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Peace of Mind, Academic Motivation, and Academic Achievement in Filipino High School Students

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Abstract. Recent literature has recognized the advantageous role of low-arousal positive affect such as feelings of peacefulness and internal harmony in collectivist cultures. However, limited research has explored the benefits of low-arousal affective states in the educational setting. The current study examined the link of peace of mind (PoM) to academic motivation (i.e., amotivation, controlled motivation, and autonomous motivation) and academic achievement among 525 Filipino high school students. Findings revealed that PoM was positively associated with academic achievement $\beta = .16$, $p < .05$, autonomous motivation $\beta = .48$, $p < .001$, and controlled motivation $\beta = .25$, $p < .01$. As expected, PoM was negatively related to amotivation $\beta = -.19$, $p < .05$, and autonomous motivation was positively associated with academic achievement $\beta = .52$, $p < .01$. Furthermore, the results of bias-corrected bootstrap analyses at 95% confidence interval based on 5,000 bootstrapped resamples demonstrated that peace of mind had an indirect influence on academic achievement through the mediating effects of autonomous motivation. In terms of the effect sizes, the findings showed that PoM explained about 1% to 18% of the variance in academic achievement and motivation. The theoretical and practical implications of the results are elucidated.

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Positive education emphasizes the significance of social and psychological factors that facilitate key learning outcomes (Seligman, Ernst, Gillham, Reivich, & Linkins, 2009). Emergence of this paradigm has led to empirical investigations which focused on positive psychological constructs that serve as antecedents of adaptive academic functioning (Datu & Valdez, 2016; Heffner & Antaramian, 2016; Lewis, Huebner, Reschly, & Valois, 2009). One notable psychological variable that has been linked to a wide range of academic outcomes was positive affect. Positive affect pertains to individuals' experience desirable emotional states (e.g., happiness, excitement, and elation) at various points in time (MacKinnon et al., 1999).

Previous literature has revealed that positive affect plays an important role in fostering student success. Supporting this viewpoint, positive affect has been linked to greater academic engagement (Lewis et al., 2009), meaning in life (Datu, 2016), and intrinsic motivation (Isen & Reeve, 2005). Positive affect was also weakly associated with academic achievement (Cheng & Furnham, 2002; Nickerson, Diener, & Schwarz, 2011). Yet, positive affect (i.e., cheerfulness) has not substantially associated with academic ability in undergraduate students (Fox & Spector, 2000; Kashdan & Yuen, 2007).

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Whereas these studies pointed to the salient function of positive affect in the academic context, a common limitation of these investigations involved their greater focus on medium-arousal (content and happy) to high-arousal (elated and excited) positive emotions. As past literature showed that there are marked cultural variations in cognition, emotion, and motivation (Markus & Kitayama, 1991; Morling, Kitayama, & Miyamoto, 2002), there is a need to assess if what intensity (e.g., low-arousal and high-arousal) of positive emotions may optimize beneficial outcomes in various cultural settings. To strengthen the argument on cultural differences in emotional expression, the affect valuation theory (Tsai, Knutson, & Fung, 2006) argues that medium-arousal to high-arousal affect are more relevant for individuals who are immersed in individualist contexts because unrestricted expression of dispositions, wants, and values is highly rewarded in their cultural setting. Alternatively, low-arousal positive affect (calm and relaxed) are more suitable for individuals who are embedded in collectivist settings given that constant adjustment to others' needs and wants is important in such cultural contexts.

Recognizing these cultural variations on the expression of affective states, Lee, Lin, Huang, and Fredrickson (2013) developed the "peace of mind" construct. Peace of mind (PoM) refers to the extent to which individuals feel internal peace, coherence, and comfort. Lee et al. (2013) found that PoM is applicable for Chinese and European-American students.

Consistent with their hypotheses, Chinese scored higher than European-American participants on PoM which implied that low-arousal positive emotions like PoM may be more generalizable to interdependent cultural contexts.

Even with the seeming value of examining the role of PoM in the academic setting, very few studies have investigated the beneficial impact of PoM especially in collectivist societies. Aside from the study of Lee et al. (2013), only Datu, Valdez, and King (2016) have looked at the relations of PoM with an academic outcome (e.g., academic engagement). Other empirical investigations focused on the association of PoM with organizational outcomes like organizational citizenship behaviors (Ariyabuddhiphongs & Pratchawittayagorn, 2014) and task performance (Anjum, Ahmed, & Karim, 2014).

It is possible that more-culturally sensitive positive affective states like PoM may promote optimal outcomes in the educational context. The broaden-and-build theory (Fredrickson, 2001) posits that positive affective states (e.g., happiness, excitement, and calmness) are valuable in that they broaden range of thought-action preparations which enable individuals to acquire functional psychological resources. Individuals who experience positive affect are likely to embody approach types of motivation and wide range of adaptive outcomes. Supporting this theoretical conjecture, previous studies have shown that positive affect was linked to intrinsic motivation (Isen & Reeve, 2005) and academic achievement (Cheng & Furnham, 2002; Nickerson et al., 2011). Whereas PoM is regarded as one form of positive affect, Lee and colleagues (2013) note that positive affect measures in previous literature concentrated on the high-arousal feelings while limited research has been done to assess the role of low-arousal positive affective states like PoM. Furthermore, they argue that individuals in collectivist societies are more likely than those in individualist societies to experience low-arousal emotions.

It is therefore logical to assert that students' PoM may be linked to greater academic achievement as this affective state may enable them to embody approach forms of academic motivation (i.e., autonomous motivation). However, no investigation (except for the study of Datu, Valdez, & King, 2016) has examined the role of low-arousal positive affect like PoM in the academic setting. Clearly, more studies are needed to assess the theoretical linkage of peace of mind to academic outcomes.

Therefore, the main objectives of the current research were: a.) to assess the association of PoM with academic motivation and achievement; and b.) to examine the mediating effects of academic motivational orientations (i.e., amotivation, controlled and autonomous motivation) on the link between PoM and academic achievement among Filipino high school students.

Peace of mind and psychological outcomes

Past empirical literature has shown that PoM has been associated with a number of positive academic and work-related outcomes. PoM has been positively associated with academic engagement (Datu, Valdez et al., 2016), organizational citizenship behavior (Ariyabuddhiphongs & Pratchawittayagorn, 2014), positivity ratio (Lee et al., 2013), life satisfaction (Lee et al., 2013), and task performance (Anjum et al., 2014). On the other hand, PoM has been negatively correlated with anxiety and depression (Lee et al., 2013). Noticeably, while previous studies have shown that PoM was linked to well-being outcomes, only the study of Datu, Valdez et al. (2016) has explored the association of PoM with academic outcomes.

Academic motivation and academic outcomes

The self-determination theory (SDT) posits that the quality of motivational orientations that students embody place an important role in shaping key psychological outcomes (Ryan & Deci, 2000). Whereas intrinsic motivation is considered the most optimal form of motivation (compared to extrinsic motivational orientations and amotivation), the framework argues that there are forms of extrinsic motivation (i.e., identified regulation and integrated regulation) that may promote adaptive behaviors.

Consistent with the taxonomy of Vansteenkiste, Zhou, Lens, and Soenens (2005), combining identified regulation (performing an action because individuals consider them as important and valuable) and integrated regulation (doing a behavior because individuals see them as parallel to their goals and values) constitutes autonomous motivation which is a self-determined motivational orientation. Alternatively, clustering together the introjected regulation (doing a behavior because individuals feel uncomfortable or obliged to perform it) and external regulation (performing an act to get an incentive or to avoid a penalty) forms controlled motivation. Amotivation refers to absence of drive to perform an action.

Previous studies have demonstrated that these motivational orientations (amotivation, controlled and autonomous motivation) shaped key academic outcomes. Supporting this conjecture, autonomous motivation was positively associated with academic performance (e.g., Guay, Ratelle, Roy, & Litalien, 2010; Kusurkar, Ten Cate, Vos, Westers, & Croiset, 2013), academic adjustment (Ratelle, Guay, Vallerand, Larose, & Senécal, 2007), and study strategies (Kusurkar et al., 2013).

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Theoretical perspective

The broaden-and-build theory (Fredrickson, 2001) posits that positive emotions are very adaptive because they expand individuals' thought-action repertoire which is optimal for building key psychological resources. In the academic setting, scholars have shown that positive emotions optimize academic engagement (Datu et al., 2017; Lewis et al., 2009), intrinsic motivational orientation (Isen & Reeve, 2005), and academic achievement (Nickerson et al., 2011). However, it seems that past research has mainly concentrated on assessing beneficial impact of high-arousal (e.g., elation) and medium-arousal (e.g., joy) positive emotions on educational outcomes.

Solely focusing on evaluating the link of medium to high-arousal positive emotions on academic functioning in a collectivist society may be problematic for at least two reasons. First, researchers have demonstrated that medium to high-arousal positive emotions operate as more adaptive emotional states in Western societies than in collectivist settings (Morling et al., 2002; Tsai et al., 2006). Second, individuals in collectivist contexts are more likely to realize the value of expressing low-arousal positive emotions (Tsai et al., 2006). These findings indicate that more research is desired to explore the relationship of low-arousal positive emotions to academic outcomes.

With reference to the existing literature about the educational benefits of positive emotions, it seems that having PoM may be linked to higher autonomous motivation and academic achievement. This is because high levels of PoM can potentially broaden students' mind set and expand behavioral strategies that are beneficial for the attainment of successful learning outcomes (e.g., Guay et al., 2010; Kusurkar et al., 2013). This conjecture was consistent with the findings from previous literature regarding the association of positive emotions with intrinsic motivation (Isen & Reeve, 2005) and academic achievement (Nickerson et al., 2011).

Furthermore, it is also possible that PoM can promote externally-oriented reasons for studying (controlled motivation). It is likely that having high degree of PoM may broaden students' mind sets which will enable them to realize the importance of studying to gain external rewards and avoid feeling guilty about not studying (controlled motivation). In other words, controlled motivation may serve as an academic resource that can potentially develop through experiencing PoM. The conjecture on controlled motivation as an academic resource corroborated with the previous literature which demonstrates that socially-oriented motivation may be beneficial for students who are embedded in collectivist contexts (Cheng & Lam, 2013; King & McInerney, 2014).

The study posited that low-arousal positive emotions like PoM may be linked to higher academic achievement as these emotional states can promote adaptive motivational orientations (e.g., autonomous and controlled motivations), which in turn, may be associated with greater achievement. Put simply, autonomous motivation, controlled motivation, and amotivation can serve as specific mechanisms as to why PoM may be related to higher academic performance.

The philippine setting

The current research examined the association of PoM with the academic motivation and achievement of Filipino high school students in the Philippine context. Examining the relations of PoM to academic outcomes is an important direction because previous research indicates that individuals in the Philippine society are more likely to espouse an interdependent than an independent self-view (Datu, 2015; Hofstede, 2001). Existing studies show that Filipino students may significantly benefit from experiencing high levels of socially-oriented happiness as this construct has been linked to greater positive affect and life satisfaction (Datu et al., 2017). However, it seems that very limited evidence has been generated regarding the nomological network of PoM in the Philippine setting because to date, only the investigation of Datu, Valdez et al. (2016) have assessed the association of PoM with relevant academic outcomes like student engagement.

The primary aim of the current study was to examine the influence of PoM on academic motivation (i.e., amotivation, controlled motivation, and autonomous motivation) and academic achievement in Filipino high school students. It also assessed the mediating role of academic motivation on the relations between PoM and academic motivation.

The present research addressed notable gaps in the existing PoM literature for at least third significant reasons. First, whereas past studies have explored the association of PoM with academic engagement (Datu, Valdez et al., 2016) and well-being outcomes (Lee et al., 2013), the current study assessed the link of PoM to academic motivation and academic achievement. To the best of my knowledge, this was the first research which examined the theoretical linkage of PoM with academic motivation and academic achievement. Second, the study explored the indirect influence of PoM on academic achievement through the mediating role of academic motivational orientations to offer a potential mechanism on why PoM cultivates successful learning in a collectivist context. Third, whereas the research of Lee et al. (2013) assessed the role of peace of mind across Taiwanese and American

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undergraduate students, findings from their three inter-related studies may not be always generalizable in other non-undergraduate student populations. Investigating the association of PoM with key academic outcomes in Filipino high school students is an important research aim because previous studies have indicated that students who belong to this developmental period are vulnerable to experience a significant decline in academic motivation (Fredricks & Eccles, 2002; Van de gaer et al., 2009).

The present study tested the following conjectures:

H1: PoM would positively predict academic achievement.
H2: PoM would positively predict autonomous and controlled motivation.
H3: PoM would negatively predict amotivation.
H4: Autonomous motivation and controlled motivation would positively predict academic achievement.
H5: Amotivation would negatively predict academic achievement.
H6: Amotivation, controlled motivation, and autonomous motivation would mediate the association between PoM and academic achievement.

Methods

Participants

The total sample was composed of 525 Filipino high school students from a private secondary school institution in Metro Manila which is considered an urban area. The ages of the participants ranged from 11 to 19 (M = 13.85; SD = 1.27). There were 268 girls and 257 boys participants in the study. In terms of the academic year level, the sample was comprised of 201 Grade 7, 122 Grade 8, 59 Grade 9, and 142 Grade 10 students. However, 1 student failed to report the year level.

Instruments

Peace of mind

The Peace of Mind Scale (Lee et al., 2013) is a 7-item questionnaire which measured the degree to which the participants feel calmness, internal peace, and harmony. Sample items in the scale involved: "My mind is free and peaceful" and "I have peace and harmony in mind". The Cronbach's alpha coefficient of the scale in the current study was .72.

Academic motivation

The modified version of Academic Motivation Scale (Caleon et al., 2015) was utilized in the present research to assess the extent to which the participants espouse amotivation, controlled motivation, and autonomous motivation. Here are the sample items in each dimension: amotivation ("I don't know; I can't understand what I am doing in school" and "In the past, I had good reasons for going in school; however, now I don't know whether I should continue"); controlled motivation ("Because I want to get a more prestigious job" and "To prove to myself that I am capable of completing my high school education"); and autonomous motivation ("Because I feel happy and satisfied while learning new things" and "Because I think that secondary school education will help me better prepare for the job that I like"). The dimensions of the scale had the following Cronbach's alpha reliability coefficient: .85 (amotivation), .77 (controlled), and .84 (autonomous).

The English versions of the Peace of Mind Scale and Academic Motivation Scale were administered to the participants because past investigations have shown that the English versions of psychological questionnaires are considered valid even in the Philippine context (e.g., Datu, 2015; Datu et al., 2017.

Procedures

Before administering the packet of surveys to the participants, the author sought approval from the principal of the secondary school institution where the study was conducted. Passive consent forms were administered to the students across year levels. Afterwards, students were requested to answer the questionnaires and to report their respective general quarterly average during the second grading quarter based on their report cards. The quarterly average ranged from 0 to 100 with higher marks indicating better academic performance.

Data analysis

The descriptive statistical values like mean, standard deviation, and measures of normality were computed. As no missing data was detected, inferential statistical analyses were carried out. Then, correlational coefficients among PoM, academic motivation, and academic achievement were also calculated. To assess the indirect effects of PoM on academic achievement via amotivation, controlled motivation, and autonomous motivation, regression analyses was conducted based on the INDIRECT Macro (Preacher & Hayes, 2008) using SPSS v23. Bias-corrected bootstrapping analysis at 95% confidence interval (CI) was carried out with reference to 5,000 bootstrapped samples. The coefficient of determination values (R^2) were also reported to assess the effect sizes between the explanatory and outcome variables in the study.

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Results

Preliminary data analysis

The results of descriptive statistics and correlations analysis are shown in Table 1. Consistent with H1, PoM was positively associated with academic achievement. PoM was also positively correlated with autonomous motivation and controlled motivation while PoM was negatively associated with amotivation. Furthermore, autonomous motivation was positively correlated with academic achievement but amotivation was negatively linked to academic achievement.

Mediation analyses

The results of regression analyses were reported in Table 2. H1 was supported since PoM positively predicted academic achievement β = .16, $p < .05$. H2 was confirmed as PoM positively predicted autonomous motivation, β = .48, $p < .001$. Consistent with H3, PoM negatively predicted amotivation, β = –.19, $p < .05$. Moreover, PoM positively predicted controlled motivation, β = .25, $p < .01$. A review of the coefficient of determination (R^2) values indicated that PoM explained around 1.0% to 18% of the variance in students' amotivation, controlled motivation, and autonomous motivation.

Partly supporting H4, autonomous motivation positively predicted academic achievement, β = .52, $p < .01$ while controlled motivation did not significantly predict achievement. H5 was not supported as amotivation did not predict achievement. The three academic motivational dimensions (i.e., amotivation, controlled motivation, and autonomous motivation) accounted for 1.90% of the variance in academic achievement. The results of bias-corrected bootstrapping analysis based on 5,000 bootstrapped samples at 95% CI supported the hypothesized indirect effects of peace of mind on academic achievement via autonomous motivation (See Table 3).

Discussion

The primary objective of the current investigation was to examine the associations of peace of mind with academic motivation and academic achievement.

Table 1. *Descriptive statistics and correlational coefficients between the variables*

Variable	α	*M*	*SD*	*r*				
				1	*2*	*3*	*4*	*5*
1. Peace of mind	.72	3.53	.57	–				
2. Amotivation	.85	3.19	1.61	–.10*	–			
3. Controlled motivation	.77	5.43	.89	.20**	–.08	–		
4. Autonomous motivation	.84	5.60	.86	.35**	–.28**	.48**	–	
5. Academic achievement	–	87.82	4.23	.11**	–.08*	.07	.12**	–
6. Age	–	13.85	1.27					

Note: **$p < .001$, *$p < .05$.

Table 2. *Standardized regression weights of the regression analyses*

Types of paths	*Standardized estimates*		
Paths	β	SE	*t*
Direct effects			
PoM → academic achievement	.16	.26	–2.02*
PoM predicting mediators			
PoM → Amotivation	–.19	.09	–2.02*
PoM → Controlled	.25	.05	4.92***
PoM → Autonomous	.48	.04	10.78***
Mediators predicting outcomes			
Amotivation → academic achievement	–.15	1.26	.21
Controlled → academic achievement	.08	.30	.29
Autonomous → academic achievement	.52	.26	2.51**

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

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Table 3. *Results of Indirect Effects of Peace of Mind on Academic Achievement via Academic Motivation*

	Perceived academic achievement	
Mediators	Indirect effects	BCa 95% CI
Amotivation	–.02	–.190, .142
Controlled	.03	–.101, .106
Autonomous	.25	.091, .598

The mediating influence of academic motivation on the link between PoM and academic achievement was also assessed. Most aspects of the results confirmed the theoretical conjectures in the present study.

Consistent with H1 and H2, PoM was positively associated with academic achievement and autonomous motivation. H3 was also confirmed as PoM was negatively linked to amotivation. These results indicate that students who feel internal peace and harmony are more likely to get higher grades and espouse self-determined form of academic motivation. This corroborated the extant body of knowledge regarding the advantageous relations of positive affect with key academic outcomes such as academic achievement (Cheng & Furnham, 2002; Nickerson et al., 2011), intrinsic motivation (Isen & Reeve, 2005), and academic engagement (Lewis et al., 2009). Yet, the study contributes to the literature through assessing the association of low-arousal positive affect like PoM with academic achievement and academic motivation in the academic context.

Supporting H4, autonomous motivation was positively associated with academic achievement. Hence, it appears that when students engage in academic tasks that are consistent with their aspiration, goals and values, it is likely that they can achieve higher grades. This was consistent with the theoretical postulations of the self-determination theory (Ryan & Deci, 2000) and the findings from past investigations regarding the psychological benefits autonomous motivation on various educational outcomes such as academic performance and academic adjustment (i.e., Guay et al., 2010; Kusurkar et al., 2013; Ratelle et al., 2007).

The most notable theoretical contribution of the present study, however, points to the indirect influence of peace of mind to academic achievement through the mediating roles of autonomous motivation. This result seems to suggest that higher peace of mind could be associated with greater academic performance because this low-arousal affective state may be linked to adaptive forms of motivation (autonomous motivation). In other words, academic motivation can explain why peace of mind may be associated with higher academic achievement. Evidently, this provides support on the broaden-and-build theory (Fredrickson, 2001) which argues that positive affect may broaden action-thought repertoire that build adaptive resources and optimize key psychological outcomes.

Surprisingly, PoM was positively associated with controlled academic motivation which provided full support on H2. This implies that students with high levels of peace of mind would perform academic tasks because of external rewards and perceived sense of obligation. Whereas the self-determination theory (Ryan & Deci, 2000) posits that autonomous motivation is a more adaptive than controlled motivation, some scholars assert that even controlled motivation may play an important role in facilitating key educational outcomes in collectivist cultures (Cheng & Lam, 2013; King & McInerney, 2014). To a large extent, this is because students in interdependent contexts also see the significance of embodying more extrinsic forms of motivation to achieve vital cultural goals (e.g., preserving harmonious relationship with significant others).

Furthermore, the study showed that controlled motivation and amotivation did not predict academic achievement. These findings suggest that extrinsic motivational orientations (controlled motivation) and lack of drive to study (motivation) may not be linked to academic performance which confirmed results from previous studies on the lack of association among such motivational types and educational outcomes (Areepattamannil, Freeman, & Klinger, 2011; Baker, 2004). However, it is likely that two reasons may have shaped the non-significant associations of controlled motivation and amotivation with achievement. First, it may be possible that these motivational orientations are indirectly linked to academic achievement through the mediating effects of academic variables (e.g., self-regulation or academic engagement). Second, the use of subjective measure of academic achievement in the present study may have resulted in biased estimates of relationships between motivation and academic performance.

The effect sizes found as regards to the associations among PoM, academic motivation, and achievement in the study ranged from 1% to 18%. Although the effect sizes may indicate a relatively small degree of relationships among the variables, the values are comparable to what have been found in previous research regarding the link between personality variables and academic outcomes (Poropat, 2009). Hence, the results of the current investigation may still offer potential contributions to the existing literature regarding the correlates/predictors of academic performance.

The present study had some limitations. First, the cross-sectional nature of the current investigation poses restraints in terms of drawing causal inferences

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about the relations among PoM, academic motivation, and academic achievement. Future researchers are recommended to use longitudinal designs (i.e., cross-lagged panel or prospective longitudinal designs) to examine the causal ordering between PoM and academic outcomes. Second, the present study relied on self-report data to assess the variables of interest (e.g., peace of mind) which may be susceptible to common method variance. Future investigations are encouraged to use other-report data (peer-report and teacher-report data) to address this limitation. Third, the present research only recruited Filipino students from one high school institution which may offer limited generalizability in other cultures. Future studies can consider recruiting samples from other collectivist and individualist societies to the test the cross-cultural generalizability of the linkage between peace of mind and academic outcomes. Fourth, the study only focused on detecting the association of PoM with academic motivation and achievement. Future research can address this through exploring the linkage of low-arousal positive affective states to other academic outcomes like academic resilience and learning strategies.

Nonetheless, the present study had key theoretical and practical implications. In terms of theory, the investigation addressed research gaps in the positive affect literature through showing that low-arousal positive affect like PoM can be linked to academic achievement through the mediating effects of academic motivation, unlike previous studies which examined the relations of PoM to limited psychological outcomes such as academic engagement (Datu, Valdez et al., 2016) and well-being indices (Lee et al., 2013). Clearly, this corroborates the positive education paradigm (Seligman et al., 2009) which postulates that positive psychological states may promote better learning processes. Concerning practice, findings of the current research call for the need to conceptualize and carry out psychological interventions that can optimize low-arousal positive affect like peace of mind in the academic context. This is because cultivating these types of emotions may be associated with adaptive educational outcomes especially in collectivist sociocultural settings. Teachers are also recommended to create learning contexts that will enable students to feel calm and relaxed while performing various academic tasks.

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