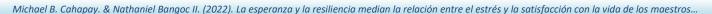


REVISTA INTERNACIONAL DE INVESTIGACIÓN E INNOVACIÓN EDUCATIVA



La esperanza y la resiliencia median la relación entre el estrés y la satisfacción con la vida de los maestros en medio de la crisis de COVID-19 en Filipinas

Hope and Resilience Mediate Relationship between Stress and Satisfaction with Life of Teachers amid COVID-19 Crisis in the Philippines

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RESUMEN.

Los resultados psicológicos juegan un papel vital en el estrés y la satisfacción con la vida (SWL) de las personas en situaciones novedosas. Ubicado en el contexto de la educación remota de emergencia en medio de la crisis global de COVID-19, este estudio se llevó a cabo con el propósito general de evaluar si la esperanza y la resiliencia median la relación entre el estrés y la SWL de los docentes. Se realizó una encuesta en una muestra de 2272 maestros de Mindanao, Filipinas. Se utilizaron escalas adaptadas para recopilar los datos necesarios a través de un cuestionario de encuesta estructurado en línea. El resultado del análisis demostró que el estrés tiene un efecto predictivo significativo y negativo sobre la esperanza, la resiliencia y la SWL. Por otro lado, la esperanza y la resiliencia generaron efectos predictivos positivos y significativos sobre la SWL. El resultado del análisis de mediación demostró que la esperanza y la resiliencia mediaron significativamente la relación entre el estrés y la SWL. Estas piezas de evidencia sugieren que la esperanza y la resiliencia son recursos psicológicos importantes que pueden disminuir los impactos negativos de las experiencias de COVID-19, como el estrés en la SWL de los maestros.

PALABRAS CLAVE.

Estrés, esperanza, resiliencia, satisfacción con la vida, educación, COVID-19, profesores.

ABSTRACT.

Psychological outcomes play a vital role in the stress and satisfaction with life (SWL) of people amid novel situations. Set in the context of emergency remote education amid the global COVID-19 crisis, this study was carried out with the overall purpose to assess whether hope and resilience mediate the relationship between stress and SWL of teachers. A survey was conducted in a sample of 2272 teachers from Mindanao, Philippines. Adapted scales were used to gather the needed data through a structured online survey questionnaire. The result of the analysis demonstrated that stress has a significant and negative predictive effect on hope, resilience, and SWL. On the other hand, hope and resilience generated significant and positive predictive effects on SWL. The result of mediation analysis proved that hope and





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resilience significantly mediated the relationship between stress and SWL. These pieces of evidence suggest that hope and resilience are important psychological resources that can decrease the negative impacts of COVID-19 experiences such as stress on the SWL of the teachers.

KEY WORDS.

Stress, hope, resilience, satisfaction with life, education, COVID-19, teachers.

1. Introduction.

The coronaviruses have since created monumental disruptions all over the world. One of these coronaviruses that disturbed humans in the last two decades is the COVID-19 which was first recorded in Wuhan, China in December 2019 and quickly spread across countries around the globe (McLeod, 2020). Its characteristics continue to evolve, showing a rapid transmission rate of respiratory disease (Guarner, 2020). Emerging variants of COVID-19 have swept countries anew, raising concerns that these new strains may spread more easily (Otto, 2021). Attributing to these new variants, recent global statistics of COVID-19 indicate a total of 236,132,082 confirmed cases and 4,822,472 deaths as of October 7, 2021 (World Health Organization, 2021).

Within the educational systems, the COVID-19 has caused teachers profound and detrimental psychological outcomes (Carreon et al., 2021; Cahapay & Bangoc, 2021). Before the COVID-19 emerged, teachers were already suffering from a perceived poor quality of life, impacting their psychological aspects due to various stress factors related to work (Lizana et al., 2021). This state was exacerbated as COVID-19 impaired education with teachers accumulating psychological symptoms due to the demands of the new unprecedented teaching situation (Ozamiz-Etxebarria et al., 2021). Various scholars and institutions have called to secure the psychological condition of teachers, analyze their needs, and provide appropriate measures in anticipation of the educational recovery (Cahapay, 2021).

With the continuing COVID-19 crisis, general empirical evidence has shown that stress is a major negative predictor of SWL (Dymecka et al., 2021). Psychologically, stress is a feeling of mental press and tension (Shahsavarani et al., 2015). Unfortunately, a high level of stress could have a serious impact on biological, psychological, and social problems (Tucker et al., 2008), thus affecting the SWL. The concept of SWL refers to the level of similarity between the desired conditions and perception of reality (Cummins & Nistico, 2002). It usually varies on an assessment of how well the needs of individuals have been attained in the past and how likely they are to be fulfilled in the future (Veenhoven, 2017).

On the other hand, hope and resilience are two important psychological resources typically thought to protect humans against such inner vulnerabilities or tough life circumstances (Knowles et al., 2021), thus assumed to intercede the influence of negative events on SWL. Hope is defined as the perceived ability and capacity of a person to achieve a goal with a positive motivational state (Snyder, 2000) while resilience can be viewed as the ability to recover from negative life events and adapt to new situations (Smith et al., 2008). This study conceptualizes the role of these essential psychological resources in the relationship between stress and SWL.





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Recent evidence has shown that stress is significantly raised while SWL is significantly decreased (Khodami, 2021). The link has further been proven with stress significantly negatively influencing SWL (e.g., Oh & Neal, 2021). Moreover, the path of the relationship between stress and SWL has been emergently studied through the mediation of other affective events like anxiety (Mei et al., 2021) and fear (Dymecka et al., 2021). Other recent studies (e.g., Karamanare et al., 2020; Yıldırım & Arslan, 2020; Kira et al., 2021; Yıldırım & Tanrıverdi, 2021) are far and in between, accounting for the relationships of two or three of the current variables of interest to the current study. No scholarly work has been specifically done to test if psychological resources such as hope and resilience mediate the relationship between stress and SWL in a novel situation.

Thus, this paper aimed to confirm such a proposed model of mediation by assessing if hope and resilience mediate the relationship between stress and SWL in a sample. Specifically, it answered the following questions:

- 1. What are the levels of stress, hope, resilience, and SWL?
- 2. What are the significant relationships among stress, hope, resilience, and SWL?
- 3. How do hope and resilience significantly mediate the association between stress and SWL?

2. Methods.

This section presents the methods of the study. It covers the sample, materials, ethical considerations, data collection, and statistical treatment.

2.1. Sample.

The respondents of this quantitative survey study are 2,272 teachers who have experience in remote teaching amid the COVID-19 crisis. They are employed in various private and government K to 12 schools in Region XII, Mindanao, Philippines during the school year 2020-2021. These teachers were included in this study regardless of age, gender, marital status, socioeconomic status, educational attainment, and number of years of teaching experience described as follows.

Table 1. Sample characteristics

Sample Characteristics		n	%
Age	34 years old and below	1071	47.1
	35 to 44 years old	644	28.3
	45 years old and above	557	24.5
Gender	Male	423	18.6
	Female	1849	81.4
Marital Status	Single	724	31.9
	Married	1548	68.1
Monthly Income	PHP23,000 and below	960	42.3
	PHP24,000 and above	1312	57.7
Education Attainment	Undergraduate degree	221	9.7
	Graduate units or degree	2051	90.3



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Teaching Experience	0-10 years	1477	65.0
	11-20 years	438	19.3
	21 years and above	357	15.7

Table 1 shows the distribution of respondents across selected sample characteristics.

2.2. Materials.

A structured online survey questionnaire was used to gather data from the respondents. The first part intended to gather data on sample characteristics of the respondents. It included age, gender, marital status, socioeconomic status, educational attainment, type of school employed, type of remote education modality, and number of years of teaching experience. Furthermore, scales were adapted to collect the data on the main variables of the study. The stress was assessed using the Perceived Stress Scale (PSS) by Cohen (1994); hope was assessed using the Adult Hope Scale (AHS) by Synder et al. (1991); resilience was assessed using the Brief Resilience Scale (BRS) by Smith et al. (2008); and SWL was assessed using the Satisfaction with Life Scale (SWLS) by Diener et al. (1985).

PSS has ten items on a scale of 0 (Never) to 4 (Very Often); AHS has twelve items on a scale of 1 (Definitely False) to 8 (Definitely True); BRS has six items on a scale of 1 (Strongly Disagree) to 5 (Strongly Agree); and SWLS has five items in a scale of 1 (Strongly Disagree) to 7 (Strongly Agree). It should be noted that some items of PSS, AHS, and BRS were reverse coded such that, consistent with other items and measures, a lower score indicates a lower level.

The internal reliability of each scale was tested. PSS obtained a Cronbach's alpha of .881; AHS obtained Cronbach's alpha of .764; BRS obtained a Cronbach's alpha of .757; and SWLS obtained a Cronbach's alpha of .834. According to Abraham and Barker (2014), an acceptable level of Cronbach's alpha is .70 for a scale to be reliable.

2.3. Data Collection.

The study procedures were carried out following the DepEd Order No. 16 series of 2017 on Research Management Guidelines and approval was obtained from the Office of the Regional Director of the Department of Education, Region XII, Philippines. All respondents provided informed consent. Furthermore, to ensure privacy, the names of the respondents were not required. It was also expressed that involvement in the survey is voluntary, no incentive is involved, and withdrawal at any given point is permissible.

The data collection for this research ran through three weeks from June 03 to 18, 2021 through Google Forms. Before accessing the main part of the structured online survey questionnaire, the respondents were presented to a first layer that articulated the purpose of the research, the process for completing the survey, ethical considerations, and the names of the researchers at the bottom. Then, the main part of the structured online survey questionnaire based on the scales adapted for this study followed. All the responses were automatically recorded and the researcher electronically downloaded the data.





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2.4. Statistical Analysis.

All data for this study were quantitatively analyzed. Before the main data analysis, preliminary inspections were made to check that required standard assumptions are met. All standard assumptions of the general linear model for mediation analysis such as linearity, normality, and homogeneity were assessed and ensured.

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Descriptive statistics provided for the frequency count, percentage rate, minimum, maximum, weighted mean, and standard deviation. Moreover, the Pearson Product Moment Correlation Coefficient was employed to determine the bivariate associations between variable combinations of stress, hope, resilience, and SWL. A series of linear regression analyses were further performed to predict SWL using stress, hope, and resilience as independent variables. Lastly, the Sobel test was carried out to evaluate whether mediators hope and resilience carried influence of stress on SWL.

The IBM Statistical Package for Social Science (SPSS) version 17 and online Sobel Test Calculator were used to analyze all the data of this study. All the tests were done at a 0.05 level of significance.

3. Results and Discussion.

The overall purpose of this study is to assess whether hope and resilience mediate the relationship between stress and SWL. The results are presented as follows.

Descriptive Analysis.

Table 2. Descriptive analysis

Variables	Minimum	Maximum	SD	Mean	Description
Stress	0.00	3.30	.46806	1.8578	Sometimes
Норе	1.33	8.00	.78100	5.7490	Somewhat True
Resilience	1.00	5.00	.45099	3.2353	Neutral
SWL	1.00	7.00	.90397	5.5349	Agree

Table 2 displays the result of the descriptive analysis.

The result shows that the teachers sometimes experience stress (M = 1.8578; SD = .46806). Moreover, they somewhat true perceive dispositional hope (M = 5.7490; SD = .78100) and are neutral when it comes to their resilience (M = 3.2353; SD = .45099). Lastly, the teachers agree that they feel SWL (M = 5.5349; SD = .90397). With these outcomes, it implies that that the teachers have a moderate level of stress, high level of hope, moderate level of resilience, and high level of SWL.





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The relative prevalence of stress, hope, resilience, and SWL among teachers amid the COVID-19 crisis has been recorded in some studies. For example, Klapproth et al. (2020) and Randall et al. (2021) found that teachers experienced medium to high levels of stress. Moreover, the result on resilience coincides with the study of Urcos et al. (2020) and Zadok-Gurman et al. (2021), revealing that the vast majority of teachers show a medium or regular level of resilience. On the other hand, teachers in the study of Randall et al. (2021) had a different level of SWL, obtaining an overall slight satisfaction.

Correlation Analysis.

Table 3. Correlation analysis

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Variables	Hope	Resilience	SWL	
Stress	569**	453**	227**	
	.000	.000	.000	
Норе		.504**	.450**	
_		.000	.000	
Resilience			.225**	
			.000	

^{**.} Correlation is significant at the 0.01 level.

Table 3 presents the result of the correlation analysis.

The result revealed that stress was negatively associated with hope, r(2270) = -.57, p < .001; resilience, r(2270) = -.45, p < .001; and SWL, r(2270) = -.23, p < .001. Meanwhile, hope was positively associated with resilience, r(2270) = .50, p < .001; and SWL, r(2270) = .45, p < .001. Lastly, resilience was positively associated with SWL, r(2270) = .225, p < .001. Generally, the outcomes indicate the negative influence of stress on hope, resilience, and SWL, as well as the positive influence of hope and resilience on SWL of the teachers.

This result is affirmed in part in many studies. Gallagher et al. (2021) found that stress was negatively associated with hope while Veronese et al. (2021) indicated that stress was negatively associated with resilience. On the other hand, analyses of Yıldırım and Arslan (2020) and Karataş and Tagay (2021) showed that hope was positively and significantly associated with resilience. On a wider scope involving associations between the variables included in the current study, the correlation results of Genç and Arslan (2021) disclosed that stress had moderate and negative correlations with hope and SWL. Similarly, SWL was moderately to strongly and positively associated with hope and optimism.



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Mediation Analysis.

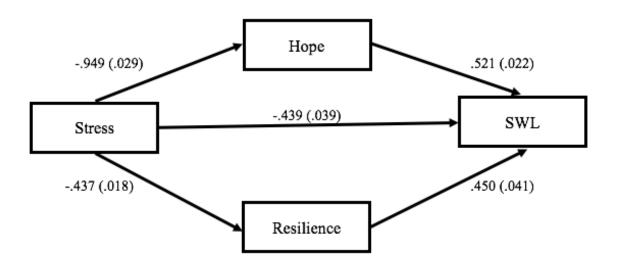


Figure 1. Linear and mediation analyses

Figure 1 shows the result of linear regression and mediation analyses.

The result of linear regression analysis demonstrated that stress has a significant and negative predictive effect on SWL (b = -.439, p < .05). It also has a significant and negative predictive effect on the hope (b = -.949, p < .05) and resilience (b = -.437, p < .05). On the other hand, hope (b = .521, p < .05) and resilience (b = .450, p < .05) yielded a significant and positive predictive effects on of SWL. Furthermore, the result of mediation analysis confirmed that hope significantly mediated the relationship between stress and SWL (Z = -19.185, p < .001). The same was found in resilience as it significantly mediated the relationship between stress and SWL (Z = -10.001, p < .001). Overall, the evidence suggests that hope and resilience are essential psychological resources to decrease the negative impacts of COVID-19 experiences such as stress on the SWL of the teachers.

The extant knowledge on the consequences of the COVID-19 crisis has underlined the emergence of negative psychological outcomes with critical repercussions on SWL in both the short and long terms. It has been shown that perceived stress level is significantly raised while SWL is significantly decreased over time (Khodami, 2021). The link has been proven as empirical data illustrate stress is significantly negatively related to SWL (e.g., Oh & Neal, 2021). Furthermore, the path of the relationship between stress and SWL has been emergently studied through the mediation of other variables such as anxiety (Mei et al., 2021), approach coping, positive attitude, mature defenses (Gori, et al., 2020), sense of coherence, fear of COVID-19 (Dymecka et al., 2021); emotion-oriented, task-oriented coping, and avoidance-oriented coping styles (Rogowska et al., 2021). The current preliminary study builds up new insights as regards the mediating effect of hope and resilience in the relationship between stress and SWL.





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4. Conclusion.

Psychological outcomes such as hope and resilience play an essential part in the relationship between stress and satisfaction with life (SWL) of people amid novel situations. Considering this assumption, this current report derives evidence from quantitative survey research involving a large sample of teachers with the goal to contribute a proposed model of mediation of such variables. Specifically, the research intended to offer evidence to better understand the mediating role of hope and resilience in the relationship between stress and SWL in the teachers amid the COVID-19 context.

Overall, the result showed that the teachers have a moderate level of stress, high level of hope, moderate level of resilience, and high level of SWL. It also highlighted the respective relationships between stress, hope, resilience, and SWL; stress has a significant and negative predictive effect on hope, resilience, and SWL while hope and resilience generated significant and positive predictive effects on SWL. Finally, the mediation analysis proved that hope and resilience significantly mediated the relationship between stress and SWL.

With this outcome, this paper provides theoretical knowledge on the complex relationships of such psychological outcomes. It specifically extends the scholarly discussion on the mediating role of hope and resilience in the association between stress and SWL. At the more practical level, such an outcome could be useful from both a preventive and intervention practice. It underscores the need to offer measures based and focused on improving hope and resilience to address psychological issues brought by stress on SWL.

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