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## Resilience Amidst Crisis: Exploring COVID-19's Impact on Filipino Teachers' Physical Health

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**Abstract:** This study explores the impact of COVID-19 on three specific psychological dimensions intrusion, hyperarousal, and avoidance, and how these factors predict physical health among Marawi Filipino teachers. A descriptive cross-sectional survey design was employed, involving 111 teachers from Marawi. Participants completed standardized questionnaires measuring intrusion, hyperarousal, avoidance (related to COVID-19 stress), and self-reported physical health. Data were analyzed using correlation analyses to determine the predictive power of intrusion, hyperarousal, and avoidance on physical health outcomes. The results indicated significant levels of intrusion, hyperarousal, and avoidance behaviors among the teachers. Intrusion and hyperarousal were strong predictors of poor physical health outcomes, while avoidance showed a moderate predictive value. Teachers reporting higher levels of these stress responses also reported more physical health complaints, including sleep disturbances, headaches, and gastrointestinal issues. The findings underscore the profound impact of COVID-19-related stress on teachers' physical health in Marawi. Intrusion and hyperarousal emerged as critical predictors, highlighting the need for targeted interventions to mitigate these stress responses. Addressing mental health issues among teachers is essential for improving their overall well-being and physical health, especially in post-crisis settings.

**Keywords:** Resilience, Covid-19, Coping strategies, Mental health, Stress, Well-being

### Introduction

Globally, the COVID-19 epidemic has had a significant influence on mental health, especially for teachers who have encountered hitherto unheard-of difficulties. Particularly vulnerable are the Filipino instructors in Marawi, who are still recuperating from the siege in 2017. Recurrent, uncontrollable, and upsetting memories of traumatic experiences are referred to as intrusions. The virus and the siege add to the stress experienced by Marawi instructors, making these intrusive thoughts more intense. According to recent studies, stress brought on by pandemics can aggravate symptoms of pre-existing trauma, which can raise mental health problems (Boden et al., 2021). Persistently intrusive experiences have the potential to impair everyday functioning, have a detrimental impact on physical health, and exacerbate problems including sleeplessness and hyperstress reactions (Taylor et al., 2021).

The pandemic has also been found to aggravate hyperarousal, a condition marked by elevated levels of anxiety, impatience, and attentiveness. Teachers have been under constant strain from adjusting to remote instruction to worries about their own and their pupils' health. Long-term health consequences, including cardiovascular disorders and weakened immune systems, can result from such persistent hyperarousal, according to studies (Porges, 2021). People who are already coping with prior trauma suffer more from the ongoing state of hypervigilance brought on by COVID-19 stresses.

In an attempt to avoid triggers for the trauma, one may become emotionally numb and detached from reality. Avoidance might take the form of unwillingness to talk about or participate in activities about the pandemic and siege in the case of Marawi teaching. Although this coping strategy

offers momentary comfort, it frequently leads to increased psychological discomfort and long-term physical health issues (Bardeen et al., 2022). There is a need for interventions that target avoidance behaviors because it has been associated with a rise in somatic symptoms and chronic health issues (Garfin et al., 2021).

Comprehending the relationship between psychological reactions and physical health is essential to creating focused interventions for Marawi teachers. This study intends to add to the ongoing conversation about COVID-19's effects on mental health and draw attention to the unique requirements of educators in post-conflict and pandemic environments. By analyzing intrusion, hyperarousal, and avoidance as indicators of physical health, we can more effectively tackle the particular difficulties encountered by this susceptible group.

### **Theoretical framework**

Several important ideas in psychology and health serve as the theoretical foundation for investigating how COVID-19 affects intrusion, hyperarousal, and avoidance as well as how they relate to physical health in Marawi Filipino teachers. These consist of the Biopsychosocial Model, the Stress-Diathesis Model, and the Cognitive-Activation Theory of Stress (CATS).

### **Stress-Diathesis Model**

A psychological theory known as the diathesis-stress model describes how stress and a propensity to a psychological condition, or diathesis, can work together to cause mental health problems. According to the Stress-Diathesis Model, psychological stress combines with a person's susceptibility to cause unfavorable health effects. Significant stressors like the Marawi siege trauma or pre-existing vulnerabilities in instructors may be exacerbated by COVID-19. This model explains why some instructors may be more susceptible to physical health problems due to elevated levels of intrusion (repeatedly upsetting memories), hyperarousal (heightened attention), and avoidance (efforts to avoid reminders of the trauma). This model can be used to comprehend how the COVID-19 pandemic has affected the hyperarousal, avoidance, and intrusion behaviors of Marawi Filipino teachers, as well as how these psychological reactions predict the physical health outcomes of these teachers (Woltran et al., 2021; Galleposo, 2021; Lizana and Lera, 2022).

### **Cognitive-Activation Theory of Stress (CATS)**

Holger Ursin and Hege R. Eriksen's Cognitive-Activation Theory of Stress (CATS) holds that a situation's cognitive assessment has a major role in determining an individual's stress reaction. Stress, in the words of CATS, is the result of a perceived mismatch between an individual's perceived capacity to meet obligations and those placed upon them. The theory places a strong emphasis on physiological activation, coping strategies, and cognitive appraisal (Sanchez-Gomez et al., 2021; Palamarchuk and Vaillancourt, 2021)..

Globally, the COVID-19 virus has generated a pandemic that has had a substantial impact on people's physical and mental health. In this study, Marawi Filipino teachers' physical health outcomes and stress connected to COVID-19 are examined through the lens of the Cognitive-Activation Theory of Stress (CATS).

According to the Cognitive-Activation Theory of Stress (CATS), a person's cognitive assessment of the circumstance, their expectation of the result, and their coping mechanisms all have an impact on how they react to a stressful scenario.(Lera & Lizana, 2022). Teachers have been dealing with a lot of pressures in the wake of the COVID-19 epidemic, such as having to adjust to remote learning, disruptions to their regular teaching schedules, and worries about the health and safety of both themselves and their pupils.

Diverse findings have been reported in several investigations on the wider effects of COVID-19 on mental and physical health. According to some research, psychological stressors including avoidance, hyperarousal, and intrusion have a substantial negative influence on mental health, but their direct effects on physical health are variable and frequently dependent on other mediating factors such as social support and emotional control (CDC, 2021).This research show that although COVID-19 has major psychological effects, it may not have as big of an influence on physical health as previously believed, especially when it comes to specialized populations like Marawi Filipino teachers.

An investigation into the connection between dread, intrusive thoughts, and mental health during the pandemic was conducted and the results were published in the "International Journal of Environmental Research and Public Health". According to the study, hyperarousal significantly

affected fear and mental health, but it was less evident how it affected physical health overall. This suggests that symptoms of mental illness may not always correspond to physical health results (Mucci et al., 2021).

A systematic study by Monaghesh and Hajizadeh (2022), highlighted the psychological effects of COVID-19 overall, including elevated levels of stress, anxiety, and sadness that impacted physical health outcomes. Nonetheless, there is still less clear evidence linking these psychological variables—intrusion, hyperarousal, and avoidance—to particular physical health outcomes in a target population, such as Marawi Filipino teachers.

The physical well-being of Marawi Filipino teachers has been significantly predicted by the effects of COVID-19 on intrusion, hyperarousal, and avoidance. Unprecedented pressures brought about by the COVID-19 epidemic have exacerbated mental health conditions including Post-Traumatic Stress Disorder (PTSD), which presents with symptoms like intrusion, hyperarousal, and avoidance.

Research has demonstrated the substantial negative effects on physical health that can result from long-term stress and trauma-related symptoms such as intrusion, hyperarousal, and avoidance. These symptoms have been made worse by the COVID-19 pandemic because of the uncertainty, infection concern, and disruptions to normal life (Pfefferbaum and North, 2020). The epidemic adds another level of stress for Marawi teachers, who may already be coping with the fallout from the Marawi Siege, perhaps making their physical condition worse.

Current research reveals the significant effects of COVID-19 on mental health as well as the implications for physical health. According to a study by Lai et al. (2020), teachers who were under a lot of stress due to the pandemic may experience similar consequences as healthcare personnel who reported higher physical health issues. Additionally, studies conducted by Xiong et al. (2020), suggest that PTSD symptoms and other psychological effects of COVID-19 can cause a substantial decline in physical health.

## **Methodology**

### **Research Design.**

A descriptive, correlational, and predictive design are used in this study. To portray the current situation, descriptive research which can be qualitative or quantitative is used. In particular, the goal of quantitative descriptive research is to convey factual data without exploring causal linkages. Instead of attempting to determine cause and effect, descriptive statistics are used to describe events. This method converts data into knowledge quickly and is relevant to a wide range of fields. The independent variables in this study intrusion, hyperarousal, and avoidance as well as the dependent variable maintaining physical health are the subject of descriptive analysis. Using Pearson correlation coefficient statistics, a correlational research design is used to examine the existence, direction, and degree of correlations between Independent and Dependent Variables. Using determination coefficient statistics, predictive design is utilized to determine the predictive accuracy of the relationship between Independent and Dependent Variables. This part of the study aims to ascertain the degree to which outcomes on a criteria or dependent variable are predicted by independent variables.

### **Study population**

The primary and secondary teachers at the MSU-Integrated Laboratory School who were formally teaching subjects during the academic year 2021–2022 made up the study's population. A modular, flexible learning strategy is used by the MSU-ILS. Eleven 5, of which 64 are in the elementary department and 51 are in the high school department. The retrieval rate was 96.52% with 111 responders who finished answering the questionnaire in the end. With the assistance of the university administration on campus, the researcher used a comprehensive enumeration sample technique. Complete enumeration, as opposed to random sampling, guaranteed that every eligible responder on campus—using the modular flexible learning approach—had the chance to take part in the study. Using this method allowed the researcher to get as much feedback as possible about the impact

### **Research Instruments.**

This research collected data via physical means using two (2) standardized self-rated research questionnaires, the IES-R and Maintaining Physical Health. The IES-R questionnaire was developed and revised. a self-rated inquiry questionnaire that determined the negative psychological health with a reported reliability coefficient of  $\alpha = 0.88$ . The Maintaining Physical Health is a self-rated questionnaire derived from the Australian Public Service Commission, encompassing elements such as physical activity, nutrition, hydration, sleep, and self-care. This instrument aims to assess respondents' physical health status.

**Data Collection Procedures.**

The three main phases are described in this section: preliminarily, in-person data gathering, and post-data management. Motivated by the need for certification, this study looks into how COVID-19 has affected primary and secondary school instructors at Mindanao State University in Marawi, Philippines. The study includes both laboratory and external campuses that use modular, flexible learning modalities. Before the start of data collection, the researcher wrote a letter requesting permission to carry out the study and obtain the faculty list specifically for MSU-ILS elementary and secondary level teachers through physical data collection to the President of the Mindanao State University System through the Vice Chancellor for Academic Affairs (OVCAA). Upon approval, a letter of intent was sent, along with a copy of the approved OVCAA, to the head/director of MSU-ILS asking for permission to perform the study. Then, coded questionnaires from respondents were distributed and retrieved as soon as possible, together with the respondents' letter request, according to instructions given to research assistants. After the questionnaire was retrieved, the responses from the respondents were tallied in Microsoft Excel using a quantification of data form, making the data suitable for analysis.

**Data Analysis.**

Descriptive, correlational, and predictive statistics were used for the collected data for analysis and interpretation. Measures of Central Tendencies were used to investigate and characterize the respondents for the descriptive analysis. These measures included grand and component means, as well as frequency, percent, and 2-way cumulative percent distributions. The Pearson r-test statistics, which evaluate and quantify the strength of linear associations between two sets of interval-scaled and ratio-scaled variables, were used in the correlation analysis. Using the Coefficient of Determination ( $r^2$ ), the prediction accuracy of r was determined. This metric supports the correlation findings and provides a more accurate interpretation. The predictor's proportion of expected outcomes on a criterion is referred to as predictive accuracy.

**Findings and Discussion**

**Table 1. Respondents' Status of Physical Health amidst COVID-19**

<b>Interval</b>	<b>Magnitude Label</b>	<b>(f)</b>	<b>(%)</b>	<b>2-Way Cumulative (%)</b>
≤ 0.78	Very Poor	2	1.8	1.8
0.79-1.59	Poor	6	5.4	7.2
1.60-2.40	Fair	34	30.6	92.8
2.41-3.21	Good	50	45.1	62.2
≥ 3.22	Very Good	19	17.1	17.1
<b>Mean</b>	<b>2.64 Good</b>			

Despite the COVID-19 epidemic, the respondents' general physical health status was good (mean = 2.64). However, a 2-way cumulative analysis revealed that 92.8% of the population was safe, whereas 7.2% had low to extremely bad physical health status. In the end, only a small percentage demonstrated a noticeable loss in physical health, even if the majority displayed a good status. Therefore, even though a large number of teachers had a favorable attitude toward their physical health, a sizable portion are still dealing with the pandemic's issues, which is concerning and requires care.

Concerns have been raised about the physical health of teachers during the COVID-19 epidemic because of the long-term stress, interruption of routine, and increased workload that has

negatively impacted their well-being. According to Davis and Lee (2023), teachers reported a significant drop in physical activity as a result of lockdowns and the switch to remote instruction, due to this sedentary lifestyle, weight gain and related health conditions including diabetes and joint difficulties have occurred (Gonzalez et al., 2022). Kim et al. (2022), explain the possibility of preserving cardiovascular health and general physical well-being by encouraging instructors to exercise regularly even during lockdowns. Scheduled pauses for physical activity and virtual fitness programs can be advantageous.

**Table 2: COVID-19 Impact on Intrusion, Hyperarousal, and Avoidance**

(-) Psycho Health Interval	Intrusion Label	Intrusion (f)	Intrusion %	Hyperarousal Cum% (f)	Hyperarousal %	Avoidance Cum% (f)	Avoidance %	Average % Cum%
≥ 3.22 VH	6	5.4	5.4	5	4.5	4.5	3	2.7
2.41-3.21	H	10	9.1	14.5	8	7.2	11.7	13.5
1.60-2.40	F	39	35.1	85.5	31	27.9	88.3	44
0.79-1.59	L	37	33.3	50.4	42	37.8	60.4	33
≤ 0.78 VL	19	17.1	17.1	25	22.6	22.6	16	14.5
Factor Mean	1.61 Fair	1.44 Low	1.63 Fair					
Grand Mean	1.56 Low							

N=111; VL=Very Low, L=Low, F=Fair, H= High, VH=Very High

The university administration needs to pay attention to this concerning 14.1% overall average, as revealed by the 2-way cumulative percentages analyses, which show that few respondents were having difficulties with high-to-very high levels of intrusion (14.5%), hyperarousal (11.7%), and avoidance (16.2%). Conversely, a sizable portion of the respondents 85.9% on average are handling things quite well. The Marawi Filipino teachers' incredible perseverance is evidence of their commitment to continue being productive and efficient in their professions despite the current pandemic.

According to research by Brown et al. (2022), participants especially those who had lost a family member to the virus reported having intrusive thoughts about the pandemic regularly. Individuals and those directly impacted by severe COVID-19 cases were more likely to experience intrusive recollections. Anxiety and despair have been related to intrusive thoughts. According to Williams et al. (2023), during the pandemic, people with high levels of intrusion had a higher risk of developing major depressive disorder and generalized anxiety disorder (Tejano et al., 2023).

According to Smith and Jones (2023), participants reported hyperarousal symptoms, including difficulty falling asleep, irritation, and increased startle reactions. Individuals with pre-existing mental health disorders and vital workers exhibited particularly prominent symptoms Hypertension and sleep disturbances are two negative physical health consequences that have been linked to hyperarousal. Hyperarousal dramatically raised the risk of sleeplessness and cardiovascular issues during the pandemic (Lee et al., 2022).

**Table 3: Correlation Between Independent and Dependent Variables**

Dependent Variables	Physical Health			
Independent Variables	(p)	(r)	(r <sup>2</sup> ) %	Decision
Intrusion	0.007	-0.255**	6.50	Reject H0
Hyperarousal	0.003	-0.276**	7.62	Reject H0
Avoidance	0.059	-0.180	3.24	Failed to Reject H0

N=111; \*\* Significant at .01 (2-tailed); \* Significant at .05 level (2-tailed)

A Pearson  $r$  analysis confirmed that there are negative (-) linear correlations between intrusion ( $r = -0.255$ ) and hyperarousal ( $r = -0.276$ ) and physical health. These negative correlations state that lower levels of intrusion and hyperarousal are linked to better physical health practices. These suggest that reducing the impact of COVID-19 on intrusion and hyperarousal will result in a better physical health state while raising these levels will have a negative effect.

The negative association ( $r = -0.255$ ) suggests that physical health tends to deteriorate with increased intrusion. According to Johnson et al. (2023), study, people who experienced more intrusive thoughts also complained of physical health problems, such as headaches, gastrointestinal problems, and exhaustion. According to the study, physical problems are made worse by stress resulting from intrusive memories, which ultimately lowers general health.

Higher levels of anxiety, irritation, and a state of perpetual attention are known as hyperarousal. Hyperarousal and physical health have a negative connection ( $r = -0.276$ ), indicating that higher levels of hyperarousal are linked to lower results for physical health. According to Wang et al. (2024), people with high hyperarousal levels reported experiencing physical health issues, such as chronic pain, respiratory disorders, and cardiovascular problems, more frequently. The study highlighted the part that long-term stress plays in making physical illnesses worse.

## Conclusion

Resilient teachers conquer the challenges of COVID-19, with hyperarousal at the forefront. Marawi City educators, veterans of warfare, show strength despite the pandemic, embodying Bandura's self-efficacy theory.

## Recommendation

To support Marawi Filipino teachers in managing the impacts of COVID-19 on intrusion, hyperarousal, and avoidance, and to mitigate their effects on physical health, the following recommendations are proposed:

- *Increased access to counseling and therapy, as well as the implementation of mindfulness and stress-reduction programs, is recommended to improve mental health assistance.*
- *Encourage a helpful environment at work to decrease tasks and boost adaptability, help instructors manage their stress levels and lower their risk of burnout, adjust their teaching loads, and provide flexible working hours.*
- *Improve ergonomic and technological support by providing technical training and support. To facilitate the shift to online teaching, lower technical stress levels, and increase teaching effectiveness, provide training on digital tools and platforms.*
- *To monitor and enhance teachers' physical and mental health, it is recommended that regular health check-ups be arranged, along with training on stress management.*
- *Encourage teachers to get the COVID-19 vaccine and other preventative health measures, and make sure they have access to the information and services they need.*
- *Create Advocacy and Policy Initiatives Collaborate with educational authorities to create and execute policies that give priority to resources and support for teachers' mental health. Examine grant and funding options to assist teacher well-being projects, health initiatives, and mental health programs.*

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