

TEACHERS' ANXIETY IN TIMES OF PANDEMIC: AN EXPLORATORY SEQUENTIAL DESIGN

DOLLY P. NERMAL
NIXON BARRETE
JO ANN AMOR P. BAMBOA

ABSTRACT

This study aimed to examine Teacher's pandemic anxiety using Exploratory Sequential Design. Teachers' anxiety may cause them to doubt their point of view. They are unsure how to respond to specific scenarios because of unexpected circumstances. As a result, it causes anxiety, stress, and worry. A total of 17 respondents participated in the study, specifically for qualitative data analysis. Purposive sampling was used to select and assign teachers for in-depth interviews and 7 teachers for focus group discussion. In the quantitative phase, 150 respondents were assigned to Exploratory Factor Analysis (EFA). Six themes emerged in the qualitative findings, including teachers' unprecedented challenges, pandemic anxiety, personal disposition anxiety, teachers' work-life engagement, anxiety classification, and adaptation to stress. However, the results revealed three underlying dimensions in teachers during factor loadings: work attitude, anxiety, and financial distress. Furthermore, the Exploratory Factor Analysis (EFA) revealed that the instruments were reduced to 8 out of 50 items as the final tool. The Cronbach Alpha ($\alpha=.825$) value also indicates that the instrument's reliability was very high. As a result, it is concluded that teachers overcome challenges as a groundbreaking event that inspires innovation and a new environment among educators and students. Instructors' learning capacity may be increased by observing and other self-care skills to focus and overcome anxiety caused by the epidemic. This shift will give them a greater sense of control and help alleviate any trauma or grief they may be feeling.

Keywords: *Teachers' Pandemic Anxiety, Teachers' Attitude, Exploratory Factor Analysis, Exploratory Sequential Design, Arakan, North Cotabato Division.*

INTRODUCTION

Corona-virus Disease 2019 has marked the start of the year 2019. This virus has spread to many countries, affecting our lives. Some studies reported that almost 95% of teachers experience anxiety, apprehension, stress, and nervousness. Anxiety is a prevalent force in many people's lives, and those working in education are no exception. Teachers' anxiety can make their perspectives unsecured since they do not know how to respond to situations. This problem has uncovered the multiple inadequacies and inequalities in our education systems, uncertainty, and discouragement (Vally & Alowais, 2021).

According to Ozamiz-Etxebarria et al., (2021), teachers' anxiety during pandemics is caused by a variety of emotions. It is a pervasive force in the lives of many people, and language educators are no exception. In addition, teachers' anxiety can render their perspectives uncertain. They do not know how to respond to situations due to the unpredictability of the circumstances.

Thus, it causes anxiety, tension, and nervousness. Teachers' high expectations for their teaching performance are linked to feelings of anxiety or stress that may arise during an evaluation or observation process. External factors such as time constraints and heavy workloads have also been identified as contributors to teacher anxiety (Merch, 2019). Many people, including online teachers, have been studied for their anxiety as teachers. These studies have examined internal anxiety catalysts, such as teacher self-efficacy, which is confidence in one's ability to coordinate and perform specific actions, such as stress, anticipation, nervousness, and concern (Cope, 2020).

Several researchers had turned minimal attention to the complementary topic of teacher anxiety during pandemics. They began to investigate the prevalence and impact of classroom anxiety among teachers. Nonetheless, the anxiety of teachers during pandemics is an unexplored area. It indicates that this area is still in its earliest stages of development. Several experiments have attempted to examine the effects of this pandemic from various angles. This research, on the other hand, would focus on how it has influenced and will continue to influence the lives and experiences of teachers, potentially causing their worries and anxieties (Aulén et al., 2021).

Thus, this study aimed to look for themes and underlying dimensions that emerged from teachers' anxiety during pandemics. Furthermore, the findings may be used as a database and a guide in developing intervention programs to investigate teachers' anxiety during pandemics.

FRAMEWORK

The conduct and foundation of this study were anchored in various theories that strengthened the study's credibility; the 1920 psycho-dynamic theory. In the late 1920s, Freud introduced an entirely new theory of anxiety. This theory served as the basis for anxiety-related research. According to his theory, the ego is the true source of anxiety. He described anxiety as a struggle between the id and ego. Aggressive and impulsive impulses may be deemed unacceptable, leading to their repression. These repressed desires may overcome repression and produce automatic anxiety.

Behavioral learning theory emphasizes the role of the environment in determining behavior. According to Ellis (1950), our disordered thinking leads to severe emotions. Maladaptive behaviors emerge as a result of these strong emotions. These theories explained anxiety as a proclivity to overestimate the likelihood of danger. Albert Ellis developed this theory.

Furthermore, according to Mezirow (1978), learning begins with a disorienting dilemma - also known as cognitive dissonance or anxiety caused by your worldview not matching the current facts. COVID-19's abrupt, unplanned, and rapid transition to online learning has contributed to intellectual dishonesty, given the difficulty we have in our education perceptions and significant inequalities in our system. Despite the best efforts and the enormous efforts of teachers, they cannot reach every child to provide the strong learning conditions and tasks that they require, and this disparity must change.

METHODS

Research Design

This study would be carried out using exploratory mixed approach test design. This design collects qualitative and quantitative data and integrates the analyzes to provide a more rigorous and comprehensive analysis than just any data source. This approach is often used for confirming, cross-validating or corroborating findings. (Cresswell, 2013). The qualitative (exploratory) findings from the first phase are applied to the development of the instrument or intervention, which is then tested in the second stage (quantitative).

Respondents

For the qualitative phase, 17 teachers who manage a class advisory were selected using the purposive sampling technique. Ten teachers were asked to participate in in-depth interviews, while seven were invited to participate in focus group discussions (FGD).

In the quantitative phase of the study, the constructed survey questionnaires from the qualitative interviews were disseminated to 150 teachers and were subjected to Exploratory Factor Analysis (EFA).

Instruments

For qualitative data collection, an interview guide served as the analysis instrument. In the interview guide, the questions that were answered during the interview are listed. Anxiety-related examination questions are taken from a high-quality audio recording to facilitate discussion during interviews and focus group discussions.

The quantitative data was extracted using the survey questionnaire derived from the qualitative data. The surveys' dimensions were determined by the patterns that emerged from the interviews and focus groups. It was given to the respondents after passing the parsimonious fit test and being tested for usability.

Statistical Tools

The notes taken from the in-depth interview were interpreted using thematic analysis. This approach focuses on finding, evaluating, and reporting trends in data. Patterns in data sets that are relevant to the description of a phenomenon and are linked to basic study questions are called themes (Boyatzis, 1996).

Exploratory Factor analysis was used in the study of quantitative data. It defines the number of structures and factors that lie beneath a succession of elements known as latent variables. Factor analysis is a type of multivariate analysis that attempts to explain the relationship between multiple variables (items) using a set of underlying factors independent of one another. This statistical method helps validate instrument structure. According to Nunnally (1978) and Carpenter (2006), factor analysis is a broad range of methods for conceptualizing data groupings.

Rather than a narrowly defined statistical approach, this method uses quantitative techniques to assign variables to specific groups. Hare et al., (1998) described factor analysis as a collection of statistical techniques for analyzing the interrelationships between multiple variables and explaining them in terms of their fundamental dimensions. The solution combined the data from various initial variables into a standard set of dimensions for minimal information loss.

RESULTS AND DISCUSSION

Table 1
Lived Experiences of Teachers Anxiety Pertaining to COVID-19 Pandemic

Issues Probed	Core Ideas	Codes/ Categories	Essential Themes
Challenges Encountered by Teachers Pertaining to Covid-19 Pandemic	<ul style="list-style-type: none"> · Teachers experienced 14 days' quarantine. · Teachers Suffers abrupt adjustment in teaching. · Teachers encountering difficulty in shifting classes from face to face to modular learning. · Teachers encountered challenges and Difficulties in their job. · Teachers suffers confusion. · Teachers encountered fear and worry about Pandemic effects. · Teachers suffers financial issues. Teachers experiences uncertainty. 	Challenges of Teachers	Unprecedented Challenges of Teachers
Teachers Experiences on Covid-19 Pandemic	<ul style="list-style-type: none"> · Teachers are worried and Depressed. · Teachers are emotionally and mentally great. · Teachers experienced Anxiety. · Teachers experienced nervousness. · Teachers experienced sleepless nights and loss of appetites. · Teachers experienced Stress build-up. · Teachers experienced worrying too much about different things. Teachers experienced Pressure and the amount of work in order to continue education amidst the pandemic. 	Teachers Anxiety	Teachers Pandemic Anxiety
Factors Contributed to Teachers' Anxiety	<ul style="list-style-type: none"> · Teachers do Multitask in Working Public Places. · Delay and gap of students learning · Safety of their loved ones. · Teachers may suffer anxiety due to lots of paper works and reports is needed to comply. · Teacher's anxiety is if her/his pupils can't submit modules. · His/her families' health condition. 		Personal Disposition Anxiety

	<ul style="list-style-type: none"> ·Lack of funding due to limited resources especially now in implementing face to face validation. ·Teachers experienced Trauma. <p>Teachers felt stress, depression, and anxiety.</p>		
The Anxiety of Teachers	<p>Maybe I am belonging to Generalized Anxiety Disorder (GAD) for I have this feeling of worry and tension.</p> <p>Infection-related anxiety (fear of getting infected or losing someone I loved because of the virus)</p> <p>Feeling of Nervousness.</p> <p>Sleepless nights.</p> <p>Feeling of Uneasiness.</p> <p>Physical Symptoms Anxiety.</p> <p>Trauma.</p>	Teachers Type of Anxiety	Classification of Anxiety
Teachers' Recommendations Pertaining to Covid-19 Pandemic Anxiety	<ul style="list-style-type: none"> ·Surrender life to God. ·Share feelings to someone you trust. ·Keep active. ·Eat well ·Keep in touch. ·Take a break. ·Acceptance of the situation. ·Always pray and be positive in life. ·Learning new skills and communication always to the family. ·Keep physically active. ·Make sleep priority. ·Eat healthy foods. ·Avoid using alcohol and illegal drugs. ·Learn about your disorder Putting effort to my skill and minding optimistic way to face it. 	Coping Strategy	Adaptation to Stress

Construction of Teachers' Pandemic Anxiety Scale

Table 2 exhibits the suggested Checklist Survey Questionnaire to be Subjected for EFA which reflected the Teachers' Pandemic Anxiety scale components which are included in the checklist. The items reflect the fundamental topics, fundamental ideas/ assertions, issues demonstrated, and implications. There are 50 items on the survey questionnaires.

Table 2

Teachers Pandemic Anxiety Scale Items

ITEMS	
1	I experienced home quarantine for 14 days.
2	I suffer abrupt adjustment in teaching.
3	I am having trouble transitioning from face-to-face instruction to modular instruction.

- 4 I suffer financial issues during pandemic time.
 - 5 I am feeling nervous, anxious or on edge.
 - 6 I experienced obstacles and difficulties while doing their duties.
 - 7 I am not able to stop or control worrying about what is happening tin the surroundings.
 - 8 I encountered fear and worry about Pandemic effects.
 - 9 I am worried and Depressed.
 - 10 I suffer confusion.
 - 11 I am becoming easily annoyed or irritable.
 - 12 I am afraid as if something awful might happen.
 - 13 I am worrying too much about different things.
 - 14 I get nervous when I met new people.
 - 15 I experience uncertainty.
 - 16 I feel shy when around people I don't know.
 - 17 I have difficulty making eye contact with others.
 - 18 I find it difficult to mix comfortably with the people I work with.
 - 19 I am emotionally and mentally great.
 - 20 I am afraid of the virus during this time of pandemic.
 - 21 I am extremely terrified of this situation or would always avoid it at all costs.
 - 22 I experienced Anxiety.
 - 23 I do not think I would be able to bear the situation like this pandemic.
 - 24 I experienced sleepless nights and loss of appetites.
 - 25 I am trembling or shaking when encountered unwanted circumstances.
 - 26 I experienced delay and gap of students learning
 - 27 I have shortness of breath or difficult breathing when I am panic.
 - 28 I experienced Trauma.
 - 29 I have the feeling strange, unreal, detached, or unfamiliar when I am panic.
 - 30 I cannot control my thoughts thinking the effects of virus during this pandemic.
 - 31 I am afraid of shouting obscenities in public situations like church, fear of writing obscenities.
 - 32 I am afraid of eating with a knife or fork, fear of handling sharp objects, fear of walking near.
 - 33 I do Multitask in Working Public Places.
 - 34 I have obsessions about hoarding or saving things.
 - 35 I feel severe emotional distress or physical reactions to something that reminds you of the traumatic event.
 - 36 I have upsetting dreams or nightmares about the traumatic event of this pandemic.
 - 37 I avoid places, activities or people that remind me of the traumatic event.
 - 38 I felt stress, depression, and anxiety
 - 39 This Pandemics hinder my plans in work.
 - 40 I cannot perform my job due to pandemics.
 - 41 I keep myself active.
 - 42 I share my feelings to someone to ease my anxiety.
 - 43 I always pray and have positive outlook in life to avoid worry during this pandemic.
 - 44 I keep myself physically active.
 - 45 I made rest a priority.
 - 46 I ate healthy foods.
 - 47 I put work into my ability and maintaining an enthusiastic attitude about it.
 - 48 I avoid using alcohol and illegal drugs.
 - 49 I accept the situation so that I can have peace of mind.
 - 50 I take a break when I am exhausted.
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Dimensions of Teachers Pandemic Anxiety

Table 3 Testing of the proposed Questionnaire consisting of 50- item scale on Teachers Pandemic Anxiety. Prior to the proposed 50-item scale for Teachers Pandemic Anxiety underwent factor analysis, the Kaiser Meyer-Olkin Measure (KMO) of Sampling Adequacy and Bartlett's test of sphericity was performed. Table 3 highlighted the results.

Table 3
KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.554
	Approx. Chi-Square	1904.898
Bartlett's Test of Sphericity	Df	1225
	Sig.	.000

The results displayed that the KMO test generated the value of .554 which is above the .5. This means the sample can be treated with EFA. Also, Bartlett's Test of Sphericity result yields a .000 significant value which tells that the data have patterned relationships, and factorability was assumed. Hence, there was empirical evidence to proceed with the factor analysis.

Derivation of Factor Structures for Teachers' Pandemic Anxiety

Table 4 shows the pattern matrix using Principal Axis Factoring with a Promax rotation method of Promax with Kaiser Normalization. It can be observed in the results the loadings of items in the three factors are above .4. It can be supported by Field (2005) that .4 is recommended and necessary to obtain the desired factors. Furthermore, it can be observed that there is no item cross-loading or not loading at all which means that the items best represent their factors. It is emphasized by Hare et al., (1998) that loadings show the degree of correlation between a variable and a factor, with higher loadings indicating that the variable is representational of the factor.

Table 4
Pattern Matrix Three-Factor Model

Items	Factor Loadings		
	1	2	3
I put work into my ability and maintaining an enthusiastic attitude about it.	.590		
I take a break when I am exhausted.	.438		
I feel severe emotional distress or physical reactions to something that reminds you of the traumatic event.	.404		
I am trembling or shaking when encountered unwanted circumstances.		.522	
I experienced Anxiety.		.450	
I am worried and Depressed.		.407	
I suffer financial issues during pandemic time.			.485
I made rest a priority.			.407

Extraction Method: Principal Axis Factoring.

Rotation Method: Promax with Kaiser Normalization.
a. Rotation converged in 6 iterations.

Reliability Test of the Scale

The instrument was evaluated for reliability to determine the internal consistency of items. It can be observed in the Table 5 that the overall reliability is high with a Cronbach's alpha value of .825. The subscale or dimension also is above the criteria of reliability above .70 alphas, Work Attitude ($\alpha=.721$), Anxiety ($\alpha=.874$), and Financial Distress ($\alpha=.732$). This indicates that the tool has good internal consistency. This is supported by Nunnally (1978) that instruments used in basic research should have reliability of .70 or better.

Table 5

Reliability Analysis Teachers' Anxiety in Times of Pandemic	
Scale	Cronbach's alpha
Work Attitude	.721
Anxiety	.874
Financial Distress	.732
OVERALL	.934

Final Version of Teachers' Pandemic Anxiety Model

Table 6 the final version of the instrument. From 50 items, the analysis suggests several issues on face validity based on the factor loadings on the items. Items that have small coefficient less than .40 are removed. This is supported by Hair et al., (2010) that those items having no sense and not reflective with the factor can be removed in the model. Also, Hair et al. (2010) loading coefficient can be set by the researcher to select only those items that best represents the factor, and those low coefficients may not be included in the factor structure.

By using the EFA, Teachers Anxiety in times of Pandemic Questionnaire was developed. This scale consists of 8 items. Specifically, a total of three (3) items for work attitude, three (3) items for anxiety, and two (2) items for financial distress. The five-point Likert scale from 5-strongly agree to 1- strongly disagree is shown below.

Table 6

Teachers Pandemic Anxiety in Pandemic Questionnaire			
Items	Factor Loadings		
	1	2	3
Factor 1: Work Attitude			
I put work into my ability and maintaining an enthusiastic attitude about it.	.590		
I take a break when I am exhausted.	.438		

I feel severe emotional distress or physical reactions to something that reminds you of the traumatic event.	.404
Factor 2: Anxiety	
I am trembling or shaking when encountered unwanted circumstances.	.522
I experienced Anxiety.	.450
I am worried and Depressed.	.407
Factor 3: Financial Distress	
I suffer financial issues during pandemic time.	.485
I made rest a priority.	.407

CONCLUSIONS

Six emerging themes significantly emphasized teacher's pandemic anxiety: Unprecedented Challenges of teachers, Teachers Pandemic Anxiety, Personal Disposition Anxiety, Teachers' Work-life Engagement, Classification of Anxiety, and Adaptation to Stress. Results revealed from the Exploratory Factor Analysis (EFA) that three underlying dimensions occur from the teachers' pandemic anxiety, such as work attitude, Anxiety, and financial distress. The reliability of the instrument was evaluated to determine the internal consistency of its items. The overall reliability is high, as indicated by the Cronbach's alpha value of 0.82. The subscale or dimension also is above the criteria of reliability, above .70 alphas Work Attitude ($\alpha=.721$), Anxiety ($\alpha=.874$), and Financial Distress ($\alpha=.732$). Results from the Exploratory Factor Analysis revealed that eight items of sets of a questionnaire are suitable for factor loadings. According to the exploratory factor analysis results, eight questionnaire items are suitable for factor loadings, indicating that these items pass the study's face validity for measuring instruments.

REFERENCES

- Ellis A. (1950). The cognitive revolution: a historical perspective
<https://www.cs.princeton.edu/~rit/geo/Miller.pdf>
- Aulén, A. M., Pakarinen, E., Feldt, T., & Lerkkanen, M. K. (2021). Teacher coping profiles in relation to teacher well-being: A mixed method approach. *Teaching and Teacher Education*, 102, 103323.
- Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development*. Sage Publications, Inc.
- Carpenter J. (2007). Multiple imputation: current perspectives. *Stat Methods Med Res*. 16:199-218. 10.1177/0962280206075304.
- Cope, (2020). Teachers' Anxiety in Times of Pandemic: An Empirical Study. Retrieved from <https://psycnet.apa.org/record/2021-89954-005>
- Creswell, John W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Thousand Oaks, CA: Sage.

Field, A. (2005) Reliability analysis. In: Field, A., Ed., *Discovering Statistics Using spss*. 2nd Edition, Sage, London, Chapter 15.

Hare Jr., J. F. et al. (1998). *Multivariate Data Analysis with Readings*. Englewood Cliffs, NJ: Prentice-Hall.

Jack Mezirow', (1978). Transformative Learning Theory <https://www.toolshero.com/personal-development/transformative-learning-theory/>

Merch, (2019). Philippine Teachers' Practices to Deal with Anxiety amid COVID- 19. Retrieved from <https://www.tandfonline.com/doi/full/10.1080/15325024.2020.1759225>

Nunnally JC. (1978). *Psychometric Theory*. New York, NY: McGraw-Hill.

Ozamiz-Etxebarria, N., Berasategi Santxo, N., Idoiaga Mondragon, N., & Dosil Santamaría, M. (2021). The psychological state of teachers during the COVID-19 crisis: The challenge of returning to face-to-face teaching. *Frontiers in psychology*, 11, 620718.

Vally, Z., & Alowais, A. (2021). Measuring anxiety related to COVID-19: Factor analysis and psychometric properties of the Arabic Coronavirus Anxiety Scale. *PloS one*, 16(11), e0260355.