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What increases the chances of staying in social isolation? Effect of prosocial variables

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Abtract

The article aims to evaluate the effects that empathy, altruism and compassion, plus sociodemographic variables, have on the permanence of adherence to the social isolation demanded by the Covid-19 pandemic. The study was quantitative, longitudinal and included a sample of 200 people from three Brazilian states, who answered twice an online questionnaire (prepared by Google forms), at intervals of 30 days, during social isolation. Davis' Multidimensional Reactivity Scale was used; the Santa Clara compassion scale (Brief Compassion Scale); the Altruistic Attitudes Scale and a sociodemographic questionnaire. The results indicated that there was an increase in the perspective empathy dimension between the first and the second collection and that the financial aspects, compassion and perspective taking increased the chances of people remaining in social isolation.

Keywords: pandemic; social isolation; prosocial behaviors.

Resumo

O que aumenta a chance de permanecer no isolamento social? Efeito de variáveis pró-sociais. O artigo possui como objetivo avaliar o efeito que a empatia, altruísmo e compaixão, mais variáveis sociodemográficas, possuem na permanência da adesão ao isolamento social demandado pela pandemia do Covid-19. O estudo foi quantitativo, longitudinal e contou com uma amostra de 200 pessoas de três estados brasileiros, que responderam duas vezes um questionário online (elaborado pelo Google forms), em intervalos de 30 dias, durante o isolamento social do primeiro semestre de 2020. Utilizou-se a escala Multidimensional de Reatividade Interpessoal de Davis; a escala de compaixão da Santa Clara (Brief Compassion Scale); a Escala de Atitudes Altruístas e um questionário sociodemográfico. Os resultados indicaram que houve aumento na dimensão da empatia de tomada de perspectiva entre a primeira e a segunda coleta e que os aspectos financeiros, a compaixão e a tomada de perspectiva aumentaram as chances de as pessoas permanecerem em isolamento social.

Palavras-chave: pandemia; isolamento social; comportamentos pró-sociais.

Resumen

¿Qué aumenta las posibilidades de permanecer en aislamiento social? Efecto de las variables prosociales. El artículo tiene como objetivo evaluar los efectos que la empatía, el altruismo y la compasión, además de las variables sociodemográficas, tienen sobre la permanencia de la adhesión al aislamiento social exigido por la pandemia de Covid-19. El estudio fue cuantitativo, longitudinal e incluyó una muestra de 200 personas de tres estados brasileños, que respondieron dos veces un cuestionario en línea (preparado por formularios de Google), a intervalos de 30 días, durante el aislamiento social. Se utilizó la escala de reactividad multidimensional de Davis; la escala de compasión de Santa Clara (Breve escala de compasión); la escala de actitudes altruistas y un cuestionario sociodemográfico. Los resultados indicaron que hubo un aumento en la dimensión de empatía de perspectiva entre la primera y la segunda colección y que los aspectos financieros, la compasión y la toma de perspectiva aumentaron las posibilidades de que las personas permanezcan en aislamiento social.

Palabras clave: pandemia; aislamiento social; comportamientos prosociales.

In the absence of a population vaccinated against COVID-19, social distancing is the most effective measure to reduce the proliferation of the Covid-19 virus (Heymann et al., 2020). Given the relevance of social distancing as a protective strategy for public health, the present research aims to assess the effects of empathy, altruism and compassion, and sociodemographic variables on the continued adherence to social isolation demanded by the Covid-19 pandemic. Therefore, it is necessary to observe that the epidemiological models built to estimate the impact of social distancing policies predict that their non-adherence would increase the number of cases and deaths. Imperial College performed calculations that impact government decisions around the world. According to the study, avoiding contact outside the home, school, or workplace would reduce proliferation rates by 75% (Ferguson et al., 2020). Additional empirical studies corroborate this idea, indicating that the imposition of measures for the non-free circulation of people is effective in flattening the virus dissemination curve curve (Abouk & Heydari, 2020; Courtemanche, Garuccio, Le, Pinkston, & Yelowitz, 2020).

Social distancing policies are diverse. They can be characterized by: restrictions on meals in restaurants, business closings that are not essential for people's immediate survival, such as bars, gyms and entertainment venues. In addition, banning the operation of schools and universities. Also, to reinforce this security, sanitary barriers are installed at airports and land borders. In more severe cases, fines could be applied to those who left the house without a plausible justification for the moment (World Health Organization, 2020).

Such measures aim to reduce contact between infected and non-infected people, reducing the contagion. Still, it is challenging to keep people in social isolation. Proof of this is the isolation rates that decrease over time, leading to a greater risk of contamination. Given the above, this study sought to answer whether the concern for other members of society can act as a protection mechanism to adhere to behavioral changes in social interaction. Therefore, below, the three prosocial variables used in the research are described.

Empathy

Empathy is a psychosocial phenomenon related to interpersonal interactions, which promote prosocial behavior and inhibit aggressive behavior. In general, it is understood from the relation between affective and cognitive models. That is, the ability to share emotional experiences and understand the emotional manifestations of others (Decety & Jackson, 2004). Davis (2018) argues that empathy can be characterized as a concept formed by different factors: (1) Perspective-taking; (2) empathic consideration; (3) fantasy; and (4) personal distress.

Perspective-taking aims to assess the ability to adopt new roles, considering the view that different individuals have. Empathic consideration refers to the tendency to experience feelings in a reactive response to other people's distress. Fantasy is about the imagination of translating one's feelings into fictional situations. Finally, personal distress is the exchange of one's emotions in the face of discomfort and restlessness of others (Cliffordson, 2001).

The relation between empathy and social distancing during the covid-19 pandemic has already been studied (Pfattheicher, Nockur, Böhm, Sassenrath, & Petersen, 2020). The authors argue that social isolation not only protects oneself but has apparent prosocial aspects, in the sense of helping other people, especially those who are more vulnerable. Overall, comparing samples from three countries, their results indicated that basic information about Covid-19 is not sufficient for its adherence. However, by including an affective empathic element in the communication, higher levels of social distancing are achieved.

Compassion

Compassion is the tendency to help others, motivated by the suffering they experience, mainly aimed at non-intimate people and strangers (Hwang, Plante, & Lackey, 2008). Such a concept covers the phenomenon as an affective state, different from an attitude or a general benevolent response, since another person's suffering needs to be present. In addition, it cannot be confused with empathy, as feeling the experience of the other is not an element of the construct (Mikulincer, Shaver, Gillath, & Nitzberg, 2005).

Three main views on the concept can be found in the literature. The first considers that individuals reflect the emotions of those around them; compassion would be, therefore, an indirect experience of anguish. The second does not consider it an emotion, but a variant of sadness and love, mainly related to caring and helping behavior. The third defends as an affective state distinct from anguish, sadness, and love, associated with specific support behaviours to individuals in a vulnerable situation (Goetz, Keltner, & Simon-Thomas, 2010).

The importance of compassion during the pandemic was mentioned in the *Journal of Clinical Nursing* editorial. Alison Kitson exposed an email that the

ambassador of the *Caring Futures Institute* sent to him. In the correspondence, it is written: compassion and caring are key points for change and acts directed towards kindness are a driving force for human behavior (Kitson, 2020, p. 1). This study considers compassion as a relevant factor of health professionals when coping with Covid-19 and tried to investigate its influence on the ability to deal with adversity (Smith, Ng, & Li, 2020). Finally, considering the population's mental health security, compassion is seen as a social protection and regulation factor (Jakovljevic, Bjedov, Jaksic, & Jakovljevic, 2020).

Altruism

Altruism can be understood as a behavior that aims to benefit another and consequently entails some cost for those who practiced it; its motivational basis is associated with sympathy and empathy (Preston, 2013). Three possible explanations support why individuals are altruistic: (1) genetic benefit, when it is aimed at people who share a kinship (Fehr & Rockenbach, 2004); (2) inclusive fitness (Dugatkin, 2007); (3) and subsequent benefits indirectly, for the individual, family or belonging group (Gintis, Bowles, Boyd, & Fehr, 2003).

The importance of altruism during the pandemic was investigated by Heffner, Vives, and FeldmanHall (2021). The authors found results that show that messages with altruistic content tend to increase social isolation compared to messages that arouse fear. This behavioral pattern has also been shown to be efficient in reducing psychological stress, an essential strategy for coping with the health team (Wu et al., 2009).

Method

Participants and Procedure

The study was quantitative, longitudinal and had an intentional non-probabilistic sample of 200 individuals from three states in the northeast of Brazil. The required sample size was estimated in the G*Power Software considering the power required for an effect (Odds ratio) of 1.8, a probability error of .05 and a confidence interval of 95%.

We used the snowball method to collect data, where the identified participants indicate other participants. Six researchers were responsible for contacting, by telephone or internet, people they knew who were in social isolation due to the Covid-19 pandemic. A code identified respondents to preserve their identity. They were informed that they would need to answer an online questionnaire twice (prepared on Google Forms) within a 30-day interval between April and June 2020. The data collection included people who declared to be performing work or studies remotely and with 18 years old or more. Those who were unable or unwilling to answer the same questionnaire 30 days after the first data collection were excluded from the study.

Data collection started after approval by the Research Ethics Committee (CAAE: 30330820.3.0000.5180).

Material

We used three scales to assess the effect that empathy, altruism and compassion (plus sociodemographic variables) have on the continued adherence to social isolation demanded by the Covid-19 pandemic. One of empathy (*The Interpersonal Reactivity Index*), one of altruistic attitudes (*Altruistic Attitude Scale*) and the other of compassion (*Santa Clara Brief Compassion Scale*), in addition to a sociodemographic questionnaire.

The Interpersonal Reactivity Index. This measure consists of 26 items that assess four factors of empathy: Personal Distress (06 items); Empathic Concern (07 items); Perspective Taking (06 items); e Fantasy (07 items). Participants should indicate the extent to which the items describe them, using a 5-point Likert scale (1 = *Does not describe me well*; 5 = *Describes me very well*). In the study by Formiga et al., (2013), the scale showed internal consistency indices greater than .70.

Altruistic Attitude Scale. Composed of 12 items, divided into three subscales representing three components of attitude: Cognition (4 items), affect (4 items), and behavior (4 items). Different response scales are used for each component, all with five points. For the cognition component, participants indicate their degree of agreement (1 = *Totally Disagree*; 5 = *Totally Agree*). For the affective component, they indicate how well or how poorly compared to the social object (1 = *Very bad*; 5 = *Very good*). Moreover, for the behavioral scale, they indicate how often (1 = *Never*; 5 = *Often*). For the adaptation in Brazil, there was internal consistency greater than .65 (Loureiro & Lima, 2009).

Santa Clara Brief Compassion Scale. Composed of five statements that assess the degree of compassion that people show. Participants indicate how true the items are for them using a 7-point scale (1 = *Not true to me*; 7 = *Very true to me*). In a study to confirm evidence of internal validity, it indicated a one-factor structure with an internal consistency of .84 (Marchetti et al., 2018).

Sociodemographic Questionnaire. The questionnaire had questions such as: Religious intensity (measured on a metric from 0 to 9. Religious intensity is greater in larger numbers); Family Income [00 - Up to one minimum wage. 01 – Between two and three minimum wages. 02 – Between four and seven minimum wages. 03 – Above eight minimum wages); Isolated days (as an open question); Financial security (measured on a metric from 0 to 9. Perceived security is higher in larger numbers); feel alone (measured on a metric from 0 to 9. Perception of loneliness is greater in larger numbers); Age (described in discrete values); Gender (0 - female, 1 - male); Marital status [0 – Single, 2 – married or stable, 3 – widowed or divorced]; Education (varying from 0 – no education to 04 – complete postgraduate studies). In the second data collection, a question was added to determine who was still in social isolation (00 – left isolation, 01 – remain in isolation).

Data analyses

We used SPSS software (version 25) to assess the data. Initially, Student's t-test was used to analyze which variables showed statistically significant differences between the first and second data collection. When the variable showed a difference, the measurements of collections 01 and 02 were adopted in the final analysis, as the different variances between collections could imply different effects on the permanence of isolation.

Subsequently, to start selecting variables for a logistic regression model, we performed Pearson's Chi-square test, Fisher's exact test or Student's t test to verify the relations with the permanence in social isolation. Those with statistical significance less than or equal to .2 were considered for the final model. In logistic regression, the variables were removed using the *Backward*: Wald method. The exp(B) was interpreted as the odds ratio of remaining in social isolation.

Results

Results showed that most participants are women (69%) with a mean age of 26.12 (*SD* = 8.83). The sample also showed 46.5% of people receiving between 02 and 03 minimum wages. At the beginning of the collection, all people were already in social isolation, with a mean time of isolated days of 15.36 (*SD* = 4.60). In the second wave, after 30 days, 6% (*n* = 12) reported that they left social isolation.

For the inferential analyses, we initially compared the levels of the study variables between the first and second data collections. The results indicate a slight reduction in fantasy empathy and Empathic Concern scores, but an increase in perspective taking. Regarding the sociodemographic variables, there was an increase in loneliness and, as expected, differences in the number of isolated days. The results described were statistically significant (see Table 1).

Table 1. Comparisons between First and Second Data Collection

	First Data Collection	Second Data Collection	p
	Mean (SD)	Mean (SD)	
Cognitive altruism	15.44 (2.59)	15.26 (2.68)	.25
Affective altruism	17.90 (2.08)	17.69 (2.34)	.12
Behavioral altruism	16.50 (2.35)	16.47 (3.30)	.92
Compassion	19.77 (3.70)	19.47 (3.85)	.18
Empathy Factors			
Fantasy	20.24 (6.21)	20.79 (6.32)	**.05**
Empathic Concern	29.79 (4.61)	29.14 (4.76)	**.01**
Personal Distress	17.82 (5.72)	17.38 (5.75)	.13
Perspective Taking	17.82 (5.72)	23.57 (4.48)	**< .01**
Demographic			
Religious intensity (from 0 to 9)	4.45 (1.84)	4.53 (1.68)	.22
Number of days in isolation	15.36 (4.60)	30.91 (11.02)	**< .01**
Financial security (from 0 to 9)	5.74 (2.71)	5.77 (2.67)	.87
Feeling lonely (from 0 to 9)	3.43 (3.10)	3.87 (3.02)	**.02**

Note. I - Age was not evaluated, as the difference between the data collection is 30 days; II – in the variables ranging from 0 to 9, the higher the number, the greater the religious intensity, financial security, and the feeling of being alone.

Table 2 presents sociodemographic variables that tend not to change significantly in the interval between the two data collections (30 days intervals). For this reason, we chose to insert them directly in the search for associations with social isolation. We found that, proportionally, more women remained in social isolation ($p < 0.01$). In addition, with a statistical significance of .07, income was also included in the regression model.

The variables that had mean differences between the first and second data collections can be found in Table 2 to verify whether these have differences between those who remained or not in social isolation. Cognitive and affective altruism and compassion means were higher among people who remained in social isolation. In addition, the averages of Empathic Concern (data collections 01 and 02), perspective-taking (collection 02), religious intensity and isolated days were also higher. Financial security (collection 01), feeling alone (collection 02) and age were considered for the final regression model due to having presented statistical significance less than or equal to .2.

Table 2. Comparison of Sociodemographic and Prosocial Variables with the Permanence in Social Isolation

	Staying in social isolation		p (sig.)
	No	Yes	
	F (%)	*F* (%)	
Gender			
Men	8 (13.1%)	53 (86.9%)	<.01
Women	4 (3.1%)	127 (96.9%)	
Marital status			
Single	10 (6.9%)	134 (93.1%)	.53
Married/stable union	2 (4.3%)	44 (95.7%)	
Educational Level			
Basic education	1 (20.0%)	4 (80.0%)	
Complete high school	8 (6.3%)	118 (93.7%)	.60
Complete higher education	2 (5.7%)	33 (94.3%)	
Complete postgraduate	1 (3.8%)	25 (96.2%)	
Family income			
Up to one minimum wage	6 (10.9%)	49 (89.1%)	
Between two and three minimum wages	2 (2.2%)	88 (97.8%)	.07
Between four and seven minimum wages	4 (11.4%)	31 (88.6%)	
More than eight minimum wages	0 (0.0%)	12 (100.0%)	
	Mean (SD)	Mean (SD)	
Cognitive altruism	13.75 (2.13)	15.53 (2.58)	.02
Affective altruism	16.16 (3.04)	18.01 (1.94)	.01
Behavioral altruism	15.50 (2.49)	16.01 (5.49)	.54
Compassion	15.50 (5.09)	20.01 (3.42)	.01
Empatia coleta 01			
Fantasy	18.41 (8.62)	20.23 (6.08)	.33
Empathic Concern	26.58 (7.56)	29.97 (4.34)	.01
Personal Distress	17.00 (6.90)	17.85 (5.56)	.61
Perspective Taking	17.00 (6.90)	17.85 (5.56)	.61
Empatia coleta 02			
Fantasy	19.00 (6.66)	20.80 (6.34)	.34
Empathic Concern	25.75 (6.06)	29.46 (4.50)	.01
Perspective Taking	19.91 (6.52)	23.86 (4.28)	.01

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Table 2. *Continuation*

	Staying in social isolation		p (sig.)
	No	Yes	
	F (%)	*F* (%)	
Demographic			
Religious Intensity (Wave 01)	3.42 (1.56)	4.51 (1.83)	.04
Days in isolation (Wave 01)	12.00 (7.44)	15.59 (4.30)	.01
Days in isolation (Wave 02)	7.75 (10.98)	32.36 (9.38)	.01
Financial security (Wave 01)	4.42 (3.84)	5.91 (2.54)	.06
Feeling lonely (Wave 01)	3.33 (3.44)	3.38 (3.12)	.96
Feeling lonely (Wave 02)	2.58 (2.74)	3.96 (3.05)	.12
Age (Wave 01)	28.17 (11.57)	26.26 (8.71)	.47

The chances of remaining in social isolation have increased for those who earn between two and three minimum wages. We found that, even under income control, other variables also significantly predicted permanence in social isolation. The chances of remaining in social isolation increase as financial security, the feeling of loneliness, compassion, and perspective-taking increase (Table 3).

Table 3. Final Model for Predicting the Permanence in Social Isolation

	B (S.E.)	Wald (df)	Sig.	Exp(B) (95% C.I.)
Up to one minimum wage		5.96 (3)	0.11	
Between two and three minimum wages	2.28 (1.10)	4.28 (1)	0.04	9.82 (1.13 - 85.63)
Between four and seven minimum wages	-0.52 (0.92)	0.31 (1)	0.58	0.60 (0.10 - 3.66)
More than eight minimum wages I				
Financial security (Wave 1)	0.23 (0.15)	2.49 (1)	0.11	1.26 (0.94 - 1.69)
Feeling lonely (Wave 1)	0.26 (0.14)	3.46 (1)	0.06	1.30 (0.99 - 1.70)
Copmassion (Wave 1)	0.28 (0.09)	8.64 (1)	<0.01	1.32 (1.10 - 1.59)
Perspective Taking (Wave 2)	0.20 (0.09)	5.50 (1)	0.02	1.22 (1.03 - 1.45)
Constant	-9.33 (2.93)	10.13 (1)	<0.01	

Note. It was not possible to estimate, as 100% remained in social isolation for this group. II Variables that were excluded from the model: Sex; religious intensity; Isolated days (Waves 1 and 2); Cognitive and affective altruism (Wave 1); Empathic consideration.

Discussion

The results show that income and the forecast of financial security increase the chances of people remaining in isolation. However, even considering the financial perspective, there are psychological variables that also increase the chances of remaining in isolation. These are: feelings of loneliness, compassion, and perspective-taking.

Initially, what can be highlighted is that there were no changes in altruism and compassion between the periods in which people were tested. However, there was a change in empathy, especially an increase in the Perspective Taking component. More data collections will be carried out during the isolation period to understand better if there are changes in prosocial behavior as people are exposed to the difficulties caused by the Covid-19 pandemic.

The addition of Perspective Taking may indicate a tendency for an increase in prosocial behavior in the following data collections. This hypothesis is supported, as empathy is identified in the literature as a strong predictor of prosocial behaviors, such as altruism and compassion (Bethlehem et al., 2017; Lamm, Rütgen, & Wagner, 2019; Ministero, Poulin, Buffone, & DeLury, 2017). Furthermore, it is possible that the increase in the dimensions of fantasy, and especially of Perspective Taking, occurred because they are cognitive dimensions of empathy and, therefore, more sensitive to social learning (M. L. Hoffman, 2007). However, in the affective dimension of empathy (i.e., Empathic Concern), there was a slight reduction, and this may have occurred because when realizing the suffering of other people and not being able to help them, people tend to reduce the affective feeling (M. L. Hoffman, 2007).

It is worth noting that empathy's cognitive and affective dimensions positively correlate (Davis, 2018; Sampaio, Guimarães, Camino, Formiga, & Menezes, 2011), but they do not share 100% of the variance. Part of the variance in the affective dimension of empathy

is not related to the cognitive dimension. Furthermore, the reduction in the affective dimensions of empathy (*Angústia Empática* and Empathic Concern) was small.

Perspective taking and compassion were two variables that remained in the final model that explain the chances of people remaining socially isolated. As there was no difference between the levels of compassion between the first and second data collections, the initial level of compassion was tested, and it was found that, as exposed in the *Journal of Clinical Nursing* editorial, in moments of great social crisis, compassion for others can be an essential prosocial resource (Kitson, 2020).

For Perspective taking, that there was an increase between the first and second data collections, it was verified that the level of the second collection (i.e., the highest level) was the one that best explained the chances of remaining isolated. As stated, Perspective taking is from the cognitive dimension of empathy and tends to be more sensitive to social learning. So, maybe this change in 30 days was due to the exposure to the suffering people are going through because of the pandemic.

Such results show that the share of empathy "learned" over the 30 days of the pandemic, more than what already existed at the beginning, has the potential to contribute to health policies aimed at social isolation. Ratifying that programs could be designed to increase Perspective taking and thus improve, for those who can stay at home, in social isolation. This demonstration that prosocial behaviors need to be taken into account in the development of public health education programs seems to be the article's main contribution. This understanding is consolidated, as the pandemic is a global health problem that strongly demands an understanding of the behavior of populations and what can interfere with health measures in them.

It is noteworthy that, as highlighted Pfattheicher et al. (2020), offering mere technical information about the pandemic and physical isolation is not enough to promote empathy. It is necessary that communication channels, such as television media, social networks, and social leaders, make it easier to take a perspective on other people's situations. Also, the power of empathy, to promote self-care to take care of other people, was highlighted in the study of Sassenrath, Diefenbacher, Siegel, and Keller (2016). The authors showed that more empathetic people in hospital settings tended to sanitize their hands more to ensure patient care.

Another noteworthy point was that more women remained isolated. However, the effect did not continue in the final model. Possibly it happened, due to the insertion and maintenance of variables such as empathy and compassion. One of the reasons why women have remained in isolation longer may be because women take greater care of others, motivated by higher levels of empathy and compassion. Such characteristics have and that have been pointed out in the literature for some decades (Micheletti, Ruxton, & Gardner, 2020; Tracy & Giummarra, 2017). Thus, when the variables compassion and Perspective taking were included in the multivariate model, there was no direct variance between sex and the permanence of social isolation, as these dimensions of prosocial behavior largely keep women in isolation.

Another important point in the results was maintaining two variables related to income: the monthly income and the financial security they perceive to have for the next two months (May and June 2020). The difference existed only between two groups for monthly income: up to one minimum wage and between two and three minimum wages. The second group is more likely to remain in social isolation. All people who reported earning above eight minimum wages remained isolated.

However, income alone does not guarantee isolation. People must realize that they can maintain themselves if they are isolated, hence the importance of the perception of financial security. This is an important feature for countries that use social isolation to reduce the speed of contagion, and it may be significant for Brazil. First, because despite the growth of the Brazilian economy between the years 2004-2013, having averaged 4.0% per year, increasing income and decreasing poverty, there was an inflection in this growth, resulting in an economic crisis, which resulted in job losses formal work (Paula & Pires, 2017). Also, Brazil remains among the most unequal globally, with a large gap between rich and poor and the flattening of the middle class. Thus, the repercussions and insecurities caused by the crisis have different effects on the country's social classes and regions (R. Hoffmann, 2017).

In this context, the Northeast of Brazil (place of the present research) stands out. With a drop in investments and an increase in unemployment, the region has presented one of the most significant difficulties in resuming growth. In 2015, there were more layoffs than hiring (Leite, Pires, Pires, & Prates, 2018). Still, in the first quarter of 2020, according to the IBGE, the

percentage of unemployment in the region was 15.6% of the economically active population.

This scenario, together with inconsistent measures by the Brazilian government, may have heightened the feeling of financial insecurity, motivating people to leave isolation regardless of the income they received. Therefore, the variable "Financial security" remained in the final model, even with the minimum wages having a strong effect. One measure that can positively affect keeping people in social isolation can be the financial assistance offered by the federal government. However, the present study was limited to assessing people's perception of financial security for the months to come. Future studies are needed to assess the effect of government financial assistance on the permanence of social isolation.

It is also worth noting that the chances of remaining in isolation increased as people reported feeling more alone in the first collection. In other words, loneliness does not seem to have reduced social isolation during the 30 days of research. This characteristic will need to be better investigated in future collections, with the insertion of measures that differentiate pain for being alone and that of pleasure. On the other hand, pleasure could function as an important psychological resource to keep oneself in social isolation. For the first case (loneliness as the pain of being alone), interactions with other variables representing risk factors, such as chronic diseases, will be verified. Thus, even feeling lonely, being more vulnerable to the worsening of the Covid-19 disease, would need to remain isolated.

Final considerations

Finally, it seems important to emphasize that this work shows that prosocial variables, in addition to financial aspects, can be seen as predictors to explain the permanence of people at home, reducing their social contacts. The premise is that more empathetic individuals tend to stay more at home because they are concerned for other people.

This study brings results that point to a beneficial effect of compassion and empathy, in addition to income, for the permanence in social isolation demanded by the pandemic caused by Covid-19. Some of the study's limitations refer to the sample being of the non-representative type and the measurements being of the self-report type collected via an internet form. Therefore, there is a need to carry out new studies that can corroborate or refute these findings. Even so, it is understood that, due to the emergency, these initial results are promising in the sense of being able to expand public strategies to mitigate the pandemic. We can conclude that the efficiency of any isolated social intervention seems to be limited, as it is recommended that several strategies be adopted and combined with increasing the chances of a substantial reduction in transmission.

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