblum (1984). The original version of this scale is divided into two parts. The first part assesses the extent to which students delay in their academic tasks, the extent to which they want to decrease this tendency, and the extent to which this tendency is problematic for them. Students rate each of these three items for three academic related tasks (writing a term paper, studying for exams, and reading assignments), yielding a 9-item scale. The second part consists of 26 items that assess why students delay academic activities. More specifically, these items measure fear of failure and task avoidance (Ferrari et al., 1995; Solomon & Rothblum, 1984). As Lay (1995) mentioned, the main characteristic of academic procrastination lies in the gap between intention to accomplish and the behavior that follows this intention. Thus, the reasons to delay such as fear of failure and task avoidance do not represent academic procrastination in a behavioral way. In line with Lay (1995), we decided to use items of the first part of this scale. More specifically, we put together the three academic related tasks into one that we named: studies in general (writing a term paper, studying for exams, and reading assignments). Instead of answering to

three academic tasks separately, as it used to be in the original version of the PASS, students had to refer to one academic activity that designated their studies in general. Thus, students rated the three procrastination items mentioned above for their studies in general (writing a term paper, studying for exams, and reading assignments). Example of procrastination items include: 'To what extent do you delay the activities related to your studies?' Each item was rated on a 5-point Likert-type scale that range from (1) *never* to (5) *always*. The standardized Cronbach alpha was 0.70.

Statistical Analyses

Goodness of Fit

All structural equation modeling analyses were performed on covariance matrices using the Maximum Likelihood estimation procedure (EQS Version 5.6; Bentler, 1993). To ascertain the model fit, we used the Comparative Fit Index (CFI), the Non-Normed Fit Index (NNFI, also known as the Tucker–Lewis Index), the Root Mean Square Error of Approximation (RMSEA) as well as the chi-square test statistic. The NNFI and CFI vary along a 0-to-1 continuum (although the NNFI could be greater than 1, this is rarely the case in practice), where values greater than 0.90 are typically taken to reflect an acceptable fit (Schumacker & Lomax, 1996). Browne and Cudeck (1993; also see Joreskog & Sorbom, 1993) suggest that RMSEAs less than 0.05 are indicative of a 'close fit' and that values up to 0.08 represent reasonable errors of approximation. The CFI contains no penalty for a lack of parsimony so that the addition of new parameters leads to an improved fit that may reflect capitalization on chance. In contrast, the NNFI and RMSEA contain a penalty for a lack of parsimony.

RESULTS

Preliminary Analyses

Two sets of preliminary analyses were performed. First, to ensure the validity of the abridged measures of motivation used in this study, we conducted confirmatory factor analyses on both scales. Results indicated that fit indices of the abridged version of the *Academic Motivation Scale* were excellent ($\chi^2(80,\ n = 294) = 199.309$; CFI = 0.94, NNFI = 0.93; RMSEA = 0.07) as well as those of *the Interpersonal Motivation Inventory* ($\chi^2(80, n = 289) = 180.215$; CFI = 0.96, NNFI = 0.94; RMSEA = 0.07). In addition, all factor loadings of both scales were significant and above 0.54.

Second, to determine whether there were differences between students from the psychology and law faculties, a MANOVA was performed on the variables' model (academic motivation, interpersonal motivation, role conflict and academic procrastination). Results revealed that there were no significant differences between the two groups, $F(4, 254) = 1.76$, $p > 0.05$. Therefore, no differences will be made between the two groups in subsequent analyses.

Third, a MANOVA was performed to test for the presence of sex differences between women and men on the variables' model. This analysis revealed a multivariate significant effect, $F(4, 276) = 5{,}38$, $p < 0.001$. Univariate *F*-tests revealed significant differences between males and females on interpersonal and academic self-determined motivation. Specifically, women reported higher levels of self-determined motivation in their scholastic work and in their interpersonal relationships than men. Variables means and standard deviations for each gender are presented in Table 1.

Despite these sex differences observed at the mean level, we would not evaluate the invariance of the proposed model across sex for two reasons. First, we do not have enough participants to perform

Table 1. Variables, means, standard deviations and *F*-test as a function of gender

	Women ($n = 223$)		Men ($n = 69$)		
Measures	Mean	Standard deviation	Mean	Standard deviation	*F*
(1) Academic self-determined motivation	10.84	3.83	9.43	4.83	4.79*
(2) Interpersonal self-determined motivation	12.62	3.85	10.44	5.22	13.49**
(3) Role conflict	3.27	1.32	3.10	1.18	0.60
(4) Academic procrastination	3.10	0.88	3.23	0.85	1.62

*$p < 0.05$; **$p < 0.001$.

such a complex analysis. Second, past studies using larger samples indicated that despite sex differences at the mean level, there is no sex differences at the process level. That is, these past studies indicate that the relations among motivational variables do not vary across sex (Guay, Senécal, & Gauthier, 2002; Senécal et al., 2001, Vallerand, Fortier, & Guay, 1997).

Finally, correlations between all variables were performed (see Table 2). As predicted, self-determined academic motivation and self-determined interpersonal motivation were negatively related to role conflict ($r = -0.17$; $r = -0.23$). Moreover, role conflict was positively related to academic procrastination ($r = 0.30$).

A Test of the Model

Correlations between motivational constructs were freely estimated as well as paths from academic and interpersonal self-determined motivation to role conflict, and from role conflict to academic procrastination. The fit of the model was good ($\chi^2(73, n = 287) = 199.188$; CFI = 0.94, NNFI = 0.92; RMSEA = 0.08). In addition, all factor loadings were significant and above 0.49. Results are presented in Figure 1. Academic motivation ($\beta = -0.16$) and interpersonal relationships motivation ($\beta = -0.16$) were negatively associated to psychological conflict. Thus, the more college students are self-determined toward interpersonal relationships and academic activities, the less they experience role conflict. Moreover, there was a significant relation between role conflict and academic procrastination ($\beta = 0.32$). In sum, these results provided support for the proposed model.

In the proposed model, the key mediational construct is psychological conflict. However, it is possible that self-determined motivations in both roles have direct effects on academic procrastination. In order to verify this possibility, we tested an alternative model where paths from both self-determined motivations to role conflict and academic procrastination were freely estimated, along with the path from role conflict to academic procrastination. Although this model had a good fit to the

Table 2. Correlations between academic motivation, interpersonal relationship motivation, role conflict, and academic procrastination

Variables	1	2	3	4
(1) Academic motivation	—	0.20***	−0.17***	−0.17***
(2) Interpersonal motivation		—	−0.23***	−0.09
(3) Role conflict			—	0.30***
(4) Academic procrastination				—

**$p < 0.01$; ***$p < 0.001$.

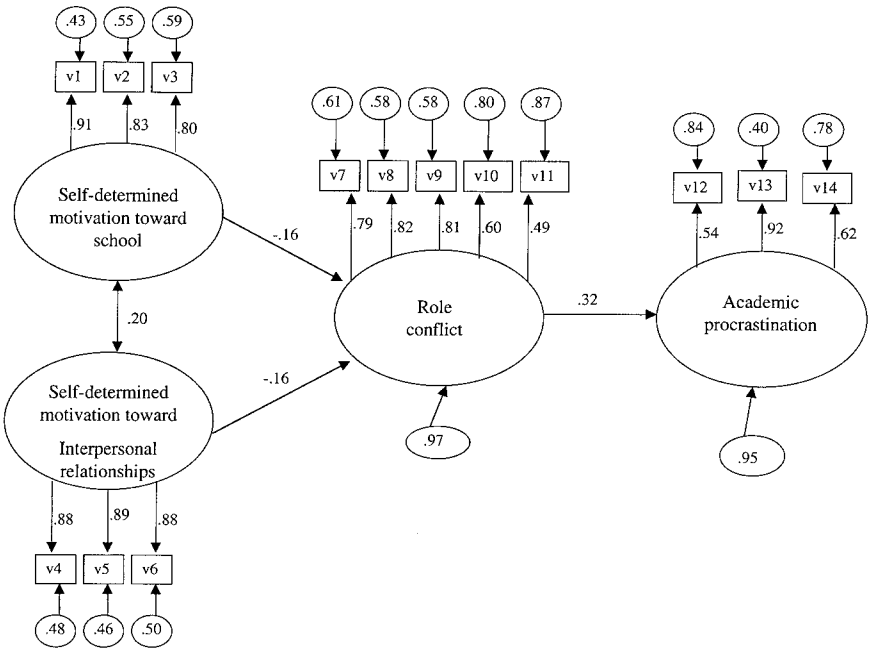

Figure 1. Results of the proposed model.
Notes: All coefficients are significant at $^{**}p < 0.05$.
v1 to v3: The three academic self-determined motivation indices.
v4 to v6: The three interpersonal self-determined motivation indices.
v12 to v14: The three items of the academic procrastination measure.
v7 to v11: The five items of the role conflict measure.
v12 to v14: The three items of the academic procrastination scale

data ($(\chi^2(71,\ n = 287) = 192.857;\ \mathrm{CFI} = 0.94,\ \mathrm{NNFI} = 0.92;\ \mathrm{RMSEA} = 0.08)$, this fit was not significantly different from the mediational model ($\Delta\chi^2(2) = 6.331, p > 0.025$). Given the equivalence of the models, we concluded that the mediational model was the best fitting model due to its parsimony (i.e. the model used fewer degrees of freedom). Specifically, results suggest that the direct paths connecting both types of motivation to academic procrastination do not significantly increased the model fit thereby supporting our mediational model (Kline, 1998).

DISCUSSION

As mentioned in the introduction, academic procrastination is typically explained by determinants related to the academic context only (e.g. task aversiveness, fear of failure, performance anxiety, low academic self-efficacy, non-self-determined academic motivation) or by some personality characteristics. However, until now no research attempts to verify the dynamic interplay between processes occurring in different life contexts to understand academic procrastination. The purpose of this study was thus to verify how processes occurring in the academic and interpersonal roles are related to role conflict and academic procrastination. Specifically, we propose and test a model which posits that low self-determined motivations in interpersonal relationships and education are related to role conflict, which in turn is related to academic procrastination. Results from structural equation modeling

analyses (see Figure 1) provided some support for the hypothesized model. In addition, the alternative model, which postulates direct paths from motivations to academic procrastination (along with the path connecting role conflict to academic procrastination) did not offer a better fit to the data than the hypothesized model thereby providing some support for our mediational model. Implications of these results are discussed below.

It appears that the way students organize their roles in their day-to-day life can create role conflict, which in turn leads to academic procrastination. An example may serve to illustrate this finding. Mark is studying for an important math exam scheduled in two days. While studying, Mark receives a call from John who asks him to go to a party tonight. Mark then feels negative and conflicting emotion that leads him to accept John's invitation instead of studying for his exam. This situation leads to academic procrastination because Mark is not following his initial intention. However, not all students would react like Mark. Some students would not feel these conflicting emotions and would keep on studying. Who are those resilient students? As shown by the results, students' level of self-determination toward their interpersonal relations and education is important to determine whether they will experience role conflict and if they will, show academic procrastination. That is, if students are regulated through external or internal pressure in both roles, they may experience negative and conflicted emotions which lead to academic procrastination. Consequently, academic procrastination is not only a matter of academic motivation as shown by Senécal et al. (1995) but it is better understood when considering other roles, such as the interpersonal one. These findings replicate recent motivation research, which has shown that self-determined motivation is associated with low levels of role conflict (Senécal et al., 2001; Sheldon et al., 1997) and positive outcomes.

Although the present results provided some support for the model, some limitations of the present study should be underscored. First, all variables were measured during the same time period and the data were correlational. It is thus inappropriate to make firm statements concerning causality. Further studies should use a longitudinal design to test more rigorously the proposed model. Second, the present study pertained to the academic and interpersonal relationships contexts only. Future research should verify the influence of other life contexts on academic procrastination. For instance, many students have to work during the school year. Role conflict between part-time work and school work may thus also foster academic procrastination. Third, participants who took part in the present study were university students. It may be important to ascertain the validity of the present model with other population. For instance, the age of participants can moderate the observed relations. Indeed, Harter (1999) revealed that adolescents are quite concerned about their relationships with peers and are thus more subject to role conflict. Thus the strength of the relation between role conflict and academic procrastination may be higher for adolescents than for young adults. Fourth, the use of some items of the PASS as a measure of academic procrastination may be somewhat problematic. It may be preferable in future research to use some other scales that assessed the gap between behavioral intentions and behavior *per se*.

A further test of the present model should examine the influence of an autonomy-supportive environment on academic and interpersonal relationship motivations. Recent studies have shown that autonomy support from significant others (i.e. taking the other's perspective, acknowledging the other's feelings and perceptions, providing the other with information and choice, and minimizing the use of pressure and control) enhances self-determined motivation (Deci, Eghrari, Patrick, & Leone, 1994; Ryan & Solky, 1996; Williams, Rodin, Ryan, Grolnick, & Deci, 1998; see also Deci & Ryan, 1991; Vallerand, 1997 for reviews). Consequently, it is possible that an autonomy-supportive environment enhances self-determined academic and interpersonal motivation, and produces low levels of role conflict between academic and interpersonal relationship roles. In the example mentioned above, an autonomy-supportive friend would have respected the fact that Mark had to study for his exam and persuaded him to stay at home and do so. This would have helped Mark to

make a better choice, with respect to his own priorities and interests. Thus, it would have encouraged Mark's self-determination, reduced his role conflict between studying for his exam and going out with his friends and finally helped him to stay on his initial intention.

In sum, despite the limitations mentioned above, a mediational model of academic procrastination was tested and supported through structural equation modeling analyses. We believe that the present findings have outlined the importance of considering motivation for different life domains and role conflict in the explanation of academic procrastination. Regarding the practical implications of these results, it is important that school counselors focus their interventions not only on how students feel, think, and behave in their academic role but also on how they feel in other significant roles in order to reduce academic procrastination.

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