Symptoms of Anxiety and depression during the outbreak of COVID-19 in Paraguay.

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Introduction:

Outbreaks of new virus infections among people are always a public health problem (Bonilla-Aldana et al., 2020). The risk of these outbreaks depends on the characteristics of the virus, including whether it spreads from person to person and how well it spreads, the severity of the resulting disease, and the medical or other measures available to control the impact of the virus (for example, vaccines or treatment medications)(Millán-Oñate et al., 2020).

For the COVID-19, has been expanding quickly to each region of the world, causing many complications and deaths, estimated that 59,884 have died from this disease (*Mapa del coronavirus (COVID-19)*, s. f.), which is required to apply strict measures such as quarantine(Cuero, 2020); to quarantine often be an unpleasant experience for those who suffer, since it includes separation, loss of freedom, uncertainty and boredom. There are even reports of suicide attempts and secondary suicide. This is why before considering these measures, these complications should be considered and weighed against the benefit(Shander et al., 2020).

Some studies have compared the psychological effects of people in quarantine against controls. The most common symptoms are those related to stress and trauma, particularly acute stress disorder. Quarantined personnel also have a greater propensity to report exhaustion, detachment, anxiety, impaired performance, and resistance to work. Post-traumatic stress disorder (PTSD) and depression may develop in the long term(Druss, 2020).

For all the above research question arises as to determine the symptoms of anxiety and depression during the isolation period the outbreak of COVID-19 in Paraguay.

Material and methods

Cross-sectional study during the 17 to 20 March 2020 were surveyed every citizen resident in Paraguay, of both sexes, over 18 years of age, who agreed to participate in the study, confirming entry into the study link.

The distribution of the surveys was carried out through groups of "WhatsApp" and social networks "Twitter" and "Facebook". All participants were first explained the purpose of the study and uses the results.

To measure anxiety and depressive symptoms, the Goldberg Anxiety and Depression Scale (EADG) was used; each subscale has 9 dichotomous response items (Yes / No) and are structured in 4 initial screening items, to determine whether or not there is a probable mental disorder, and a second group of 5 items that are formulated if Obtains positive answers to screening questions (2 or more for anxiety and more than 1 for depression), but the full scale is usually applied in the research, and was used in this study in this way.

An independent score is given for each scale, with one point for each affirmative answer. Goldberg et al. (1988) have proposed as cut-off points ≥ 4 for the anxiety scale, and ≥ 2 for the depression scale(Koloski et al., 2008).

The data provided by the questionnaire was initially saved in a Microsoft Office Excel 2013 © spreadsheet and exported to the STATA 14.0 ® statistical package for analysis. The results are expressed in tables of proportions.

The data obtained from the questionnaire were treated with confidentiality, equality and fairness, respecting the Helsinki principles. Those who wanted to know their situation had the option to put their email to receive relevant guidance.

Results

1180 subjects participated in the study, of which 34.24% (404) were between 20 and 29 years old, 51.53 % (608) were female, 39.07 % (461) were married, 35.51 % (419)

were university students and 63.73 % (752) were from the inside of the country (Table 1).

Table 1. Distribution of the participants in the online survey according to demographic characteristics.

	N	%
Age group		
18 – 19	92	7.80
20 – 29	404	34.24
30 – 39	117	15
40 – 49	226	19.15
+ 50	281	23.81
Gender		
Male	572	48.47
Female	608	51.53
Marital status		
Married	461	39.07
Never married	408	34.58
Others	311	26.36
Studies		
None	178	15.08
Primary	261	22.12
High school	322	27.29
University	419	35.51
Place of residence		
Asuncion + metropolitan area	428	36.27
Inside the country	752	63.73

49.66% (586) presented anxiety symptoms and 47.20% (557) depressive symptoms (Table 2).

Table 2 . Distribution of the participants in the online survey according to the presence of anxious and depressive symptoms.

	N	%
Anxiety		
Yes	586	49.66
No	594	50.34
Depression		
Yes	557	47.20
No	623	52.80

When comparing anxiety symptoms with demographic characteristics, it is obtained: 55.31% (125) of the people in the age group between 40 - 49 years of age had anxious symptoms, 50% (304) of women, 49.30% (282), 51.41 % (237) of those married, 51.24% (165) of those with secondary education, 51.33% (386) of those from the interior of the country, and 46.73% (200) of those from Asunción + Metropolitan area. Regarding depressive symptoms and demographic characteristics, it is obtained: 48.89% (83) of people in the age group of 30 - 39 years had depressive symptoms, 49.48% (283) of men, 45.07% (274) of women, 56.13% (229) of the never married,

57.28 (240) of the university students and 52.80% (226) of the residents in Asunción + Metropolitan Area (Table 3).

Table 3. Distribution of the participants in the online survey according to demographic characteristics and anxious and depressive symptoms.

	Anxiety		**Depression**	
Age-group	**Yes (%)**	**No (%)**	**Yes (%)**	**No (%)**
18 – 19	43 (46.74)	49 (53.26)	44 (47.83)	48 (52.17)
20 – 29	201 (49.75)	203 (50.25)	186 (46.04)	218 (53.96)
30 – 39	95 (53.67)	82 (46.33)	83 (46.89)	94 (53.11)
40 – 49	125 (55.31)	101 (44.69)	109 (48.23)	117 (51.77)
+ 50	122 (43.42)	159 (56.58)	135 (48.04)	146 (51.96)
Gender				
Male	282 (49.30)	290 (50.70)	283 (49.48)	289 (50.52)
Female	304 (50)	304 (50)	274 (45.07)	334 (54.93)
Marital status				
Married	237 (51.41)	224 (48.59)	231 (50.11)	230 (49.89)
Never married	208 (50.98)	200 (49.09)	179 (43.87)	229 (56.13)
Others	141 (45.34)	170 (54.66)	147 (47.27)	164 (52.73)
Studies				
None	79 (44.38)	99 (55.62)	85 (47.75)	93 (52.25)
Primary	132 (50.57)	129 (49.43)	129 (49.43)	132 (50.57)
High school	165 (51.24)	157 (48.76)	164 (50.93)	158 (49.07)
University	210 (50.12)	209 (49.88)	179 (42.72)	240 (57.28)
Place of residence				
Asuncion + metropolitan area	200 (46.73)	228 (53.27)	202 (47.20)	226 (52.80)
Inside the country	386 (51.33)	366 (48.67)	355 (47.21)	397 (52.79)

Discussion

Psychosocial disorders (depression and anxiety) increasingly affect the health of the general population.

The study draws attention for demonstrating an inverse relationship with the literature and previous studies that show a higher frequency of cases of depression in people of the female sex and those over 50 years of age(Belló et al., 2005; Gómez-Restrepo et al., 2004; Juanes, s. f.). However, regarding Anxiety, it coincides with the literature of prevalence studies where the prevalence usually occurs in Women and in ages between 40 and 50 years(Balanza Galindo et al., 2009; *El trastorno de ansiedad generalizada*, s. f.; *Epidemiología del Trastorno de Ansiedad Generalizada.* | *Psiquiatria.com*, s. f.).

The same thing happens if you look at the “Civil Status” of the population, since in the literature it is possible to find the same criteria together with that of “Marital Satisfaction”, as protective factors, in the face of the development of symptoms related to Anxiety and depression, without however, the results show a higher prevalence weight of anxiety in married people, which is repeated in terms of the depression. This can also be transferred to the concept of general health for both pathologies(Posada-Villa et al., 2006; Simó-Noguera et al., 2015; Valdez Medina, José Bastidas-González, R, 2017).

Although the general population exceeds school age (the first interval of the minimum age still belongs to the pre-university school age), it is interesting to know a study that found a relationship between family dynamics and manifestations of depression. Being the normal functional family the one with the highest number of depressed schoolchildren. In this same study, an association was found between manifestations of depression and socioeconomic level(Hinostroza-Gastelú, s. f.). The criteria related to this economic level of study (None) and the Primary, Secondary and University Levels, can be related to certain economic dependence on parents or on the work done itself (the profit of which is reinvested in professional training in people who are students and pay for their studies with work). In this sense, it is possible to observe in all these sets of analysis criteria, the characteristics positively related to Anxious and Depressive symptoms (more with Anxiety), but just as positive with anxiety, although to a lesser degree.

The presence of symptoms associated with depression is quite evident in all age ranges, always being closer to 50% and never below 40%.

In adolescents, this type of symptomatology is linked to conflicts in interpersonal relationships with peers and adults, being the process of seeking health or help more oriented towards other adolescents, rather than professionals in the area of mental health(Garcia Mantilla et al., 2018). In time of confinement, this could become a rather problematic situation, in the sense that the rules of social isolation per se limit interaction with “peers” and, on the other hand, assistance or seeking professional help within of a health device, it is prioritized for cases related to the Pandemic, there are no clear protocols for mental health protection.

Being a female, belonging to the rank of "Older Adult" and being ill reveals relationships with depression, as well as having limitations to carry out activities(Gorete Reis et al., 2009). These Characteristics are broadly reflected in the greater anxious and depressive symptoms on the part of women with these age characteristics. The fact of confinement and lack of interaction could become a "risk factor" for maintaining their health.

One of the main comorbidities of Depression and to a lesser extent for Anxious disorders, are related to a complex network of factors associated with suicide attempts. No factor studied has proved to be more important or "crucial”, by itself, for the effectiveness of the attempts, it can be inferred that tedium, characterized as time devoid of meaning (very related to confinement and social isolation), has a predominant place (Minayo et al., 2016). An increase in the number of suicide attempts, such as completed suicides, could occur, if the necessary attention and containment are not given in the general population, with an emphasis on the populations mentioned in published research articles.

As social interaction activities based on telephone calls via mobile phone have an inverse correlation with the degree of risk of social isolation(Martínez Rebollar & Campos Francisco, 2015). Therefore, one of the most interesting approaches in the groups considered in the elderly group has to do with not leaving them only in confinement or in the case that confinement is a necessary element / either because some member of the family have the need to go out for work (as is the example of the personnel related to the health area), carry out repeated interactions through the different platforms of social interaction, both voice and video. For this, the use of social networks fulfills and will continue to fulfill a contentious role that can broaden its action, as a factor of protection and prevention of morbid states related to Depression and Anxiety.

The main factors associated with the perception of poor health and poor quality of life are the presence of anxiety and depression disorders, social isolation and lack of exercise, dependence on basic and instrumental activities (such as care personal)(Azpiazu Garrido et al., 2002). In this sense, the presence of symptoms related to anxiety and depression can "make people feel" as lacking health or in danger of losing it and the restrictions of mobility added to the loss of capacities for basic and instrumental activities, as well as the need for emotional containment, it could be perceived as a state of lability or weakness in the emotional and instrumental (behavioral) factors necessary to maintain autonomy in daily life.
According to the latest publication of the Basic Health Indicators, the General unemployment rate in Paraguay corresponds to the urban population at 7.2 and the rural population at 4.5(*Indicadores Básicos de Salud*, s. f.). However, the study data show a lower rate of both pathologies in the urban area, but in the rural area, the relationship is reversed.
The depression-anxiety comorbidity is a risk factor for the development of suicidal behavior more important than these conditions separately or other diagnoses. This association confers greater risk than other factors related to conformation and family history among them: family history of suicidal behavior, not having children, or age younger than 35 years(Baca García & Aroca, 2014). These characteristics must be taken into account for their evaluation, containment and, if required, treatment in the mental health area, therefore, the detection and treatment protocols in this area to be developed, as supplements to those currently used for the purpose of "containment", they will be extremely useful. In Paraguay there is a “Death by Suicide” rate of 9.3 in Men and 3.2 in women, the prevalence of both pathologies being practically the same.

Among the limitations of the study, the method of data collection can be mentioned mainly, since it was not possible to access a good sample size, and people who did not have an internet connection could not complete the survey either.
By way of conclusion, it is possible to indicate that a large proportion of the population presented anxious or depressive symptoms, which was seen in almost the same measure in both sexes, however, it occurred mainly at an older age and residents of the interior of the country. It is necessary to apply psychological containment measures in quarantine periods, since it is a time when most people find themselves in a situation of vulnerability and many stressors that lead to states of anxiety and depression.

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