Self-Reported Psychological Problems and Coping Strategies: A Web-Based Study in Peruvian Population During the COVID-19 Pandemic.

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Abstract

BACKGROUND: The Coronavirus pandemic has disrupted health systems across the world and led to major shifts in individual behavior by forcing people into isolation in home settings. Its rapid spread has overwhelmed populations in all corners of Latin-American countries resulting in individual psychological reactions that may aggravate the health crisis.

OBJECTIVE: this study reports on demographics, self-reported psychological morbidities and associated coping styles during the COVID-19 pandemic for the Peruvian population. **Methods:** This cross-sectional study uses an online survey with snowball sampling that was conducted after the state of emergency was declared in Perú (on April 2nd). The General Health Questionnaire (GHQ -28) was used to identify somatic symptoms, incidence of anxiety/ insomnia, social dysfunction and depression and the Coping Strategy Questionnaire (COPE-28) mapped personal strategies to address recent stress.

RESULTS: 434 self-selected participants ranging in age from 18 to 68 years old (ME =33.87) completed the survey. The majority of participants were women (61.3%), aged between 18 and 28 (41.7%), well-educated (>=85.0 %), Peruvian (94.2%), employed (57.4%) and single (71.20 %). 40.8% reported psychological problems, expressing fear of coronavirus infection (71.43%). Regression analysis shows that women developed more somatic symptoms (p<0.001*, C.I: -2.75 to -.99) and greater anxiety/insomnia (p=0.00*, C.I: -2.98 to 0.84) than men. Depression and social dysfunction were equally likely at any age. Educational status was protective against developing psychological disorders (p<0.05). While active responses (acceptance and social support) are scarcely used by individuals with psychological problems; passive strategies (such as denial, self-distraction, self-blame, disconnection, and emotional discharge) are more commonly reported.

CONCLUSION: This study provides a better understanding of psychological disorders occurring during the COVID-19 pandemic in the Peruvian population. About half of the respondents reported psychological morbidity and poor coping responses. This evidence informs the need for broader promotional health policies focused on strengthening individual's active strategies to improve mental health, especially in underprivileged groups during and after the Covid-19 pandemic.

1. Introduction

To date (June 10th, 2020), more than 400,000 deaths worldwide have been attributed to the coronavirus (1). Despite the deployment of several public health strategies to prevent continued transmission of the virus at the global level (1–3), the subjective perception of risk within the population represents a latent threat that may potentially trigger a wide variety of individual behavioral and emotional responses. Therefore, during this pandemic complex morbidities are highly likely to occur (4–6) and recent research has found a significant association between the current COVI-19 pandemic and the emergence of mental disorders (7–9).

Early reports from multiple studies during the epidemic phase in China confirm moderate to severe psychological impact, described as severe states of distress and deteriorated general health self-assessments in numerous samples in China (10–13). In a cross-sectional nation-wide study, with nearly 52 730 participants, psychological distress was identified among the one-third of the sample (35%) (11). Another study performed in Australia including 5070 participants drawn randomly from the general population, 78% of respondents had worsened their mental conditions since the beginning of the quarantine; this study found that vulnerable groups comprising those unemployed, student, retired and stay-at-home parents were highly susceptible to develop depression (14). Other studies have reported the emergence of emotionally disturbance patterns (15), anxiety disorders, depression, sleep problems, (8–10), and increased risk behaviors, such as substance use and smoking (14, 16). As financial instability resulting from job loss and massive social isolation became more prevalent, these clinical conditions worsen their status (16).

Considering that coping mechanisms are multifaceted in the face of stress (17), a strong link has been demonstrated between physical health, psychological well-being, and the use of active coping styles (18). Previous reviews have extensively documented the impact on psychological health during life-threatening events (19, 20), whose prediction may be feasible through coping strategies. For instance, Li et al. analyzed the emotional and cognitive responses published in the Chinese social network Weibo, the results showed an intensification of negative emotions (anxiety, depression and indignation) and coping behaviors mostly related to increased leisure activity and religion-based responses (9). In this context, the starting point of our research is the conceptual analysis given by Lazarus, who explains the stress mechanism suggesting two types of responses (17). While some individuals may proactively explore options for assistance, others remain in the space of their own loneliness, worsening the burden of their illness. Both either passive or active behavior-related strategies would predict the evolution of disease symptoms. Thus, there is a critical demand to identify coping mechanisms to reduce the risk of coronavirus spreading within the population.

What is worth noting is that pandemics can create confusion, sense of urgency, fear and perplexity, which may threaten emotional stability of entire families (21–23), lead alarmingly to some sort of "collective hysteria" (24) and to increased perceived health vulnerability during quarantine due to the unknown nature of the disease and its treatment (25). Together these reports demonstrate the possible emergence of mental problems in general population, along with unadjusted behaviors as suggested from previous pandemics (26).

This project provides valuable evidence on how the ongoing pandemic impacts psychological health in the general population. It is worth mentioning the limited studies capturing the perspective directly from the affected population and their mental health during global crises, data is particularly scarce in Latin American context. There is an increased susceptibility to develop disease (23, 27, 28) within the poorest and most vulnerable groups in society due to lack of coping response and poor awareness and control measures (10). This justifies the urgent need to better understand the mental health problems caused by unexpected events such as the COVID-19 pandemic in the Spanish-speaking community.

Particularly, Peru has been significantly affected by the COVID-19 pandemic, causing significant national alarm (29). Although exposure to the virus outbreak has already been shown to be related to adverse effects, the role of coping strategies that regulate emotional responses to stressing situations is discussed (17). Therefore, this study aims at investigating psychological health and how it is linked to the deployment of active or passive coping strategies in the general population exposed to the COVID-19 pandemic.

2. Study Design And Methods

A cross-sectional survey was administered in March-April, during the Covid-19 pandemic and through anonymous online questionnaires. Exclusively individuals (≥ 18 years) able to provide informed consent were recruited using a convenient snowball sampling process. Respondents were required to reside in any department in Peru. No monetary compensation was given for completing the questionnaire. The study protocol was approved by the ethics committee of "Catolica de Santa Maria" University *(ref. no. 167–2020)*. The instruments were considered valid when fully completed; participants under 18 years old and those whose responses were biased by acquiescence or social desirability were excluded, based on the questionnaire's protocol.

2.1 General Health Questionnaire- Goldberg (GHQ-28)

The survey comprised the (GHQ-28) Questionnaire, a population-based, self-administered tool for screening and determining mental disorders. Participants were asked about symptoms and/or discomfort they had experienced recently (in recent weeks) during the coronavirus pandemic. Each item is scored based on a 4-point scale containing 4 subscales of depression, anxiety, social dysfunction, and physical symptoms, ranging from "better/healthier than normal" option, through a "same as usual" and a "worse/more than usual" to a "much worse/more than usual" option (30). For this study, Cronbach's alpha coefficient was calculated as a high reliability estimator, corresponding to α = 0.934 (IC95%, 0.925–0.943).

2.2 Coping Estrategies Questionnaire (COPE-28)

The survey also included the (COPE-28) Brief version (28 items), which measures behaviors and cognitive responses to stressors related to Covid-19. We used the Spanish version (31), which has 14 subscales (asking about self-distraction, active coping, denial, substance use, use of emotional support, use of instrumental support, behavioral disengagement, relief, positive reframing, planning, humor, acceptance, religion, self-blame). The tool identified active and passive strategies asking 4-point values (1: "I haven't been doing this at all"; 4 "I've been doing this a lot") (32). For the present study the calculation of Cronbach's alpha coefficient as a reliability estimator was α = 0.858 (IC = 95%, 0.838–0.876).

2.3 Data analysis

Respondents were asked to identify categorically key demographic information, which is subsequently analyzed using *Stata Statistical Software 15.0* for Windows (33) as proportions. Linear regression was used to calculate whether there were univariate associations between sociodemographic data, the GHQ scale and COPE-28 questionnaire.

To establish the relationship between psychological health and both active and passive coping strategies, structural equation models (SEM) were used. Path analysis (34) was done with comparative adjustment index (CFI), with values ≥ .90 (35) the root mean square error of approach (RMSEA), with values ≤ .80 (36) and the goodness-of-fit Index (GFI > .8 or > .9) was used to evaluate how well the models fit (37). From the correlations, the final model was elaborated with path analysis, using the data on participants who presented with psychological problems to determine the active and passive coping strategies most frequently used within this group. The presence of psychological problems was identified using the GHQ scale with a cut-off point 23/24 (38).

3. Results

3.1 Participant characteristics (Table 1)

Table 1

Association between socio-demographic variables and indicators of general health status at covid-19

Variables	N(%)	Somatic symptom			Anxiety/Insomnia			Social Disfunction			Severe Depression		
R-Squared	Adjusted R-Squared	R^2	(AR^2)	p (95% Confidence Interval)	R^2	(AR^2)	p(95% CI)	R^2	(AR^2)	p(95% CI)	R^2	(AR^2)	p(95% CI)
R^2	(AR^2)	p(95% CI)											
Gender													
Men	168 (38.7)	0.039	0.0368	Reference	0.028	0.026	Reference	0.001	-0.002	Reference	0.005	0.005	Ref
Women	266 (61.3)			0.00* (-2.75 to − .99)			0.00* (-2.98 to 0.84)			0.59 (-1.04 to 0.59)			0.1 to (
Age													
18−28	181 (41.7)			Reference			Reference			Reference			Ref
29−38	124 (28.6)	0.013	0.004	-0.34 (-1.57 to 0.54)	0.022	0.013	0.02* (-2.73 to -0.19)	0.034	0.025	0.05* (-1.89 to 0.01)			0.0 (-2. -0.4
39−48	51 (11.8)			0.94 (-1.39 to 1.49)			0.45 (-1.07 to 2.39)			0.23 (-2.08 to 0.50)	0.042	0.033	0.0 (-2. -0.0
49−58	54 (12.4)			0.74 (-1.17 to 1.64)			0.24 (-2.70 to 0.67)			0.03* (-2.61 to -0.08)			0.0 (-3. -0.7
59−68	24 (5.5)			0.04* (-4.06 to -0.13)			0.08 (-4.45 to 0.28)			0.00* (-4.88 to -1.34)			0.0 (-4. -0.7
Most recent study													
Secondary	64 (14.75)			Reference			Reference			Reference			Ref
University	174 (40.09)	0.876	0.875	0.001* (2.55 to 3.48)	0.502	0.489	0.006* (0.47 to 2.74)	0.312	0.307	0.001* (1.01 to 3.01)	0.236	0.231	0.0 (1.0 3.0
Degree	116 (26.73)			0.001* (6.83 to 7.82)			0.001* (5.24 to 7.66)			0.001* (3.88 to 6.01)			0.0 (3.8 6.0
Postgraduate	80 (18.43)			0.001* (12.6 to 13.7)			0.001* (9.87 to 12.5)			0.001* (5.82 to 8.13)			0.0 (5.8 8.1
Nationality													
Peruvian	409 (94.2)	0.001	-0.001	Reference	0.001	-0.002	Reference	0.000	-0.002	Reference	0.007	0.005	Ref
Foreign	25 (5.8)			0.51(-1.24 to 2.50)			0.66 (-1.75 to 2.78)			0.67 (-1.34 to 2.06)			0.0 to 3
Work													
No	185 (42.6)	0.000	-0.002	Reference	0.000	-0.002	Reference	0.000	-0.002	Referencia	0.005	0.003	Ref
Yes	249 (57.4)			0.93 (-0.84 to 0.92)			0.92 (-1.12 to 1.01)			0.91 (-0.85 to 0.76)			0.1 to (
Marital status													
Co-habitant	19 (4.38)	0.004	-0.003	Reference			Reference			Reference			Ref
Single	309 (71.20)			0.44 (-1.31 to 2.98)			0.97 (-2.64 to 2.54)			0.34 (-1.01 to 2.89)			0.8 to 1

* p < 0.05; ** p < 0.01; *** p < 0.001.

Variables	N(%)	Somatic symptom			Anxiety/Insomnia			Social Disfunction			Severe Depression		
Married	98 (22.58)			0.77 (-1.94 to 2.61)	0.005	-0.003	0.76 (-2.32 to 3.18)	0.003	-0.004	0.46 (-1.28 to 2.85)	0.006	-0.001	0.70 to 1
Widower	8 (1.84)			0.95 (-3.94 to 3.71)			0.33 (-6.90 to 2.35)			0.97 (-3.42 to 3.55)			0.1 to 0
Fear of coronavirus (family)													
No	124 (28.57)	0.005	0.002	Reference	0.003	0.001	Reference	0.001	-0.002	Reference	0.001	-0.001	Ref
Yes	310 (71.43)			0.16 (-1.66 a 0.27)			0.27 (-1.81 a 0.51)			0.62 (-1.09 a 0.66)			0.5 a 0
Product Concern													
Little or nothing	211 (48.62)	0.009	0.004	Reference	0.004	-0.001	Reference	0.006	0.001	Reference	0.003	-0.002	Ref
Moderated	207 (47.70)			0.05* (-1.77 a -0.001)			0.38 (-1.55 a 0.59)			0.21 (-1.32 a 0.29)			0.2 a 0
Severe	16 (3.69)			0.77 (-2.69 a 2.004)			0.30 (-4.35 a 1.33)			0.22 (-3.47 a 0.81)			0.6 a 1
Cause of concern													
Children and family care	44 (10.14)			Reference			Reference			Reference			Ref
Domestic work	18 (4.15)			0.69 (-3.05 a 2.04)			0.38 (-1.69 a 4.45)			0.10 (-0.38 a 4.24)			0.7 a 2
Social isolation	169 (38.94)	0.003	-0.009	0.82 (-1.73 a 1.36)	0.009	-0.003	0.60 (-1.31 a 2.41)	0.009	-0.003	0.48 (-0.89 a 1.90)	0.005	-0.006	0.4 a 1
Not being able to work	121 (27.88)			0.73 (-1.88 a 1.32)			0.23 (-0.74 a 3.12)			0.84 (-1.31 a 1.60)			0.6 a 1
Working without family	16 (3.69)			0.76 (-3.07 a 2.24)			0.86 (-3.48 a 2.93)			0.61 (-1.78 a 3.04)			0.9 a 2
Teleworking	66 (15.21)			0.33 (-2.65 a 0.89)			0.91 (-2.27 a 2.01)			0.91 (-1.52 a 1.70)			0.6 a 1

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

From the 450 respondents who completed the survey, only 434 (38.7% males and 61.3% females) were recruited into the study with a response rate of 100% (Table 1). The mean age of participants was 33.87 ± 12.6, whose age range from 18 to 68 years old coming from 16 departments of Perú. The majority were well-educated (> = 85.0%), Peruvian (94.2%), employed (57.4%) and single (71.20%).

Regarding social factors, a great number were afraid of contracting coronavirus (71.43%), 47.7% were worried about limited access to cleaning products, and 38.94% about social distancing, followed by 27.88% worried about not being able to work. Regarding employment, 42,6% were not working due to quarantine period, and 40.09% were university students.

3.2 General health status based on socio-economic profile (Table 1)

We standardized the sampling, adjusting it to ± 1.5 threshold (39) where 40.8% (n = 177) of respondents reported psychological disorders in contrast to non-cases (59.2%), with a cut-off point of 23/24 (38).

Being female was associated with increased somatic symptoms (P = 0.001; 95% CI = -2.75 to -3.74) and indicators of anxiety and insomnia (P = 0.001; 95% CI = -2.98 to 0.84). Being within the age group between 59–68 years was negatively and significantly associated with somatic symptoms (P = 0.04; 95% CI = -4.06 to -0.13). While the 29 to 38-year-old group scored significantly higher on questions about anxiety/insomnia (P = 0.02; 95% CI = -2.73 to -0.19). The social dysfunction indicator is present at all ages except for the 39 to 48-year-old group. Negative association score is found for severe depression regardless of

participants age. Concern about the absence of hygiene products (including personal protection, antibacterial gel, chinstraps and others) is negatively associated at a moderate level (P = 0.05; 95% CI = -1.77 to -0.001) with somatic symptoms.

3.3 Association between sociodemographic variables and subscales of active and passive coping strategies in covid-19

Positive reassessment subscale is strongly associated with being females (p = 0.03*, CI: -0.63, -0.04) and older ages (the exception is for 29–38 years old). Likewise, a significantly negative association exists with the Acceptance subscale (p = 0.06, CI: -0.53 a 0.01). Those with graduate (P = 0.01; 95% CI = -1.13 to -0.18) and doctoral degrees (P = 0.04; 95% CI = -1.04 to -0.03) are less likely to engage on planning activities as a coping strategy. People with higher education (P = 0.01; 95% CI = 0.18 to -1.05) are more likely to use positive reassessment as a coping strategy. Moreover, positive reassessment behaviors punctuated negatively lower among married respondents (P = 0.02; 95% CI =-1.63 to -0.12), and with concern, at moderate level, about shortage of personal toiletries, protection and other items (P = 0.01; 95% CI = -0.70 to -0.12) (Table 2).

Table 2

Association between sociodemographic variables and subscales of active coping strategies in covid-19

Variables	N(%)	Active			Planification			Positive reevaluation			Aceptation		
R-Squared	Adjusted R-Squared	p (95% Confidence Interval)	R2	(AR2)	p(95% CI)	R2	(AR2)	p(95% CI)	R2	(AR2)	p(95% CI)		
R2	(AR2)	p(95% CI)											
Gender													
Man	168 (38.7)	0.006	0.004	Reference	0.000	-0.002	Reference	0.011	0.001	Reference	0.008	0.006	Refer
Woman	266 (61.3)			0.11(-0.51 a 0.05)			0.73 (-0.25 a 0.35)			0.03* (-0.63 a -0.04)			0.06 (-0.53 0.01)
Age (years)													
18−28	181 (41.7)			Reference			Reference			Reference			Refer
29−38	124 (28.6)	0.009	-0.000	0.70 (-0.40 a 0.27)	0.026	0.017	0.51 (-0.23 a 0.47)	0.063	0.054	0.23 (-0.55 a 0.13)			0.06 (-0.62 0.01)
39−48	51 (11.8)			0.97 (-0.44 a 0.46)			0.19 (-0.79 a 0.16)			0.01* (-1.05 a -0.12)	0.043	0.034	0.002 (-1.09 -0.23)
49−58	54 (12.4)			0.09 (-0.82 a 0.07)			0.10 (-0.85 a 0.08)			0.001*(-1.44 a -0.53)			0.01* (-0.99 -0.16)
59−68	24 (5.5)			0.26 (-0.97 a 0.26)			0.02* (-1.46 a -0.16)			0.001*(-1.78 a -0.51)			0.002 (-1.50 -0.34)
Most recent study													
Secondary	64 (14.75)			Reference			Reference			Reference			Refer
University	174 (40.09)	0.008	0.002	0.06 (-0.01 a 0.82)	0.020	0.013	0.15 (-0.76 a 0.12)	0.027	0.020	0.01* (0.18 a 1.05)	0.013	0.006	0.80 (-0.35 0.45)
Degree	116 (26.73)			0.27 (-0.19 a 0.69)			0.01* (-1.13 a -0.18)			0.63 (-0.35 a 0.58)			0.48 (-0.58 0.27)
Postgraduate	80 (18.43)			0.19 (-0.16 a 0.79)			0.04* (-1.04 a -0.03)			0.11 (-0.09 a 0.91)			0.12 (-0.82 0.09)
Nationality													
Peruvian	409 (94.2)	0.003		Reference	0.005	0.003	Reference	0.000	-0.002	Reference	0.002	-0.000	Refer
Foreign	25 (5.8)		0.001	0.24 (-0.94 a 0.23)			0.15 (-1.08 a 0.16)			0.74 (-0.72 a 0.52)			0.34 (-0.84 0.29)
Work													
No	185 (42.6)	0.002	-0.000	Reference	0.001	-0.001	Reference	0.001	-0.001	Reference	0.003	0.000	Refer
Yes	249 (57.4)			0.34 (-0.41 a 0.14)			0.55 (-0.38 a 0.20)			0.51 (-0.38 a 0.19)			0.29 (-0.41 0.12)
Marital status													
Co-habitant	19 (4.38)			Reference			Reference			Reference			Refer
Single	309 (71.20)	0.011	0.003	0.31 (-1.02 a 0.32)	0.012	0.005	0.16 (-1.23 a 0.19)	0.016	0.009	0.09 (-1.31 a 0.11)	0.014	0.007	0.47 (-0.88 0.40)

* p < 0.05; ** p < 0.01; *** p < 0.001.

Variables	N(%)	Active			Planification			Positive reevaluation			Aceptation		
Married	98 (22.58)			0.16 (-1.23 a 0.19)			0.04* (-1.55 a -0.04)			0.02* (-1.63 a -0.12)			0.09 (-1.25 0.11)
Widower	8 (1.84)			0.06 (-2.35 a 0.04)			0.21 (-2.09 a 0.46)			0.07 (-2.40 a 0.13)			0.80 (-0.99 1.30)
Fear of coronavirus disease (family)													
No	124 (28.57)	0.003	-0.002	Reference	0.000	-0.002	Reference	0.000	-0.002	Reference	0.000	-0.002	Refer
Yes	310 (71.43)			0.73 (-0.25 a 0.36)			0.76 (-0.27 a 0.37)			0.99 (-0.32 a 0.32)			0.76 (-0.25 0.34)
Product Concern													
Little or nothing	211 (48.62)			Reference			Reference			Reference			Refer
Moderated	207 (47.70)	0.007	0.002	0.15 (-0.48 a 0.07)	0.006	0.001	0.30 (-0.45 a 0.14)	0.020	0.016	0.01* (-0.70 a -0.12)	0.012	0.007	0.05 (-0.53 0.001)
Severe	16 (3.69)			0.23 (-1.19 a 0.29)			0.18 (-1.32 a 0.25)			0.09 (-1.43 a 0.12)			0.45 (-0.44 0.97)
Causes of concern													
Children and family care	44 (10.14)			Reference			Reference			Reference			Refer
Domestic work	18 (4.15)	0.017	0.006	0.51 (-0.53 a 1.06)	0.017	0.006	0.81 (-0.95 a 0.74)	0.011	-0.001	0.68 (-0.67 a 1.01)	0.194	0.008	0.08 (-0.08 1.43)
Social isolation	169 (38.94)			1.09 (-0.80 a 0.16)			0.43 (-0.31 a 0.72)			0.60 (-0.64 a 0.37)			0.30 (-0.22 0.69)
Not being able to work	121 (27.88)			0.11 (-0.91 a 0.09)			0.81 (-0.59 a 0.47)			0.30 (-0.80 a 0.25)			0.69 (-0.38 0.57)
Working without family	16 (3.69)			0.05 (-1.65 a 0.01)			0.24 (-1.42 a 0.35)			0.11 (-1.58 a 0.16)			0.17 (-1.34 0.24)
Teleworking	66 (15.21)			0.37 (-0.80 a 0.30)			0.22 (-0.22 a 0.96)			0.91 (-0.61 a 0.55)			0.91 (-0.49 0.56)

* p < 0.05; ** p < 0.01; *** p < 0.001.

Conversely, passive coping strategies (Table 3) are more likely among individuals aged 39–48 years, this group scored higher in religion-related responses to deal with the stress (P = 0.01; 95% CI = 0.16 to 1.31). Strategies such as self-distraction and self-incrimination responses (except in the age range 59–68 years) are commonly used at any age. Senior group (59 to 68 years) is associated negatively with relief-seeking behaviors (P = 0.02; 95% CI = -1.23 to -0.09). Finally, while being a college student is strongly associated with higher rates of religion-based responses as a coping strategy (P = 0.03; 95% CI = 0.07 to 1.14), postgraduate respondents (P < 0.001) tend to use greater self-distraction, self-blame and emotional release strategies compared to high school students.

Table 3
Association between sociodemographic variables and subscales of passive coping during COVID-19

Variables	N(%)	Religion			Selfdistraction			Self-incrimination			Desahogo		
R-Squared	Adjusted R-Squared	R2	(AR2)	p (95% Confidence Interval)	R2	(AR2)	p(95% CI)	R2	(AR2)	p(95% CI)	R2	(AR2)	p(95% CI)
Gender													
Men	168 (38.7)	0.049	0.047	Reference	0.010	0.008	Reference	0.007	0.004	Reference	0.016	0.014	Ref
Women	266 (61.3)			**0.001*** (-1.20 a -0.49)			**0.03*** (-0.64 a -0.02)			0.09 (-0.04 a 0.51)			0.0... (-0.0... -0.0...)
Age (year)													
18–28	181 (41.7)			Reference			Reference			Reference			Ref
29–38	124 (28.6)	0.021	0.012	0.57 (-0.30 to 0.54)	0.075	0.066	**0.003*** (-0.90 to -0.18)	0.038	0.029	**0.02*** (-0.69 to -0.05)	0.015	0.006	0.12 (-0.5... 0.0...)
39–48	51 (11.8)			0.01* (0.16 to 1.31)			**0.01*** (-1.12 to -0.15)			0.02* (-0.93 to -0.06)			0.33 (-0.0... 0.2...)
49–58	54 (12.4)			0.13 (-0.12 to 1.01)			**0.001*** (-1.56 to -0.61)			0.001* (-1.22 to -0.37)			0.25 (-0.0... 0.10...)
59–68	24 (5.5)			0.07 (-0.07 to 1.51)			**0.001*** (-2.08 to -0.75)			0.09 (-1.11 to 0.08)			0.02 (-1.2... -0.0...)
Education level													
High school				Reference			Reference			Reference			Ref
College	174 (40.09)	0.012	0.005	0.03* (0.07 a 1.14)	0.025	0.018	0.58 (-0.33 to 0.58)	0.063	0.056	0.24 (-0.16 to 0.63)	0.038	0.031	0.0... (0.1... 0.8...)
Bachelor	116 (26.73)			0.06 (-0.02 a 1.11)			0.18 (-0.15 to 0.81)			0.003* (0.21 to 1.06)			0.00... (0.2... 1.0...)
Posgrade	80 (18.43)			0.09 (-0.09 a 1.13)			0.004* (0.23 to 1.29)			0.001* (0.61 to 1.52)			0.00... (0.4... 1.3...)
Nationality													
Peruvian	409 (94.2)	0.000	-0.002	Reference	0.000	-0.002	Reference	0.004	0.001	Reference	0.000	-0.002	Ref
Foreigner(living in Peru)	25 (5.8)			0.93 (-0.78 to 0.72)			0.82 (-0.72 to 0.57)			0.21 (-0.21 to 0.94)			0.9... (-0.5... 0.5...)
Work													
No	185 (42.6)	0.000	-0.002	Reference	0.001	-0.001	Reference	0.001	-0.001	Reference	0.000	-0.002	Ref
Yes	249 (57.4)			0.81 (-0.31 to 0.39)			0.51 (-0.41 a 0.20)			0.48 (-0.37 a 0.17)			0.9... (-0.2... 0.23...)
Marital status													
Co-habitant	19 (4.38)			Reference			Reference			Reference			Ref
Single	309 (71.20)	0.008	0.001	0.74 (-0.72 to 1.01)	0.004	-0.003	0.38 (-1.08 to 0.42)	0.009	0.002	0.26 (-0.28 to 1.03)	0.011	0.004	0.9... (-0.5... 0.64...)

* p < 0.05; ** p < 0.01; *** p < 0.001.

Variables	N(%)	Religion			Selfdistraction			Self-incrimination			Desahogo		
Married	98 (22.58)			0.59 (-1.16 to 0.67)			0.27 (-1.23 to 0.35)			0.24 (-0.28 to 1.12)			0.3 (-0.9... 0.3...
Widower	8 (1.84)			0.71 (-1.83 to 1.25)			0.27 (-2.07 to 0.60)			0.45 (-1.63 to 0.72)			0.5 (-0.7... 1.4...
Fear of contracting coronavirus (or family member)													
No	124 (28.57)	0.000	-0.002	Reference	0.003	0.000	Reference	0.000	-0.002	Reference	0.000	-0.002	Ref...
Sí	310 (71.43)			0.78 (-0.33 to 0.44)			0.25 (-0.14 to 0.53)			0.92 (-0.31 a 0.28)			0.8 (-0.2... 0.30
Fear of products													
Little or nothing	211 (48.62)			Reference			Reference			Reference			Ref...
Moderate	207 (47.70)	0.002	-0.002	0.64 (-0.44 to 0.27)	0.004	-0.000	0.42 (-0.43 to 0.18)	0.003	-0.002	0.55 (-0.35 to 0.19)	0.009	0.004	0.1 (-0.4... 0.04
Severe	16 (3.69)			0.35 (-1.40 a 0.50)			0.20 (-1.35 a 0.28)			0.33 (-1.08 a 0.36)			0.14 (-1.1... 0.11
Causes of concern													
Children and family care	44 (10.14)			Reference			Reference			Reference			Ref...
Domestic work	18 (4.15)	0.009	-0.002	0.56 (-1.33 a 0.72)	0.007	-0.004	0.94 (-0.85 a 0.92)	0.008	-0.003	0.29 (-1.21 a 0.36)	0.014	0.002	0.5 (-0.9... 0.4...
Social isolation	169 (38.94)			0.28 (-0.94 a 0.28)			0.87 (-0.58 a 0.49)			0.98 (-0.47 a 0.48)			0.74 (-0.3... 0.5...
Not being able to work	121 (27.88)			0.12 (-1.16 a 0.13)			0.34 (-0.82 a 0.29)			0.73 (-0.57 a 0.41)			0.59 (-0.3... 0.58
Working without family	16 (3.69)			0.74 (-0.89 a 1.25)			0.21 (-1.51 a 0.34)			0.25 (-1.29 a 0.34)			0.3 (-1.1... 0.4...
Teleworking	66 (15.21)			0.64 (-0.88 a 0.54)			0.64 (-0.76 a 0.47)			0.76 (-0.46 a 0.63)			0.1 (-0.7... 0.8...

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

3.4 Pearson's correlations between general health and coping strategies scale (Table 4)

Table 4
Pearson's correlations for General Health indicators (GHQ)and active and passive coping strategies (COPE)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Somatic symptoms	1															
2. Anxiety/insomnia	.69**	1														
3. Social Dysfunction	.55**	.56**	1													
4. Severe depression	.49**	.54**	.50**	1												
5. Active	.03	.03	.02	−.12*	1											
6. Planning	−.08	−.06	−.02	−.19**	.66**	1										
7. Emotional Support	.20**	.13**	.15**	.01	.32**	.28**	1									
8. Social Support	.12*	.16**	.13**	.02	.34**	.38**	.54**	1								
9. Positive re-evaluation	−.02	.01	.05	−.10	.54**	.51**	.33**	.29**	1							
10. Acceptance	−.10*	−.10*	.02	−.11*	.52**	.53**	.15**	.28**	.56**	1						
11. Humor	.05	−.01	.09	.04	.27**	.36**	.17**	.29**	.34**	.38**	1					
12. Religion	.04	.05	.03	−.10	.35**	.34**	.39**	.32**	.34**	.29**	0	1				
13. Denial	.21**	.23**	.17**	.18**	−.07	.04	.16**	.26**	−.14**	−.10*	.10*	.12*	1			
14. Self-Distraction	.15**	.27**	.26**	.15**	.43**	.48**	.29**	.39**	.50**	.45**	.34**	.31**	.04	1		
15. Self-incrimination	.23**	.26**	.29**	.41**	.21**	.18**	.17**	.24**	.16**	.10*	.35**	.02	.22**	.32**	1	
16. Disconnection	.23**	.23**	.36**	.36**	−.05	−.04	.18**	.09	.05	−.04	.16**	.05	.23**	.12*	.33**	1
17. Desahogo	.16**	.15**	.20**	.19**	.32**	.29**	.32**	.32**	.25**	.20**	.28**	.19**	.14**	.34**	.38**	.22**
18. Substance use	.20**	.15**	.20**	.21**	−.07	−.11*	.09	.06	−.15**	−.08	.12*	.01	.32**	.01	.22**	.19**

* p < 0.05; ** p < 0.01.

Emotional support strategy correlates significantly positive with somatic symptoms (r = 0.20**), anxiety/insomnia (r = 0.13**) and social dysfunction (r = 0.15**). The planning strategy correlates inversely with severe depression (r = -0.19**). It is clear that the greater the social support response, the lesser the anxiety/insomnia (r = 0.16**) and social dysfunction (r = 0.13**). The situation-acceptance strategy is a protective factor against indicators of somatic symptoms, anxiety/insomnia and severe depression (*p < 0.05). It is also evident that the active strategies of positive re-evaluation and humor do not correlate with any indicator measured with the general health scale (GHQ). On the contrary, passive coping styles (denial, self-distraction, self-blame, disconnection, withdrawal and substance use) correlate significantly with general health indicators.

3.5 Path analysis results related to active and passive coping strategies (Fig. 1)

Social acceptance and support-seeking behaviors are active strategies more likely to be used by individuals who rated with psychological problems (this results are derived from standardized path analysis coefficients with acceptable goodness-of-fit indexes (X2/gl = 3.096; GFI = 0.880; IFC = 0.851 and RMSEA = 0.109 (IC90% 0.089, 0. 129); On the other hand, passive strategies such as denial (p = 0.25), self-distraction (p = 0.18), self-incrimination (p = 0.13), disconnection (p = 15), relief (p= -0.10), religion (p= -0.10) are passive strategy more likely used by individuals, who rated with psychological problems. The strategies that do not support the model are humor (active strategy) and substance use (passive strategy), explaining adequate adjustment rates with 19% of the variability, (R2 = 0.19) in participants who rated psychological problems.

Figure 2 describes usage of active strategies among participants who do not report any psychological problems, those strategies include emotional support (positive) and planning (negative); Additionally, passive strategies include: self-distraction (positive), self-blame (positive), disconnection (positive). Finally, the statistical predicting model reported that only 21% (R2 = 0.21) of the participants without psychological problems use active coping

(humor and social support) (X2/gl = 5.739; GFI = 0.869; CFI = 0.751 and RMSEA = 0.119 (IC90% 0.098, 0.139).

4. Discussion

Our findings suggest that during the period of social isolation (April-May), respondents experienced psychosomatic symptoms, anxiety, social dysfunction and severe depression as assessed by GHQ-28. Gender, age, education level, and having moderate concerns about purchasing protective products influenced the mental health of respondents; other variables, including nationality, employment and marital status, and being afraid of the coronavirus disease were not significantly associated with the presence of psychological symptoms. In our sample, educational status is a protective factor against mental health disturbances. In similar research, studies in China at the beginning of the pandemic found that education, employment and marital status are protective factors of mental health (12) (40).

Our data suggests that women experience higher levels of somatic symptoms and anxiety/insomnia. These findings are consistent with previous studies reporting greater levels of anxiety (12), fear within women (13), and older adults exposed to public health messages in the context of European quarantined countries, such as Italy (41). Being female and a young adult (29−38) increases risk of anxiety; while older are more likely to report depression, these findings are similar to Newby's (14) who found that students were at greater risk for depression than older adults.

Regarding sources of concern, we found that participants reported little concern respect to some changes in circumstances, such a working without family (3.69%), doing domestic work (4.15%) and maintaining children and family care (10.14%). A higher percentage was worried because of social isolation (38.94%), and not being able to work (27.88%). Drawing from another studies we notice that people report higher rates of anxiety due to concern for themselves and their family (42). The distinctive distribution of work and responsibilities across Peruvian families seems to be driving varied behavioral responses (somatic symptoms, anxiety/insomnia, social dysfunction and severe depression) supported by the last national report. In here, a great number of families were classified as nuclear households (53.9%) made up of a couple with or without children or at least one, followed by extended families (20.6%) and single person households (16.8%) (43). The changes of working circumstances due to the current social distancing are perceived differently among single respondents (71.2%) who are less likely to report concern for others or to work without being with the family. Nearly half of respondent (47.70%) also reported significant higher somatic symptoms due to shortage of protective products (personal toiletries). The use of tonics and medicines to not get sick or prevent physical discomfort are also reported in similar studies regarding massive purchases of cleaning supplies and food upon higher alarm among the population (7).

Coping Strategies

Interestingly, sociodemographic such as gender, age, educational status and the likelihood of being married influence a person's likelihood of using active coping style. In our study self-distraction and self-blame, both passive strategies, were significantly informed. Self-distraction was used by individuals of all ages except among those 18 to 28 years old. Analyzing religion -related coping beliefs, we found that university students and groups from 39 to 48 years old increases in praying as a strategy, which corresponds with the country culture according to national records (76.0% of Peruvians profess being Catholic) (43). A great deal of women respondent (61.3%) reported using religion-based strategies probably to mitigate stress, those results are also supported by previous recent Chinese studies during the pandemic (74.77%)(9).

Psychological problems and use of coping strategies

Coping strategies are mediated by cultural factors and gender differences. This study confirms that women tend to use more passive strategies, except for positive re-evaluation as an active strategy. Contrastingly, Asian- based studies reported the deployment of active styles focusing on problem solving (active, social support and planning) are analyzed and can significantly predict responses of anxiety (3.4%), anger (2.2.%) and sadness (0.9%). With that said, women may be more likely to use proactive, problem-centered coping in the face of the pandemic and less likely to use passive strategies than men. (13). This has some minor fluctuations in North America, where women are more likely to report strategies that focus on passive behaviors such as distraction, religion, and less humor (44). We found that women with psychological problems use religion, self-distraction and venting possibly to alleviate the distress they feel about the pandemic, has not been reported in other studies.

People with psychological problems use adaptive strategies based on acceptance and the support-seeking behaviors to face the crisis. In contrast, the sample of participants without psychological problems had a predominance of cognitive coping with planning and disconnecting from activities, followed by less seeking social support, most likely due to the higher educational status of the respondents; self-distraction was the only passive or blocking coping strategy that ranked high in this group. Interestingly, in Singapore, in late 2002, in the face of severe acute respiratory syndrome (SARS) two coping strategies, denial and planning, were associated with post-traumatic morbidity. Both, lack of planning and denial are ways of reducing powerlessness in the face of stress but at the same time they are maladaptive strategies leading to psychological problems (5). We found that the use of passive responses (denial, self-distraction, self-blame, venting, and religion) may respond to the unprecedented impact of the COVID-19 pandemic on a country and global scale; metaphorically, it is understood as a chain of misadjusted responses that begins with rejecting the deadly consequences of the disease, not accepting reality, resorting to various activities to avoid thinking about the crisis, and avoiding confronting the problem.

Among the strengths, this study was one of the first to investigate the impact of COVID-19 on mental health and coping strategies in the face of the crisis. It was conducted two weeks after the declaration of the state of emergency by the Peruvian government

Future research could follow participants in the aftermath of the pandemic and examine the evolution of psychological problems after the state of emergency. Other studies on low-income populations with educational and health needs and restricted access to the Internet provided insight into their coping strategies and the effects on their mental health.

5. Conclusions

Recognizing the compelling need to minimize the risk of transmission and the severity of the epidemic, mental health disorders need to be addressed early by strengthening active strategies within the population to prevent disease progression.

This study found moderate scores for psychological problems in response to the COVID-19 pandemic. The association of female gender, higher education and all age groups except the youngest (18 to 28 years) allows for detection of high-risk groups. The occurrence of psychological problems is better captured through the analysis of participants' coping mechanisms when confronted with critical situations. The findings inform of timely intervention programs to minimize long-term problems, which may potentially arise after quarantine particularly in the vulnerable population.

Limitations

An Internet-based survey method was used to avoid possible coronavirus infection. We used a snowball sampling in a voluntary manner and conducted through an online system. Therefore, some selection bias is considered. Only people who had access to the Internet connection were able to participate in the study via computer or mobile phone, which limited the participation of people who did not have these technological devices. In the absence of low-income people, we will have constraints in understanding their psychological responses to the pandemic. The sample size was neutralized by extensive data analysis using linear regression and structural equation modeling

Declarations

Ethics approval and consent to participate

This study involves human participants, whose written consent was retrieved at start of the study. The study protocol was approved by the ethics committee of "Catolica de Santa Maria" University *(ref. no. 167-2020).*

Consent for publication

The authors utilized a research form to ask the participants their consent to publish their clinical results.

Availability of data and materials

The datasets generated and/or analysed during the current study are available at the OFS repository, available at: https://osf.io/zs8um/?view_only=48a6dd4bb5be41c2a5050d093f6bcbc0

Competing interests

The authors declare that they have no competing interests

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Author contribution

RAG and ABP made considerable contributions to conception and drafting. RAG and JHC worked in the analysis and interpretation of data. JBH reviewed the concluding edition. All authors contributed writing, editing, and reviewing the final manuscript.

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References

1. WHO. Coronavirus Disease 2019 (COVID-19) Situation Reports. April 1 2020. Vol. 2019, WHO Situation report. 2020.

2. Adhikari SP, Meng S, Wu Y, Mao Y, Ye R, Wang Q, et al. Epidemiology , causes , clinical manifestation and diagnosis , prevention and control of coronavirus disease (COVID-19) during the early outbreak period : a scoping review. 2020;1–12.

3. Sohrabi C, Alsafi Z, O'Neill N, Khan M, Kerwan A, Al-Jabir A, et al. World Health Organization declares global emergency: A review of the 2019 novel coronavirus (COVID-19). Int J Surg [Internet]. 2020;76:71–6. Available from: https://doi.org/10.1016/j.ijsu.2020.02.034

4. Mao Y, Lin W, Wen J, Chen G. Clinical and pathological characteristics of 2019 novel coronavirus disease (COVID-19): a systematic reviews. 2020;1–31.

5. Sim K, Huak Chan Y, Chong PN, Chua HC, Wen Soon S. Psychosocial and coping responses within the community health care setting towards a national outbreak of an infectious disease. J Psychosom Res [Internet]. 2010;68(2):195–202. Available from: http://dx.doi.org/10.1016/j.jpsychores.2009.04.004

6. Torales J, O'Higgins M, Castaldelli-Maia JM, Ventriglio A. The outbreak of COVID-19 coronavirus and its impact on global mental health. Int J Soc Psychiatry. 2020;20764020915212.

7. Öğütlü H. Turkey's Response to COVID-19 In terms of Mental Health. Ir J Psychol Med. 2020;1–11.

8. Lu W, Wang H, Lin Y, Li L. Psychological status of medical workforce during the COVID-19 pandemic: A cross-sectional study. Psychiatry Res [Internet]. 2020;288(April):112936. Available from: http://www.ncbi.nlm.nih.gov/pubmed/32276196

9. Li S, Wang Y, Xue J, Zhao N, Zhu T. The impact of covid-19 epidemic declaration on psychological consequences: A study on active weibo users. Int J Environ Res Public Health. 2020;17(6).

10. Wang Y, Wang Y, Chen Y, Qin Q. Unique epidemiological and clinical features of the emerging 2019 novel coronavirus pneumonia (COVID-19) implicate special control measures. J Med Virol. 2020;

11. Qiu J, Shen B, Zhao M, Wang Z, Xie B, Xu Y. A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic : implications and policy recommendations. 2020;19–21.

12. Wang C, Pan R, Wan X, Tan Y, Xu L, Ho CS, et al. Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. Int J Environ Res Public Health. 2020;17(5).

13. Huang L, Xu FM, Liu HR. Emotional responses and coping strategies of nurses and nursing college students during COVID-19 outbreak. medRxiv. 2020;2020.03.05.20031898.

14. Newby J, O'Moore K, Tang S, Christensen H, Faasse K. Acute mental health responses during the COVID-19 pandemic in Australia. medRxiv. 2020;2020.05.03.20089961.

15. Weisman LS. Y v i d. 2003;(April).

16. Brooks SK, Webster RK, Smith LE, Woodland L, Wessely S, Greenberg N, et al. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. Lancet [Internet]. 2020;395(10227):912–20. Available from: http://dx.doi.org/10.1016/S0140-6736(20)30460-8

17. Lazarus RS, Folkman S. Stress, Appraisal, and Coping [Internet]. Springer Publishing Company; 1984. Available from: https://books.google.com.pe/books?id=i-ySQQuUpr8C

18. Park CL, Adler NE. Coping Style as a Predictor of Health and Well-Being Across the First Year of Medical School. Heal Psychol. 2003;22(6):627–31.

19. Smith BW, Kay VS, Hoyt T V., Bernard ML. Predicting the anticipated emotional and behavioral responses to an avian flu outbreak. Am J Infect Control. 2009;37(5):371–80.

20. van Bavel JJ, Baicker K, Boggio PS, Capraro V, Cichocka A, Cikara M, et al. COVID-19 pandemic response. Nat Hum Behav [Internet]. 2020;4(May):1–12. Available from: http://dx.doi.org/10.1038/s41562-020-0884-z

21. Ni JJ, Bordoloi S, Shao W, Garg A. COVID-19 and mental health: A review of the existing literature. Sci Total Environ [Internet]. 2019;136486. Available from: https://doi.org/10.1016/j.scitotenv.2019.136486

22. Taylor S. The Psychology of Pandemics: Preparing for the Next Global Outbreak of Infectious Disease [Internet]. Cambridge Scholars Publishing; 2019. Available from: https://books.google.com.pe/books?id=8mq1DwAAQBAJ

23. Zhang SX, Wang Y, Rauch A, Wei F. Health, Distress and Life Satisfaction of People in China One Month into the COVID-19 Outbreak. SSRN Electron J [Internet]. 2020;288(March):112958. Available from: https://doi.org/10.1016/j.psychres.2020.112958

24. Barbisch D, Koenig KL, Shih FY. Is There a Case for Quarantine? Perspectives from SARS to Ebola. Disaster Med Public Health Prep. 2015;9(5):547–53.

25. Asmundson GJG, Taylor S. Coronaphobia: Fear and the 2019-nCoV outbreak. J Anxiety Disord. 2020;70(February).

26. Weiss DS. The Impact of Event Scale : Revised. 1978;219–38.

27. Bali S, Stewart KA, Pate MA. Long shadow of fear in an epidemic: Fearonomic effects of Ebola on the private sector in Nigeria. BMJ Glob Heal. 2016;1(3):1–14.

28. Davis M, Stephenson N, Flowers P. Compliant, complacent or panicked? Investigating the problematisation of the Australian general public in pandemic influenza control. Soc Sci Med [Internet]. 2011;72(6):912–8. Available from: http://dx.doi.org/10.1016/j.socscimed.2011.01.016

29. Prensa N De. Plataforma digital del Estado Peruano. Ministerio de Salud. 2020;15–7.

30. Goldberg, D. & Williams P. Cuestionario de Salud General (GHQ-28). Masson. 1996;(Madrid).

31. Morán C, Landero R, González MCT. COPE-28: Un análisis psicométrico de la versión en Español del brief COPE. Univ Psychol. 2010;9(2):543–52.

32. Carver CS. You want to measure coping but your protocol's too long: Consider the brief COPE. Int J Behav Med. 1997;4(1):92–100.

33. StataCorp. Stata Statistical Software: Released 15. Coll Station TX StataCorp LLC. 2017;

34. Podsakoff PM, MacKenzie SB, Lee JY, Podsakoff NP. Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. J Appl Psychol. 2003;88(5):879–903.

35. Bentler PM. Comparative fit indexes in structural models. Psychol Bull. 1990;107(2):238–46.

36. MacCallum RC, Browne MW, Sugawara HM. Power analysis and determination of sample size for covariance structure modeling. Psychol Methods. 1996;1(2):130–49.

37. Hu LT, Bentler PM. Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. Struct Equ Model. 1999;6(1):1–55.

38. Swallow BL, Lindow SW, Masson EA, Hay DM. The use of the General Health Questionnaire (GHQ-28) to estimate prevalence of psychiatric disorder in early pregnancy. Psychol Heal Med. 2003;8(2):213–7.

39. George, D. & Mallery M. Using SPSS for Windows step by step: a simple guide and reference. Allyn & Bacon. 2003;(Boston, MA).

40. Zhang Y, Ma ZF. Impact of the COVID-19 Pandemic on Mental Health and Quality of Life among Local Residents in Liaoning Province, China: A Cross-Sectional Study. Int J Environ Res Public Heal 2020, Vol 17, Page 2381 [Internet]. 2020;17(7):2381. Available from: https://www.mdpi.com/1660-4601/17/7/2381

41. Barari S, Caria S, Davola A, Ivchenko A, Jachimowicz J, King G, et al. Evaluating COVID-19 Public Health Messaging in Italy : Self-Reported Compliance and Growing Mental Health Concerns. medRxiv [working paper, not yet peer reviewed]. 2020. p. 1–19.

42. Erceg N, Ružojčić M, Galić Z. Misbehaving in the Corona Crisis: The Role of Anxiety and Unfounded Beliefs. 2020;(April).

43. Instituto Nacional de Estadística e Informatica. Censos Nacionales 2017: XII de Población, VII de Vivienda y III de Comunidades Indígenas. 2017;641.

44. Park CL, Russell BS, Fendrich M, Finkelstein-Fox L, Hutchison M, Becker J. Americans' COVID-19 Stress, Coping, and Adherence to CDC Guidelines. J Gen Intern Med. 2020;

Figures
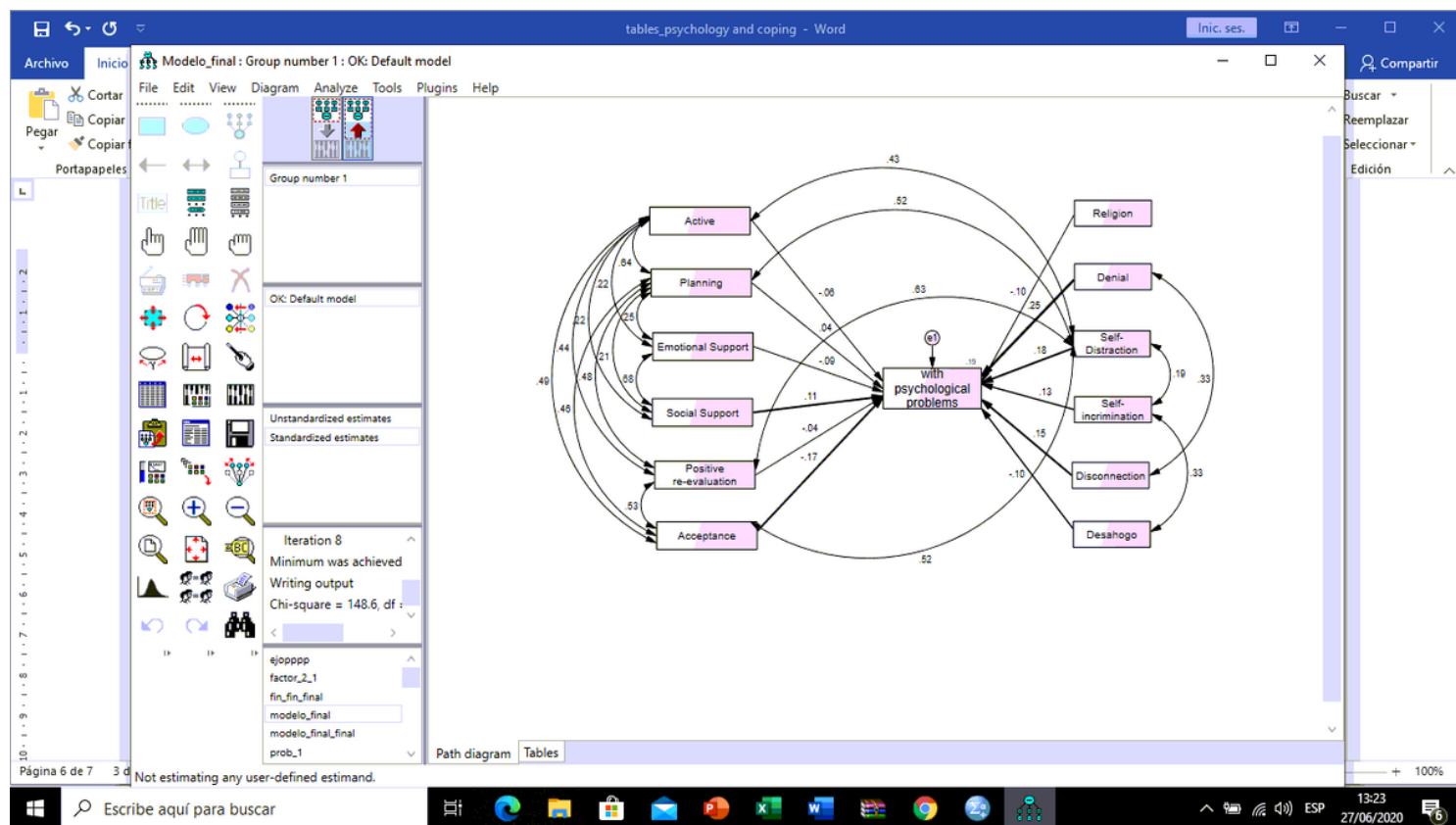
Figure 1

Report of the path analysis. Standardized coefficients of active and passive coping strategies in participants with psychological problems (N = 177; *p < .05).
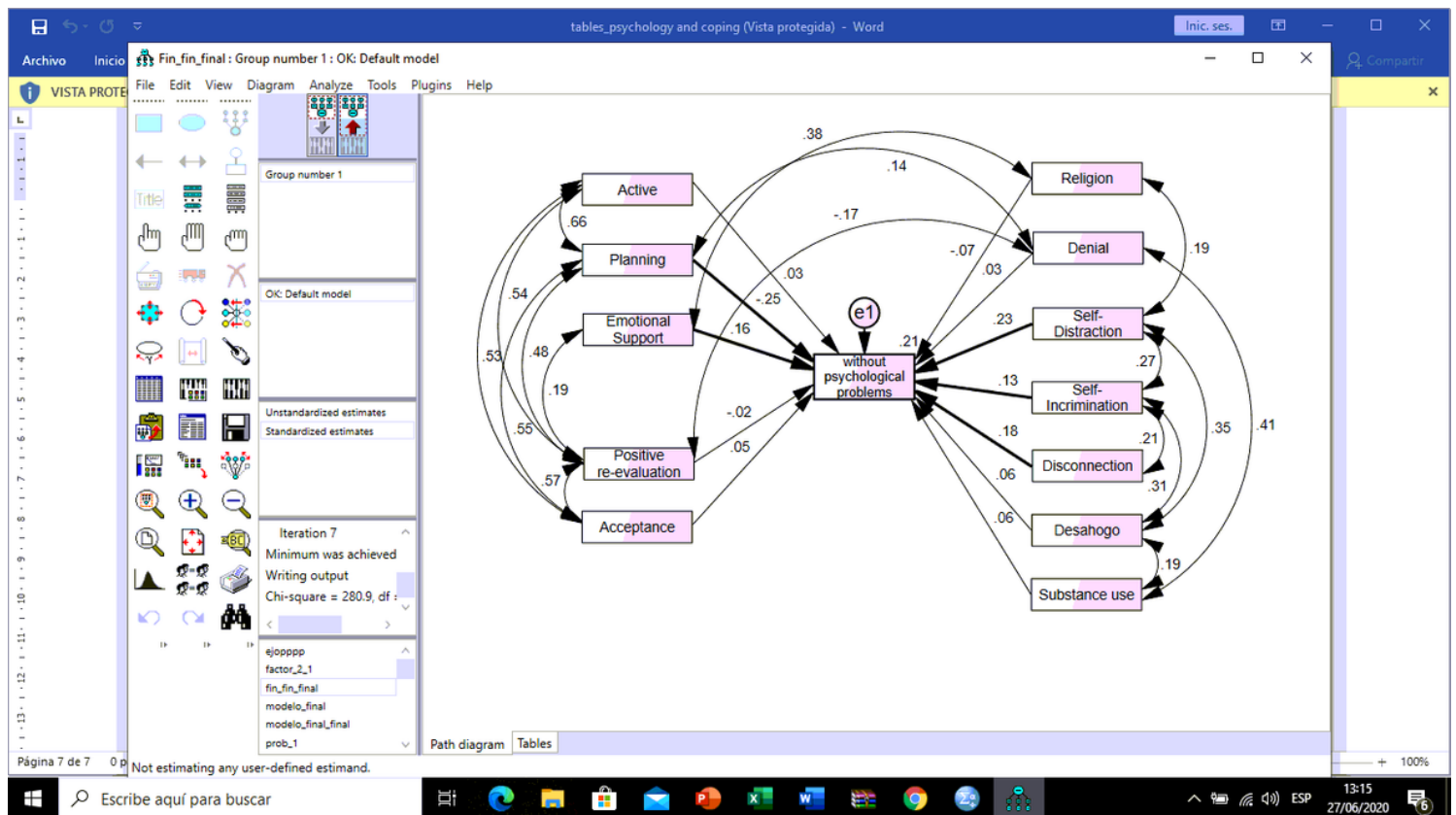
Figure 2

Report of the path analysis. Standardized coefficients of active and passive coping strategies in participants without psychological problems (N = 257; *p < .05).