

## Financial Stress and Well-being of Filipino Students: The Moderating Role of External Locus-of-hope

Allan B. I. Bernardo  
*University of Macau*

Katrina Fernando Resurreccion  
*De La Salle University*

One of the core principles of positive psychology is that character strengths buffer the effects of adverse experiences on well-being. This study investigated whether external locus-of-hope (LOH) moderates the effects of financial stress on Filipino students' well-being. Students from various universities answered questionnaires that included scales for financial stress, internal and external LOH, and satisfaction with life; all the relevant scales had good psychometric properties with the current sample. As expected, life satisfaction was negatively predicted by financial stress and positively predicted by three LOH dimensions. More importantly, external-family LOH moderated the relationship between financial stress and life satisfaction; there was no negative relationship between financial stress and life satisfaction among students with high external-family LOH. But the results also suggest that financial stress moderates the relationship between external-spiritual LOH and life satisfaction; external-spiritual LOH's positive relationship with life satisfaction is found only among those who experience low financial stress.

*Keywords:* financial stress, locus-of-hope, hope theory, well-being, life satisfaction, university students

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Correspondence concerning this article can be addressed to Allan B. I. Bernardo, Department of Psychology, E21-3060 Humanities and Social Sciences Building, University of Macau, Avenida da Universidade, Taipa, Macau. Email: allanbibernardo@umac.mo

One of the fundamental principles of positive psychology is that character strengths buffer the effects of stress and other negative experiences on the well-being of individuals (Gable & Haidt, 2005; Park & Peterson, 2009). Character strengths like gratitude, forgiveness, and hope are thought to be associated with more adaptive forms of coping with these stressful experiences (Harzer & Ruch, 2015). Among Filipino students, a possible source of stress relates to financial difficulties that students or their families experience. In this study, we inquired into the possible buffering effects of hope on the negative effects of financial stress on life satisfaction of a sample of Filipino students.

### **Financial Stress and Well-being Among Filipino Students**

According to an old review of published psychology research in the Philippines, stress and coping has been one of the most intensively researched topics among Filipino psychology researchers (Bernardo, 1997). But there were hardly any studies that focus on stress experiences of Filipino students in that review, a trend that has improved somewhat in the last decade with the publication of some studies on Filipino students' stress-related experiences. This observation reflects a similar trend in other parts of the world where research on stress experienced by higher education students came relatively late compared to stress research on other populations (Michie, Glachan, & Bray, 2001). As a reflection of this trend in other countries, research on stress in higher education students has increased in the past two decades, and psychologists now have a better understanding of the range of stressors for students (Robotham & Julian, 2006) and factors related to students' stress (Beiter et al., 2015). Various psychological assessment tools have also been developed to measure higher education students' stress (e.g., Ross, Niebling, & Heckert, 1999; Sarafino & Ewing, 1999) and general measures of stress have been adapted or validated for use in specific populations of college students (Camacho, Cordero, & Perkins, 2016; Chan & Bernardo, 2017).

There has been a similar increase in the number of published research on Filipino students' stress-related experiences. Most of these studies inquire into the factors associated with the experience of stress,

including the sources of stress (Calaguas, 2012; Pengpid, Peltzer, & Ferrer, 2014), responses to stress (Dy, Espiritu-Santo, Ferido, & Sanchez, 2015; Labrague et al., 2017), and various psychological and educational correlates of stress (Calaguas, 2011; Pengpid et al., 2014; Reyes et al., 2016; Tamanal, Park, & Kim, 2017). There is a noticeably higher frequency of published studies on stress-related experiences of nursing students in the Philippines (e.g., Labrague, 2014; Labrague et al., 2017), which may be explained by the continuing rise in enrollment in nursing programs in the Philippines. A few studies have inquired into stress-related experience as symptoms of more complex psychological problems of students (e.g., Gingrich, 2009; Sta. Maria et al., 2015). Interestingly, even with the increase in the number of published studies tackling stress experienced by Filipino students, there seems to be more studies on the subject with Filipino-American students (e.g., Nadal, Pituc, Johnston, & Esparrago; 2010; Wei, Ku, & Liao, 2011), which suggests that more research could definitely be done on stress-related experiences of Filipino students.

One of the sources of stress for students that has been observed among higher education systems in different parts of the world relates to financial pressures (Aherne, 2001; Joo, Durband, & Grable, 2008; Roberts, Golding, Towell, & Weinreb, 1999). Not surprisingly, stress related to financial strain and uncertainty has a negative impact on student well-being (Mahmoud, Staten, Hall, & Lennie, 2012; Smyth, Hockemeyer, Heron, Wonderlich, & Pennebaker, 2008). Students' financial stress is associated with higher self-reported mental health needs (Hyun, Quinn, Madon, & Lustig, 2006), difficulties in college adjustment (Meehan & Negy, 2003), and a range of adverse behaviors, social relations, and academic outcomes (Adams, Meyers, & Beidas, 2016; Northern, O'Brien, & Goetz, 2010).

Experiencing financial stress is not unlikely among Filipino students, and government statistics suggest that a significant proportion of the school-age population experience financial difficulties. Starting at the basic education level, almost 20% of Filipino children who dropped out of school mentioned insufficient financial resources as the main reason for quitting school (Philippine Statistics Authority, 2015). Dropping out of school was most probable among 17-year olds, particularly among those from the lowest income families (Reyes,

Tabuga, Asis, & Mondez, 2015). In the college-age population, the top reason (mentioned by 37.58%) for not going to college or university was the high cost of higher education; moreover, about 16.0% of those who opted not to pursue higher education report that they did so in order to look for work to earn money for their families (Reyes et al., 2015). In the current study, we hypothesized that financial stress would be negatively related to subjective well-being, or specifically, life satisfaction of Filipino students. There are currently no published studies that show this relationship with a Filipino sample. One recent study did not actually measure financial stress, but showed that sense of poverty was associated with the experience of psychological distress among students (Reyes & Yujuico, 2014).

### **Locus-of-hope and Well-being**

As mentioned earlier, a fundamental assumption of positive psychology is that character strengths moderate the effects of stress on well-being (Park & Peterson, 2009; Peterson, Gerhardt, & Rode, 2006). In this study, we explored the role of hope in moderating the negative relationship between financial stress and life satisfaction of Filipino university students. Hope theory (Snyder, 2002) defines hope as positive cognitions related to one's expectations and ability to attain important life goals. More specifically, hope is defined as "a cognitive set that is based on a reciprocally derived sense of successful agency (goal-directed determination) and pathways (planning to meet goals)" (Snyder et al., 1991, p. 571). Research has shown that hope is consistently associated with various indicators of well-being (Gilman, Dooley, & Florell, 2006; Marques, Pais-Ribeiro, & Lopez, 2011; Wong & Lim, 2009), including among low-income youth (Adelabu, 2008). More importantly, hope moderates the relationship of different risk factors and depression (Ashby, Dickinson, Gnilka, & Noble, 2011; Visser, Loess, Jeglic, & Hirsch, 2013), consistent with the assumptions of positive psychology.

The locus-of-hope model (Bernardo, 2010) is an extension of hope theory that differentiates between internal and external agents in goal-directed hopeful thoughts. The original hope theory is assumed to represent an internal locus-of-hope (LOH), wherein hope involves

the individual's own capacities and strategies for attaining important life goals. The external LOH dimension, on the other hand, involves external agents such as one's family and peers or even external forces or higher spiritual beings, and are labeled as external-family, external-peer, and external-spiritual LOH respectively. The model proposes that both internal and external agents can figure in goal-directed hopeful thoughts, and as such, the external LOH dimensions are assumed to be important hope-related cognitions in addition to internal LOH. External LOH might be salient in cultures that emphasize interdependent self-construals (or self-concepts that define the self in terms of one's relationships to other; Markus & Kitayama, 1991) and also the role of external agency in goal-pursuit (Markus & Kitayama, 2003), but there is no assumption that external LOH dimensions are exclusive or specific to such cultures, or that internal LOH dimensions are not important to such cultures. Previous studies have shown strong associations between the external LOH and individual-level measures of interdependent self-construals and collectivism, and between internal LOH and individual level measures of independent self-construals and individualism (Bernardo, 2010; Du & King, 2013). These findings suggest that the internal and external LOH dimensions should not be understood as being specific to a type of culture, and indeed, the research has investigated these constructs as individual-difference variables.

There is now evidence that external LOH dimensions are associated with various indicators of well-being in adolescents (Bernardo, 2015), young adults (Bernardo, 2010; Bernardo, Wang, Pesigan, & Yeung, 2017; Bernardo, Yeung, Resurreccion, Resurreccion, & Khan, in press; Datu & Mateo, 2017; Du, Bernardo, & Yeung, 2015; Du & King, 2013) and adult community samples (Bernardo & Estrellado, 2014). In a cross-cultural study of Asian university students, external LOH is associated with the use of more collaborative learning strategies in schools (Bernardo, Salanga, Khan, & Yeung, 2016). Consistent with previous findings that hope is associated with adaptive coping, external LOH was also associated with more adaptive forms of collectivist coping (Bernardo et al., 2017; Wang, Bernardo, & Yeung, 2017). In most of these studies, external-family and internal LOH were the most consistent positive predictor of well-being measures. The other

two LOH dimensions had less consistent positive relationships with well-being. In some cases, external-spiritual LOH was even negatively associated with adaptive behaviors and outcomes (see Bernardo & Estrellado, 2017a, 2017b; Bernardo et al., in press). Based on these previous studies, we hypothesize that internal LOH and external-family LOH would be positively associated with life satisfaction of the students in the sample. We do not hypothesize a relationship between the external-peer and external-spiritual LOH and life satisfaction.

Although there is an increasing body of evidence on the positive correlates of external LOH, there is actually only one published study that demonstrated a buffering effect of external LOH. In a study of Filipino university students, Datu and Mateo (2017) found that external-peer LOH moderated the negative impact of discrimination on various measures of students' well-being: In particular, students with high external-peer LOH maintained good well-being even if they experienced discrimination. We make a similar argument regarding the moderating effect of locus-of-hope as in this previous study (Datu & Mateo, 2017). That is, the belief that external agents would play an important role in attaining one's important goals would lessen the harmful effects of financial stress by serving as additional resources for the individual to deal with stressful experiences. That external agents would serve this function is consistent with locus-of-hope model's assumption of conjoint forms of agency (i.e., external agents play roles in one's goal-pursuit) that underlie external loci-of-hope dimensions. But the moderating effect found by Datu and Mateo (2017) involved an external LOH dimension that has not been consistently associated with positive well-being indicators, and as such, we cannot assume that the buffering effects of LOH are necessarily associated with those LOH dimensions that have known correlations with well-being. So our final hypothesis is less specific than the previous two: We hypothesize that *some* external LOH dimensions would moderate the negative relationship between financial stress and well-being.

### **The Current Study**

The primary purpose of the current investigation is to explore whether external LOH dimensions will moderate the negative impact

of financial stress on Filipino students' life satisfaction. With this main objective, our study hopes to contribute towards providing further evidence on the importance of external LOH in people's well-being, and university students' well-being in particular. More importantly, because there is so far very little evidence on the buffering effects of external LOH on the negative effects of adverse experiences on well-being, our study would hopefully contribute towards further building up the evidence on this subject. Such evidence will provide stronger arguments in support of the important role of external LOH as a character strength that promotes well-being by way of moderating the effects of stress.

In line with the study's primary purpose, we propose three hypotheses:

- H1: Financial stress will negatively predict life satisfaction;
- H2: Internal and external-family LOH will positively predict life satisfaction; and
- H3: LOH dimensions will moderate the negative relationship between financial stress and life satisfaction (although we cannot specify which among the LOH dimensions would do so).

## METHOD

We tested the aforementioned hypotheses in a sample of university students who were asked to answer a survey questionnaire that included scales measuring financial stress, LOH, and life satisfaction. The complete survey included other variables (e.g., self-mastery, self-esteem) but were not included in the analysis.

### Participants

The participants were 274 university students from various universities from the National Capital Region, Region 3, and Region 4A. The average age of the participants was 19.28 years ( $SD = 0.69$ ) and majority (64.60%) was female. All gave their informed consent to participate and were given extra course credit for their participation.

## Measures

**East Asian Student Stress Inventory (EASSI).** To measure financial stress, a subscale of items related to financial difficulties from the EASSI (Chng, Ding, & Perez, 1998) was used. The subscale had four items [e.g., “I cannot concentrate in school because I worry about my finances or my family’s finances” and “I cannot afford to spend money for fun and recreation (e.g., movies & restaurants)"]. There were 20 other items in the EASSI that referred to other sources of stress like family pressure, test anxiety, among others, but these were not analyzed in the current study. The participants were asked to indicate their agreement with each statement from 1 (*strongly disagree*) to 5 (*strongly agree*).

**Locus-of-hope Scale.** The scale (Bernardo, 2010, 2015) comprised of four subscales with eight items each: internal (e.g., “I meet the goals that I set for myself.”); external-family (e.g., “My parents have lots of ways of helping me attain my goals”), external-peer (e.g., “I have been able to meet my goals because of my friends’ help”), and external-spiritual (e.g., “God has many different ways of letting me attain my goals”). The eight filler items from the original scale were not used in this study. Each item expressed a statement about goal pursuit and attainment to which the participant had to reply using a scale from 1 (*definitely false*) to 4 (*definitely true*).

**Satisfaction With Life Scale.** The 5-item scale (Diener, Emmons, Larsen, & Griffin, 1985) measured general subjective well-being. Participants indicated their agreement with each item (e.g., “In most ways my life is close to my ideal”) using a scale from 1 (*strongly disagree*) to 7 (*strongly agree*).

## RESULTS

### Descriptive Statistics of the Key Variables

The descriptive statistics for and correlations among the different scales in the study are summarized in Table 1. The table also indicates that all the scales have good internal consistency (all Cronbach’s  $\alpha \geq .75$ ). We note that compared to the LOH scales, there is much more

Table 1. Descriptive Statistics and Bivariate Correlations for Key Variables

	$\alpha$	<i>M</i>	<i>SD</i>	Correlations ( <i>r</i> )					
				(2)	(3)	(4)	(5)	(6)	
(1) Financial stress	.75	2.76	0.86	-.28*	-.22*	-.01	-.04	-.38*	
(2) Internal LOH	.75	3.23	0.36	--	.42*	.25*	.24*	.47*	
(3) External-family LOH	.90	3.36	0.49		--	.45*	.34*	.48*	
(4) External-peer LOH	.87	2.85	0.48			--	.22*	.18*	
(6) Life satisfaction	.81	4.86	1.14				--	.36*	

\**p* < .01

variation in the financial stress and life satisfaction scale scores. As the focus of the study was on financial stress, it was useful to examine the distribution of responses to the financial stress scale. The skewness (-.06) and kurtosis (-.43) suggested a normal distribution; the mean (shown in Table 1) and median (2.75) scores were slightly below the midpoint of the scale. These descriptive statistics suggest that the participants were mostly not experiencing high levels of financial stress. Indeed, only 5.5% of the respondents had financial stress scale scores of 4.0 or higher (4.0 representing the *agree* response to the financial stress items) compared to the 24.5% whose financial stress scale score was 2.0 (*disagree*) or lower.

### **Confirmatory Factor Analysis of Locus-of-hope Scale**

We sought to establish further the psychometric properties of the LOH scale because it is a fairly new scale. In particular, we used confirmatory factor analysis to assess the structural validity, convergent validity, and discriminant validity of the scale. To test the structural validity of the four-factor structure of the LOH scale, three confirmatory factor analysis procedures were conducted to compare (a) a one-factor model where all 32 items comprised one latent factor, (b) a two-factor model where the 8 internal LOH items comprised one factor and the 24 external LOH items formed another factor, and (c) a four-factor model where the eight items of each subscale as indicators of each of the four latent factors, and the four factors covary with each other. The summary of the fit indexes for the three models is shown in Table 2. There was inadequate fit for both the one-factor and two-factor models, and adequate fit for the four-factor model, consistent with the original model (Bernardo, 2010) and other studies with other Filipino student samples (Bernardo, 2015; Bernardo et al., 2016).

The pertinent statistical results for the composite reliability, convergent validity, and discriminant validity of the four scales are summarized in Table 3. All four subscales demonstrate good composite reliability (all > .70). For convergent validity, the average variance extracted (AVE) should be greater than .50 and the composite reliability (CR) should be greater than AVE (Hair, Black, Babin, & Anderson, 2010). As shown in Table 3, the external-family and external-peer

Table 2. Summary of Fit Indexes for Three Tested Models for Confirmatory Factor Analysis of

Locus-of-hope Scale										
Model	$\chi^2$	<i>df</i>	<i>p</i>	$\chi^2/df$	CFI	TLI	IFI	RMSEA	90%CI	
One-factor	2822.09	464	.0001	6.08	.53	.50	.53	.14	.13, .14	
Two-factor	2545.12	463	.0001	5.50	.58	.55	.59	.13	.12, .13	
Four-factor	772.79	458	.0001	1.69	.94	.93	.94	.05	.04, .06	

Table 3. Additional Psychometric Properties of the Locus-of-hope Scales

Locus-of-hope subscale	CR	AVE	MSV	Correlations			
				(1)	(2)	(3)	(4)
(1) Internal	.75	.28	.25	<b>.53</b>			
(2) External-family	.90	.52	.25	.50	<b>.72</b>		
(3) External-peer	.88	.48	.25	.29	.50	<b>.69</b>	
(4) External-spiritual	.96	.77	.13	.25	.36	.21	<b>.88</b>

Note. CR=composite reliability; AVE=average variance extracted; MSV=maximum shared variance; values in bold italics=square root of AVE

LOH subscales both have adequate convergent validity. The internal and external-peer LOH scales do not meet the AVE criterion. However, some methodologists consider that the AVE is a strict and conservative measure of convergent validity, and that the convergent validity of a scale may be assessed on the basis of CR alone (Malhotra & Dash, 2011). Finally, all four subscales show good discriminant validity: All maximum shared variance (MSV) are less than AVE and all the square roots of AVE are higher than the pertinent correlations (Hair et al., 2010). Overall, therefore, the Locus-of-hope scale shows more than adequate psychometric properties for the current sample.

### **Confirmatory and Exploratory Factor Analysis of the EASSI**

Although we were not interested in the other dimensions of the EASSI, we also explored the structural validity of the EASSI because this has not been previously used with a purely Filipino sample (note: there were Filipino students mixed in the sample of Asian students in Chng et al., 1998). Furthermore, the factor structure of the EASSI has been studied only using exploratory factor analytic procedures (Chng et al., 1998; Ding, 1993; Islam, 2001; Shin, Kang, Lim, Yang, & Chae, 2016), and in these studies individual items sometimes loaded in unintended factors. Thus, there is no strong evidence on the structure of the scale, so far. The confirmatory factor analysis we conducted with the Filipino sample also could not provide evidence for the scale's structural validity. The confirmatory factor analysis conducted to test the 7-factor structures was not resolved (i.e., the maximum number of iterations was reached, and the covariance matrix among the factors was not positively definite). Therefore, the solution was not admissible; estimates of model fit were all incorrect and could not indicate the validity of the factor structure. However, the scalar estimates suggested that items in financial stress factor were fine, as were those in the other factors (family-related stress, physiological stress, test-anxiety), but that the items in the other factors were problematic.

With the failure of the confirmatory factor analysis, we conducted instead an exploratory factor analysis. After confirming the adequacy of the sampling ( $KMO = 0.89$ ; Bartlett's Test  $\chi^2(276) = 1850.28$ ,  $p < .0001$ ), six factors had eigenvalues  $> 1$  and accounted for 56.51%

of the variance observed. The scree plot did not clearly indicate the best possible number of factors; either a 4- or 5-factor solution could be considered the best solution. In any case, the exploratory factor analysis suggests that the 7-factor solution proposed in the EASSI is not viable with the Philippine sample, and instead, fewer factors may be identifiable.

This less than adequate structural validity of the EASSI notwithstanding, there was indication that the financial stress scale was internally consistent. The four items in the financial stress scale all loaded in the same factor in the various factor solutions, with one other item loading in this factor (i.e., “When I realize the financial burden my family carries to support my education I feel very stressed.”). Note that the other item actually fits well with the other financial stress items. However, to be consistent with the original scale, only the original four items were used in the current analysis.

### **Moderated Regression Analysis**

To test the hypotheses about how LOH dimensions moderate the relationship between students’ financial stress and satisfaction with life, regression analysis was conducted. The preliminary step was to create the interaction terms. The scores for financial stress and the four LOH scales were centered by subtracting each score from the scale mean to reduce multicollinearity between the main effect and the interaction terms, and to ensure that the interpretation of the effects would occur at a meaningful value (Cohen, Cohen, West, & Aiken, 2003). The centered scores were then used to compute the cross-product used as the interaction term. Four interaction terms were created: financial stress x internal LOH, financial stress x external-family LOH, financial stress x external-peer LOH, and financial stress x external-spiritual LOH.

In the regression model, life satisfaction was simultaneously regressed to sex and age of the participant, financial stress, the four LOH scales, and the four interaction terms as predictors of life satisfaction. The regression model explained a significant proportion of the variance in life satisfaction:  $R^2 = .42$ ,  $F(11, 259) = 18.58$ ,  $p < .001$ . The detailed results of the regression analysis are summarized in Table

Table 4. Summary of Results of Regression Analysis of Predictors of Life Satisfaction

	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	95% CI	
					Lower bound	Upper bound
Age	.01	.03	.02	0.41	-.05	.08
Sex (1=male; 2=female)	.00	.12	.00	0.04	-.22	.23
Financial stress	-.38	.07	-.28	-5.56**	-.51	-.24
Internal LOH	.80	.17	.25	4.70**	.46	1.13
External-family LOH	.76	.14	.32	5.33**	.48	1.04
External-peer LOH	-.06	.14	-.02	-0.41	-.32	.21
External-spiritual LOH	.27	.09	.16	2.99**	.09	.44
Financial stress X Internal LOH	.05	.18	.01	0.27	-.31	.41
Financial stress X External-family LOH	.34	.15	.14	2.21*	.04	.64
Financial stress X External-peer LOH	.03	.15	.01	0.21	-.27	.34
Financial stress X External-spiritual LOH	-.19	.09	-.12	-1.98*	-.37	-.00

\* $p < .05$ ; \*\* $p < .01$

4. Consistent with the hypothesis, financial stress was a significant negative predictor of life satisfaction. Mostly consistent with the hypotheses, three LOH subscales (internal, external-family, external-spiritual) were significant positive predictors of life satisfaction. Two external LOH scales (family and spiritual) significantly moderated the relationship between financial stress and life satisfaction, but the coefficients indicated that the nature of the moderation was different for the two external LOH scales.

To better understand the contrasting moderation effects, simple slopes were evaluated using the graphing procedure for interactions recommended by Cohen et al. (2003) in which all values were first converted to z-scores. Representative points on the life satisfaction regression lines were then predicted based on the financial stress and each of the external LOH variables. The predicted values were computed and plotted following the procedure suggested by Frazier,

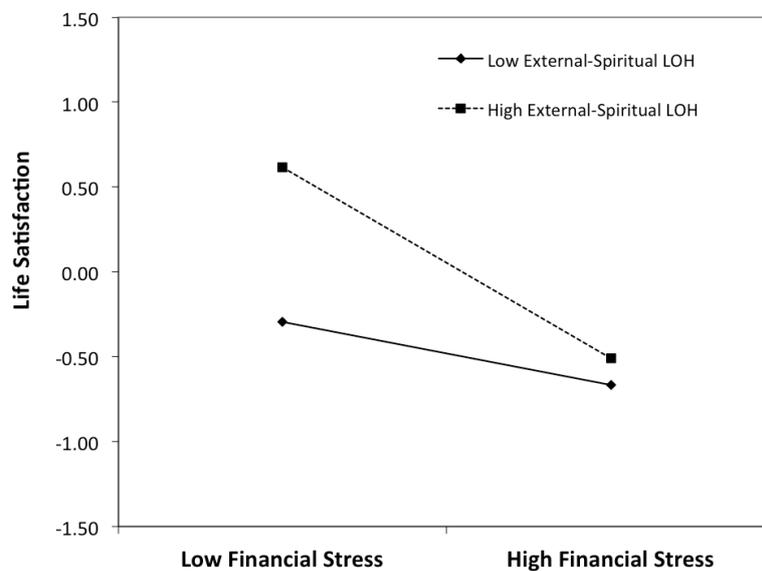


Figure 1. Graphic presentation of moderating effect of external-family locus-of-hope on the relationship between financial stress and life satisfaction.

Tix, and Barron (2004) using a spreadsheet application developed by Dawson (2018), and the slopes of each of the plotted lines were also computed. The plotted interaction effects are shown in Figures 1 and 2.

Figure 1 shows that for participants with low external-family LOH, financial stress was negatively related to life satisfaction (slope = -0.71), whereas for those with high external-family LOH, financial stress was not associated with life satisfaction (slope = 0.08). This suggests that external-family LOH buffers the negative relationship between financial stress and life satisfaction. In contrast, the pattern in Figure 2 suggests that external-spiritual LOH might be amplifying the negative relationship between financial stress and life satisfaction. There was a negative relationship between financial stress and life satisfaction in both high and low external-spiritual LOH groups, but the slope for the high group (-0.56) was more negative than that for the low group (-0.19). But we should note that the estimated values of life satisfaction for high financial stress in the low and high external-spiritual LOH groups were not different from each other; thus, the more negative

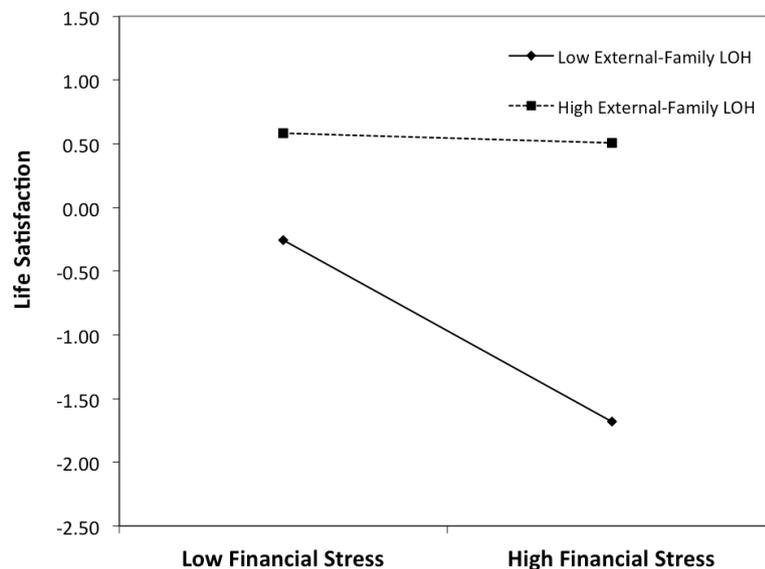


Figure 2. Graphic presentation of moderating effect of external-spiritual locus-of-hope on the relationship between financial stress and life satisfaction.

slope for the high external-spiritual LOH group was because of the much higher life satisfaction among those with low financial stress. So the more appropriate way to interpret the interaction might be that external-spiritual LOH boosts life satisfaction only among students who do not experience financial stress; external-spiritual LOH makes no difference among students experiencing high financial stress. It might even be more appropriate to say that financial stress moderates the effect of external-spiritual LOH on life satisfaction.

## DISCUSSION

Consistent with the fundamental positive psychology assumption on the role of character strengths in buffering the effects of negative experiences on well-being, the results of the study show how external-family LOH moderates the relationship between financial stress and Filipino students' life satisfaction. As the results indicate, there seems to be no negative relationship between financial stress and life satisfaction among students who report high external-family LOH; this finding is consistent with the buffering effect of hope on the negative impact of stress. Thus, even if financial stress is clearly negatively associated with life satisfaction (as shown in the regression analysis results in Table 3), there are groups of students for whom financial stress does not have this negative association and it is their high external-family LOH that seems to be playing a role in this. The buffering role of external-family LOH was observed on top of its direct positive relationship with life satisfaction. Thus, consistent with previous research (e.g., Bernardo, 2015; Du et al., 2015) external-family LOH is associated with life satisfaction of individuals. But the current finding is the first demonstration of external-family LOH's buffering role, and as such, is an important contribution to further establishing the positive nature of this external LOH dimension. The buffering role of external-family LOH might be associated with students' coping strategies for financial stress. Previous research suggests that external-family LOH is associated with some adaptive forms of collectivist coping (Bernardo et al., 2017; Wang et al., 2017); these studies were done with Chinese samples but it is not unreasonable to assume that similar associations might be found with Filipino samples. If so, then the buffering role of

external-family LOH might be related to how it enables more adaptive coping strategies in those students who experience financial stress. For example, one way of coping with financial stress is by seeking financial assistance or support from family members; seeking assistance is more likely if students hold the belief that their families are disposed to and have the means to support their goal pursuits. In contrast, students who do not hold such hope-related beliefs cannot cope with financial stress by seeking assistance from family members. More detailed process accounts of how external-family LOH moderates the effects of stress should be investigated in the future.

Prior to our results, only one other study has demonstrated the buffering effect of external LOH, and this involved external-peer LOH (Datu & Mateo, 2017); their study did not find a significant moderating effect of external-family LOH. But we should keep in mind that their study focused on a different form of adverse experience (i.e., discrimination), and it is quite possible that different external LOH dimensions play distinct buffering roles in different types of adverse experiences. Interestingly, our current study found a moderating effect related to external-spiritual LOH that does not seem to indicate a buffering effect. Instead, the results suggest that the positive relationship between external-spiritual LOH and life satisfaction only holds among students who do not experience financial stress. We should note that external-spiritual LOH positively predicts life satisfaction, but the moderation effect suggests that this positive relationship has definite boundary conditions. Previous research has shown that external-spiritual LOH does not have consistently positive relationships with well-being outcomes. In a study of Filipino women who were victims of interpersonal violence, external-spiritual LOH was a negative predictor of help-seeking behavior (Bernardo & Estrellado, 2017a). So it is possible that the positive impact of external-spiritual LOH might be observed in specific circumstances only, such as those when the individual does not experience much adversity. Stated conversely, the positive impact of external-spiritual LOH might not be found among individuals who experience adversity (e.g., students who experience financial stress or women who experience interpersonal violence). These interpretations could be verified in future studies that focus specifically on the external-spiritual LOH dimension.

We wish to underscore how the results related to external LOH relate to the findings related to internal LOH, which represents the dimension of hope that has been studied in most studies of hope theory (Snyder, 2002). Consistent with hope theory, our results show a positive relationship between internal LOH and life satisfaction. Thus, our results show how external LOH dimensions supplement the positive associations of hope that is rooted in personal agency; hope that relates to the external agency of others does not supplant the kind of hope that relies on personal capacities that has been the focus of much prior research work. We would like to suggest that the external and internal dimensions of LOH are best addressed as complementary character strengths that individuals can draw from in various situations or domains; as such, they should be seen not as competing constructs, but as complementary positive constructs. Indeed, many other studies have documented how combinations of internal and external LOH dimensions relate to positive outcomes (Bernardo, 2015; Bernardo & Estrellado, 2014; Bernardo et al., in press; Datu & Mateo, 2017; Du et al., 2015). Future research could look into the roots of these different LOH dimensions in various cultures (e.g., Bernardo & Nalipay, 2016, and explore the possible distinct processes and outcomes associated with these different dimension of LOH in various domains of student life experiences (e.g., Bernardo et al., 2016).

We should note some important limitations in our study, foremost of which is its reliance on cross-sectional self-report data. The cross-sectional nature of our data prevents us from making causal claims or even stronger process assumptions about the direction of the variables' effects on each other. Moreover, although the self-report measures we used were mostly reliable and had sound psychometric properties, the complete scale that measured students' stress (EASSI) did not show good structural validity. We can be more confident of the results if these are supported by some other convergent measures, especially those that involve observable well-being outcomes. In the future, research that involve either longitudinal or experimental research designs that also utilize a wider range of behavioral measures would help in better clarifying the nature of the processes associated with the moderating role of hope in students' well-being.

Another important limitation of our study relates to our sample.

The small sample size in the current study might mean that we were not able to tap the full range of financial stress experienced by Filipino students. Although students from several universities were recruited in our sample, they were drawn mainly from fairly economically developed regions of the country (NCR, Region 3, and Region 4A). It is conceivable that students from other less economically developed regions or from regions where there are higher incidences of poverty might experience more acute levels of financial stress, and we do not know whether the benefits of internal or external LOH would be observed with such students. Future research could be undertaken to study these questions with a truly representative sample of Filipino students who experience financial stress.

The implications of our results go beyond elaborating on and clarifying the nature and outcomes of the positive character strength of hope. Our study focused on a particular type of adverse experience that might be widespread among Filipino students in various colleges and universities. As schools, government, and non-government organizations find ways to address the financial difficulties of students, psychologists with a positive psychology orientation might develop ideas on how to deal with the negative psychological experiences associated with financial strain, and how to build character strengths and the strengthen the well-being of students who experience these financial difficulties. In other countries, school-based hope-building interventions have been developed (Edwards & McClintock, 2013; Pedrotti, Edwards, & Lopez, 2008), and such programs have been particularly useful among students who come from economically challenged backgrounds (Sheehan & Rall, 2011). Although these hope-building interventions have focused on internal LOH, it is conceivable that similar types of interventions can be developed to also target building the adaptive external LOH dimensions. There are presently no published studies that describe or demonstrate the effectiveness of external LOH interventions, but such interventions can be patterned after the internal LOH interventions that begin with the identification of important goals, followed by structured activities that would encourage the development of strategies towards attaining the goals (Pedrotti et al., 2008) but that involve the cooperation, collaboration, or assistance of family, friends, and other significant persons. Ideally,

the hope-building interventions would seek to build both internal and external LOH in students.

Beyond the relationship between students' hope and well-being, research has shown how students with hope are also more engaged (Datu & Valdez, 2016), have more adaptive learning goal orientations (Peterson et al., 2006), demonstrate better task performance (Peterson et al., 2006), and academic achievement (Datu & Valdez, 2016; Feldman & Kubota, 2015). Thus, with such programs, positive psychologists working in schools can help students who are experiencing financial difficulties maintain their well-being and acquire positive resources that would allow them to more effectively deal with their present challenges, and also enable them to attain their aspirations related to their personal learning and development in schools.

#### AUTHOR NOTE

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