

## Examining the relationship of personality and burnout in college students: The role of academic motivation

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**Abstract** This study extends the literature on burnout by examining the relationship of personality, academic motivation, and burnout among college students. Previous literatures had suggested bivariate links between personality and burnout, personality and academic motivation, and academic motivation and burnout. Integrating these variables together, the author hypothesized that personality and burnout are associated and this association is mediated by academic motivation. Results of bivariate correlations using data from 150 college students were consistent with the literature and the author's hypotheses. However, path analyses using the same data indicated that only conscientiousness has a significant link to a burnout dimension and no mediation was found. Furthermore, direct effects from academic motivation to burnout and indirect effects of personality to burnout via academic motivation were observed. The findings were discussed in relation to the self-determination theory (SDT) and its implication to instruction and assessment.

**Keywords:** *Personality, burnout, motivation*

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### Introduction

Burnout has originally been conceived as a work-related syndrome experienced by individuals who work in human services domain like health care and social work (Maslach & Jackson, 1981). More recently, it has been shown that burnout is also experienced by school students (e.g., Gan, Shang, & Zhang, 2007; Salmela-Aro, Kiuru, Leskinen, & Nurmi, 2009; Schaufeli, Martinez, Marquez-Pinto, Salanova, & Bakker, 2002). The concept of burnout has been extended to school context because the primary activities of students like attending classes, reviewing lessons, and making assignments can be considered as work. However, although there has been an upward trend in the study of burnout in the school context, much is still to be known about burnout in students. For instance, the extent to which personality relates to student burnout has yet to be fully established and much of the literature on this relationship has been on job burnout. And in

spite of the academic nature of the work of students in school, little has been said on the role of academic motivation in student burnout. The proposed study intends to fill these gaps by examining the relationship between personality, academic motivation, and burnout among Filipino college students.

### **Academic Burnout**

While the development of the term burnout is attributed to Freudenberger (1974), much of what we know about burnout is based on the conceptualizations of Maslach and Jackson (1981) who described burnout as a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment caused by chronic stress from continuous involvement with clients in human services occupations. On the other hand, Zhang, Gan, and Cham (2006) described academic burnout as feeling exhausted because of study demands (exhaustion), having a cynical and detached attitude towards one's schoolwork (cynicism), and feeling incompetent as a student (reduced efficacy).

The literature is replete with studies that examine the relationship of student or academic burnout with various individual and situational or contextual variables. Individual variables that have been hypothesized as related to burnout among students are coping flexibility (Zhang, Gan, & Cham, 2007), personality (Jacobs & Dodd, 2003), and sex (Jacobs & Dodd, 2003; Weckwerth & Flynn, 2004). Situational or contextual variables that have been studied in relation to burnout among students include school climate (Salmela-Alo, et al., 2008), social support (Jacobs & Dodd, 2003; Weckwerth & Flynn, 2006), academic major (Bernhard, 2007), academic achievement (Schaufeli, et al., 2002), and coursework (Law, 2007). A review of the studies in school or academic burnout suggest that these studies are focused on situational stressors - burnout as a function of the situation- and less as a function of the individual's characteristics.

### **Personality and Burnout**

Personality can be described in terms of five factors, more popularly known as the Big Five personality factors. According to John and Srivasta (2009), the use of the term Big Five does not imply that personality differences can be reduced to only five traits but these five dimensions represent personality at the broadest level of abstraction. While authors tend to vary with the terms they used, the most common factors described within the Big Five framework are agreeableness, conscientiousness, extraversion, neuroticism, and openness to experience. Examining the relationship of burnout and personality is based on the assumption that individual characteristics like personality (suggestion: add one more individual characteristic) influence the experience of burnout. This means that a person's personality traits will make him/her more or less susceptible to burnout. Also, it has actually been suggested that personality may help individuals be protected against known risks of developing burnout (Bakker, van Derzee, Lewig, & Dollard, 2006). Empirically, several studies examined the relationship of personality and burnout in the workplace. For one, Langelaan, Bakker, van Doornen, and Schaufeli (2006) found that higher level of neuroticism is positively related with higher level of

burnout. This is expected given that neuroticism is linked to a negative general appraisal tendency and maladaptive and ineffective coping (Grant & Langan-Fox, 2007). Mills and Huebner (1998), meanwhile, have found that neuroticism and extraversion are both associated with all three components of burnout; conscientiousness is associated with emotional exhaustion and personal accomplishment; and agreeableness is associated with both emotional exhaustion and depersonalization. On the other hand, Bakker et al. (2006) demonstrated that neuroticism is the sole predictor of emotional exhaustion; neuroticism, extraversion and openness to experience demonstrated significant effects on depersonalization; and both neuroticism and extraversion predicted personal accomplishment. The study of Zellars, Perrewe, and Hochwarter (2000) also found that neuroticism predicted emotional exhaustion, extraversion and agreeableness predicted depersonalization, and openness to experience predicted personal accomplishment.

The relationship of personality and burnout in the workplace has been well studied but this seems not to be the case for student or academic burnout. While there are studies that examined the relationship of personality and burnout in students (e.g., Jacobs & Dodd, 2003; Watson, Deary, Thompson, & Li, 2007), it seems that there are still plenty to explore in terms of the relationship of personality and burnout.

### **Personality and Academic Motivation**

Only a handful of studies have examined the relation of personality traits to aspects of academic motivation (e.g., Busato, Prins, Elshout, & Hamaker, 1999; Kanfer, Ackerman, & Heggestad, 1996, as cited in Komarraju & Karau, 2005). More recently, Komarraju, Karau, & Schmeck (2009) found that conscientiousness is related across all three motivation dimensions, and in particular, it was found to have positive relationship with intrinsic motivation and negative relationship with amotivation- students who are more organized and disciplined are most likely to be motivated and are less likely to be disengaged. A similar positive relationship was found between openness and intrinsic motivation - students who are intellectually curious are more motivated in learning and schoolwork. In addition, agreeableness has been found to be negatively associated with amotivation while extraversion and neuroticism was positively related with extrinsic motivation. The researchers, however, reported that neurotic individuals tend to score higher on amotivation.

The results of the study of Komarraju, Karau, & Schmeck (2009) were somewhat consistent with the earlier findings of Komarraju and Karau (2005) wherein the avoidance aspect of academic motivation was found to be positively related with neuroticism and extraversion and negatively related with conscientiousness and openness. This means that “neurotic students tend to avoid many aspects of academic life” while “conscientious and open students are less likely to be avoidant in their motivation” (Komarraju & Karau, 2005, p. 564). In addition, the same study found out that students with higher level of openness are more likely to engage in educational experiences while students with higher levels of conscientiousness are more achievement oriented.

## Academic Motivation and Burnout

Academic motivation is considered as an important factor in school adjustment and is largely anchored in the self-determination theory (SDT) of Ryan and Deci (2000a; 2000b). This theory views motivation as a continuum with intrinsic and amotivation at either end, and extrinsic motivation in the middle (Ryan & Deci, 2000a). Intrinsic motivation refers to engaging in an activity for its own sake and the experience of pleasure and satisfaction derived from participation. Individuals who are intrinsically motivated tend to have an internal locus of control, are driven to accomplish, seek intellectual stimulation, and are enthusiastic about learning new things while extrinsically motivated individuals pursue education to achieve contingent goals, rather than for an intrinsic enjoyment of learning (Komarraju, Karau, & Schmeck, 2009). The third major component of academic motivation, amotivation, refers to the relative absence of motivation (neither intrinsic nor extrinsic). Amotivated individuals experience feelings of incompetence and expectancies of uncontrollability. It occurs when individuals perceive their behaviors not resulting in a certain outcome and instead perceive their behaviors as caused by forces beyond their own control (Cockley, 2000).

College students face many challenges in their pursuit of higher education. The continuing demands of schoolwork and presence of stressors may lead to negative outcomes like burnout. SDT explains that the more intrinsically motivated an individual is, the more that he will persevere in the performance of a task or the achievement of a goal. Because an intrinsically motivated person feels that he has control over the outcomes of his behaviors, such person will not easily be discouraged from the pursuit of his goals and this would lessen the impact of burnout. The SDT also explains why decreased intrinsic motivation likely leads to all three dimensions of burnout (Rubino, Lukyste, Perry, & Volpone, 2009). In one study, Pisarik (2009) found that individuals who experienced greater levels of intrinsic motivation to attend college were more likely to experience lower levels of exhaustion and cynicism, and higher levels of professional efficacy. In addition, he also found out that individuals who experienced greater levels of amotivation were more likely to experience higher levels of exhaustion and cynicism, and lower levels of professional efficacy.

## Personality, Academic Motivation and Burnout

In the preceding sections, the literature reviewed shows that (a) personality, in terms of the Big Five dimensions, has been associated with burnout, (b) the personality of individuals has been found to predict their levels of academic motivation, and (c) academic motivation has been linked to burnout. The current study proposes an integration of these three variables wherein academic motivation serves as a linking mechanism between personality and burnout among college students. This hypothesized link is based on the logic that differences in student motivation levels may be related to basic personality differences (Kommaraju & Karau, 2005) and different motivational orientations lead to different student outcomes like academic burnout. This is consistent with the view that more self-determined behaviors (intrinsic motivation) are more associated with positive

psychological states (Pisarik, 2009). In other words, a student's personality predisposes him to a particular motivational orientation (whether he is more or less self-determined) which in turn predisposes him to the experience of burnout. Indeed, the empirical studies reviewed seem to provide some support for this link. However, these studies are rather limited as none examined the possible role of motivation as a linking mechanism between personality and burnout, whether in school or in the workplace.

### The Present Study

On the basis of the literature reviewed, the present study addresses some of the limitations in the current literature on the relationship of personality and burnout among college students. First, I examine the relationship between personality and burnout among a sample of Filipino college students. Second, I examine the possible mediating role of academic motivation in the personality-burnout link. For the first purpose, I specifically examine the following hypotheses:

**Hypothesis 1a.** Higher neuroticism will be positively associated with emotional exhaustion and cynicism while negatively associated or unassociated with efficacy. Since neuroticism is characterized by emotional distress and poor impulse control (Kommaraju & Karau, 2005), I expect that more neurotic students will have a reduced sense of efficacy and greater experience of emotional exhaustion and stronger cynical feelings toward school.

**Hypothesis 1b.** Higher conscientiousness will be positively related with efficacy while negatively associated or unassociated with emotional exhaustion and cynicism. I expect students who are disciplined, organized and hard working to display higher levels of efficacy while experiencing less emotional exhaustion and cynicism.

**Hypothesis 1c.** Higher openness to experience will be positively related with efficacy while negatively associated or unassociated with emotional exhaustion and cynicism. I expect students who are intellectually curious to have little or no cynical feelings and emotional exhaustion from school work while having a strong personal efficacy.

**Hypothesis 1d.** Higher extraversion will be negatively associated or unassociated with cynicism. I find it reasonable to expect that students who are sociable, confident, and assertive will make more use of environmental sources of motivation in their school work which can reduce cynicism.

**Hypothesis 1e.** Higher agreeableness will be negatively associated with cynicism. I expect students who are friendly and nurturing to have less cynical feelings toward school work.

In terms of the second purpose of the study, I propose that the students' academic motivation may mediate associations between personality and burnout.

Specifically, I expect the association between neuroticism and the three burnout dimensions to be mediated by amotivation. I also expect the association between the three burnout dimensions and both conscientiousness and openness to be mediated by intrinsic motivation. And lastly, I expect that the association between extraversion and cynicism, as well as between agreeableness and cynicism, to be mediated by extrinsic motivation.

## Method

### Research Design

The current study made use of the quantitative-predictive method using a cross-sectional design. Data were gathered through the use of self-report measures.

### Participants

The participants in the present study are 150 college students from a state university in Manila. The participants were selected through convenience sampling (mean age = 18.27; male =25, female =125) and have received course credit for their participation in the study. Self-report measures were given as one set of inventories and participants were given a maximum of 30 minutes to complete the measures.

### Measures

**Big Five Inventory (BFI).** The BFI, developed by John, Donahue, and Kentle (1991), is a 44-item Likert-type measure of extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. In U.S.A. and Canadian samples, the alpha reliabilities of the BFI scales typically range from .75 to .90 and average above .80; three-month test-retest reliabilities range from .80 to .90, with a mean of .85. (John & Srivastava, 1999). In the present study, the instrument's Cronbach's alpha levels are .82 (total scale), .77 (extraversion), .61 (agreeableness); .65 (conscientiousness), .81 (neuroticism), and .73 (openness to experience).

**Academic Motivation Scale (AMS).** The Academic Motivation Scale (AMS) is a 28-item measure of students' motivation for attending college (Vallerand, et al., 1992). The AMS uses a 7-point Likert-type scale that measures three major motivation dimensions: intrinsic, extrinsic, and amotivation. The intrinsic motivation has three sub-scales (to know, toward accomplishment, to experience stimulation) like the extrinsic motivation (identified, introjected, external regulation). However, for the purpose of the present study, only the three major dimensions were used. The Cronbach's alpha levels for the instrument in the present study are .90 (total), .84 (intrinsic), .78 (extrinsic) and .66 (amotivation).

**Maslach Burnout Inventor-Student Scale (MBI-SS).** The MBI-SS consists of 16 items that constitute the three scales for exhaustion, cynicism, and efficacy.

All items are scored on a 7-point frequency rating scale ranging from 1 (never) to 7 (always). The authors reported Cronbach's alphas range from .65 to .86 across three nationalities (Schaufeli, et al., 2002). Cronbach's alphas for the instrument in the present study are .86 (total), .75 (emotional exhaustion), .63 (cynicism) and .88 (efficacy).

### Data Analysis

Means, standard deviations, and intercorrelations of all the major variables in the study were determined using the software Statistical Package for the Social Sciences (SPSS) Version 15. Path analysis using Amos 7.0 was used to test the hypothesized mediation model. Path analysis was selected because it gives the researcher a clearer picture of the Big Five personality traits as separate manifest variables vis-à-vis the manifest variables of academic motivation and burnout. The goodness of fit of the hypothesized model was tested using various indexes: chi square, chi-square to degrees of freedom, Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), root mean square of approximation (RMSEA), and Akaike Information Criterion (AIC). To evaluate the model fit, chi-square should not be significant ( $p > .05$ ), chi-square to degrees of freedom should be less than two, CFI and TLI should at least be .90, and RMSEA should be not greater than .08. In terms of the AIC, the model with less value suggests better fit.

## Result

### Preliminary Analyses

Table 1 summarizes the means, standard deviations, and intercorrelations of all the major variables in the study. The intercorrelations using Pearson  $r$  were used to determine the relationships of the participants' personality traits with academic motivation and burnout dimensions. Findings revealed that consistent with previous studies, neuroticism is significantly related to all three burnout dimensions. This is the exact opposite of the extraversion trait which did not correlate to any of the burnout dimension which is surprising given the findings of previous studies suggesting that extraversion is a significant predictor of burnout (e.g., Bakker, et al. 2006; Zellars, Perrewe, & Hochwarte, 2000). Another surprising finding was the significant relationship of agreeableness with all burnout dimensions. Findings reveal that agreeableness was found to have significant negative relationships to both cynicism and exhaustion, and significant positive relationship with efficacy. Furthermore, conscientiousness was found to have significant positive and negative correlation to efficacy and exhaustion respectively, but no association was found with cynicism. On the other hand, openness to experience was found to have a significant positive relationship with efficacy. And lastly, no significant relationship was found between openness to experience and both cynicism and exhaustion.

**Table 1**  
**Summary Statistics and Intercorrelations among the Major Variables**

	1	2	3	4	5	6	7	8	9	10	11
1 Cynicism	-										
2 Efficacy	-.30*	-									
3 Exhaustion	-.51*	-.25*	-								
4 Intrinsic	-.23*	.33*	-.21*	-							
5 Extrinsic	-.23*	.16	-.10	.62*	-						
6 Amotivation	.48*	-.23*	-.22*	-.16*	.11	-					
7 Extraversion	-.05	.13	-.03	.03	.04	-.04	-				
8 Agreeableness	-.22*	.31*	-.18*	.10	-.03	-.36*	-.00	-			
9 Conscientiousness	-.12	.30*	-.17*	-.04	-.06	-.03	.09	.35*	-		
10 Neuroticism	.25*	-.18*	.23*	-.18*	-.09	.36*	-.20*	-.39*	.07	-	
11 Openness	-.11	.24*	-.06	.29*	.23*	-.21*	.23*	.13	-.05	-.42*	-

\*  $p < .05$

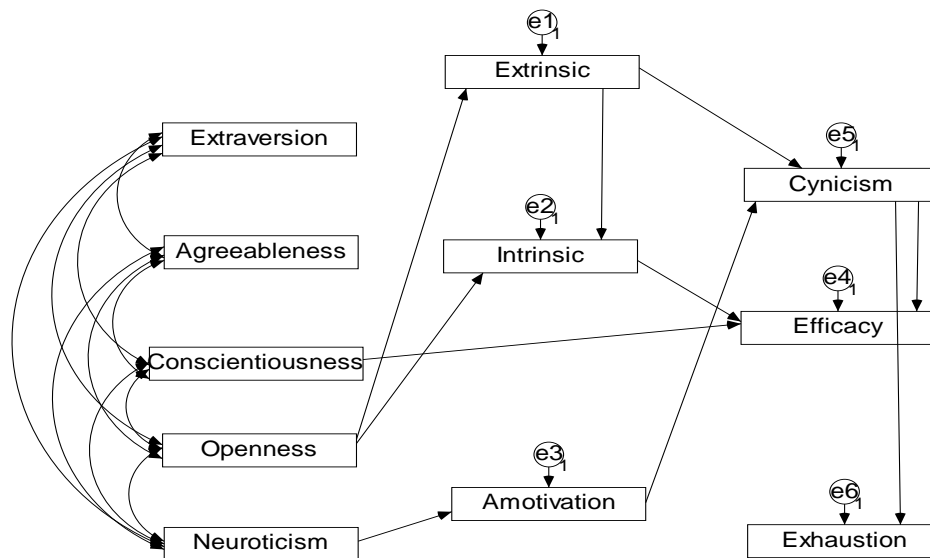
### Path Analyses

**The Empirical Model (Model 1).** Using the findings from the intercorrelation of variables, direct and mediated paths from personality to burnout were examined. In this model, paths were added depending on the significance of the relationships between variables from the intercorrelation of variables depicted in Table 1. If an association was found between two variables, a path was added between them, even if they were not part of the initial set of hypotheses. Similarly, if no association was found between two variables, a path was not added, even if a path was initially hypothesized. As a result, Model 1 included direct paths from neuroticism and agreeableness to all three dimensions of burnout; direct paths from conscientiousness to both efficacy and exhaustion; a direct path from openness to efficacy; mediated paths from neuroticism to all three burnout dimensions via amotivation; mediated paths from openness to all three burnout dimensions via intrinsic motivation; and a mediated path from openness to cynicism via extrinsic motivation.

Model 1 was tested for goodness of fit and findings show a rather poor fit across all indexes (chi-square= 91.32,  $p=.000$ ; chi-square over degrees of freedom= 3.38; CFI= .80; TLI=.59; RMSEA=.13). To improve the fit, I made use of the modification indices reported by Amos 7.0 during the data analysis. These indices generate recommendations about loosening constraints on certain model parameters in order to improve the overall model fit. In consonance with the modification indices, I decided to add a path from extrinsic motivation to intrinsic motivation and a path from cynicism to emotional exhaustion and efficacy in the model. These modifications to Model 1 led to the final model (Model 2). Findings revealed a good fit across all indexes for Model 2 (chi-square= 27.57,  $p=.38$ ; chi-square to degrees of freedom= 1.06; CFI= .99; TLI=.99; RMSEA=.02). The AIC of Model 2 was also lower (107.57) as compared to the AIC of Model 1 (169.32), thus providing additional support that Model 2 is a better model than Model 1.



**Figure 2**  
**The Final Model Showing the Association between Personality, Academic Motivation, and Burnout (only significant paths are shown)**



**The Final Model (Model 2).** A path analysis of Model 2 provided support to some of the direct paths predicted in the model but not to all. In addition, none of the mediated paths predicted were supported. In the final model, findings revealed that the direct paths from neuroticism to exhaustion (.14), cynicism (.07), and efficacy (.02) were not supported. These findings preclude examining mediation paths from neuroticism across all burnout dimensions. Regardless of this, amotivation was found to have a significant path to cynicism (.42,  $p < .001$ ). This suggests that neuroticism has an indirect effect on cynicism via the path of amotivation because neuroticism has a direct path to amotivation (.36,  $p < .001$ ). Similarly, the direct path from openness to efficacy was also not supported (.15,  $p > .05$ ) but openness has a significant path to both intrinsic (.16,  $p < .05$ ) and extrinsic motivation (.23,  $p < .01$ ). These findings have implications because intrinsic motivation predicts efficacy (.25,  $p < .001$ ) while extrinsic motivation predicts cynicism (-.18,  $p < .05$ ). This suggests that openness to experience does not have a direct or mediated effect to efficacy but it does have an indirect effect toward efficacy through its effect on intrinsic motivation. It also suggests that openness to experience has an indirect effect on cynicism through its effect on extrinsic motivation. On the other hand, the direct path from conscientiousness to efficacy was supported (.25,  $p < .05$ ) while that from conscientiousness to exhaustion was not (.13,  $p > .05$ ). And lastly, the direct path from agreeableness to both cynicism (-.05,  $p > .05$ ) and efficacy (.14,  $p > .05$ ) were not supported. In addition, direct paths from cynicism to both efficacy (-.16,  $p < .05$ ) and exhaustion (.49,  $p < .001$ ) were

supported by the data. Extrinsic motivation was also able to predict intrinsic motivation (.58,  $p < .001$ ).

### Discussion

The present study examined the personality-burnout link among college students. Bivariate correlations were used to determine significant associations between the Big Five personality traits and the three burnout dimensions. Findings suggested that four of the Big Five traits (except extraversion) play an important role in the experience of burnout among college students. Most of the findings of the study were consistent with the prediction of the hypotheses outlined. In the path analyses, direct and mediated effect paths were hypothesized and examined to determine whether personality affect burnout directly (independent of academic motivation) or by mediation (through academic motivation). Using an empirical model based on the significant relationships of the personality traits and burnout dimensions of the college students, results indicated (a) substantial link between conscientiousness and efficacy; (b) substantial link between openness and both intrinsic and extrinsic motivation; (c) substantial link between neuroticism and amotivation; (d) substantial link between cynicism and both extrinsic motivation and amotivation; (e) substantial link between intrinsic motivation and efficacy; (f) substantial link between extrinsic motivation and intrinsic motivation; (g) substantial link between cynicism and both efficacy and emotional exhaustion; and (h) absence of mediated effects via academic motivation in the personality-burnout link.

One major finding of the present study is that conscientiousness was the only personality trait that has a significant link to burnout. While the link between conscientiousness and efficacy have not been well-established in previous studies on student burnout, it is reasonable to assume that students who are determined and who are into task and goal-directed behavior may hold high beliefs on their capacity to perform academic tasks. Such personal efficacy may benefit students in terms of experiencing satisfaction and a sense of accomplishment in their school work which may maintain their drive to study and perform well in their academics. This result, however, is in stark contrast with the results of past studies which have shown strong relationship between all Big Five personality traits and the three burnout dimensions. One probable explanation for this divergent finding is that many of these previous studies that were earlier reviewed made use of correlation or regression analyses to examine the personality-burnout link while I made use of path analyses. Indeed, the bivariate correlations of the variables in this study depicted significant associations between personality and burnout consistent with the literature and with my initial hypotheses.

While only one personality trait was able to have a strong association with a burnout dimension, all three academic motivation dimensions were found to be linked with at least one burnout dimension. Previously, it has been shown that intrinsically motivated students tend to have lower levels of burnout while amotivated students were more likely to experience higher levels of burnout (Pisarik, 2009). The results of the present study suggest that more intrinsically motivated students have higher levels of efficacy; more extrinsically motivated students have lower levels of cynicism; and more amotivated students have higher

levels of cynicism. These findings can also be attributed to the role of self-determined motivation in predicting task-oriented coping (Thompson and Gadreau, 2008). It is safe to speculate that more self-determined students experience less burnout because they cope better in stressful situations.

Another important finding is that none of the academic motivation dimensions mediate the link between personality and burnout. This is mainly because conscientiousness was the only personality trait that has a significant direct path to a burnout dimension. In other words, there is little to mediate given the data from the sample of this study. However, the absence of any mediated paths can somewhat be attributed to the indirect association between certain personality traits and burnout dimensions via academic motivation. Indeed, it was found that neuroticism has an indirect effect on cynicism via amotivation; openness to experience has an indirect effect on cynicism via extrinsic motivation; and openness to experience, likewise, has an indirect effect on efficacy via intrinsic motivation. This means that academic motivation influences burnout distinctly and separately from that of personality although its relationship with personality factors lead to personality indirectly influencing burnout. This finding is important given that some authors suggest that significant direct path between a predictor and an outcome variable is not necessary for mediation to occur (see Preacher & Hayes, 2008, p. 880). This means that indirect effects such as the ones found in the present study can be considered as mediated effects in itself. But whether such indirect effects can be construed as mediated effects or not, the more important finding is that academic motivation seems to provide a linking mechanism between certain personality traits and burnout dimensions.

The role of academic motivation in the personality-burnout link is better viewed in terms of the specific variables or dimensions. For instance, a neurotic student is more prone to amotivation, and if he becomes less motivated in his school work, this may lead to feelings of self-doubt and indifference toward academic work and school (cynicism). This can be explained by the fact that being amotivated can already be considered as an emotional response to stressors (e.g., school work, teacher) which may promote disinterest toward school. Similarly, in terms of openness to experience, an intellectually curious and imaginative student who becomes more motivated by intrinsic reasons like goal-achievement may lead to higher confidence and sense of accomplishments in academic tasks (efficacy), while those who are more motivated by environmental reinforcements may tend to explore and enjoy their learning environment which could make them more appreciative of the importance of school and performing well in academic tasks (reduced cynicism). Overall, these associations can be explained by the self-determination theory. No matter what is the predisposition of a student in terms of his personality traits, it is his type or level of motivational orientation (whether he is more or less self-determined), that may dictate whether he will experience burnout or not.

In addition, data from the sample in the present study supported a link between extrinsic and intrinsic motivation, as well as between cynicism and both exhaustion and efficacy. In terms of motivation, this can be explained by the fact that intrinsic and extrinsic motivation under self-determination theory is viewed as a continuum and not as opposite polarities. Hence, being high in extrinsic motivation

may lead to being high in intrinsic motivation. Empirically, I made use of the AMS to measure the students' motivational orientations and the extrinsic motivation dimension of AMS has two sub-scales (introjected and identified) that are designed to capture increasing self-determination among students. For one, Pisaruk (2009) referred to identified regulation as a self-determined motivational orientation like intrinsic motivation. It is not surprising then the data from my sample resulted to a strong positive link between intrinsic motivation and extrinsic motivation. In terms of the three burnout dimensions, there is a dearth of empirical data on the interrelationship of the three burnout dimensions beyond correlations. However, there have been efforts in the past to view burnout as a process wherein one dimension appears first before the other dimensions and this includes a conceptualization where depersonalization (the equivalent of cynicism) appears first prior to the experience of diminished feelings of personal accomplishment and emotional exhaustion (for a brief review, see Cordes & Dougherty, 1993).

Turning now to implications for practice, one recommendation that can be made is for teachers to differentiate their instruction, taking into account the personality and motivational orientation of their students. Because intrinsic motivation results in high-quality learning and creativity (Ryan & Deci, 2000b), it would also be important to provide a classroom and school environment where self-determination or autonomy in learning is facilitated and not constricted. This, in turn, could prevent the experience of burnout that could lead to serious academic problems for students. Clearly, teachers must become aware of their students' motivational orientations (intrinsic or extrinsic) and levels of burnout so differentiated instruction and other forms of intervention from teachers or school counselors can be made. Henceforth, it is important that teachers or counselors must have an assessment of their students' academic motivation and burnout, on top of the usual assessment of standard variables like intelligence and personality. Data from such assessment may go a long way in assisting both teachers and counselors prevent future incidence of burnout and other maladjustments in relation to school work. In addition, it seems logical that when assessing students' motivation, measures that are capable of determining dimensions of motivation (ex. intrinsic, extrinsic) should be used. While the results of this study showed a strong positive association between intrinsic motivation and extrinsic motivation, these two motivational orientations are distinct and separate. As also shown by the path analysis, intrinsic motivation is linked with efficacy while extrinsic motivation is linked with cynicism. It is then imperative that students' intrinsic motivation and extrinsic motivation in studying or attending school are both assessed and used to guide instruction and counseling. Furthermore, it may also be important that psychometricians or educators develop indigenous measures of school or academic burnout and academic motivation for students. This could guarantee the use of culturally and socially appropriate measures of academic motivation and burnout.

In summary, the present study provided preliminary evidence on the possible role of academic motivation in the relationship between personality and burnout among college students. However, there is still a need to examine alternative models of mediation as well as other possible associations like moderation to create a clearer picture on the role of personality and academic motivation to the experience of burnout among college students. Obviously, one

limitation of his study is its cross-sectional nature and its use of self-report scales. Future studies may want to examine personality, academic motivation, and burnout using a longitudinal design and may use high school students in lieu of college students to determine if the same findings will be found to other educational levels. Another limitation was that extrinsic motivation was examined as a singular dimension. Future studies may want to examine the sub-scales of AMS, particularly as Ryan and Deci (2000b) emphasize the multidimensional nature of extrinsic motivation. In spite of these limitations, examining student burnout and motivation seems to be a worthy endeavor that merit further attention. It is my hope that this study is able to provide a springboard for other researchers to investigate the personality-burnout link among college students and the possible role that academic motivation plays in this link.

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