



Short Research Report

Gratitude Moderates the Relationship Between Happiness and Resilience

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Introduction

The promotion of resilience among young people is essential to maintain a healthy mental state. As one of the dimensions in positive mental health, resilience refers to an individual's adjustment in the face of difficulty (Cheung & Kam, 2012; Hermann et al., 2011; Murphey et al., 2013; Werner, 1995). Resilient individuals withstand better life stressors, such as poverty, health problems, or family conflict. They avoid responding to unfavorable circumstances with negative behaviours, such as violence and substance abuse (Cutuli & Herbers, 2018; Shumba, 2010; Werner, 1995). They are more inclined to see problems as opportunities for growth.

Positive emotions, such as joy, interest, contentment, and love, are known to foster resilience (Amstadter et al., 2014; Cohn & Fredrickson, 2010; Emmons & Shelton, 2002; Kashdan et al., 2006; Ong et al., 2006). Although prior studies demonstrate that resilient individuals tend to be more grateful and have

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happier dispositions, the relationship of resilience, gratitude, and happiness has not been sufficiently studied among young people, particularly in collectivist societies, like in Asian countries (Balgiu, 2017; Çerkez, 2017; George & Moolman, 2017; Miljevic-Ridicki et al., 2017; Tecson et al., 2019). As factors initiating the process of resilience require a more thorough investigation, in this short research report, we focus on assessing young people's resilience in the Philippines and examine whether gratitude amplifies both happiness and resilience.

We hypothesized that gratitude is positively correlated with sense of happiness and resilience, that happiness is positively associated with the resilience among young people; and that gratitude moderates the relationship between happiness and resilience.

Methodology

A convenience sample of 380 college graduates answered an online survey, with a mean age of 19.58 (SD = 2.79, ranging from 18 to 30 years old). Most of the respondents were female (54.74%), college graduates (73.42%), and self-reported to be in the lower socio-economic background (24.74%, 15,501 to 25,500 to (£397.22) family monthly income equivalent to (Philippine peso 62.28 = 1 £ sterling). This study was approved by the university's ethics committee.

The *Happiness Measure* (Fordyce, 1988) is composed of 2 items (*i.e.*, “In general, how happy or unhappy do you usually feel?”; “Consider your emotions a moment further. On the average, what percent of the time do you feel happy?”). The first item uses using a 10-point scale, the second item uses a percentage rating. Test-retest reliability provided a strong correlation, $r = 0.80$, $p > 0.01$ for the 2-item happiness measure.

The *Gratitude Questionnaire* (McCullough et al., 2002) (Cronbach $\alpha = 0.80$) is composed of six items measuring gratitude (*e.g.*, "I have so much in life to be thankful for," "If I listed everything that I felt grateful for, it would be a very long list"). These items use a 7-point scale, ranging from 1 (strongly disagree) to 7 (strongly agree)

The *Brief Resilient Scale* (Smith et al, 2008) (Cronbach $\alpha = 0.75$) is composed of six items (*e.g.*, I tend to bounce back quickly after hard times,” “It does not take me long to recover from a stressful event”) and uses a 5-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

SPSS and SPSS Macro were used for the statistical analyses. First, correlation analysis was computed to determine the associations between gratitude, happiness, and resilience. Second, hierarchical regression and moderation analysis were carried out to examine whether gratitude moderates the relationship between happiness and resilience following the guidelines established by Hayes (2012). All assumptions for Pearson's correlation, hierarchical multiple regression, and moderation analysis (normality of data, continuous variables, non multicollinearity) were met.

Results and Discussion

The correlations between gratitude with happiness ($r = 0.24$, $p < 0.01$) and between gratitude and resilience ($r = 0.27$, $p < 0.001$) were both significant (Figure 1 A-C). Likewise, the correlation between happiness and

resilience was also significant ($r = 0.31, p < 0.001$). Based on the analysis, these relationships were expected because gratitude has been reported to be associated with happiness (Emmons & McCullough, 2003; Maltby et al., 2005; McCullough et al., 2002; Watkins et al., 2015; Wityliet et al., 2019) and has an enhancing effect of resilience (Mary & Patra, 2015). The correlation between happiness and resilience is also consistent with the recent finding that happiness may play a significant role in boosting resilience among college students (Short, Barnes, Carson, & Platt, 2020).



Figure 1 Relationship between gratitude, happiness and resilience. (A-C) Scatterplot diagrams of gratitude, happiness and resilience showing a positive significant but weak correlation amongst the variables.

Table I shows the results of two-step hierarchical regression using happiness and gratitude as predictors of resilience. In the first step, happiness significantly predicted resilience, accounting for 9% of the variance. In the final step, when the model included gratitude, the variables accounted for 14.47% of the variance. Thus, happiness and gratitude both predicted resilience. The observed moderating effect of gratitude and happiness on resilience (coefficient = 0.01, SE = 0.01, $t(3, 376) = 5.30, p < 0.001$, LLCI: 0.01, ULCI: 0.01) in Figure 2 is consistent with the view that positive emotions are substrates of a person’s resilience towards life challenges (Seligman et al., 2005). The gratitude effect may be explained as a coping strategy of reframing one’s thoughts and focusing on reasons for being grateful (Sztachanska et al., 2019; Watkins et al., 2015). These self-generated positive memories are important to experience positive emotions and resilience.

Table I. Hierarchical regression on the effect of gratitude and happiness on resilience.

Step	Variables	Adjusted r^2	F -value	Unstandardized Coefficients		Standardized Coefficients	t -value
				B	SE	Beta	
1	Constant	9%	39.54**	2.43	0.12		19.88
	Happiness			0.12	0.02	0.31**	6.29
2	Constant	14%	31.90**	1.79	0.18		9.67
	Happiness			0.12	0.02	0.28**	5.72
	Gratitude			0.14	0.03	0.23**	4.70

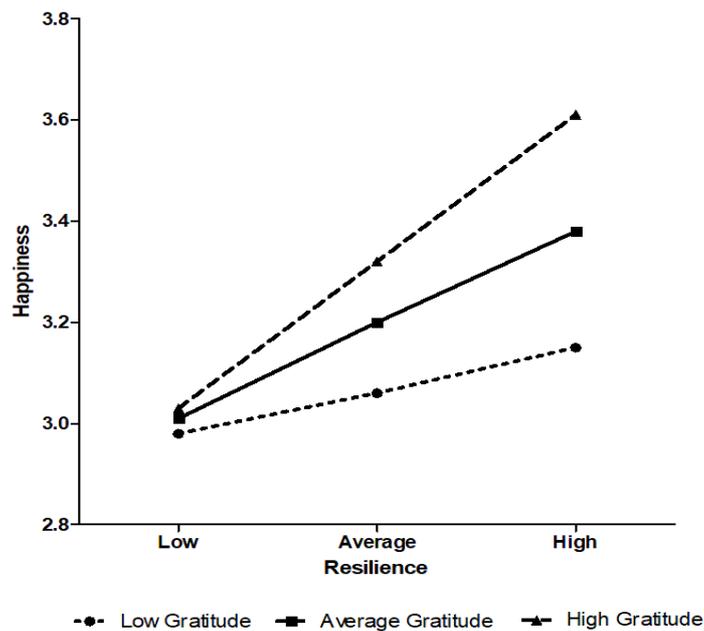


Figure 2. Relationship between gratitude, happiness and resilience. Moderating Role of Gratitude in the Relationship between Happiness and Resilience. The increase on gratitude amplifies the relationship between happiness and resilience.

This study has various limitations. First, although the hierarchical regression analysis and moderation analysis in this study presents an interesting analysis of the dataset, it is suggested that future research uses other methodologies, for example, an experimental study to determine the capacity of gratitude to impact resilience. Second, it is essential to consider larger sample size. It would also be interesting for future research to be conducted with students from other countries with similar collectivist cultures, such as Vietnam, Indonesia, and Japan.

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