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PERCEIVED STRESS, SELF-EFFICACY, AND MENTAL HEALTH OF THE FIRST-YEAR COLLEGE STUDENTS DURING COVID-19 PANDEMIC

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ABSTRACT

This study determined the relationship between the perceived stress and the mental health of the first-year college students in Adventist Medical Center College Iligan, Philippines for the Academic Year 2021-2022. This study also assessed the moderating effect of self-efficacy on the relationship between college students' perceived stress and mental health. The random sample of 208 first-year college students who were officially enrolled and those who took the online class modality for the first semester of 2021-2022. This study utilized a cross-sectional survey design and descriptive-correlation design with the application of moderated regression analysis. Results showed that perceived stress is a significant predictor of mental health. At the same time, self-efficacy does not offer any moderated effect on the relationship between perceived stress and the respondents' mental health. Thus, the perceived stress harms the students' mental health.

INTRODUCTION

Mental health is one of the critical factors in a person's health (Hadavi et al., 2014). According to the World Health Organization (WHO), mental health is the absence of any mental disorders accompanied by a state of social welfare and health (Jazayeri, 2003). It consisted of several multifaceted factors and the interaction between physical, emotional, psychological, and social agents (Kim, 2003). Among these essential factors are perceived stress and self-efficacy.

Stress is considered a primary challenge for several first-year college students. It could be associated with several adverse psychological and physical problems that affect the emotional and cognitive domain of the students and could also be resulted in weakening their immune system (Putterman, 2012). The current study conducted by AlAteeq et al. (2020) showed that sampled students in KSA experienced high to moderate stress levels during the COVID-19 pandemic. This outcome can result from the mandatory curfew time and shifting physical class set-up to modular or distance learning. Further, several students experienced stress and anxiety since they are afraid of being infected by the coronavirus and are open to fictitious information from unreliable sources. They are more likely to get mental health problems and other possible psychiatric disorders (Ketphan et al., 2020). However, Lin and Chen (2009) pointed out that stress is not necessarily wrong; in fact, appropriate focus is one of the motivations for college students to improve. Thus, it plays an indispensable role in the health of the students.

In addition, Bandura (1977) defined self-efficacy as one's perspectives, expectations, beliefs, ideas, and judgments that they could successfully perform a given behavior. He further

stated that self-efficacy could influence people's behavior and behavior change. In short, self-efficacy relates to many work-related or personal-related behaviors (Eden & Aviram, 1993). Bavojdan et al. (2011) found that increased self-efficacy and problem-oriented coping strategies will improve mental health. On the other hand, decreased level of self-efficacy would lead to decreased mental health. Students with low self-efficacy have a low level of aspirations, resulting in intense academic performances (Bandura, 1977; Margolis and McCabe, 2006). As noted by Fencl and Scheel (2005), teaching strategies made a significant contribution to the self-efficacy level of the students.

According to Kecojevic et al. (2020) indicated that students have a fundamental knowledge of COVID-19 transmission and joint symptoms. Students tend to use and trust the official sources and have changed their behaviors following public health recommendations. But some students reported several academic and everyday difficulties and high levels of mental health distress. High levels of depression were related to problems in focusing on academic work. In contrast, higher levels of anxiety were more likely to be reported by students other than first-year students and those who spend more than one hour per day looking for information on COVID-19. Due to the growing concerns related to the impact of the pandemic on the mental health of college students, this study explored the effect of perceived stress and self-efficacy on the mental health of first-year students. Also, this study uniquely investigated the moderated effect of self-efficacy on the relationship between perceived stress and mental health.

METHOD

This study utilized a cross-sectional survey design disseminated from the 2nd until the 27th day of December 2021 during the pandemic crisis due to coronavirus disease. A sample of 208 officially enrolled first-year students in Adventist Medical Center College Iligan for the first semester of 2021-2022. The current study considered both male and female students aged 17-32 years old. An online google form survey was distributed to first-year students using the simple random sampling method. With the first-year college students as the target respondents, the google link was sent to them through their email add or Facebook messenger.

The survey form formatted into google form consisted of three components: first, the perceived stress scale (PSS) of Cohen et al. (1983). The author revealed it to have sufficient reliability on a college-aged sample ($\alpha = 0.84 – 0.86$). The instrument consisted of ten indicators used to assess the perception of stress experienced by the respondents over the last month. It considers a 5-point Likert-type scale that considers responses from never (0) to very often (4). PSS scores were computed by reversing responses (e.g. 0=4, 1=3, 2=2, 3=1 & 4=0) to the four positively stated items (items 4 ,5, 7, & 8) and then summing across all scale items. High total scores tell a high level of stress, whereas a low score indicates a low level of stress.

Further, the second component is the self-efficacy inventory of Wang (1999); Shi & Wang (2005). High scores indicate a high level of self-efficacy, and a low score means a low level of self-efficacy. The third component of the survey is all about the mental health inventory (Veit and Ware, 1983). The instrument has an 18-item version with four subscales (anxiety, depression,

behavioral control, and positive affect) that considers scoring ranges from 0-to 100, with higher scores indicating better mental health. Higher scores of anxiety, depression, and behavior control indicate a lower level of anxiety, depression, and loss of behavior control. A high score of positive affect suggests a high level of positive affect.

Considering the data gathering protocol, the researcher formulated a consent form stating the ethical rule of conducting research online and stated the purpose and significance of the current study. The questionnaire was primarily encoded in the google form, and the link was posted on the Moodle platform, where the respondents could access the survey form for 2-3 weeks. After that, survey forms were not accepted. They were clicking the google form link transmitted potential respondents to a webpage composed of a consent form and survey forms of perceived stress, self-efficacy, and mental health inventory. All fields were mandatory to be answered except for their names. No more respondents can withdraw from the study once they have completed the online google form.

Data analysis was done using descriptive statistics such as mean and standard deviation for the study variables. The basis for the scores was done by summing the associated scores to obtain a total score. An Independent T-test was used for testing the differences in the study variables by gender. Further, Correlation analysis was used to investigate the relationship between the study variables. Also, Moderated regression analysis was utilized to test the moderating effect of self-efficacy on the relationship between the stress and mental health of the respondents.

RESULT AND DISCUSSION

For the statistical results based on the sample data gathered, the presentation systematically followed through with the study's objectives. Table 1 presents the results of the descriptive statistics on the respondents' perceived stress, self-efficacy, and mental health.

Table 1. Descriptive Statistics on Perceived Stress, Self-Efficacy, and Mental Health

Variables	All Respondents			Male Group			Female Group		
	n	Mean	SD	n	Mean	SD	n	Mean	SD
Perceived Stress	208	24.42	5.03	40	23.23	5.52	168	24.70	4.88
Self-efficacy	208	73.22	9.51	40	70.35	9.96	168	73.90*	9.30
Mental Health (overall)	208	45.66	14.58	40	49.81*	13.40	168	44.67	14.71
Anxiety	208	37.21	18.25	40	42.90*	15.13	168	35.86	18.70
Positive Affect	208	55.26	19.90	40	56.25	18.73	168	55.03	20.21
Depression	208	42.96	17.58	40	49.80**	18.36	168	41.33	17.04
Behavior Control	208	49.98	16.27	40	52.00	15.35	168	49.49	16.48

Note: Comparison analysis is based on Independent T-test

**-significant at 0.05 level **-significant at 0.01 level*

The result shows that the respondents have a moderate level of stress (*M=24.42, SD=5.03*), and the male and female respondents have a comparable level of stress. Current studies showed that no perceived stress differences occurred between gender. Both genders showed the same degree of appraisal in one's life as stressful (Cohen, 1983). Students perceive similarly, regardless of their sex differences, their feelings and thoughts during the last months, and how frequently they felt a certain way. Previous findings revealed the opposite that the female students reported higher perceptions of stressors in frustrations, pressures, and changes.

In contrast, male students reported having higher behavioral and cognitive reactions to stress than female students (Hamaideh, 2010). The study by Dixon and Kurpius (2008) showed that women reported higher college stress than men, whereas sex and self-esteem accounted for 13.8% of the variance in pressure. According to Harutyunyan et al. (2020), male students experience higher stress levels, but their perceived stress level is much lower than females. As noted, the findings of the previous studies showed that males and females have different perceived stress levels as Yan et al. (2021) depicted those males and females differed significantly in adapting to the current pandemic conditions and the need for psychological support services. Thus, Dy et al. (2019) pointed out that Filipino male students reacted to stress more in affective responses while female students through cognitive responses.

On the level of self-efficacy, the respondents had a higher level of self-efficacy (*M=73.22, SD=9.51*). In contrast, female respondents had a higher self-efficacy level (*M=73.90, SD=9.30*) than male respondents (*M=70.35, SD=9.96*). Females manifested a higher level of self-efficacy than males. They showed that females have a more heightened sense of perspectives of academic motivation, less concentration on life's failure, more driven to challenging tasks, and more confidence in dealing with life's difficulties. This result is consistent with the findings of Salwa & Mansor (2013) that males and females have incomparable self-efficacy, where female students have higher general self-efficacy than their male students among the 489 secondary students in Malaysia.

In contrast, Villas (2019) study showed no significant differences in self-efficacy of Grade 11 Filipino senior high school students across sexes, saying that one's self-efficacy is not attributed to sex. The authors noted that both sexes are equally confident in performing academic and health-related tasks. But inconsistent with the findings of Gota (2012) that there were no significant differences among female and male students in their academic self-efficacy among Ethiopian students.

For the findings on mental health, the respondents manifested nearly average levels of mental health (*M=45.66, SD=14.58*) were no statistical differences in mental health levels between gender. As to the components of mental health, male respondents have lower anxiety (*M=42.90, SD=15.13*) than female respondents (*M=35.86, SD=18.70*). Further, the result depicted that the male respondents had lower depression levels than male respondents. There was no statistical difference in behavior control between male and female respondents. During adolescence, girls have a much higher prevalence of depression than boys.

In contrast, boys engaged with more problems with anger involved in high-risk behaviors frequently than girls, and the prevalence of anxiety is much higher in women than in men during their adulthood (WHO, 2002). A previous study by Gitay and colleagues (2019) revealed that anxiety had been more common in females than males. The result of Kourus et al. (2017) also manifested that sex has no association with the mental health of college students.

Table 2. Correlation Matrix of the Perceived Stress, Self-Efficacy and Mental Health

Variables	Perceived Stress	Self-Efficacy	Mental Health
Perceived Stress	--		
Self-Efficacy	0.223** (0.001)	--	
Mental Health	-0.380** (0.001)	-0.015 (0.832)	--

Note: Analysis is based on Pearson Correlation ***-significant at 0.01 level*

Table 2 reveals that perceived stress and self-efficacy are highly correlated (*r=0.223, p=0.001*). Further, the perceived stress is negatively correlated to the respondents' mental health (*r=-0.380, p=0.001*). However, there was no statistically significant correlation between self-efficacy and the respondents' mental health (*r=-0.015, p=0.832*). Students with a high level of stress will have poor mental health status (Pedersen, 2012). This result signified a students' ability to function well in an academic setting. To boost the students' mental health, they need to have robust coping mechanisms to lower their stress levels.

Table 3. Moderated Regression Analysis with Mental Health

Variable	Model 1			Model 2		
	B	SE	β	B	SE	β
Perceived Stress (PS)	-5.777	0.963	-0.396**	-5.658	0.960	-0.388**
Self-Efficacy (SE)	1.073	0.963	0.074	1.411	0.977	0.097
Interaction (PS x SE)				1.518	0.856	0.117
R^2		0.150			0.162	
ΔR^2		0.150			0.013	
F		18.017**			13.186**	

*Note: *p < 0.05* ***p < 0.01*

Table 3 depicts that perceived stress is negatively associated with mental health (β=-0.396, p<0.001), while self-efficacy is not significantly associated with the mental health of the respondents (*β=0.074, p>0.05*) in Model 1. Regression model 1 is significant (*F=18.017, p<0.001*), suggesting that perceived stress is essential for mental health. Model 1 reflected that 15% of the total variance of mental health accounted for the predictors. Further, for predictor-moderator regression model (Model 2) revealed that perceived stress (*β=-0.388, p<0.001*) is still

the sole significant predictor of mental health. At the same time, self-efficacy does not moderately affect the association between perceived stress and mental health ($p>0.05$). Regression model 2 is significant ($F=13.186$, $p<0.001$). This result suggested that perceived stress is the consistent predictor of mental health and self-efficacy as the proposed moderator of the relationship between perceived stress and mental health was not significant. Students' stress can affect mental health in several ways. Students with high-stress levels tend to have more days of low or poor mental health. It can affect the students' ability to function well in an academic. According to Dyson and Renk (2006), high-stress levels are found to cause symptoms of anxiety and depression. Anxiety and depression are alarming mental health concerns that can impact a student's ability to be successful in a college environment (Chien, 2015). For the moderation analysis, self-efficacy does not significantly moderate the relationship between first-year college students' stress and mental health. Thus, the results (Model 1 and 2) observed that perceived stress is a consistent predictor of mental health regardless of the level of self-efficacy reported by the students.

CONCLUSION

The current study concluded that female students have higher self-reported self-efficacy levels than male students but significantly higher anxiety and depression levels, the sub-domains of mental health, as compared to males. Male students have better overall mental health as compared to female students. Both genders displayed comparable perceived stress levels. The students with high-stress levels would tend to manifest low mental health status. Self-efficacy has no moderation effect on the association between the sampled students' perceived stress and mental health. Students' perceived stress was negatively associated with mental health regardless of their low or high self-efficacy level.

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