Original article

Nivel de adaptación y ansiedad en adultos mayores durante el confinamiento por COVID-19 en Tepetitlán, Hidalgo

Level of adaptation and anxiety in older adults during confinement due to COVID-19 in Tepetitlán, Hidalgo

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Resumen

Objetivo: Examinar la relación que existe entre el nivel de adaptación y la ansiedad durante el confinamiento por la pandemia COVID-19 en adultos mayores residentes del municipio de Tepetitlan.

Métodos: Estudio descriptivo transversal realizado de noviembre de 2021 a marzo de 2022 en una muestra *no probabilística por conveniencia* de 170 adultos de 60 años y más. De acuerdo con lo señalado por la declaración de Helsinki y la ley general de salud en materia de investigación, se obtuvo la aprobación del comité de ética en investigación de la Universidad Autónoma del Estado de Hidalgo así como el consentimiento informado, a partir de lo cual se aplicó una cedula de datos sociodemográficos. Para conocer el nivel de ansiedad de los participantes se empleó el inventario de ansiedad de Beck. Se utilizó el *instrumento de adaptación de adulto mayor activo*, que evalúa la adaptación en relación con los siguientes modos o dimensiones: fisiológico, función del rol, interdependencia y autoconcepto. Para estimar la relación entre las variables de interés se empleó la prueba de correlación de Spearman.

Resultados: El promedio de edad fue de 70 años (± 7.6 años). Más de la mitad de los participantes fueron del sexo femenino (62.9%). Se observó una correlación alta y estadísticamente significativa entre el nivel de adaptación y la ansiedad de los adultos mayores (rho=0.61; valor p=.000).

Conclusión: Los resultados indican que el nivel de adaptación de los adultos mayores durante el confinamiento por COVID-19 probablemente se relaciona con su nivel de ansiedad.

Palabras clave: adaptación, ansiedad, adulto mayor, COVID-19.

Abstract

Objective: To examine the relationship between the level of adaptation and anxiety during COVID-19 pandemic confinement in older adult residents of the municipality of Tepatitlan.

Methods: Cross-sectional descriptive study conducted from November 2021 to March 2022 in a *non-probabilistic convenience* sample of 170 adults aged 60 years and older. In accordance with the Helsinki declaration and the general health law on research, the approval of the Research Ethics Committee of the Autonomous University of the State of Hidalgo was obtained, as well as informed consent, from which a sociodemographic data form was applied. The Beck anxiety inventory was used to determine the level of anxiety of the participants. *The active older adult coping instrument* was used, which evaluates coping in relation to the following modes or dimensions: physiological, role function, interdependence and self-concept. Spearman's correlation test was used to estimate the relationship between the variables of interest.

Results: The average age was 70 years (± 7.6 years). More than half of the participants were female (62.9%). A high and statistically significant correlation was observed between the level of adaptation and anxiety in older adults (rho=0.61; p-value=.000).

Conclusion: The results indicate that the level of adaptation of older adults during COVID-19 confinement is probably related to their level of anxiety.

Key words: adaptation, anxiety, older adult, COVID-19.

Introduction

According to data reported by the World Health Organization (WHO), the global population is aging at an accelerated pace. Estimates indicate that between 2015 and 2050, the proportion of the population over 60 years of age will double from 12% to 22%, and most older adults will live in low- and middle-income countries.[1] In the specific case of Mexico, figures reported by the National Survey of Demographic Dynamics (ENADID) indicated that in 2018 the number of inhabitants aged 60 years and over was 15.4 million.[2]

Moreover, in January 2020, the WHO declared the outbreak of the new coronavirus disease, COVID-19, an international public health emergency. In response to this situation, social restrictions were activated, confinement was decreed, and everyone was asked to stay indoors as long as possible due to the mortality rate of this disease.[3-5] The significant growth in the number of confirmed cases and related deaths caused negative feelings and thoughts that threaten mental health worldwide.[6]

The global pandemic of COVID-19 has had important implications for older adults' health because they constitute the group at highest risk. In addition, other related health problems arised from this situation, such as post-traumatic stress disorder, confusion, depression, anxiety, panic, and behavioral disturbances. In addition, related such as family separation,

distress, bereavement and loneliness affect older adults to a greater extent.[7,8]

Likewise, social restrictions interfere in the daily life activities of older adults, provoking different reactions among them. Some elderly people have a maladaptive reaction, as they perceive such restrictions as an emotional overload that results in a greater degree of uncertainty, frustration and anxiety. By contrast, others try to keep up with their daily routine as much as possible and make the most of the situation, adapting to their current living conditions, thus presenting an adaptive reaction.[9] In this sense, the concept of adaptation proposed by Callista Roy refers to the process in which, through the use of different capabilities, people cope with various situations arising from their environment.[10]

Anxiety is defined as an emotional state of displeasure that is accompanied by somatic and psychic changes, which can occur as an adaptive reaction, or as a symptom or syndrome that accompanies various medical and psychiatric conditions. Anxiety affects mental processes, tends to produce distortions in the perception of the environment and of oneself, interfering with the capacity for analysis and evidently affecting the individual's functionality.[11] It has been suggested that anxiety is one of the mental health problems that affects the elderly population worldwide mostly.[1] Despite this, to date there is no scientific basis for a relationship between the level of adaptation of older adults and the level of anxiety. Thus, the aim of this research is to determine the presence of this relationship during the confinement due to the pandemic of COVID-19 in the municipality of Tepetitlan, Hidalgo.

Methodology

A quantitative, descriptive, and correlational study was conducted from November 2021 to March 2022. A non-probabilistic convenience sample of 170 adults aged 60 years and older, residents of the municipality of Tepetitlan was formed. Both men and women were included regardless of having any type of chronic disease or having suffered COVID-19. In accordance with the Helsinki declaration[12] and the general health law on research for health[13], older adults were invited to participate in the research at the Tlahuelilpan High School. Informed consent was obtained from each participant and a sociodemographic data questionnaire was applied, in addition to obtaining the approval of the Research Ethics Committe of the Autonomous University of the State of Hidalgo. Subsequently, the Beck Anxiety Inventory was applied to measure the level of anxiety of the participants. This scale has been previously used in the Mexican population with acceptable reliability levels (0.70). It is worth mentioning that this instrument consists of 21 questions, with a Likert-type scale. The total score of this scale ranges from 0 to 63 points. When a participant's score is between 0-5 it is considered minimal anxiety, when it ranges from 6 to 15 it is mild anxiety, if it ranges between 16-30 it is considered moderate anxiety and, finally, a score between 31 and 63 corresponds to severe anxiety. To measure the level of adaptation, the Adaptation of the Active Older Adult instrument was used, which has an acceptable reliability (level > 0.70) both for its general score and for the scores of the adaptive modes it evaluates. This scale is made up of 111 items, which in turn are divided into

the following four modes: physiological, self-concept, interdependence and role function. Each item has a dichotomous response option of Yes and No, with a maximum value of one point and a minimum of zero points. The level of adaptation is categorized as integrated, compensatory and compromised, depending on the score of each adaptive mode.

- Physiological mode: integrated <15, compensatory 15-18, and compromised 19-42.
- Self-concept mode: integrated <12, compensatory 12-23, and compromised 24-35.
- Interdependence mode: integrated <7, compensatory 7-12, and compromised 13-18.
- Role function mode: integrated <7, compensatory 7-12, and committed 13-18.[14]

Sociodemographic variables, as well as anxiety and coping level, are described with means, frequencies, and percentages, depending on the quantitative or qualitative nature of the variables. Spearman's correlation test was used to examine the relationship between the level of adaptation and anxiety. We chose to apply this nonparametric test instead of Pearson's correlation, since the variables of interest did not meet the assumption of normal distribution after evaluating them with the Shapiro-Wilk normality test. Data analysis was performed with the spss version 22 statistical package.

Results

The sample consisted of 170 older adults aged 60 years or more, of whom 62.9% were women. The average age was 70 ± 7.6. About 51.2% of the population was married, 55.3% had only a primary school education and most of them were Catholics (89.4%). Only 22.9% of the participants had a paid job. Regarding the presence of chronic diseases, 34.1% had hypertension and 21.8% had diabetes type 2. In addition, only 5.3% of the study population reported suffering or having suffered from COVID-19 at some time in their lives (Table 1).

Table 1 General data of the study population

Characteristics	F^a	$\%^b$
Age in years	70	± 7.6
Sex		
Men	63	37.1
Women	107	62.9
Marital status		
Married	87	51.2
Single	20	11.8
Widowed	54	31.8
Divorced	9	5.3

Characteristics	F[a]	%[b]
Religion		
Atheist	2	1.2
Catholic	152	89.4
Evangelical	8	4.7
Other	8	4.7
Schooling		
No schooling	32	18.8
Primary	94	55.3
Secondary	29	17.1
High school	11	6.5
University	4	2.4
Occupation		
None / Unemployed	15	8.8
Household	116	68.2
Paid work	39	22.9
Diseases		
Hypertension	58	34.1
Diabetes	37	21.8
COVID-19	9	5.3
Cancer	2	1.2
Other	13	7.6
None	51	30

Abbreviations: a Frequency, b Percentage
Source: sociodemographic data questionnaire   N=170

When the level of adaptation of the older adults was evaluated, it was observed that in the interdependence mode (81.2%) and in role function (69.4%) there was a higher percentage of the population with an integrated level of adaptation, while in the self-concept mode there was a higher frequency of people with a compensatory level of adaptation (92.9%). In addition, in the physiological mode, 27.1% of the participants presented a compromised level of adaptation (Table 2).

Table 2 Frequency and percentage of adaptation levels for each adaptive mode

Physiological mode	F[a]	%[b]
Integrated	90	52.9
Compensatory	34	20
Committed	46	27.1

Self-concept mode		
Integrated	9	5.3
Compensatory	158	92.9
Committed	3	1.8
Interdependent Mode		
Integrated	138	81.2
Compensatory	19	11.2
Committed	13	7.6
Mode Role Function		
Integrated	118	69.4
Compensatory	49	28.8
Committed	3	1.8

Abbreviations: a Frequency b Percentage
Source: Adaptation instrument for the active older adult   N=170

On the other hand, regarding the level of anxiety of the older adults, 26.5% presented a minimal level of anxiety, while 38.2% presented mild anxiety, 32.9% moderate anxiety and the rest severe anxiety (Table 3).

Table 3 Frequency and percentage of anxiety level

Anxiety level	F[a]	%[b]
Minimum anxiety	45	26.5
Mild anxiety	65	38.2
Moderate anxiety	56	32.9
Severe anxiety	4	2.4

Abbreviations: a Frequency b Percentage
Source: Beck Anxiety Inventory   N=170

From the correlation analysis with the total score of the Older Adult Adjustment Instrument and the Beck Anxiety Inventory, a positive and high correlation was observed between both variables, which was also statistically significant (Table 4).

Table 4 General Correlation of the level of adaptation and level of Anxiety

	Anxiety	
Adaptation	Correlation[a]	p-Value
	0.61	0.000

Abbreviations: a Spearman´s correlation coefficient
Source: own design

When the correlation of each of the adaptive modes with the level of anxiety was analyzed, a high and significant correlation was observed between the physiological mode and the participants' anxiety (rho=0.74 and p-value=.000). Likewise, similar results were found between the self-concept mode and anxiety. However, in this case the correlation was moderate (rho=0.46 and p-value=.000). On the contrary, in the interdependence mode a low and non-significant correlation with anxiety was observed (rho=.19 and p-value= .010). Similarly, a low and non-significant correlation was observed between role function mode and anxiety (rho=.108 and p-value= .10; Table 5).

Table 5. Correlation analysis between the level of anxiety and level of adaptation by mode

Adaptive Modes	Anxiety	
	Correlation[a]	p-Value
Physiological mode	0.74	0.00
Self-concept mode	0.46	0.00
Interdependence mode	0.19	0.10
Role function mode	0.10	0.16

Abbreviations: a Spearman's correlation coefficient
Source: Active Older Adult Adjustment Instrument and Beck Anxiety Inventory

Discussion

Judging from the review of the literature on the subject, it seems that the present investigation is the only one, so far, that has examined at national level the relationship between adaptation and anxiety in older adults during COVID-19 pandemic confinement. Regarding the level of anxiety, the participants in this study presented mainly mild (38.2%) and moderate (32.9%) levels of anxiety, results that differ from those reported in 2007 by Acosta Quiroz et al.,[14] who reported mainly minimal (48%) and mild (32%) levels in their study population. These differences are probably due to the fact that this research was conducted several years before the COVID-19 pandemic confinement. Likewise, the findings of the present article contrast with those of the study published in 2018 by Buitrago

Bonilla et al.,[9] who found low levels of anxiety in most cases in their population, despite the fact that they were institutionalized older adults. This work was conducted a year before the COVID-19 pandemic, which seems to suggest that this health contingency had some effect on the levels of anxiety in older adults.

Regarding the level of adaptation of older adults, we observed that in the physiological mode there was a greater prevalence of older adults with an integrated level (52.9%). Likewise, in the self-concept mode there was a greater frequency of the compensatory level (92.9%). On the other hand, the interdependence (81.2%) and role function (69.4%) modes were more prevalent at the integrated level. These results partially agree with those of Pérez et al.,[15] as they reported in 2019 that in the physiological mode there was a higher frequency of participants with

integrated level, while in the self-concept mode they recorded a higher proportion at the compromised level. In addition, in the interdependence and role function mode 100% of the population was classified with an integrated level of adaptation. By contrast, in our results there is a significant proportion at the compensatory level in the interdependence (11.2%) and role function (28.8%) modes. These differences may be due to the fact that, the population in the Perez *et al.*, study was composed of institutionalized adults; in addition, such study was also carried out before the COVID-19 confinement. Such fact indicates that COVID-19 restrictions had an impact on the adaptation levels of older adults. On the other hand, the previously mentioned study was conducted with a much smaller sample size, which may also limit its statistical interpretations. It is worth mentioning that such research took place in rural communities, an issue that may had influenced its results with respect to other studies that were conducted in different settings, as mentioned above.

Conclusions

The findings of this study show a possible relationship between the level of adaptation and anxiety in older adults in the municipality of Tepetitlán during COVID-19 confinement. However, it is necessary to consider that this is a cross-sectional study, so it is not possible to determine causality between the variables of interest. Nevertheless, it shows the relevance of implementing nursing interventions that comprehensively address the case of older adults and considering their physical and mental health.

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