Resilience during the COVID-19 pandemic in a vulnerable population receiving food assistance

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ABSTRACT

Resilience is the ability of people to overcome risky situations that compromise their health and that of their families. Therefore, the objective of this research is to determine resilience during the COVID-19 pandemic in a vulnerable population that receives food assistance. The objective of the research is to determine resilience during the COVID-19 pandemic, in a vulnerable population receiving food assistance. It is a quantitative, descriptive, cross-sectional study, with a total population of 366 participants who answered a questionnaire of sociodemographic data and the Connor-Davidson resilience instrument 25. The results show the resilience of the vulnerable population, where 32 (8.7%) have a low resilience, 124 (33.9%) have an average resilience and 210 (60.9%) have a high resilience. In conclusion, activities that foster resilience should be considered, including broad strategies for mental health support during the pandemic in the general population.

1. Introduction

At the beginning of the coronavirus pandemic (COVID-19), which is a threat worldwide, there is a great alert in relation to the psychological consequences that COVID-19 is leaving (Di Monte et al., 2020). The short and long-term impact on the mental health of the general population and even on people who suffer from some psychiatric disorder, publicize the consequences given in people due to COVID-19 at the mental level (Fedina et al., 2021; Kimhi et al., 2020).

In such a sense to maintain balanced mental health, it is necessary to be resilient to any situation that overwhelms your mental health, since during the pandemic factors such as anxiety, depression and anxiety (Jones et al., 2020; He et al., 2020), have been factors that have mostly compromised the mental health of the person, and that this has made them more vulnerable to present a mental disorder over time (Gilan et al., 2020; Hou et al., 2021).

Resilience in the person is very important since it allows him to maintain immunity and stable mental health in any situation for a prolonged period of time resilience is a process of adaptation to challenging conditions in life, which covers aspects from personal resources that protect mental health against mental disorders (Grossman et al., 2021; Huang et al., 2020).

Likewise, another important aspect for the person to maintain stable mental health is the emotional temperaments associated with resilience and their adaptation during the pandemic (Verdolini et al., 2021). Since emotional temperaments are those that differentiate each person, and this promotes better or for worse the mechanisms to face physical stressors, environmental and even psychological, allowing the person to make decisions to face and react to situations that compromise their health (Hines et al., 2021).

Therefore, the objective of the research is to determine resilience during the COVID-19 pandemic, in a vulnerable population receiving food assistance.

2. Literature review

In the study conducted in the United Kingdom, with 150 participants who were nurses, it was observed that 16.1% presented high levels of resilience, 37.2% presented moderate-high resilience, 27.8% moderate resilience, and 19.8% had low resilience, concluding that factors such as depression and anxiety at high levels decreased levels of resilience (Roberts et al., 2021).

In the study carried out in Spain, with 1795 participants from the general population, it was observed that people who performed physical activities regularly during the pandemic tended to manifest higher indices of resilience in relation to greater control, greater efficiency, and greater optimism (Carriedo et al., 2020).

In the study conducted in Italy, with 20,720 participants in the study, it was observed that 53% of the population had low resilience, 15% medium resilience, 19% moderate resilience, and 14% high resilience and that factors such as depressive and anxiety symptoms tended to decrease levels of resilience (Sampogna et al., 2021).

In the study conducted in Germany, with 1005 elderly participants 65 years of age, the relationship between resilience and perceived threat to COVID-19 was observed, where 25.5% had high resilience and disagreed if they felt threatened by COVID-19 and 12.4% who had low resilience and agreed that they perceived a threat from COVID-19 (Weitzel et al., 2021).

3. Methodology

The research for its properties is quantitative, in terms of its methodology descriptive, not experimental, and cross-sectional (Hernández-Sampieri et al., 2015). The population is made up of a total of 366 participants. Table 1 shows the socio-demographic data of people, taking into account some characteristics. Inclusion criteria for this research is as follows:

- Residents in the age range of 18 years and older
- Residents who have been living in the district of San Juan de Lurigancho for 1 year
- Residents who voluntarily agree to participate in the study

The data collection technique was the survey, in which the Connor-Davidson Resilience Scale instrument was formulated in the version of 25 items (CD-RISC 25).

For data collection, the survey was structured in 3 parts; sociodemographic aspects, characteristics in relation to COVID-19, and the CD-RISC 25 instrument which comprises 25 items which are distributed in 5 dimensions (persistence–tenacity–self-efficacy, control under pressure, adaptation, and ability to recover, control and purpose and spirituality), where they are valued with a Likert scale with 5 response options: "0=never," "1=rarely," "2=sometimes," "3=often" and "4=almost always," obtaining a total score adding all the items, so its score would cover from 0 to 100, where, "0 to 33" is low resilience, "34 to 66" medium resilience and "67 to 100" high resilience, the higher the score the higher the level of resilience of the inhabitants of a vulnerable area in North Lima (Connor and Davidson, 2003).

The sample adequacy measure obtained a coefficient of 0.970 (KMO>0.9) and the Bartlett Sphericity Test obtained significant results (Approx. x^2=13339.800; gl=300; Sig=0.000).

Table 1: Socio-demographic data and characteristics in relation to COVID-19 of the inhabitants in the district of San Juan de Lurigancho

Characteristics	n=366
Sex	
Female	195 (53.3)
Male	171 (46.7)
Age	
Media±D.T.	34.99±10.502
Young [18 to 29 years]	126 (34.4)
Adult [30 to 59 years]	229 (62.6)
Elderly [60 years and older]	11 (3.0)
Marital status	
Single	48 (13.1)
Married	23 (6.3)
Cohabitant	291 (79.5)
Divorced	1 (0.3)
Widow(er)	3 (0.8)
Degree of instruction	
Unenlightened	3 (0.8)
Complete Primary	17 (4.6)
Incomplete primary	52 (14.2)
Complete Secondary	117 (32.0)
Incomplete secondary	98 (26.8)
Complete Superior	41 (11.2)
Superior incomplete	38 (11.2)
Occupation status	
Stable	51 (13.9)
Eventual	227 (62.0)
No occupancy	58 (15.8)
Retired	4 (1.1)
Student	25 (6.8)
Not applicable	1 (0.3)
Family type	
Nuclear	295 (80.6)
Single parent	28 (7.7)
Extended	19 (5.2)
Expanded	6 (1.6)
Reconstituted	1 (0.3)
Single person	17 (4.6)
COVID-19 infection	
Yes	71 (19.4)
No	295 (80.6)
Infection of a family member with COVID-19	
Yes	118 (32.2)
No	248 (67.8)
Death of a family member from COVID-19	
Yes	57 (15.6)
No	309 (84.4)

Likewise, the measures of adequacy to the sampling of the anti-image diagonal of the 25 items obtained significant results (MSA>0.95). In the principal component analysis, the instrument items recorded extraction values greater than 0.70 in the communality matrix with the exception of item 2 (0.48) and item 3 (0.593). A single component was recorded that explains 75.254% of the variance. Finally, an array of rotated components could not be extracted because all the elements are grouped into a single factor. Therefore, the instrument can be considered valid.

The reliability of the instrument was determined based on Cronbach's Alpha statistical test, which obtained for the total of the items (i=25) a coefficient of 0.986 (α>0.8).

The study was carried out to determine the resilience of vulnerable residents who receive food assistance in the district of San Juan de Lurigancho

because it is an area in which the necessary basic services are not available and where most families are living in poverty or extreme poverty.

4. Results

In Table 2, we can see the results of the resilience variable and its dimensions, where in the main variable resilience 32 participants representing 8.7% have a low resilience, 124 participants representing 33.9% have an average resilience and 210 participants representing 60.9% have a high resilience. Regarding its dimensions, in the dimension persistence, tenacity and self-efficacy, 38 participants representing 10.4% have low resilience, 105 participants representing 28.7% have medium resilience and 223 participants representing 60.9% have high resilience; in the control under pressure dimension, 37 participants representing 10.1% have low resilience, 116 participants representing 31.7% medium resilience and 213 representing 58.2% high resilience; in the adaptation and ability to recover dimension, 36 participants representing 9.8% have low resilience, 138 participants representing 37.7% medium resilience and 192 participants representing 52.5% high resilience; in the control and purpose dimension, 39 participants representing 10.7% have a low resilience, 112 participants representing 30.6% average resilience and 215 participants representing 58.7% high resilience; and in the spirituality dimension, 48 participants representing 13.1% have low resilience, 135 participants representing 36.8% medium resilience and 183 participants representing 50% high resilience.

In Table 3, we can observe the correlation between the main variable resilience with the variables of the socio-demographic aspects of the study, where we can evidence that there is an existing relationship between the main variable with most of the variables of sociodemographic aspects (sex, degree of instruction, occupation condition, type of family) since a score lower than (p<0.005) is evident.

5. Discussions

This study relates from the perspective of the mental health of the inhabitants of the district of San Juan de Lurigancho, in order to emphasize their coping and decision-making capacities to resolve conflicts in relation to their health, family, and social environment during the COVID-19 pandemic. We can observe in the results that the inhabitants have a high level of resilience, in turn with respect to their dimensions they also presented high levels of resilience, this is because during the COVID-19 pandemic the population as time passed, they were adapting to the changes produced by the pandemic, although at first, they had to face the situation in a more relative way and make decisions that can protect their health and that of their family. Roberts et al. (2021) argued that resilience is forged as the

person faces situations that compromise their physical and mental health but at the same time that compromises a family member, so resilience allows them to maintain the mental balance necessary to obtain skills that allow them to improve their coping skills and in turn decision-making to resolve risk conflicts such as the pandemic COVID-19.

As for its dimensions, high levels were evidenced in its results, this is because people during the COVID-19 pandemic, for the most part, acquired over time skills that improved their adaptability to the situation that is being crossed until today, where the best way to cope with it is to maintain mental health in a balanced and positive way since this allows the person to face any situation responsibly and thus over time focus on improving their daily life in the long term. Sampogna et al. (2021) mentioned that today's population, due to the COVID-19 pandemic, they have developed coping skills in situations of risk that compromise health, because the attitudes they take in a positive way before any situation that compromises their health and that of their family, will allow them to make the right decisions in order to keep them and their family protected in the short term or long-term.

As for the correlation of resilience and sociodemographic aspects, in the sex variable, we can observe that the male sex has high levels of resilience.

Table 2: Resilience and dimensions in relation to the vulnerable inhabitants of the district of San Juan de Lurigancho

Scale and dimensions	n=366
Resilience	
Media±D.T.	64.05±17.552
Low level [0-33]	32 (8.7)
Medium level [34-66]	124 (33.9)
High level [67-100]	210 (57.4)
Persistence, tenacity, and self-efficacy	
Media±D.T.	21.14±6.076
Low level [0-11]	38 (10.4)
Medium level [12-21]	105 (28.7)
High level [22-32]	223 (60.9)
Control under pressure	
Media±D.T.	17.50±5.061
Low level [0-9]	37 (10.1)
Medium level [10-18]	116 (31.7)
High level [19-28]	213 (58.2)
Adaptation and ability to recover	
Media±D.T.	12.66±3.445
Low level [0-7]	36 (9.8)
Medium level [8-13]	138 (37.7)
High level [14-20]	192 (52.5)
Control and purpose	
Media±D.T.	7.77±2.229
Low level [0-4]	39 (10.7)
Medium level [5-8]	112 (30.6)
High level [9-12]	215 (58.7)
Spirituality	
Media±D.T.	4.98±1.469
Low level [0-3]	48 (13.1)
Medium level [4-5]	135 (36.9)
High level [6-8]	183 (50.0)

This is because the male as head of the family, due to the pandemic, has developed attitudes and skills that have allowed to improve their coping style in situations that compromise their health and that

of their family, and that this has allowed the person, due to the pandemic, to overcome the difficulties with which it has been beneficial since it has allowed him to obtain resources, in order to improve the decisions he makes for the future. Carriedo et al. (2020) explained that men tend to be more resilient because they avoid particular situations, where they become assertive people and in turn know how to cope with risky situations and thus maintain their mental health.

Table 3: Correlation between the main variable Resilience with socio-demographic aspects of the vulnerable inhabitants of the district of San Juan de Lurigancho

Characteristics	Resilience			Chi-square tests	
	Low level	Medium level	High level	Val. X2; gl	p
Sex					
Female	18 (9.2)	84 (43.1)	93 (47.7)	17.357; 2	.000
Male	14 (8.2)	40 (23.4)	117 (68.4)		
Age					
Young [18 to 29 years]	16 (12.7)	41 (32.5)	69 (54.8)	6.066; 4	.194
Adult [30 to 59 years]	16 (7.0)	77 (33.6)	136 (59.4)		
Elderly [60 years and older]	0 (0.0)	6 (54.5)	5 (45.5)		
Marital status					
Single	4 (8.3)	18 (37.5)	26 (54.2)	12.326;8	.137
Married	2 (8.7)	1 (4.3)	20 (87.0)		
Cohabitant	26 (8.9)	103 (35.4)	162 (55.7)		
Divorced	0 (0.0)	1 (100.0)	0 (0.0)		
Widow(er)	0 (0.0)	1 (33.3)	2 (66.7)		
Degree of instruction					
Unenlightened	0 (0.0)	1 (33.3)	2 (66.7)	31.201; 12	.002
Complete primary	0 (0.0)	3 (17.6)	14 (82.4)		
Incomplete primary	1 (0.0)	26 (50.0)	25 (48.1)		
Complete secondary	9 (1.9)	33 (28.2)	75 (64.1)		
Incomplete secondary	7 (7.7)	29 (29.6)	62 (63.3)		
Complete superior	7 (7.1)	18 (43.9)	16 (39.0)		
Superior incomplete	8 (21.1)	14 (36.8)	16 (42.1)		
Occupation status					
Stable	0 (0.0)	19 (37.3)	32 (62.7)	100.13; 10	.000
Eventual	16 (7.0)	69 (30.4)	142 (62.6)		
No occupancy	1 (1.7)	29 (50.0)	28 (48.3)		
Retired	0 (0.0)	2 (50.0)	2 (50.0)		
Student	15 (60.0)	5 (20.0)	5 (20.0)		
Not applicable	0 (0.0)	0 (0.0)	1 (100.0)		
Family type					
Nuclear	24 (8.1)	91 (30.8)	180 (61.0)	35.916; 10	.000
Single parent	1 (3.6)	14 (50.0)	13 (46.4)		
Extended	0 (0.0)	9 (47.4)	10 (52.6)		
Expanded	0 (0.0)	2 (33.3)	4 (66.7)		
Reconstituted	0 (0.0)	1 (100.0)	0 (0.0)		
Single person	7 (41.2)	7 (41.2)	3 (17.6)		

6. Conclusions

It is concluded that activities that promote resilience should be taken into account, including broad strategies for the support of mental health during the pandemic in the general population. Clinical interventions are needed with a focus on fostering resilience since this will allow the population to improve their coping skills in situations of risk that compromise their health.

Compliance with ethical standards

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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