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Technostress, Work Performance, Job Satisfaction, and Career Commitment of Teachers amid COVID-19 Crisis in the Philippines

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RESUMEN.
La percepción de tecnoestrés en la educación en constante aumento a niveles sin precedentes no es nueva. Sin embargo, en situaciones novedosas como la crisis global del COVID-19, el tecnoestrés y su influencia en importantes facetas de la enseñanza merecen una revisión. Este artículo se centra en la asociación del tecnoestrés sobre las características de la muestra y las variables de desempeño organizacional de los docentes en el contexto de la educación a distancia de emergencia que trajo la crisis del COVID-19. Siguiendo un diseño de investigación principalmente correlacional, se tomó como muestra a 2272 profesores de Mindanao, Filipinas. Los datos recolectados a través de instrumentos adaptados fueron tratados mediante estadística descriptiva e inferencial. Los resultados mostraron que los docentes experimentan un nivel moderado de tecnoestrés, niveles muy altos de desempeño y satisfacción laboral y un alto nivel de compromiso con la carrera. Además, se reveló que el tecnoestrés y sus cuatro conjuntos diferían significativamente según la edad, el género, el estado civil y la experiencia docente. Por último, se encontró que el tecnoestrés tiene una relación negativa significativa con el desempeño laboral. Las implicaciones prácticas de estos resultados en el desarrollo profesional de los profesores en el contexto de la educación a distancia de emergencia se discuten al final del estudio.

PALABRAS CLAVE.
Tecnología educativa, efectos psicológicos, educación a distancia, profesores, pandemia, Filipinas.

ABSTRACT.
The perception of technostress in education constantly increasing to unprecedented levels is not new. However, in novel situations like the global COVID-19 crisis, technostress and its influence on important teaching facets deserve a revisit. This paper focuses on the association of technostress on the sample characteristics and organizational performance variables of the teachers in the context of emergency distance education brought by the COVID-19 crisis. Following a mainly correlational research design, 2,272 teachers from Mindanao, Philippines

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were taken as a sample. The data collected through adapted instruments were treated using descriptive and inferential statistics. The results showed that the teachers experience moderate level of technostress, very high levels of work performance and job satisfaction, and high level of career commitment. It was further revealed that technostress and its four sets significantly differed across age, gender, marital status, and teaching experience. Lastly, it was found out that technostress has a significant negative relationship with work performance. The practical implications of these outcomes on the professional development of the teachers in the context of emergency distance education are discussed at the end of the study.

KEY WORDS.
Educational technology, psychological effect, distance education, teachers, pandemic, Philippines.

1. Introduction.
After more than a year, the COVID-19 crisis continues to devastate the world. The education sector is plagued by many issues as it transitions to a period called the "new normal." One of the alternatives adapted to bridge the gap caused by these issues is technology (Starkey, 2021). Scholars extol technology as an efficient and effective tool in transforming the landscape of education in the post-COVID-19 period (Anoba & Cahapay, 2020). However, one of the negative observable outcomes of the adaption of technological instructional delivery alternatives amid the current situation is the technostress (Penado Abilleira et al., 2021). This stress drives technology spillover effects into the lives of the teachers especially in developing countries where education is generally shaped by relatively slow technological transformation. Technostress can be described as the direct or indirect negative disturbance on the thoughts and behaviors of individuals or end users in organizations caused by the use of technology (Tu et al., 2005). It is a type of stress that results specifically from the rapid technology changes and happens as a consequence of the inability to meet the new competencies demanded (Çoklar et al., 2019). Some causes of technostress include rapid technological change, inadequate readiness, and increased workload (Ennis, 2005). Furthermore, technostress is a multidimensional construct. Laspinas (2015) mentioned that technostress has physical, emotional, behavioral, and psychological aspects. Thus, it may affect mental states in a manner that may emerge, for instance, in the form of difficulty in accepting technology (Ayyagari et al., 2011). On the other hand, Salanova et al. (2007) described the concept of technostress in terms of skepticism, fatigue, anxiety, inefficacy that are caused by the use of technology. This particular model consisting of four sets has been recently used in related scholarly works to understand technostress.

Technostress has recently been the object of interest of some scholars in the different fields fashioned by technology. Reviewing the studies on technostress and various theoretical constructs, emerging scholarly works investigate the association of technostress on selected sample characteristics (e.g., Annalakshmi & Catherin Jayanthy, 2019; Jameel Abo Mokh et al., 2021; Yadav & Rahaman, 2020; Shintri & Narasalagi, 2020) and different organizational performance variables such as work performance, job satisfaction, and career commitment (e.g., Hassan et al., 2019; Heo & Jung, 2020; Li & Wang, 2020; Magistra et al., 2021; Penado

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Abilleira et al., 2021). The present research is an extension of these studies, taking a more comprehensive approach by investigating the relationship of technostress both on the sample characteristics and organizational performance variables.

Furthermore, technostress has been studied in different samples (e.g., see Heo & Jung, 2020 on nurses, Shintri & Narasalagi, 2020 on teachers; Isiakpona & Adebayo, 2011 on librarians; Scaramuzzino & Barfoed, 2021 on social workers; Khuzaini & Zamrudi, 2021 on marketing employees). The current study specifically focuses on the teachers as the subjects of interest. Barron et al. (2021) affirmed that a crucial factor that reshapes the changing role of teachers amid the COVID 19 crisis is the pedagogical adaptation. The traditional teaching approaches have to be reconceptualized, but they do not easily convert to a remote learning environment (Cahapay, 2020). This new reality requires teachers to innovate their instructional practices. With the great involvement of technology in this new reality for teachers, technostress is inevitable.

Considering the essential role played by the teachers as "backliners" (Rogayan & Dantic, 2021) and "primary workers" (Carreon et al., 2021) in the long anticipated educational continuity and recovery (Cahapay, 2021), this paper stresses the significance of investigating the technostress and its association with sample characteristics and organizational performance variables in the context of emergency distance education amid COVID-19 crisis. A study of how technostress influences work productivity aspects in a novel situation can provide a basis for assessing the condition of the teachers and provide relevant, appropriate, and responsive actions to counter technostress. This paper expects to generate empirical evidence which could be used for formulating measures to assist the teachers, thus improve education designed to be efficient and effective in the light of changed situations caused by the crisis.

Thus, the end goal of this study is to investigate the association of technostress with sample characteristics and organizational performance variables of the teachers in the context of emergency distance education brought by the COVID-19 crisis. Specifically, it answered the following questions:

1. What are the levels of technostress, work performance, job satisfaction, and career commitment of the teachers?
2. Is there a significant difference in the technostress, work performance, job satisfaction, and career commitment of the teachers?
3. Is there a significant relationship between technostress and work performance, job satisfaction, and career commitment of the teachers?

2. Methods.
This section presents the methods used to achieve the purpose of this research. They are discussed as follows.

2.1. Research design.

This paper is carried out as a quantitative research following a mainly correlational research design. It involves a systematic investigation of the nature of relationships between two or more variables (Sousa et al., 2007; Lau, 2017). Thus, the correlational research design is appropriate for this study as it aimed to investigate the association of technostress on the sample characteristics, work performance, job satisfaction, and career commitment of the teachers in the context of emergency distance education amid the COVID-19 crisis.

2.2. Sampling strategy.

The respondents of this study were selected through a simple random sampling strategy in which the respondents are selected by chance, but with a known possibility of selection (Lavrakas, 2008). There were 2,272 K to 12 teachers who took part in this study. They are employed in schools in Region XII, Mindanao, Philippines during the school year 2020-2021. They were included regardless of gender, age, educational attainment, and socioeconomic status. The sample characteristics of the respondents are presented in Table 1.

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

2.3. Research instrument.

This research used several scales formed into a research instrument to collect the needed data. The first part consisted of items intended to generate responses about the characteristics of the respondents such as age, gender, marital status, monthly income, educational attainment, and teaching experience. The second part is the scale titled Technostress adapted from Estrada-Muñoz et al. (2020). The items were framed on a scale of 0 as "Never" and 6 as "Always." There were 16 items equally divided into four sets as skepticism, fatigue, anxiety, and inefficacy. The Cronbach alpha generated for the scale in this study was .945, which is considered very strong reliability. This is followed by adapted scales on Work Performance

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(Tarafdar et al., 2010), Job Satisfaction (Pepe, 2011), and Career Commitment (Akinwale & Okotoni, 2019). Following the original formats of the scales, the items for Work Performance (four items) and Job Satisfaction (six items) were presented on a scale of 1 as "Strongly disagree" and 5 as "Strongly agree" while the items for Career Commitment (nine items) were answered on a scale of 1 "Strongly disagree" and 4 as "Strongly agree." The Cronbach alphas generated for these scales were .952, .886, and .921 respectively, which are very strong reliabilities as well.

2.4. Study procedure.
The researchers first sought ethics review approval for this study. Following the DepEd Order No. 16 series of 2017 on Research Management Guidelines, prior administrative endorsement was obtained from the Department of Education Region XII for this research. Using an internet survey designed in Google Forms, the data of this study were collected in three weeks from June 03-18, 2021. An internet survey can be defined as a survey that collects data from respondents through the internet (Lavrakas, 2008). It is preferred as the modality of data collection because of the difficulty of a face-to-face survey considering the continuing restrictions caused by the COVID-19 crisis. Before accessing the main internet survey, the respondents were presented to a first layer of the online questionnaire. This layer described the purpose of the research, the process for completing the survey, ethical considerations, and the names of the researchers at the end. To ensure confidentiality, the names of the respondents were not required. It was further indicated that involvement in the survey is voluntary, no incentive is involved, and withdrawal at any given point is allowed. Informed consent was provided in which the respondents will have to agree by ticking a box before they could proceed to the main internet survey.

2.5. Statistical treatment.
The assumption of normality was initially tested and confirmed, thus parametric tests were used to treat the data of this study. Descriptive statistics provided for the frequency count and weighted mean. The t-test for independent samples and Analysis of Variance were performed to compare the technostress, work performance, job satisfaction, and career commitment across the sample characteristics. Finally, the Pearson Product Moment Correlation Coefficient was used to test the influence of technostress on work performance, job satisfaction, and career commitment. All tests were done at a 0.05 level of significance. The IBM Statistical Package for Social Science version 17 was employed.

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3. Results.

This study generally aimed to investigate the influence of technostress on work performance, job satisfaction, and career commitment of the teachers in distance education amid the COVID-19 crisis. The results are presented as follows.

Table 2. Level of technostress by set.

Variable	Mean	Description
Technostress - Skepticism set	3.261663732	Sometimes
Technostress - Fatigue set	3.340669014	Sometimes
Technostress - Anxiety set	2.900748239	Sometimes
Technostress - Inefficacy set	2.672205106	Rarely
Overall Technostress	**3.043821523**	**Sometimes**

Table 2 presents the level of technostress of the teachers by set.

The result shows that the teachers sometimes experience technostress in terms of fatigue (M = 3.340669014; e.g., feeling exhausted after working with ICT); skepticism (M = 3.261663732; e.g., feeling less and less interest in ICT); and anxiety (M = 2.900748239; e.g., feeling tensed working with ICT). On the other hand, the teachers rarely experienced technostress in terms of inefficacy (M = 2.672205106; e.g., feeling unsure about abilities with ICT). Overall, the teachers sometimes experience technostress (M = 3.043821523). This implies that that the teachers moderately feel stressed using ICT in emergency distance education amid the COVID-19 crisis.

Table 3. Levels of work performance, job satisfaction, and career commitment.

Variable	Minimum	Maximum	Mean	Description
Work Performance	1.00	5.00	4.22964088	Strongly Agree
Job Satisfaction	1.00	5.00	4.06670579	Agree
Career Commitment	1.00	4.00	3.48899648	Strongly Agree

Table 3 presents the levels of career commitment, work performance, and job satisfaction of the teachers.

The result indicates that the teachers strongly agree that they exhibit career commitment (M = 3.48899648; e.g., proud of being called a teacher) and work performance (M = 4.229640879; e.g., accomplish more work). It suggests that the teachers have very high levels of career commitment and work performance in their teaching profession. On the other hand, they agree that they feel job satisfaction (M = 4.0667058; e.g., satisfied with relationships with students). It signifies that the teachers have a high level of job satisfaction in their teaching profession.

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Table 4. Difference in the technostress by set.

Sample Characteristics	Technostress							
	Skepticism		Fatigue		Anxiety		Inefficacy	
	M	p	M	p	M	p	M	p
Age								
34 years old and below	**3.2512**	**.000**	**3.1636**	**.000**	**2.8126**	**.000**	**2.4970**	**.000**
35 to 44 years old	**3.3276**		**3.2496**		**2.8389**		**2.6227**	
45 years old and above	**3.5278**		**3.4641**		**3.1418**		**3.0664**	
Gender								
Male	3.3236	.180	**3.2282**	**.010**	**2.8751**	**.042**	**2.6371**	**.006**
Female	3.4155		**3.4078**		**3.0130**		**2.8257**	
Marital Status								
Single	**3.2472**	**.017**	**3.1727**	**.025**	2.8505	.193	**2.5894**	**.033**
Married	**3.3844**		**3.3033**		2.9243		**2.7109**	
Monthly Income								
PHP23,000 and below	3.3057	.263	3.2419	.535	2.8654	.252	2.6281	.156
PHP24,000 above	3.3662		3.2761		2.9266		2.7045	
Educational Attainment								
Undergraduate degree	3.2805	.460	**3.0860**	**.034**	2.7975	.200	2.5848	.281
Graduate units or degree	3.3471		**3.2806**		2.9119		2.6816	
Teaching Experience								
0-10 years	**3.2767**	**.004**	**3.1809**	**.000**	**2.8348**	**.000**	**2.5521**	**.000**
11-20 years	**3.4315**		**3.3984**		**2.9035**		**2.7437**	
21 years and above	**3.4937**		**3.4279**		**3.1702**		**3.0812**	

Table 4 displays the difference in the technostress of the teachers by set.

The results reveal that relative to the skepticism set of technostress, the teachers of ages 45 years old and above (*M*=3.5278) have significantly higher skepticism than the teachers of ages 34 years old and below (*M*=3.2512) and 35 to 44 years old (*M*=3.3276). Moreover, teachers who are married (M=3.3844) have higher skepticism as compared to single teachers (*M*=3.2472). It was further found out that the teachers who have teaching experience of 21 years and above (*M*=3.4937) and 11-20 years (*M*=3.4315) have significantly higher skepticism than the teachers who have teaching experience of 0-10 years (*M*=3.2767). Overall, these results mean that teachers who are 45 years old and above, married, and have 11 years and above teaching experience have significantly higher technostress relative to the skepticism set.

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When it comes to fatigue set of technostress, the results uncover that significantly higher fatigue was observed in teachers who are 45 years old and above (*M*=3.4641) than the teachers who are 34 years old and below (*M*=3.1636) and 35 to 44 years old (*M*=3.2496). Similarly, significantly higher fatigue was noted in females (*M*=3.4078) than males (*M*=3.2282), married (*M*=3.3033) than single (*M*=3.1727), with graduate units or degree (*M*=3.2806) than with undergraduate degree (*M*=3.0860). The teachers who have teaching experience of 21 years and above (*M*=3.4279) and 11-20 years (*M*=3.3984) have also significantly higher fatigue than the teachers who have teaching experience of 0-10 years (*M*=3.1809). As a whole, it can be deduced from the results that the teachers who are 45 years old and above, female, married, with graduate units or degree, and have 11 years and above teaching experience have significantly higher technostress when it comes to fatigue set.

Moreover, in terms of anxiety set of technostress, the outcomes disclose that the teachers of ages 45 years old and above (*M*=3.1418) have significantly higher anxiety than the teachers of ages 34 years old and below (*M*=2.8389) and 35 to 44 years old (*M*=2.8126). Furthermore, females (M=3.0130) have significantly higher anxiety than males (M=2.8751). It was also shown that the teachers who have teaching experience of 21 years and above (*M*=3.1702) have significantly higher anxiety than the teachers who have teaching experience of and 11-20 years (*M*=2.9035) and 0-10 years (*M*=2.8348). Taken together, these results point to the notion that teachers who are 45 years old and above, female, and have 21 years and above teaching experience have significantly higher technostress when it comes to anxiety set.

Lastly, viewing the inefficacy set of technostress, the findings unveil that teachers who are 45 years old and above (*M*=3.0664) have significantly higher inefficacy than the teachers who are 34 years old and below (*M*=2.6227) and 35 to 44 years old (*M*=2.4970). A significantly higher inefficacy was likewise noticed in females (M=2.8257) than males (M=2.6371), married (M=2.7109) than single (M=2.5894). A significantly higher inefficacy was further observed in the teachers who have teaching experience of 21 years and above (*M*=3.0812) as compared to the teachers who have teaching experience of and 11-20 years (*M*=2.7437) and 0-10 years (*M*=2.5521). Generally, these results provide evidence that teachers who are 45 years old and above, female, married, and have 21 years and above teaching experience have significantly higher technostress by inefficacy set.

Table 5. Difference in overall technostress, career commitment, work performance, and job satisfaction.

Sample Characteristics	Overall Technostress		Work Performance		Job Satisfaction		Career Commitment	
	M	p	M	M	M	p	M	p
Age								
34 years old and below	2.9311	.000	4.1867	.034	4.0412	.002	3.4065	.000
35 to 44 years old	3.0097		4.2501		4.0459		3.5173	
45 years old and above	3.3000		4.2835		4.1398		3.6149	

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Gender								
Male	**3.0160**	.011	4.2169	.100	4.0639	.616	**3.5080**	.000
Female	**3.1655**		4.2857		4.0791		**3.4058**	
Marital Status								
Single	**2.9650**	.019	**4.1637**	.005	4.0622	.792	**3.4167**	.000
Married	**3.0807**		**4.2606**		4.0688		**3.5228**	
Monthly Income								
PHP23,000 and below	3.0103	.212	**4.1634**	.000	4.0529	.316	**3.4394**	.000
PHP24,000 above	3.0684		**4.2783**		4.0768		**3.5253**	
Educational Attainment								
Undergraduate degree	2.9372	.128	4.2036	.599	4.0764	.787	**3.3982**	.006
Graduate units or degree	3.0553		4.2325		4.0657		**3.4988**	
Teaching Experience								
0-10 years	**2.9612**	.000	**4.1988**	.027	**4.0459**	.001	**3.4288**	.000
11-20 years	**3.1193**		**4.2647**		**4.0558**		**3.5445**	
21 years and above	**3.2932**		**4.3054**		**4.1662**		**3.6699**	

Table 5 displays the difference in the overall technostress, career commitment, work performance, and job satisfaction of the teachers.

First, the results show that the overall technostress is significantly higher in teachers who are 45 years old and above (*M*=3.3000) have significantly higher inefficacy than the teachers who are 34 years old and below (*M*=3.0097) and 35 to 44 years old (*M*=2.9311). Furthermore, A significantly higher overall technostress was found in females (M=3.1655) than males (M=3.0160), married (M=3.0807) than single (M=2.9650). The same significantly higher overall technostress was gleaned when comparing the teachers who have 21 years and above (*M*=3.2932), 11-20 years (*M*=3.1193), and 0-10 years (*M*=2.9612) teaching experiences. These results connote that teachers who are 45 years old and above, females, married, and with teaching experience of 21 years and above tend to have a significantly higher level of technostress.

Looking into the work performance of the teachers, it can be revealed that there is a significant difference with the teachers of ages 45 years old and above (*M*=4.2835) performing higher than the teachers of ages 35 to 44 years old (*M*=4.2501) and 34 years old and below (*M*=4.1867). There is also a significant difference in the performance of the teachers who are married (*M*=4.2606) versus single (*M*=4.1637) and teachers with monthly income of PHP24,000 above (*M*=4.2783) against with monthly income of PHP23,000 and below (*M*=4.1634). Likewise, a significant difference in the performance was noted in the teachers with teaching experience of 21 years and above (*M*=4.3054) as compared to teachers with teaching experience of 11-20 years (*M*=4.2647) and 0-10 years (*M*=4.1988). These outcomes provide a piece of evidence that teachers who are 45 years old and above, married, with monthly income of PHP24,000 above, and teaching experience of 21 years and above have a likelihood of a significantly higher level of work performance.

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The findings further demonstrate that as regards job satisfaction, the teachers who are 45 years old and above (*M*=4.1398) are significantly more satisfied than the teachers who are 34 years old and below (*M*=4.0459) and 35 to 44 years old (*M*=4.0412). The same can be gleaned when it comes to job satisfaction across teaching experience, with teachers in the profession for 21 years and above (*M*=4.1662) exhibiting significantly more satisfaction than teachers in the profession for 11-20 years (*M*=4.0558) and 0-10 years (*M*=4.0459). These results signify those teachers on ages 45 years old and above and with teaching experience of 21 years and above tend to have a significantly higher level of job satisfaction.

Finally, a significantly higher level of career commitment is noted in the teachers of ages 45 years old and above (*M*=3.6149) and 35 to 44 years old (*M*=3.5173) as compared to teachers of ages 34 years old and below (*M*=3.4065). There are further significantly higher levels of career commitment in the teachers who are male (M=3.5080) than female (M=3.4058), married (*M*=3.5228) than single (*M*=3.4167), with monthly income of PHP24,000 above (*M*=3.525) than of PHP23,000 and below (*M*=3.4394), and with graduate units or degree (M=3.4988) than with undergraduate degree (M=3.3982). A significantly higher level of career commitment was seen in the teachers with teaching experience of 21 years and above (*M*=3.6699) and 11-20 years (*M*=3.5445) as compared to teachers with teaching experience of 0-10 years (*M*=3.4288). These research outcomes offer impressions that teachers who are 45 years old and above, male, married, with monthly income of PHP24,000 above, with graduate units or degree, and teaching experience of 21 years and above are most likely to possess significantly higher levels of career commitment.

Table 6. Relationship between technostress and career commitment, work performance, and job satisfaction.

Variables	Work Performance	Job Satisfaction	Career Commitment
Technostress - Skepticism set	**-.111** **.000**	-.035 .093	-.030 .152
Technostress - Fatigue set	**-.112** **.001**	.070 .175	.070 .548
Technostress - Anxiety set	**-.125** **.000**	.028 .186	.000 .986
Technostress - Inefficacy set	**-.150** **.000**	.019 .367	.004 .863
Overall Technostress	**-.115** **.000**	.024 .252	.013 .538

Table 6 displays the relationship between technostress and work performance, job satisfaction, and career commitment.

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Michael B. Cahapay, & Nathaniel F. Bangoc II. Estrés tecnológico, desempeño laboral, satisfacción laboral y compromiso profesional de los maestros en medio de la crisis de COVID-19 en Filipinas

The bivariate analyses reveal that there is a significant inverse relationship between technostress sets of skepticism (r=-.111, p=.000), fatigue (*r*=-.012, *p*=.001), anxiety (*r*=-.125, *p*=.000), and inefficacy (*r*=-.150, *p*=.000) and work performance. This connotes that as the teachers experience higher levels of skepticism, fatigue, anxiety, and inefficacy associated with the use of ICT, they tend to demonstrate a lower level of work performance. When looking into the larger picture, a significant inverse relationship between overall technostress and work performance (*r*=-.115, *p*=.000) is expectedly found. This implies that when teachers experience a higher level of technostress, they most likely show a lower level of work performance. It can be remarked, however, that all the significant relationships found in the analyses were very modest. Moreover, it can be notably observed that there were no relationships between technostress, job satisfaction, and career commitment. These results nevertheless provide empirical basis as to the influence of technostress and its four sets on the work performance of the teachers in the context of distance education amid the COVID-19 crisis.

4. Discussion.

This study aimed to investigate the association of technostress on the sample characteristics and organizational performance variables of the teachers in the context of emergency distance education amid the COVID-19 crisis. The results are discussed as follows.

First, it was found that the teachers experience a moderate level of technostress. This result is affirmed in the current studies on the technostress of teachers around the world. The results obtained in the research of Jameel Abo Mokh et al. (2021), Çoklar and Bozyiğit (2021), and Gökbulut (2021) indicated a medium level of technostress in the teachers. Similarly, in some studies conducted in the past, Efilti and Çoklar (2019) and Wang and Li (2019) showed a mild level of technostress in the sample of teachers involved in their research. Comparing these results in a study with different samples and conducted amid the current global crisis, higher technostress levels were found in the research of Scaramuzzino and Barfoed (2021) in the social workers.

Furthermore, this study revealed that teachers who are 45 years old and above, females, married, and with teaching experience of 21 years and above tend to have a significantly higher level of overall technostress. Results in related studies are far and in between in this aspect. For example, Yadav and Rahaman (2020) found a significant difference in the technostress of teachers across age, but not across gender and teaching experience. This result is similar to the research outcomes of Gökbulut (2021) and Shintri and Narasalagi (2020), finding no significant difference across gender, and by extension, no significant difference across teaching experience or tenure.

Moreover, the result of the study of Annalakshmi and Catherin Jayanthy (2019) also showed no significant difference across gender and a significant difference across teaching experience with teachers having 0-10 years teaching experience showing higher technostress than teachers with 10 and above years teaching experience. On the other hand, Jameel Abo Mokh et al. (2021) contrastingly indicated no significant difference in the technostress of the teachers across educational attainment and teaching experience.

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Looking into the difference in the different sets of technostress, this study observed a significant difference in skepticism, fatigue, anxiety, and inefficacy across age, gender, marital status, and teaching experience. Specifically, teachers who are 45 years old and above, females, married, and with at least 11 years of teaching experience tend to exhibit higher levels of technostress in at least three sets. The study of Estrada-Muñoz et al. (2020) offers an interesting comparison taking into account selected sets across age and gender. It was found out that, in both anxiety and fatigue sets, there was no significant association in terms of age but there was a significant difference across gender with males showing higher anxiety than females.

Similarly, while Penado Abilleira (2021) found that overall technostress was significantly different across gender, however, varied findings were generated when looking specifically into the technostress sets. They identified that females indicated significantly higher mean scores for both anxiety and fatigue sets as compared to the males. However, there was no significant difference found in the technostress of the same sample of teachers when it comes to skepticism and inefficacy sets across gender.

Lastly, this study disclosed a significant negative relationship between technostress, including all its four sets, and work performance. This outcome is supported by Li and Wang (2020) who recently found that technostress has a significant negative influence on the work performance of the teachers. On the other hand, it is interesting to note that such results are supported but vary in the result obtained by Magistra et al. (2021). Their finding demonstrated that technostress has a significant positive influence on the performance of the teachers.

However, despite evidence from current and previous studies (e.g., Heo & Jung, 2020 on the significant influence of technostress on job satisfaction; Hassan et al., 2019 on the significant influence of technostress on career commitment), the result of this research provides contrasting result otherwise. It was demonstrated that there are no significant relationships between technostress and job satisfaction and career commitment. This result points to other factors that influence job satisfaction and career commitment not included in this study.

5. Conclusion.

This study revisits technostress and its influence on important teaching aspects set in a novel situation like the current global COVID-19 crisis. It is also an extension of related studies in the field, taking a more comprehensive approach by investigating the relationship of technostress on different selected variables. Its objective is threefold: describe the levels of technostress, career commitment, work performance, and job satisfaction; compare the technostress, career commitment, work performance, and job satisfaction across sample characteristics; and relate technostress to career commitment, work performance, and job satisfaction.

The major outcome of this study indicated that the teachers have a moderate level of technostress. It was also shown that the teachers have very high levels of work performance and job satisfaction, and high level of career commitment. Furthermore, the results revealed that technostress and its four sets significantly differed across age, gender, marital status, and teaching experience to varying degrees. On the other hand, significant differences were also noted in the work performance, job satisfaction, and career commitment across different

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sample characteristics. Lastly, a significant negative relationship between technostress and work performance was found. This research provides evidence as regards the technostress of teachers in the context of distance education amid the COVID-19 crisis.

Considering these results at a more practical level, measures such as professional development programs in technology integration to reduce the moderate level of technostress of teachers should be developed. The teachers who are 45 years old and above, females, married, and with teaching experience of 21 years and above who experience a significantly higher level of technostress should be strategically assisted in these proposed measures in the context of this study. These measures are also grounded on the evidence that technostress is a factor that negatively influences the work performance of the teachers.

The use of psychometrically tested scales and the involvement of a large sample in exploring technostress and its influence on various variables can be considered as strengths of the study design. However, there were some limitations as well. It may include biases related to data on variables like work performance obtained through the perception of the respondents themselves. The results of this study showing no significant relationships between technostress and other organizational performance variables also point to other factors not tested in this study. It is suggested that future studies in the field should address these gaps to get a more accurate and complete view of the research interest.

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