IMPACT OF FINANCIAL LITERACY ON LEVEL OF STRESS AMONG BUSINESS EDUCATION STUDENTS

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ABSTRACT

This study determined the impact of financial literacy on the level of stress among business education students. The descriptive-comparative-correlational method of research was utilized to analyze the data gathered from 326 respondents. The subject of this study were the BSBA and BSOA of the College of Business Education in North Luzon Philippines State College during the second semester, Academic Year 2017-2018. Stratified random sampling was used in the selection of sample respondents. A 5-point Likert scale questionnaire was utilized in the gathering of data. Findings of the study revealed a high level of financial literacy; and average stress level of the respondents. There is no significant difference in the level of financial literacy between the BSBA and BSOA students. There is a significant difference in the level of stress between the BSBA and BSOA students. A positive correlation existed between the age and overall financial literacy of the students; and the course is directly related to the stress level of the students. There is a positive correlation between the age and overall financial literacy; course significantly related with stress level of the respondents; and financial records literacy level positively related with stress level among the respondents. Data reveals that the regression model is Stress = 2.404 + (-.347 x Cash Management) + (.285 x Financial Records) + (.175 x Savings Plan).

Keywords: *financial literacy, level of stress, regression model*

INTRODUCTION

Financial literacy has been an interesting knowledge for so long considering its influence to individual economic life. Several studies about it have been conducted among students, employees and even entrepreneurs. Klapper, *et al.* (2015) randomly selected 140 adults were interviewed face-to-face where less than 80 percent has access to telephone. The S&P global FinLit Survey revealed that worldwide, only 1-in-3 adults are financially literate. Not only is financial illiteracy widespread, but there are big variations among countries and groups. This is true not only in developing economies but also in countries with well-developed financial markets. People with relatively high financial literacy also tend to have a few things in common, regardless where they live. Adults who use formal financial services like bank accounts and credit cards generally have higher financial knowledge, regardless of their income. Even poor people who have bank account are more likely to be financially literate than poor people who do not have a bank account. Also rich adults who use credit also generally have better financial skills than rich adults who do not. Financial literacy is then defined as the ability to balance a bank account, prepare budgets, save for the future and learn strategies to manage or avoid debt (Commonwealth Bank Foundation, 2004).

Razafimahasolo, et *al.* (2016) determined the impact of financial literacy on the level of stress and academic achievement among 363 college students of a private university in the Philippines. The author found that the respondents had a moderately high level of financial literacy, low level of stress, and satisfactory academic achievement. Furthermore, a very satisfactory level of financial literacy of the college students may lead to a low level of stress and an excellent academic performance. Likewise, when financial literacy is poor, the level of stress outcomes may be high, and the academic achievement may suffer. There was no significant difference in the level of stress when age, gender, and family income were considered. The author further concluded that financial literacy in terms of cash management significantly predict the level of stress and academic achievement of college students.

In neighboring ASEAN countries like in Malaysia, Ibrahim, *et al.* (2009) found that majority

among degree students in UiTM Kedah campus are very much lacking in financial knowledge and hence, their money management skills are very weak. Nidar and Bestari (2012) revealed that the level of personal financial literacy of students in Padjadjaran University, Bandung, Indonesia are within the low category; and therefore, needs to be improved, especially in the areas of: investment, credit, and insurance. Level of education, faculty, personal income, knowledge from parents, parent's income, and ownership of insurance factors have significant impact on their personal financial literacy.

Chen and Volpe (1998) examined the relationship between the personal financial literacy and the characteristics of 924 students at 14 colleges in United States. Results showed that non-business majors, women, students in the lower class ranks, under age 30, and with little work experience have lower levels of knowledge about finance. Using logistic regression analysis, the findings revealed that less knowledgeable students tend to hold wrong opinions and make incorrect decisions. It is concluded that college students are not knowledgeable about personal. The low level of knowledge will limit their ability to make informed decisions.

Similarly, Beal and Delpachitra (2003) found that financial literacy among students at regional universities in Australia is not high. Logistic regression analysis revealed that those who scored higher on financial literacy were more likely to be male, be majoring in business, have more work experience, have a higher income, and have a lower aggregate risk preference. The researcher further concluded that university students in Australia are neither skilled nor knowledgeable in financial matters and that this would have negative impact on their future lives through incompetent financial management.

In Israel, Shahrabani (2013) examined the financial literacy of 574 college students. Results of the study revealed the respondents' low level of financial literacy and that financial literacy is affected by gender, nationality, class rank, work experience, and college major. In Cape Coast, Ghana, Ansong and Gyensare (2012) examined the determinants of university working-students' financial literacy. The paper found that age and work experience are positively related to financial literacy. Also, mother's education is positively correlated with the respondents' financial literacy. However, level of study, work location, father's education, access to media and the source of education on money are all not significantly correlated with financial literacy.

Nonis, *et al.* (1998) investigated the influence of perceived time as a stress coping strategy among 164 college students. Results of the study show that in low levels of stress and high levels of academic performance, problem-solving ability, and health for students are in high levels as compared to students who perceived low control over time but with high level of stress.

Misra and McKean (2000) investigated the interrelationship among academic stress, anxiety, time management, and leisure satisfaction among 249 university undergraduates by age and gender. The study concluded that time management behavior had a greater buffering effect on academic stress than leisure satisfaction activities. Significant gender differences existed among all the measures. Females had more effective time management behavior than males, but also experienced higher academic stress and anxiety. Males benefited more than female from leisure activities. Freshmen and sophomore students had higher reactions to stress than juniors and seniors. Multivariate analysis revealed that anxiety, time management, and leisure satisfaction are all predictors of academic stress. Anxiety reduction and time management in conjunction with leisure activities may be an effective strategy for reducing academic stress in college students.

Ross, *et al.* (1999) determined the major sources of stress among 100 college students at mid-sized Midwestern University. The authors concluded that intrapersonal sources of stress namely: change in sleeping habits, vacations and breaks, change in eating habits, new responsibilities, and increased class workload are the most common sources of stress. Likewise, the frequently reported stressors are financial difficulties, change in social activities, severe injury, transferred schools, and events such as missing too many class, and arguing with an instructor. In Taiwan, Kai-Wen (2009) investigated the sources of stress among college students. The author found that male students feel higher stress level from family factor than female ones; students in higher grades feel more stress from physical/mental, school, and emotional factors; students who take a student loan also feel more stress from physical/mental, school, and emotional factors than those who do not.

Heckman, *et al.* (2014) examined the factors related to financial stress among college students. The results of the proportion tests and multivariate logistic regressions showed that most important financial stressors are not having enough money to participate in the same activities as peers and expecting to have higher amounts of student loan debt at graduation. The results also indicate that students with higher financial self-efficacy and greater financial optimism about the future are significantly less likely to report financial stress.

Rafidah, *et al.* (2009) examined the relationship between stress factors, perceived factors and academic performance among 154 Pre-Diploma Science students in a Malaysian public institution of higher

learning. The results indicate that the students experienced stress but at a moderate level. There is a statistical significant difference between the level of perceived stress at the beginning and middle of the semester but not statistical significant between the beginning and middle with the end of the semester. Burns (1991) found that compared to local students the overseas group had significantly greater difficulties adjusting to academic requirements, particularly with regard to managing the demands of study, specifically study methods, independent learning, language skills, participation and time management. The overseas students manifested significantly higher degrees of various stress indicators than the local students did.

It is evident that studies along financial literacy and stress have been conducted to college students in higher education institutions. The aforementioned studies established a chronic knowledge in understanding financial matters (Razafimahasolo, *et al.* 2016; Ibrahim, *et al.* 2009; Nidar and Bestari, 2012; Chen and Volpe, 1998; Beal and Delpachitra, 2003; Shahrabani, 2013). Similar findings came out in understanding the factors, effect and sources of stress in academic life of college students (Nonis, *et al.* 1998; Misra and McKean, 2000; Ross, et al. 1999; Heckman, et al. 2014; Rafidah, *et al.* 2009).

This deficiency may also be crucial for Filipino college students especially now that poverty is the main reason why some do not enter into college education. However, others studied very hard making poverty as a challenge and not a hindrance to achieve a college diploma. Seemingly some students enjoy college life from the remittances of their families members working abroad. For OFWs, education of their children is the outright reason for working very hard in a foreign country. A question that might elaborate how they manage their financial situation in everyday life and the difficulties that hinder their academic endeavor. Nonetheless, no studies on Filipino college students' financial literacy and stress are available online except those papers that might be published in local research journal. Thus, the current study was conceptualized.

This study might therefore contribute to the existing literature since it analyzed the impact of financial literacy on the level of stress among business education students of North Luzon Philippines State College-College of Business Education in the Second Semester, Academic Year 2017-2018. Precisely, it described the current level of financial literacy and stress; ,the difference between the level of financial literacy and stress; ,the relationship between the profile and the level of financial literacy and stress; the significant impact of financial literacy on the respondent's level of stress; ,and which of the financial literacy dimensions significantly predict the respondents' level of stress.

The hypotheses of this study are:

H1. There is a low level of financial literacy and stress of the respondents.
H2. There is no significant difference between the level of financial literacy and level of stress of the respondents.
H3. The personal profile of the respondents are not significantly related to their level of financial literacy and level of stress.
H4. There is no significant impact of financial literacy on the respondent's level of stress.
H5. None among the financial literacy dimensions significantly predict the respondents' level of stress.

METHODS

Research Design

The study used the descriptive-correlational research method. Correlational research aims by identifying relationships among variables; and if relationship exists between two variables, it becomes possible to predict a score on either variable if a score on the other variable is known (Fraenkel and Wallen, 2003). This method was utilized to determine whether financial literacy is related to the level of stress of the respondents; and it attempted to identify which among the financial literacy dimensions significantly predict the respondents' level of stress.

Sample

The subject of this study comprised 326 college students from the College of Business Education, North Luzon Philippines State College who were enrolled during the Second Semester, Academic Year 2016-2017. Of the students in the sample, 75.8% percent were BSBA and 24.2% BSOA. There were 52.1% fourth year, 20.9% third and second year, respectively, and 6.1% first year students; majority (72.4%) were female and 27.6% male and the mean age was 20.15 years. In addition, 87.4% students in the sample were staying at home during their college studies receiving a mean daily allowance of ₱108.60. Stratified random sampling was utilized to get the sample of the study.

Procedure

The study, which was approved by the VP for Administration, Research and Extension and was conducted in the Second Semester of Academic Year 2016-2017. It included a structured questionnaires which were distributed during the class and collected after 30 minutes giving the students the chances to verify items that are not clear to them before they responded on the questionnaire. Student could choose whether to or not to respond on the questionnaire

nevertheless all of them willingly responded.

Questionnaire

The study utilized a structured questionnaire by means of five-point Likert Scale, adopted from the study of Razafimahasolo, *et al.* (2016). The questionnaire comprised of three parts: Part I dealt with personal characteristics of respondents along course, year level, age, gender, residence, and daily allowance; Part II focused in terms of level of financial literacy with three dimensions, namely: a) cash management comprised of 15 items, b) financial records contained 15 items, and savings plan involved 12 items; and Part III of the questionnaire dealt with level of stress comprised of 25 items. The result of the reliability analysis using scale alpha was .93 for cash management; .95 for financial records; .92 for savings plan; and .83 for stress scale.

A five-point Likert Scale, 5 – 1 with answer options of "strongly agree" and "a lot" as 5, "agree" and "quite often" as 4, "undecided" and "occasionally" as 3, "disagree" and "seldom" as 2, and "strongly agree" and "never" as 1 was used in evaluating the respondents' level of financial literacy and level of stress, respectively. The following scale and norms were utilized for interpretation in the study

Scale	Quantitative Rating	Level of Financial Literacy		Level of Stress	
		Item Rating	*Descriptive Interpretation*	*Item Rating*	*Descriptive Interpretation*
5	4.51 – 5.00	Strongly Agree	Very High	A Lot	Very High
4	3.51 – 4.50	Agree	High	Quite Often	High
3	2.51 – 3.50	Undecided	Average	Occasionally	Average
2	1.51 – 2.50	Disagree	Low	Seldom	Low
1	1.00 – 1.50	Strongly Disagree	Very Low	Never	Very Low

The frequency count and percentage described the current profile of the respondents; mean was determined by the level of financial literacy and level of stress; t-test analyzed the differences between the level financial literacy and level of stress of the respondents; Pearson Product Moment Coefficient of Correlation examined the relationship between the profile and the level of financial literacy and level of stress; and multiple regression analyzed and determined the which among the financial literacy dimensions significantly predict the respondents level of stress.

RESULTS

The Level of Financial Literacy and Level of Stress of the Respondents

Data presented in Table 1 reveals that there is a "high" (□ = 3.87) cash management literacy of the respondents. It could be explained further that it is important for the respondents to spend less than their daily allowance because they are capable of using their future earnings to achieve their financial goals and at the same time they understand the importance of personal financial management. In terms of financial records, the respondents achieved a "high" (□ = 3.75) literacy rating because they can greatly compare carefully the cost of things they buy; they know how much allowance they would need; they follow carefully their financial budget. Along with savings plan, the respondents reached a "high" (□ = 3.75) literacy rating as supported by the fact that they understand why it is essential to save for future needs; they roughly how much they should save from their allowance; and whether or not they should become financially secured depends on their ability. Generally, the respondents have an overall "high" (□ = 3.80) financial literacy as supported by their high literacy rating in cash management, financial records and savings plan.

INDICATORS	RESPONDENTS				OVERALL	
	BSBA		*BSOA*			
		DL		DL		DL
Cash Management	3.90	H	3.83	H	3.87	H
Financial Records	3.72	H	3.77	H	3.75	H
Savings Plan	3.78	H	3.82	H	3.80	H
GRAND MEAN	3.80	H	3.80	H	3.80	H

The state college students generally have a great financial literacy, as compared with the previous studies among college students in the ASEAN neighboring countries, United States, Australia, and other developed countries (Razafimahasolo, et al. 2016; Ibrahim, et al. 2009; Nidar and Bestari, 2012; Chen and Volpe, 1998; Beal and Delpachitra, 2003; Shahrabani, 2013). The current finding does not support the first hypothesis.

As gleaned in Table 2, there is an "average" (□ = 2.86) level of stress among the respondents. Both the BSBA (□ = 2.71) and BSOA (□ = 3.01) college students were "occasionally" stress. It could be explained further that the respondents were occasionally stress when there are times they get easily feel tired or exhausted, experienced tension headaches, and when they tend to cry. Likewise, the respondents were seldomly stressed when they have serious arguments with instructors, and when they tend to escape attending classes or lectures.

Generally, the state college students experienced a typical stress level similarl to the students in Malaysian

public institution of higher learning (Rafidah, *et al.* (2009); and as compared in preceding studies to college students in private universities in the Philippines, and neighboring countries (Razafimahasolo, *et al.* 2016; Nonis, *et al.* 1998). The current finding does not support the first hypothesis.

Table 2. *Level of Stress of the Respondents.*

Respondents		DL
BSBA	2.71	O
BSOA	3.01	O
GRAND MEAN	**2.86**	**A**

Differences Between the Level of Financial Literacy and Level of Stress of the Respondents

Table 3 shows the significant difference in the level of financial literacy of the respondents when group according to course. The findings showed that there is no significant difference in the mean score along a) cash management for BSBA (□ = 3.9049, sd = .44198) and BSOA (□ = 3.8254, sd = .53001) respondents; t(114.757) = 1.205, p = .231; b) financial records for BSBA (□ = 3.7234, sd = .42932) and BSOA (□ = 3.7733, sd = .54555) respondents; t(110.584) = 1.205, p = .459; and c) savings plan for BSBA (□ = 3.7762, sd = .45567) and BSOA (□ = 3.8163, sd = .59143) respondents; t(109.181) = -.553, p = .581. The results suggest that the BSBA students exhibited higher cash management literacy compared to BSOA students with a mean difference of .07942 whereas the BSOA students demonstrated higher financial records and savings plan literacy with a mean difference of -.04993 and -.04013, respectively.

As a whole, the findings reveals that there is no significant difference in the mean score for BSBA (□ = 3.8015, sd = .39176) and BSOA (□ = 3.8053, sd = .51574) respondents; t(108.277) = -.061, p = .951. BSBA and BSOA have the same level of financial literacy. This result support the second hypothesis.

Table 3. *Significant Difference in the level of Financial Literacy of the Respondents Based on Course*

Indicators	N	Mean	*sd*	*t*	*df*	*p* (2-*tailed*)	Mean Difference
A. Cash Management:				1.205	114.757	.231	.07942
BSBA	247	3.9049	.44198				
BSOA	79	3.8254	.53001				
B. Financial Records:				-.743	110.584	.459	-.04993
BSBA	247	3.7234	.42932				
BSOA	79	3.7733	.54555				
C. Savings Plan:				-.553	109.181	.581	-.04013
BSBA	247	3.7762	.45567				
BSOA	79	3.8163	.59143				
D. Overall:				-.061	108.277	.951	-.00386
BSBA	247	3.8015	.39176				
BSOA	79	3.8053	.51574				

Table 4 shows the significant difference in the level of stress of the respondents when group according to course. The findings showed that there is significant difference in the mean score for BSBA (□ = 2.7143, sd = .67335) and BSOA (□ = 3.0076, sd = .73447) respondents; t (122.760) = -3.151, p = .002. The results suggest that the BSOA students exhibited high stress level compared to BSBA students with a mean difference of -.29326. This could be explained further that the BSOA program have lesser number of financial-related subjects compared to BSBA program. This result does not support the second hypothesis.

Table 4. *Significant Difference in the level of Stress of the Respondents Based on Course*

Indicators	N	Mean	*sd*	*t*	*df*	*p*(2-tailed)	Mean Difference
BSBA	247	2.7143	.67335	-3.151	122.760	.002	-.29326
BSOA	79	3.0076	.73447				

Relationship between the Profille and the Level of Financial Literacy and Level of Stress of the Respondents

Table 5 reveals the correlation data between the profile and respondents' level of financial literacy. Result of analysis showed that the profile year level is correlated with cash management (r = .112, p = .05); age is correlated with cash management (r = .120, p = .05), with financial records (r = .112, p = .05), and overall (r = .118, p = .05). The correlation coefficient are positive indicating that the older the student, the dimensions cash management and financial records and the whole financial literacy level also rises. Ansong and Gyensare (2012) supported the finding of the study. This current finding (age) support the third hypothesis.

On the other hand, overall correlation analysis revealed that no significant relation between the profile course (r = .004, p = .05), year level (r = .075, p = .05), gender (r = .052, p = .05), residence (r = -.028, p =

.05), and allowance (r = .006, p = .05) and the level of financial literacy of the respondents. The current finding does not support the third hypothesis.

Table 5. *Result of Correlation Analysis between the Profile and the Level of Financial Literacy of the Respondents*

PROFILE	FINANCIAL LITERACY			OVERALL
	Cash Management	*Financial Records*	*Savings Plan*	
Course	-.073	.047	.035	.004
Year Level	.112*	.065	.029	.075
Age	.120*	.112*	.090	.118*
Gender	.014	.047	.077	.052
Residence	-.083	.009	-.001	-.028
Allowance	.027	-.046	.034	.006

Legend:

* - correlation is significant at the 0.05 level (2-tailed)

Table 6 shows the correlation data between the respondents' profile and level of stress. Analysis of the data revealed that the profile course is correlated with the respondents' stress level (r = .180, p = .01). The correlation coefficient is positive indicating that more financial-related subject in the curriculum tend to be more stressful to students than the curriculum with lesser number of financial-related subjects. The result of the study is supported by the findings of Beal and Delpachitra (2003) and Shahrabani (2013). This current finding (course) support the third hypothesis.

Table 6. *Result of Correlation Analysis between the Profile and the Level of Stress of the Respondents*

PROFILE	Level of Stress
Course	.180**
Year Level	.023
Age	.029
Gender	.012
Residence	.058
Allowance	-.067

Legend:

** - correlation is significant at the 0.01 level (2-tailed)

On the other hand, the profile year level (r = .023, p = .05); age (r = .029, p = .05); gender (r = .012, p = .05); residence (r = .058, p = .05); and allowance (r = -.067, p = .05) exist no significant relationship with the level of stress of the respondents. The current finding does not support the third hypothesis.

Impact of Financial Literacy on the Respondents' Level of Stress

Table 7 presents the result of correlation analysis between the financial literacy and stress level of the respondents. Result of analysis showed that a positive correlation between the financial records (r = .122, p = .05) dimension to the level of stress of the respondents. Correlation analysis implies that a very satisfactory literacy level in financial records may lead to a very high stress level. Likewise, when financial records literacy level is unfortunate, the level of stress outcomes may be poor. The finding is dissimilar to the findings of Razafimahasolo, et al. (2016). Taken singly, this result does not support the fourth hypothesis.

Furthermore, the financial dimension cash management (r = -.017, p = .05); savings plan (r = .108, p = .05); and overall (r = .080, p = .05) existed no significant impact on the respondents' level of stress. This result support hypothesis H4.

Table 7. *Result of Correlation Analysis between the Level of Financial Literacy and the Level of Stress of the Respondents*

Financial Literacy	Level of Stress
Cash Management	-.017
Financial Records	.122*
Savings Plan	.108
Overall	.080

Legend:

* - correlation is significant at the 0.05 level (2-tailed)

Predictors of the Respondents' Level of Stress

Analysis of the data showed that, for every 1 peso decrease in cash management, it leads to .347 point increase in stress. Moreover, for every 1 peso increase in financial records, .285 point increase in stress; and for every 1 peso increase in savings plan, it leads to .175 point increase in stress. Hence, cash management (β = -.231, p < .004) is negatively related with stress; and financial records (β = -.285, p < .038); and savings plan (β = -.123, p < .169) are positively related to stress. The regression coefficient which is negative indicate that as cash management decreases, stress also rises. However, the regression coefficient is positive indicating that as financial records and savings plan increase, stress also rises. The r-square = .040 signifies that about 4% of the variability of stress can be explained by cash management, financial records, and savings plan. The 96% can be explained by other variables. This result does not support the fourth hypothesis.

Table 8. *Predictors of Financial Literacy on the Respondents' Level of Stress.*

Model	Unstandardized *B* Coefficients	Standardized Beta Coefficients	*p*	R-square
1 (Constant)	2.404		.000	
Cash Management	-.347	-.231	<.004	.040
Financial Records	.285	.188	<.038	
Savings Plan	.175	.123	<.169	

Regression Model: Stress = 2.404 + (-.347 x Cash

Management) + (.285 x Financial Records) + (.175 x Savings Plan).

CONCLUSIONS

The researcher concluded that the respondents of the study had a high level of financial literacy; and average stress level. There is no significant difference in the level of financial literacy between the BSBA and BSOA students while a significant difference existed in the level of stress between the BSBA and BSOA students. There is a positive correlation between the age and overall financial literacy; course significantly related with the stress level of the respondents; and financial records literacy level positively related with stress level among the respondents. Data reveals that the regression model is Stress = 2.404 + (-.347 x Cash Management) + (.285 x Financial Records) + (.175 x Savings Plan).

A seminar on financial literacy and stress management is being proposed to improve the knowledge and skills in cash management of the students.

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