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Ryan Michael, Geneveve M. Parreño & Judith S. Rabacal. Resiliencia personal y su influencia en el estrés, la ansiedad y el miedo de COVID-19 entre los estudiantes graduados en Filipinas

Resiliencia personal y su influencia en el estrés, la ansiedad y el miedo de COVID-19 entre los estudiantes graduados en Filipinas

Personal resilience and its influence on COVID-19 stress, anxiety and fear among graduate students in the Philippines

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RESUMEN.
La pandemia de COVID-19 está ejerciendo presiones nuevas e imprevistas y ha provocado una alteración sustancial en la vida de las personas en todo el mundo. Aunque existe un cuerpo de literatura en ciernes sobre el impacto del COVID-19 en la salud mental y el bienestar psicológico, se han publicado pocas investigaciones entre estudiantes graduados filipinos en el contexto de una pandemia. Esta investigación descriptiva-correlacional y transversal examinó la relación de la resiliencia en el estrés, la ansiedad y el miedo percibidos por COVID-19. Doscientos tres estudiantes de posgrado participaron en la encuesta en línea realizada en la última semana de agosto de 2020. Se utilizaron cuatro cuestionarios autoinformados para recopilar los datos. Se realizó estadística descriptiva y análisis correlacional. Los resultados indicaron que las puntuaciones compuestas del COVID-19 estrés, ansiedad y miedo fueron 2.81 (SD=.605), 3.94 (SD=.686) y 3.03 (SD=1,004) respectivamente. La puntuación compuesta en la escala de resiliencia fue 3.33 (SD=.496). El estrés y el miedo de COVID-19 tuvieron una correlación inversa significativa con la resiliencia. La resiliencia tiene una influencia protectora sobre el miedo al COVID-19 y es fundamental para hacer frente al estrés del COVID-19. Es posible que las instituciones educativas deban cultivar y aprovechar el rasgo de resistencia de los estudiantes graduados en medio de una pandemia y otros eventos estresantes para ayudar a combatir los estados mentales negativos y las consecuencias psicológicas indeseables.

PALABRAS CLAVES.
Ansiedad, COVID-19, miedo, resiliencia, estrés.
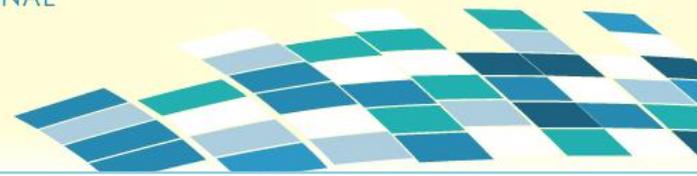
ABSTRACT.

The COVID-19 pandemic is putting new and unforeseen pressures and has resulted in substantial disruption in the lives of the people across the globe. Although there is a budding body of literature on the impact of COVID-19 on mental health and psychological well-being, little research has been published among Filipino Graduate students in the context of a pandemic. This descriptive-correlational, cross-sectional research examined the relationship of resilience on COVID-19 perceived stress, anxiety, and fear. Two-hundred and three Graduate students participated in the online survey conducted in the last week of August 2020. Four self-reported questionnaires were used to gather the data. Descriptive statistics and correlational analysis were performed. Results indicated that the composite scores of the COVID-19 stress, anxiety, and fear were 2.81 (SD=.605), 3.94 (SD=.686), and 3.03 (SD=1.004) respectively. The composite score on the resilience scale was 3.33 (SD=.496). COVID-19 stress and fear had a significant inverse correlation with resilience. Resilience has a protective influence on COVID-19 fear and is pivotal to cope with COVID-19 stress. Educational institutions may need to cultivate and harness the resilient trait of Graduate students in the midst of pandemic and other stressful events to help combat negative mental states and undesirable psychological consequences.

1. Introduction.

The novel coronavirus disease 2019 (COVID-19) has exponentially spread across the globe in a matter of months and has affected the mental well-being and psychological health of people around worldwide (Ho et al., 2020; Rabacal et al., 2020; Yildirim et al., 2020). COVID-19 has infected and killed millions of people across the world (Ferreira et al., 2020). According to the World Health Organization (WHO), as of December 5, 2020, 1,513,179 have lost their lives and the number of confirmed cases globally has reached 65,257,767 (WHO, 2020a). In the Philippines, the first case of COVID-19 was reported on January 20, 2020 (WHOb). Since then, the number of confirmed cases is climbing in many parts of the country. Based on the statistics published by the Department of Health (2020), as of December 5, 2020, the total number has reached 438,069. The unprecedented challenges and adversity carried by the global COVID-19 crisis can certainly be a threat to the resilience of Filipinos (Callueng et al, 2020) and people around the world.

According to the WHO, COVID-19 is the first pandemic caused by a coronavirus that has sparked serious social, economic, and psychological consequences (WHOc). While the response of individuals to emotional distress caused by traumatic events such as this pandemic may vary (Killgore et al., 2020), studies have shown the profound psychological impact of outbreaks can have on people (Ho et al., 2020; Preti et al., 2020). Indeed, with the great number of cases of infection and high rate of mortality, the COVID-19 outbreak may have a serious impact on people's psychological health and people may experience several mental health problems (Paredes Escobar et al., 2020). Addressing and responding to the

mental health toll of the COVID-19 crisis is thereby important (Blanc et al., 2020). Anxiety and fear of a novel virus and uncertainty of the situation can be overwhelming and cause strong emotions to people (Centers for Disease Control and Prevention (CDC), 2020). Additionally, some public health actions necessary to reduce the spread of COVID-19, such as stay-at-home orders, social distancing, quarantine, and lockdowns, can make people feel isolated, bored, lonely, anxious, and stressed (Hwang et al., 2020; Banerjee y Rai, 2020). To avoid such mental health problems, it may be necessary to understand and recognize the factors associated with the psychological responses amidst the COVID-19 pandemic. Challenging life situations like the COVID-19 crisis have a significant and undesirable impact on the psychological health and mental functioning of a person and potentially result in detrimental mental health problems (Yildirim y Arslan, 2020). Identifying protective factors that can prevent psychological problems when confronted with difficulties (Yildirim y Arslan, 2020) and understanding the role of an individual's psychological strength, flexibility to adapt to new situations, ability to bounce back, cope with risk, stress, and adversity, or resilience (Ferreira et al., 2020; Smith et al., 2008) in explaining the underlying mechanism between COVID-19 relates stressors and psychological problems may be necessary (Yildirim y Solmaz, 2020).

The COVID-19 has truly changed the world abruptly. The education sector has not escaped from the devastating effects and wrath of the pandemic (Moralista y Oducado, 2020; Oducado et al., 2020). The COVID-19 pandemic and associated lockdowns are having profound effects on education with countries and schools facing unprecedented challenges. Furthermore, no higher education stakeholder was spared from the impact of the global health crisis. While there is growing research conducted on the psychological impact of the COVID-19 pandemic among students specifically among university undergraduate students (e.g. Aslan et al., 2020; Islam et al., 2020; Rodríguez-Hidalgo et al., 2020; Rogowska et al., 2020; Son et al., 2020), not much is written and published among Graduate students. Besides, researches conducted before the pandemic reported Graduate education to be stressful (Johnson, 2008; Van Berkel y Reeves, 2017; Stillwell et al., 2017). Surveys also reported that the anxiety and depression of Graduate students have been reportedly worsening that demands urgent attention (Nature, 2019). Graduate students are confronted with challenges to meet the rigorous academic demands of the course (Stillwell et al., 2017) along with conflict between academic and personal responsibilities and problems with finances, graduate teaching, and career planning (Johnson, 2008; Wyatt y Oswalt, 2013). Apart from the traditional academic demands of Graduate Education and economic hardships, the COVID-19 presents additional challenges that will possibly have a detrimental effect on the psyche and undoubtedly lead to behavioral and mental health crises (Coe y Enomoto, 2020) among Graduate students. It is expected that heightened stress can occur during an infectious disease outbreak (CDC, 2020). Understanding the development of stress and other negative mental states are important because a prolonged and high level of stress is associated with higher rates of health issues (Wyatt y Oswalt, 2013; Van Berkel y Reeves, 2017; Oducado et al., 2020). Moreover, maintaining good mental well-being is as essential as keeping physical health during a pandemic (Yildirim y Solmaz, 2020).
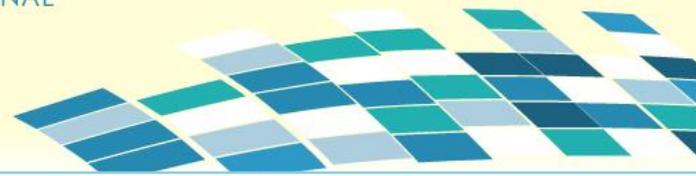
Given that the COVID-19 pandemic is a multifaceted crisis having significant implications for all disciplines and fields in higher education, research involving Graduate students is imperative. The WHO takes the impact of the crisis on people's mental health very seriously (WHO, 2020d). To add to this, the United Nations has already warned of a looming global mental health crisis due to the COVID-19 pandemic as anything that threatens mental health, particularly in large numbers, affects the core fabric of society (Collin, 2020). Further research and immediate solutions are also being called for on students' mental health amid the COVID-19 pandemic (Grubic et al. 2020). It may be necessary to look at the psychological responses of Graduate students during the pandemic and understand the role of resilience in protecting against adverse mental health problems. A review of extant studies in higher education has underscored the important role of resilience in helping students to finish their studies, overcome obstacles, and manage their wellbeing (Brewer et al., 2019). A study also found that resilience had a significant effect on psychological health and subjective well-being among adults during the early stage of COVID-19 (Yildirim y Arslan, 2020).

To the researchers' knowledge, a study on the underlying relation between resilience and negative psychological responses among Filipino Graduate students is still unknown within the context of a pandemic. This research aimed to determine the influence of personal resilience on perceived stress, anxiety, and fear related to COVID-19 among Filipino Graduate Students.

2. Materials and Methods.
2.1. Research design and participants.
This study employed a descriptive-correlational, cross-sectional research design. This study was conducted among Graduate School students of a State College in Negros Occidental, Philippines. All Graduate students (N=220) enrolled during the Summer term of 2020 were invited to participate in the online survey, 203 responded, having an overall response rate of 92.27%.

2.2. Instruments.
Self-reported questionnaires were adopted for data collection. The primary measure for this study to assess the ability to bounce back or recover from stress by Graduate students was the Brief Resilience Scale (BRS) by Smith et al. (2008). Each item provides five-point Likert response options ranging from 1 (strongly disagree) to 5 (strongly agree), with a high score representing high resilience. The BRS has good internal consistency, with Cronbach's alpha ranging from 0.80-0.91 (Smith et al., 2008).

The COVID-19 Perceived Stress Scale (COVID-PSS-10) by Pedrozo-Pupo et al. (2020) was used to measure the stress associated with COVID-19 as perceived by participants during the last month. For this study, the tool uses five-point response options ranging from 1 (never) to 5 (very often), with a high score indicating high stress. The COVID-PSS-10 has high internal consistency, with Cronbach's alpha equal to 0.86 (Pedrozo-Pupo et al. (2020). Among Filipino samples, the COVID-PSS-10 had a reported Cronbach's alpha equal to 0.83 (Oducado et al., 2021) and the computed Cronbach's alpha for this study was 0.80.

The COVID-19 Anxiety Syndrome Scale (C-19ASS) of Nikčević y Spada (2020) was used to assess the anxiety associated with COVID-19 self-reported by the participants over the last two weeks. The participants were asked to respond on a five-point Likert-type scale to indicate their level of agreement with 1 (not at all) to 5 (nearly every day), with a high score representing high anxiety. The C-19ASS has two correlated factors, perseveration (6 items) and avoidance (3 items), with demonstrated acceptable levels of reliability of Cronbach's alpha of 0.86 and 0.77, respectively (Nikčević y Spada, 2020). The internal consistency of the C-19ASS in this study was $\alpha = 0.83$.

The Fear of COVID-19 Scale (FCV-19S) by Ahorsu et al. (2020) was used to assess the COVID-19 fear of the participants. The FCV-19S uses a five-point Likert scale answerable by 1 (strongly disagree) to 5 (strongly agree), with a high score representing greater fear. The tool has an internal consistency of Cronbach's alpha equal to 0.82 (Ahorsu et al., 2020). For this study, FCV-19S had a Cronbach's alpha value of $\alpha = 0.91$.

2.3. Data collection procedure and ethical considerations.

Before the data collection, permission to use the instruments was granted by their authors, and approval to collect the data was granted by the Dean of the Graduate School. The data were gathered via an online survey with the aid of Google forms. Administering the survey and collecting the data online was the only practicable way of data collection in times of the outbreak. The survey link was sent in the Facebook Groups and Messenger of the students in the last week of August 2020 at the end of their Summer term. The participants were asked to read the information about the study presented on the first page of the online survey. Participants were not allowed to proceed with the survey and access the questionnaires until they consent to voluntarily partake in the study. The anonymity of the respondents and the confidentiality of their responses were maintained throughout the study.

2.4. Statistical análisis.

To analyze the data, responses were entered into the Statistical Package for Social Sciences (SPSS) version 23.0. Frequency, percentages, mean, and standard deviation (SD) were used to describe the demographic characteristics and composite scores. In addition, because of the widespread of the participants' age, the median was also used to describe the middle age of participants. The normality of data was investigated before selecting the inferential test of significance at a confidence level of 95%. Pearson's product-moment was utilized in the analysis of the relationship between variables.

3. Results.

Table 1 shows that the mean age of the participants was 35.02 (SD=9.43) and a median age of 33 years. The majority were females (77.3%), married (57.1%), and were enrolled in the Master of Arts in Education program (54.7%). A little over one-fourth (28.6%) reported the presence of a COVID-19 case near their residence.

Table 1. Demographic profile and degree program (n=203).

Variables	Median	Mean	SD	n	%
Age (years)	33	35.02	9.43		
Sex					
Male				46	22.7
Female				157	77.3
Marital Status					
Single				85	41.9
Married				118	58.1
Degree Program					
Doctor of Philosophy in Educational Management				28	13.8
Doctor of Philosophy in Technological Management				1	.5
Master of Arts in Education				111	54.7
Master in Public Administration				30	14.8
Master in Information Technology				19	9.4
Master in Nursing				6	3.0
Master of Science in Agriculture				5	2.5
Master of Science in Fisheries				3	1.5
Presence of a COVID-19 case near their residence					
Yes				58	28.6
No				107	52.7
Unsure				38	18.7

Table 2 presents that the composite scores on the COVID-PSS-10, C-19ASS, FCV-19S, and BRS were 2.81 (SD=.605), 3.94 (SD=.686), 3.03 (SD=.1.004), and 3.33 (SD=.496), respectively.

Table 2. Descriptive statistics of major variables.

Variables	Min	Max	Mean	SD
Stress (COVID-PSS-10)	1	4	2.81	.605
Anxiety (C-19ASS)	1	5	3.94	.686
Fear (FCV-19S)	1	5	3.03	1.004
Resilience (BRS)	3	5	3.33	.496

To test for the relationship on resilience (independent variable) on stress, anxiety, and fear (dependent variables), Pearson's r was performed (see Table 3). The bivariate correlation analyses showed significant negative or inverse correlations between resilience and COVID-19 stress (r=-0.234, p=0.001) and between resilience and fear of COVID-19 (r=-0.384, p=0.000). On the other hand, while a negative or inverse correlation (r=-0.110) was found between resilience and anxiety, this was not statistically significant (p=0.118).
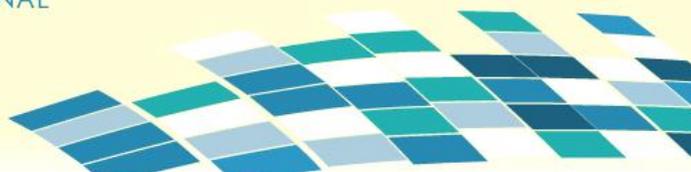
Table 3. Correlation of resilience on stress, anxiety, and fear

Variables	r	p-value
Stress	-0.234	0.001
Anxiety	-0.110	0.118
Fear	-0.384	0.000

4. Discussion.

This investigation looked into the association of resilience on COVID-19 perceived stress, anxiety, and fear Filipino Graduate Students. In this study, we found that Filipino Graduate students experienced moderate to high levels of stress, fear, and anxiety as indicated by their above the midpoint composite scores. This may reflect the widespread effects of changing and uncertain situations and health-related fears due to the COVID-19 pandemic (Grubic et al. 2020; World Health Organization, 2020) at the same time the challenge to maintain positive mental health in times of crisis (Arslan et al., 2020). The findings of this current study affirm the result of prior research indicating that the COVID-19 pandemic has resulted in some indicators of emotional distress, negative mental health, and adverse psychological consequences among the general public, teachers, and students in different parts of the world. Research in the United States disclosed a modest negative impact on mental health during the early months of the COVID-19 experience (Zhou et al., 2020) and 71% of college students indicated increased stress and anxiety due to the COVID-19 outbreak (Son et al., 2020). Around 18.1% of university students in Bangladesh were severely suffering from anxiety (Islam et al., 2020). Above level stress, anxiety, and depression were also recorded among university undergraduate students in Ecuador (Rodríguez-Hidalgo et al., 2020). Over 50% of university students in Poland (Rogowska et al., 2020) and Turkey (Aslan et al., 2020) showed mild to severe anxiety, a high level of perceived stress, and met the diagnostic criteria of depression. Also, more than half of the sample of a study conducted in Germany at the beginning of the COVID-19 pandemic expressed suffering from psychological distress and anxiety (Petzold et al., 2020). Similarly, the COVID-19 outbreak was reportedly causing increased fear and worries among participants from 28 different countries with a large portion of the sample living in Netherlands (Mertens et al., 2020). In the Philippines, the COVID-19 resulted in students reporting moderate to severe psychological impact of the pandemic (Tee et al. 2020) and teachers experiencing a moderate level of stress and impact on their quality of life (Oducado et al., 2020; Rabacal et al., 2020).

Moreover, it was demonstrated in this study that resilience had a significant but negative relationship with stress and fear. Although not statistically significant, resilience was also inversely related to anxiety. The result of the present study indicates that higher resilience is associated with lower stress and fear related to COVID-19. In other words, students or individuals with increased ability to bounce back quickly in difficult times have a better ability to respond to stress and adversity. Resilience has a buffering effect on the undesirable consequences and negative impact of disturbances in times of crisis (Yildirim y Arslan, 2020). When students can cope, bounce back or remain resilient to stress, this can help them in preventing the adverse psychological problems associated with the crisis and contribute to

promoting good mental and psychological well-being, positive functioning, and optimal health and development (Satici et al., 2020; Yıldırım y Solmaz, 2020). In particular, Filipinos are known for their natural resilience and for thriving in the face of adversity and challenging times (Rabacal et al., 2020). The result of this present study is similar to prior studies reporting the pivotal role of resilience in protecting against stress, anxiety, fear, and other negative thoughts, emotions, and behaviors. For instance, a negative correlation between COVID-19 stress and resilience was found in a sample of Turkish adults (Yildirim y Solmaz, 2020) and another online survey (Ferreira et al., 2020). A higher level of resilience was likewise associated with lower depression and anxiety among mild COVID-19 patients in China (Zhang et al., 2020). Resilience also negatively predicted mental health problems among health care professionals in Turkey (Yildirim et al., 2020) and was negatively associated with physicians' anxiety during the pandemic in Israel (Mosheva et al., 2020). Another study similarly reported that individuals with higher levels of resilience registered a lower impact of perceived COVID-19 threat on future anxiety when compared to those with lower levels of resilience (Paredes Escobar et al., 2020).

The findings of this study suggest the need to pay more attention and be proactive in developing interventions, approaches, and strategies that promote resilience likewise determine factors contributing to emotional distress, mental well-being and psychological health of people during the pandemic (Arslan et al., 2020; Yıldırım y Solmaz, 2020; Yildirim y Arslan, 2020). Also, the anxiety and fears of students during the pandemic should be acknowledged and not be ignored.

This research is not without limitations that could be addressed in future research. This study only involved Graduate students in one school in the Philippines and was skewed towards the master's level and Graduate students in the teacher education program. Findings cannot be generalized to all Graduate students in the country and internationally. The cross-sectional nature of the study makes it difficult to track temporal changes over time and to draw a conclusion on the causal effect of resilience on the study variables. Also, the use of online survey questionnaires lends itself to social desirability and self-reported bias and those without or limited internet access may be underrepresented.

5. Conclusion.

The COVID-19 pandemic has taken a modest to profound mental and emotional toll on Graduate students and has far-reaching effects on their psychological and mental well-being. Such results are disturbing and failing to consider the negative psychological impact and emotional distress that students experience related to the COVID-19 pandemic would result in untoward consequences. The psychological well-being of Graduate students must also be given particular focus and approaches may be developed and carried out to lessen the undesirable psychological consequences of the pandemic and overcome the adverse effect of stressful situations. Moreover, personal resilience is a significant factor influencing stress and fear concerning COVID-19. Resilience is an important psychological resource that plays a significant role in reducing undesirable mental health outcomes such as COVID-19 stress and fear among Graduate students. This study highlighted the buffering and protective role of resilience against negative mental states during a pandemic. Personal resilience makes

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students less susceptible to the mental health impact of the pandemic and may be a significant variable for future approaches and interventions aimed at protecting students' mental health against the adverse psychological impact of the COVID-19 pandemic and other disease outbreaks. Building healthy mental responses, responding effectively to crisis, learning to adapt to adversity, and cultivating the resilient trait among Graduate students in the face of pandemic and amid other stressful events are seen as valuable to help combat the negative mental and psychological states and rise above the challenges of the pandemic. Institutions of higher learning may need to spark a growing interest and may more attention to resilience. Finally, this study adds to a better understanding of the impact of the pandemic on mental health and contributes to the body of knowledge regarding the influence of resilience on negative mental and psychological states in the context of the COVID-19 pandemic.

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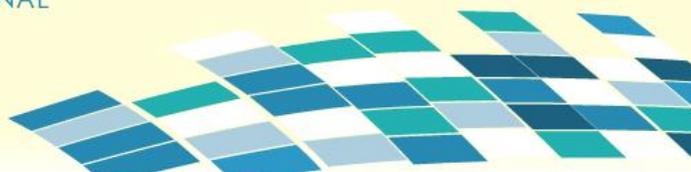
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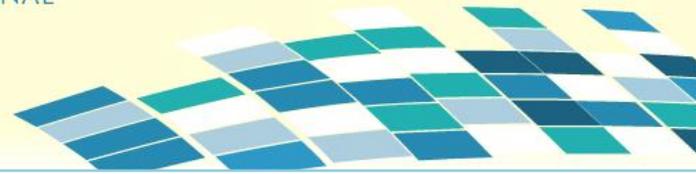
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