

# Prevalence of Anxiety among Senior Citizens during the Pandemic in Partido District of Camarines Sur, Philippines

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## ABSTRACT

This is a descriptive and correlational study of the prevalence of anxiety among senior citizens of the mainland Partido District, Camarines Sur, Philippines. It determines the level of support, locality and other socio-economic factors affecting anxiety of the elderly during the pandemic. It likewise determines the relationship between these variables to level of anxiety of the respondents. The study utilized randomly selected municipalities of the district from which 385 respondents were selected using stratified random sampling. Further, it utilized the Depression, Anxiety and Stress Scale (DASS-21), secondary data, unstructured interview and researchers' observation in gathering data.

This study found that the majority of the respondents experienced normal level of anxiety but a significant number experienced moderate level of anxiety during the pandemic. There was neutrality and dissatisfaction in the level of social support provided by friends and relatives. Likewise, there was a significant correlation between levels of anxiety and social support and income. On the other hand, a significant negative correlation was found between levels of anxiety and socio-demographic factors such age gender, localities, home ownership and educational attainment.

It was recommended that appropriate psychological and financial support and interventions accorded to the elderly so that anxiety levels may be reduced during pandemics making it more manageable to the elderly. Establishing better relationships through regular visits and monitoring of the elderly by health workers during pandemics are avenues to improve social support to senior citizens. The existing "relief system" of the government in the form of goods may be improved making it more sustainable and continuous throughout the duration of pandemics.

**Key Words:** prevalence, anxiety, senior citizens, pandemic

## INTRODUCTION

The 2019 coronavirus illness otherwise known as COVID-19, which began in China, has grown into a worldwide health hazard, with the number of infected people and related mortality in exponential growth in some significant cities in the world. The illness was first identified in late December 2019 in Wuhan City, Hubei Province, among individuals who presented with cryptic pneumonia. By 30 January 2020, the disease had spread throughout China. Following this occurrence, the World Health Organization (WHO) declared the COVID-19 outbreak a public health emergency of worldwide concern, which was later elevated to global pandemic status on 11 March 2020 (<https://www.euro.who.int/en>).

COVID-19 is a beta coronavirus that is spread by physical contact between humans. Each COVID-19 case

has been linked to the transmission of four more variants. Among the vulnerable, the elderly is one of the identified by WHO to be at increased risk of getting infectious illnesses during outbreaks (<https://www.who.int/>).

The pandemic has resulted in a significant decrease in social contact and anxiety among the elderly (Santini, et.al.,2019; Durankus and Atsu, 2020). Social isolation, according to Wang (2021) and Fakoya, et.al. (2020), is an unpleasant sensation associated with a lack of social connections. The absence of a larger set of connections or an engaged social network causes social loneliness. The lack of a close emotional bond or an intimate figure causes emotional loneliness. Anxiety, depression, and sadness, as well as a lack of serenity and happiness, are all issues that affect mental well-being.

One of the reasons that may cause a person's anxiety is the decrease in social contact frequency. The majority of people have a great need for social interactions that provide them with feelings of solidarity, affection, and connection. This might be a close cousin or friend with whom you have frequent contact, but it can also be a less intense connection, such as with someone from an organization with whom you have just superficial touch (de Jong Gierveld et al., 2018). Staying at home alone, or mostly with family members, for an extended length of time is a major disruption of social life. A reduction in the frequency of social contact causes a decline in happiness, thus leads to anxiety and depression. (Torales, et.al, 2020)

Second, as a result of the pandemic, people may suffer personal losses. People may suffer grief as a result of COVID-19, including the loss of a loving spouse or a member of their social network (van Tilburg, et.al. 2020). Social isolation and mental health issues (specifically anxiety and depression) have been identified as the most significant repercussions of bereavement (Perrig-Chiello et al., 2016). Reduction of social support such as loss of connections through a person's profession or company and decrease in involvement in social and public events are examples of other forms of loss. Furthermore, persons may lose access to the care and assistance given by experts in the field of care or welfare. Reduction of social support have a negative impact on mental well-being.

Third, the pandemic might be viewed as a cause of stress with a significant psychological effect to the society. The media has been dominated by reports on hospitalizations and significant strain on intensive care units, as well as the substantial increase in the number of deaths, particularly among the elderly. Thinking of these potential dangers to oneself and loved one may cause stress (Shanin & Hussien, 2020). Perceiving societal dangers or risks correlates to a decrease in happiness.

In the light of the foregoing contexts, this study intends to explore the prevalence of anxiety of COVID19 pandemic among the elderly in Partido area and to determine the correlation of location, economic standing, and social support with the level of anxiety experienced by the elderly. The results and findings of this study are addition to the dearth of knowledge about prevalence of anxiety of senior citizens during a pandemic. As of today, there has been significant researches regarding the pandemic's impacts on people's well-being. However, research efforts aimed at understanding the local prevalence of anxiety are still lacking. This study is a contribution to the literature on the prevalence of anxiety among elderly people. Government and non-government institutions may utilize the baseline data as input to policy making or as bases for possible intervention towards a better mental well-being of elderly during and post pandemics.

## OBJECTIVES

This study generally aims to determine the impact of social contacts, personal losses, and the experience of general threat to mental well-being of the vulnerable sectors of the society, specifically the elderly.

The study addresses the following objectives:

1. determine the level of social support, locality, and economic factors of the elderly;
2. determine the prevalence of anxiety among the elderly; and
3. determine the relationship between level of anxiety and social support, locality and economic standing of the elderly.

## METHODOLOGY

### Research Design

Mixed research design was utilized in this study. Particularly, this design combines descriptive and correlational designs. Descriptive design was utilized to describe the situation and circumstances present when this study was conducted. Information on anxiety was investigated using this design. Correlation design was utilized to test association. Locality, economic situation, and level of social support was tested in association with levels of anxiety.

### Respondents

The respondents of this study were the senior citizens who are all residents of municipalities of the mainland Partido District. From the six municipalities of the district only 4 municipalities were randomly chosen. Likewise, a total of 385 senior citizens was randomly selected from each chosen municipality through stratified sampling to determine the number of respondents from each municipality. The figure is generated based on the Sample Size Determination in Health Studies Manual by Lwanga and Lemeshow (1991) of the World Health Organization using 95 level of confidence with 10% precision. List of names of senior citizens and the total number of National Commission on Senior Citizens (NCSC) registered senior citizens were requested from the municipal office of Barangay Senior Citizens Association (BASCA).

Table 1: Stratified Sampling of Four Partido Municipalities

Municipalities	Population*	Sample
A	5247	99
B	6264	119
C	4513	85
D	4316	82
<b>Total</b>	<b>20340</b>	<b>385</b>

\*as of 2022

### Data Gathering Procedures

This study used questionnaires in physical forms or hard copies as data gathering instruments. The questionnaires were formulated and validated. Particularly, the following were adopted as the procedures in data gathering:

**Questionnaires** were distributed and retrieved through face-to-face administration. The questionnaire has 2 parts: Demographic Profile and Depression, Anxiety, and Stress Scale (DASS – 21). The demographic profile included the respondents' age, gender, home municipality, locality, level of social support received, and their economic income bracket. The questions used in determining the level of social support were

adapted from the research of Van Tilburg, et.al (2020) in which Likert scale is used.

The second part, DASS – 21, is an established set of three self-report scales designed to measure the emotional states of depression, anxiety and stress. DASS – 21 is taken from Manual for the Depression Anxiety & Stress Scales, (2nd Ed.) by Lovibond & Lovibond (1995). The questionnaires were translated to local Bikol language by professionals who are known for practicing the language in their respective fields. These were then content and face validated by experts in the field.

**Unstructured interview** was conducted to ensure consistency of respondents' answers to the questionnaire. Moreover, this procedure was done to give respondents equal chance to participate in the study in cases where questionnaire is not possible (example, respondents who cannot read). This procedure addressed all objectives, especially the fourth objective of this study.

**Secondary Data** was used to triangulate the responses of the respondents. This includes the Senior Citizen's Data Form of the National Commission on Senior Citizens (NCSC) of the Philippines.

**Researcher's observation** was conducted to guarantee accuracy of responses and to triangulate and validate responses.

## Data Analysis

Descriptive data was presented in addressing objectives 1 and 2 of this study. The responses from each group were tabulated in terms of location, social support (living with relatives or living alone) and their economic standing (income brackets).

The correlational tool that is used in this study is the Kendall rank correlation coefficient,  $\tau$  (tau). This tool is nonparametric in nature and is suitable as a measure of correlation with the bivariate data of at least ordinal measurement (Sprent, 2007; Siegel, 1956). Though another correlational tool of the same requirements for data, the Spearman Rank and Kendall's tau may draw more accurate generalizations compared to Spearman's rho in the population (Akoglu, 2018). This statistical tool was used to correlate anxiety with socio-demographic profile of respondents, specifically social support, income, educational attainment, and age.

Another tool used was Rank-Biserial Correlation Coefficient, a non-parametric bivariate correlational tool that measures the strength of the relationship between a nominal variable and an ordinal variable. This tool was applied to determine the level of relationship between the respondents' locality, gender and home ownership with their level of anxiety. This statistical tool uses similar concept of Spearman Rank Correlation Coefficient (Khamis, 2008).

## RESULTS AND DISCUSSION

### Level of Social Support, Socio-Demographic Profile and Economic Factors

Table 6 shows the level of support to the respondents which were measured according to the questionnaire made in the study of van Tilburg, et.al. (2020). Across municipalities, the results show that most of the senior citizens (n=203, 52.59%) have received fair or neutral social support from relatives and significant individuals during the pandemic. Moreover, respondents claimed that they were dissatisfied (n=102, 26.42%) and very dissatisfied (n=13, 3.37%) with the social support they received during the pandemic. These findings are also true across the respondents' municipalities. It is notable that few respondents (n=68, 17.62%) attested that they were satisfied or very satisfied of the social support from friends and relatives.

Table 6. Level of Social Support for the Elderly

Levels of Social Support	A		B		C		D		Overall	
	n	%	n	%	n	%	n	%	n	%
Very dissatisfied	4	3.96	1	0.84	4	4.82	4	4.82	13	3.37
Dissatisfied	25	24.75	32	26.89	22	26.51	23	27.71	102	26.42
Fair/Neutral	52	51.49	62	52.10	46	55.42	43	51.81	203	52.59
Satisfied	16	15.84	21	17.65	8	9.64	10	12.05	55	14.25
Very Satisfied	4	3.96	3	2.52	3	3.61	3	3.61	13	3.37

The trend of the results and findings on the level of social support experienced by the respondents in the overall data is a reflection of the results in specific respondent- municipalities. For instance, in municipality A (n=51, 51.49%); municipality B (n=62, 52.10%); municipality C (n=46, 55.42%); and municipality D (n=43, 51.81%) received fair to neutral social support from relatives and friends. On the other hand, per respondent-municipalities, extremely lower number of the respondents compared to the total number of respondents attested that they are satisfied or very satisfied (Municipality A, n=20, 19.80%; Municipality B, n=24, 20.17%; Municipality C, n=11, 13.25%, Municipality D, n=13, 15.66%). Dissatisfaction on the level of support of friends and relatives was relatively similar to the satisfaction level in each respondent-municipality ( A, n=29, 28.71%; B, n=33, 27.72%; C, n=26, 31.33%; D, n=27, 32.53%).

It can be deduced from the foregoing data that there was extremely high neutrality and significant level of dissatisfaction in the support received by the senior citizen-respondents from their relatives and friends during the pandemic. It may be inferred from this particular finding that expected supports from these people were not manifested and felt by the respondents because of the lock-down status in the locality. Mobility of the people who are supposed to deliver or provide the support to their elderly were limited because they themselves feared the potential danger of COVID 19 to one’s life (Shanin & Hussien, 2020). Moreover, reduction in the social contact because of lock downs hampers social support (Torales, et.al, 2020).

Table 7 shows the socio-demographic profile of the respondents. The average age of the respondents is 69.36 with a 7.52 standard deviation (SD). Most of the respondents hailed from the municipality B (n=119, 30.80%) which was in accordance with the stratified random sampling done in the methodology part of the study. The second majority respondents are from municipality A (n=99, 25.80%). Municipality C (n=85, 22.19%) and municipality D (n=82, 21.2%) have almost an equal number of respondents, which were still based on the stratified random sampling performed in the methodology part. There were one hundred thirty-four, 134 (34.80%) male respondents while there were 251 (65.19%) female respondents.

Table 7: Age, Municipality and Gender of the Respondents

		Value
Age	Average	69.36
	SD	7.52
		Frequency (Percent)
Municipality	A	99 (25.80)
	B	119 (30.80)
	C	85 (22.19)
	D	82 (21.22)

Gender	Male	134 (34.80)
	Female	251 (65.19)

Table 8 shows the socio-economic status of respondents based on monthly income, educational attainment, and home ownership. The majority of the respondents claimed that they have a monthly income of less than PhP 5000.00 (n=241, 62.60%) while 79 (20.52%) of the respondents received between PhP5,000.00 to PhP 10,000.00 monthly income. It is noteworthy that fourteen (14) of the 385 respondents attested that their monthly income is PhP 15, 000 or above.

Most of the respondents (n=182, 47.27%) only indicated elementary level as their highest educational attainment while 103 (26.75%) of them are high school graduates. Only thirty-four (34) or 8.83% of the 385 respondents were graduates of baccalaureate or higher degrees.

There is an overwhelming majority of 337 (87.53%) of the respondents who have no house of their own. These respondents attested that they are living in a house for rent or in a house owned by their children who have families of their own or staying in an abode with a relative. Only a relatively very low 2.34% of 385 respondents have house of their own.

Table 8: Socio-Economic Status of Respondents

	PhP	Frequency	%
Monthly Income	< 5,000	241	62.60
	5000 – 10,000	79	20.52
	10,001 – 15,000	26	6.75
	15,001 – 20,000	8	2.08
	20,001 – 25,000	3	0.78
	30,000 – 35,000	2	0.52
	> 35,000	1	0.26
	Not Specified	25	6.50
Educational Attainment	Pre-School	6	1.56
	Elementary	182	47.27
	High School	103	26.75
	College	28	7.27
	Post-Graduate	6	1.56
	Not Specified	60	15.58
Do they own their home?	Yes	9	2.34
	No	337	87.53
	Not Specified	39	10.13

Figure 1 shows the source of income of the respondents. Two hundred eight (208) or 54.03% of the respondents depend on their pension as their source of income. From the interview of the respondents, majority of these are in the form of Social Security System (SSS) and Senior Citizen’s (SC) pensions. Only very few respondents claimed that their pension was from the Government Service Insurance System (GSIS). One hundred thirty-five (135) or 35.06% of the respondents have agricultural means as their source of income. Sixty-three (63) or 16.36% received income from other means which include mostly from subsidies given to them by their children.



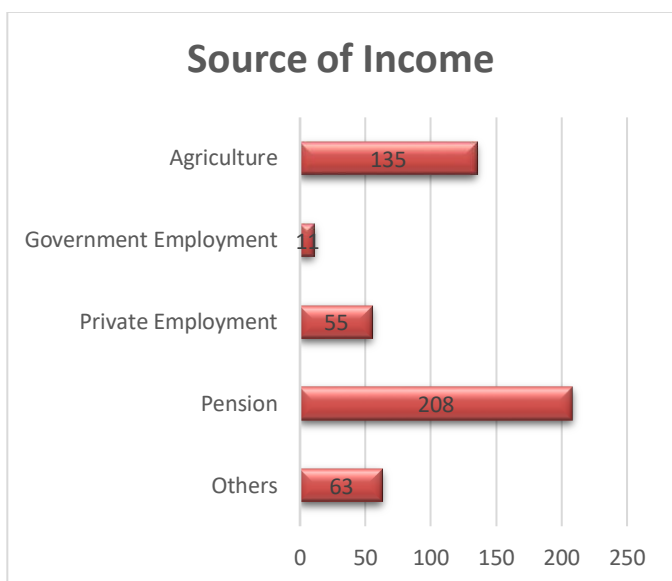


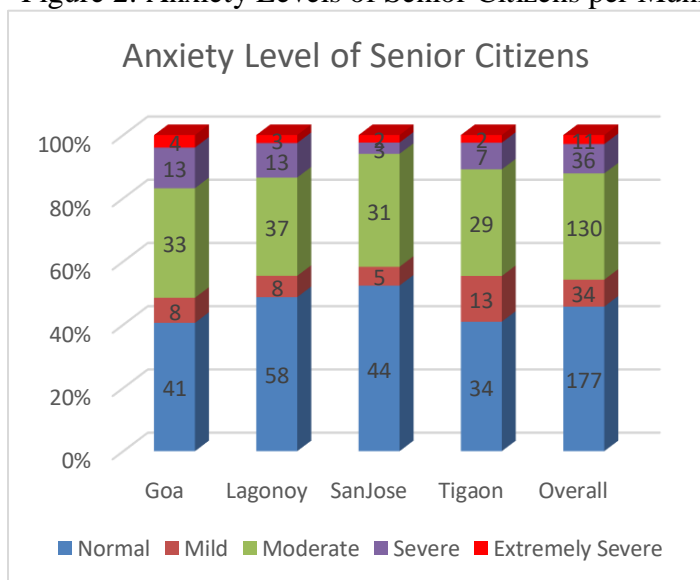
Figure 1: Source of Income of the Respondents

It can be concluded from these data that the respondents are at the prime of their life, average age of which was 69 years old. The respondents were majority female. They came from four respondent-municipalities of the mainland Partido which were proportionately and randomly sampled. They had low-income level most of which came from pensions and agriculture. Majority were high school graduate or lower and did not have a house of their own. These respondents attested that they experienced neutral social support from relatives, friends and social workers.

### Prevalence of Anxiety among the Elderly

Figure 2 shows the distribution of the respondents' anxiety levels per municipality and the overall mainland Partido District. The figure consistently shows that the respondents across participating municipalities experienced the normal level of anxiety (Municipality A, n=41; (Municipality B, n=58; (Municipality C, n=44, (Municipality D, n=34) during the pandemic. This level of anxiety is the lowest level according to the Depression, Anxiety, and Stress Scale (DASS – 21). On the other hand, the number of respondents who experienced moderate level of anxiety (Municipality A, n=33; Municipality B, n=37; Municipality C, n=31, (Municipality D, n=29), however, is quite notable. Overall, most respondents (n=177, 45.97%) experienced normal level of anxiety during the pandemic, followed by 130 (33.77%) respondents who experienced a moderate level of anxiety.

Figure 2: Anxiety Levels of Senior Citizens per Municipality



It may be deduced from these findings that the majority of the elderly in the respondent-municipalities have experienced anxiety in a normal level, a level which is still manageable in the perspective of the respondents. However, it is noteworthy that there are significant number of respondents who experienced moderate level, a level which is not normal. It may be inferred that this moderate anxiety was brought about by the pandemic lockdowns which resulted in a significant decrease in social contact and eventually anxiety among the elderly (Santini, et.al.,2019; Durankus and Atsu, 2020). Additionally, the media had been dominated by reports on hospitalizations and significant statistics on intensive care unit patients, as well as the substantial increase in the number of deaths, particularly among the elderly. Thinking of these potential dangers to oneself and loved one may cause stress (Shanin & Hussien, 2020) among the elderly.

### Relationship Between Levels of Anxiety and Social Support, Locality, and Economic Status

Table 9 shows the results of Kendall’s tau-b correlation in determining the relationship between level of anxiety and income, educational attainment, social support and age. These variables were measured in least ordinal level. The result of this test shows a significant relationship between level of anxiety and income ( $\tau=0.10$ ,  $p=0.03$ ), educational attainment ( $\tau=-0.13$ ,  $p<0.01$ ) and social support ( $\tau=0.13$ ,  $p<0.01$ ).

Table 9. Levels of Anxiety vs. Income, Educational Attainment, Social Support and Age

	Anxiety	
	$\tau$	p-value
Income	0.103*	0.033
Educational Attainment	-0.127**	0.005
Social Support	0.129**	0.004
Age	0.060	0.141

\*Correlation is significant at the 0.05 level (2-tailed)

\*\* Correlation is significant at the 0.01 level (2-tailed)

Anxiety among senior citizens showed a positively weak yet significant relationship with income. This means that senior citizens with a higher level of income tend to experience lower levels of anxiety during the COVID-19 pandemic. This also shows the level of assurance a higher income can bring to senior citizens when dealing with challenges brought by COVID-19 pandemic. Personal average income of the elderly during pandemic was one of the factors influencing mental health (Webb & Chen, 2022).

Similar type of correlation is found between levels of anxiety and social support. Senior citizens with better social support from family members, friends, neighbors, and social workers tend to experience lower levels of anxiety during the COVID-19 pandemic. Since the correlation is significant, this means that better social support can lessen anxiety. Zhao, et.al. (2022) affirmed that anxiety was associated social support among the elderly. Social support plays an important role in preventing and regulating anxiety among rural older people. To reduce the occurrence and level of anxiety among elderly, efforts and support in the form of programs and projects may be provided by private as well as government entities.

The correlation between educational attainment and level of anxiety is weak and negatively correlated. This means that educational attainment was not a predictor of levels of anxiety. Similarly, age was found to be not significantly correlated with anxiety level. This implies that the level of anxiety experienced by senior citizens is not related to their age. Thus, age is not a determinant of the level of anxiety of a senior citizen during the pandemic. These means that their anxieties were not mitigated by their educational attainment as well as their age. The senior citizens tend to fixate on the pandemic’s uncertainty (Huang & Zhao, 2020)



rather how old they are or how much they learned.

Table 10: Levels of Anxiety vs. Localities, Home Ownership and Gender

	Anxiety	
	$\rho$	p-value
Localities	-0.018	0.721
Home Ownership	-0.055	0.282
Gender	0.082	0.107

The results of the rank-biserial correlation test between anxiety and variables stated above revealed that the localities, home ownership, and gender of the respondents are not significantly related to their level of anxiety experienced during the COVID-19 pandemic as the p-values of all tests are above 0.05 level of significance. This is shown in Table 10.

This means that COVID-related anxieties are not reinforced by their residence whether owned or not, their location and gender. The locality where the senior citizen resides and their home ownership are not associated with their anxieties during pandemic.

## CONCLUSIONS AND RECOMMENDATIONS

Though COVID-19 has wreaked havoc among the Filipino populace, its negative effects among senior citizens especially those living in the mainland Partido District are not as impactful as expected in terms of anxiety levels. The findings of this study confirm that the senior citizens of this district handled the effects of the COVID-19 pandemic well. They addressed their anxiety at a level that is manageable.

Social support for the elderly was overwhelmingly fair and neutral. This particular finding calls for the improvement of social support. Establishing better relationships through regular visits and monitoring of the elderly during pandemics are avenues to improve social support to senior citizens. This may eventually lead to more informed elderly because it is through regular visits and monitoring that legitimate information are handed down to the elderly.

Lastly, income, higher educational attainment, and social support are found to be significantly correlated with anxiety levels among senior citizens. Thus, a more financially compensated and better socially supported senior citizen may mean less and more manageable anxiety levels. The existing “relief system” of the government in the form of goods may be improved making it more sustainable and continuous throughout the duration of pandemics. Since restrictions of social isolations and lockdowns prevent families and relatives of the senior citizens to go out, work and earn a living, it is imperative that local government units should come up of a sustainable relief system for the economically-under-privileged senior citizens.

Therefore, it is recommended that appropriate psychological and financially support interventions may be accorded to the elderly so that anxiety levels may be reduced during pandemics making it more manageable to the elderly. Since psychological supports during pandemic were mostly provided on line, senior citizens may not have the technological capacity to avail of these services, thus it is recommended that social support may include psychologically services during home visits by the health workers.

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