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Psychology of Health

Loneliness, Social Support, and Cognitive Reserve of Older Adults in the COVID-19 Pandemic

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Abstract: The COVID-19 pandemic significantly affected the quality of life of older Brazilian adults. This study aimed to investigate the level of loneliness and social support of older adults during the COVID-19 pandemic and its relation with cognitive reserve, sociodemographic data, daily habits, and perceived health. An online cross-sectional study was conducted. The final sample consisted of 116 Brazilians aged over 60 years. The following instruments were used: sociodemographic questionnaire, questionnaire on the everyday habits during the pandemic, *CRIq, Revised UCLA Loneliness Scale* and *MOS-SSS.* The results showed a significant association between loneliness and social support. The regression models demonstrate the influence of perceived health and different forms of social contact in predicting social support and loneliness. These results evince the importance of the evaluation of factors related to the quality of life of older Brazilian adults during and after the COVID-19 pandemic.

Keywords: social support, cognitive reserve, loneliness, COVID-19, aging

Solidão, Apoio Social e Reserva Cognitiva em Pessoas Idosas na Pandemia da COVID-19

Resumo: A pandemia da COVID-19 afetou significativamente a qualidade de vida das pessoas idosas brasileiras. O objetivo deste estudo foi analisar o nível de apoio social e de solidão de pessoas idosas durante a pandemia do COVID-19 e sua relação com variáveis como a reserva cognitiva, dados sociodemográficos, hábitos diários e a saúde percebida. Foi conduzido um estudo transversal, online, com uma amostra de 116 brasileiros com mais de 60 anos. Os seguintes instrumentos foram aplicados: Questionário sociodemográfico, Questionário sobre hábitos na pandemia, *CRIq, Revised UCLA Loneliness Scale e MOS-SSS.* Foi observada uma associação significativa entre a solidão e o apoio social. Os modelos de regressão demonstram a influência da percepção da saúde, e de diferentes meios de comunicação na predição do apoio social e da solidão. Os resultados apresentados demonstram a importância de avaliar fatores psicossociais relacionados à qualidade de vida das pessoas idosas brasileiras durante e após a pandemia de COVID-19.

Palavras-chave: apoio social, reserva cognitiva, solidão, COVID-19, envelhecimento

Soledad, Apoyo Social y Reserva Cognitiva en Adultos Mayores en la Pandemia del COVID-19

Resumen: La pandemia del COVID-19 ha afectado significativamente a la calidad de vida de los adultos mayores brasileños. El objetivo de este estudio fue investigar el nivel de apoyo social y la soledad en los adultos mayores durante la pandemia del covid-19 y su relación con las variables como reserva cognitiva, datos sociodemográficos, hábitos diarios y salud percibida. Se realizó un estudio transversal en línea con una muestra de 116 participantes con más de 60 años de edad. Se utilizaron los instrumentos: Cuestionario sociodemográfico, cuestionario sobre hábitos en la pandemia, *CRIq*, *Revised UCLA Loneliness Scale* y *MOS-SSS*. Se encontró una correlación significativa entre la soledad y el apoyo social. Los modelos de regresión encontrados demuestran la influencia de la percepción del estado de salud y de diferentes medios en la predicción del apoyo social y la soledad. Los resultados presentados muestran la importancia de evaluar los factores psicosociales relacionados con la calidad de vida de los adultos mayores brasileños durante y después de la pandemia del COVID-19.

Palabras clave: apoyo social, reserva cognitiva, soledad, COVID-19, envejecimiento

The COVID-19 pandemic brought about economic and psychosocial consequences for the entire population and studies suggest that older people were especially affected (Miller, 2021). One of those consequences was the sudden restriction of the everyday activities of older adults outside the home, directly affecting their social relationships and quality of life and generating an increased feeling of loneliness and social deprivation (Gonçalves et al., 2022). Therefore, it is important to consider the impacts that the

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preventive measures recommended during the pandemic had on the physical, cognitive and psychosocial aspects of older people.

The cognitive reserve theory, developed by (Stern, 2002), postulates that there is a protective mechanism of cognition capable of compensating for the effects of brain injury that would be sufficient to cause symptoms of clinical dementia or cognitive decline. Cognitive reserve is an active mechanism that makes it possible to compensate for structural brain damage. According to this hypothesis, activities developed throughout life such as studying, working and having leisure time increase the amount of cognitive reserve, consequently leading to resistance to neurodegenerative diseases such as Alzheimer's (Harrison et al., 2015).

Maintenance of cognitive function is an essential factor for quality of life in aging. Therefore, the study of cognitive reserve mechanisms and how they relate to an individual's life history has great scientific and social importance. In this sense, some studies relate the maintenance of cognitive function in older adults to the concepts of loneliness and social support. These variables may serve as prodromes of cognitive decline and therefore can be related to the construct of cognitive reserve (Boss et al., 2015; Ellwardt et al., 2013; Krueger et al., 2009; Oremus et al., 2020).

Loneliness can be defined as the subjective perception of deficiencies in an individual's social circle, whether quantitative or qualitative (Russel et al., 1984). It is an aversive emotional state resulting from frustration with one's personal or social life. Loneliness may occur due to factors common to the aging process such as changes in lifestyle, impaired health, loss of loved ones or concern about care in nursing homes or one's financial situation (Boss et al., 2015). In a systematic review, Boss et al. (2015) concluded that there is a consensus in the literature regarding the negative effect of loneliness on the overall cognitive function of older people, and is it described as a risk factor for the development of dementia (Ren et al., 2023). Some studies suggest that COVID-19 preventive measures led to a surge in loneliness (Miller, 2021; Pandey et al., 2021), which tended to increase throughout the pandemic period and the enforcement of restrictive measures (Su et al., 2023).

Another important aspect in the life of older adults is social relationships. According to Stern (2012), some aspects of social relationships have been related to increased cognitive reserve. Two aspects of social relationships were identified: functional or qualitative (social support), and structural or quantitative (social network). Social support can be defined as the resources made available by other people in situations of need, i.e., the extent to which an individual can count on their social network for help, care and comfort (Oremus et al., 2020). It is a multifaceted concept, which includes the provision of emotional support, informal support (information and advice) and instrumental support (help with finances and everyday activities) (Kamin et al., 2020). Social support can be further divided into received and perceived, i.e., social support that is actually available and the perception one has of such availability (Ellwardt et al., 2013; Kamin et al., 2020). Recent studies show a link between social support and cognitive reserve. For example, in a longitudinal study that monitored Japanese older adults over a period of 10 years, social support was identified as a protective factor against the development and advancement of dementia (Murata et al., 2019).

An important resource that was widely used during the pandemic to keep in touch with friends and family was remote communication. According to Benvenuti et al. (2020), the internet can be an important tool in maintaining social relationships. However, when older adults are "forced" by circumstances to use the internet to keep in touch with their social network, a recurring situation during the pandemic, reports of loss of social support increase. Sociodemographic aspects may also negatively affect older adults during the pandemic (Berg-Weger & Morley, 2020). Living alone, for example, has been identified as a risk factor for the manifestation of depressive symptoms (Choi et al., 2021).

The quality of life of older adults is, therefore, related to the level of social support and loneliness (Benvenuti et al., 2020; Miller, 2021), which influences the way they deal with stressful events and the negative perception of aging. The impact of the COVID-19 pandemic on the quality of social relationships among older adults, and how it affected their physical and cognitive health, is an important factor that must be considered when designing public policies for older people after the pandemic. The objective of this study was to analyze the level of social support and loneliness of older adults during the COVID-19 pandemic and its relationship with variables such as cognitive reserve, sociodemographic data, everyday habits and self-perceived health.

Method

This is a descriptive and cross-sectional study.

Participants

The sample consisted of 116 Brazilians aged 60 or over who were invited to take the survey through email and social media. Participants who fully answered the questionnaire and agreed with the informed consent document were included. Table 1 features the demographic characteristics of the sample.

Instruments

Sociodemographic questionnaire: Data on age, gender, marital status, region of Brazil, living conditions and self-perceived health were collected.

Questionnaire on everyday habits during the pandemic: To analyze the effects of the pandemic on the participants' everyday life, data were collected on, for example, places they visited during the pandemic, use of communication

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technologies, frequency of visits and calls from people close to them, and purchase of basic supplies.

Cognitive Reserve Questionnaire (CRIq): Part of the Portuguese version of the CRIq instrument was used as a measure of cognitive reserve (Nucci et al., 2012; available at: http://www.cognitivereserveindex.org/). This instrument assesses the level of general cognitive reserve accumulated throughout life, in addition to three dimensions: CRIq-school, CRIq-leisure and CRIq-work. To enable its online administration, and considering the best adaptation of the questions to the Brazilian context, only the questions referring to CRIq-school and CRIq-work were used. The leisure dimension was assessed by the question: "Before the pandemic, how many hours (approximately) of leisure and free time did you have per week? This includes household chores, taking care of grandchildren, parents and pets, exercising, volunteer work, etc." Leisure activity was defined according to the original instrument, which aims to evaluate all types of activities developed over life that may contribute to increasing cognitive reserve. Therefore, activities that are not usually considered leisure, such as household chores, were evaluated under the same topic. Using this instrument made it possible to quantify three important parameters in the study of cognitive reserve: (a) years of schooling, (b) years of formal work and (c) number of other household or leisure activities. These results were used individually as indicators of cognitive reserve and also for the detailed characterization of the sample, without adding up a total score as suggested by the original instrument.

Revised UCLA *Loneliness Scale* (UCLA-R): The Brazilian version (UCLA-BR) was used (Barroso, Andrade, Midgett et al., 2016; Russell et al., 1980) to assess the level of loneliness. The scale consists of a questionnaire with 20 questions that must be answered according to a Likert scale: never (0) – rarely (1) - sometimes (2) – often (3). The score ranges from 0 to 60 points and the higher the score the greater the level of loneliness. The score on this scale suggests: minimum loneliness (0 to 22 points); mild loneliness (23 to 35 points); moderate loneliness (36 to 47 points); intense loneliness (48 to 60 points). This instrument showed evidence of validity and reliability for assessing loneliness in the Brazilian population (Barroso, Andrade, & Oliveira, 2016).

Social Support Survey (MOS-SSS): The version adapted for Brazil, translated by the pro-health study (Chor et al., 2001), was used to assess the level of social support. This instrument consists of a questionnaire with 19 questions that must be answered according to a 5-point Likert scale (never – rarely – sometimes – often – always). The Brazilian version of MOS-SSS showed good psychometric parameters and suitability indexes for the studied population (Chor et al., 2001).

Procedures

Data collection. The study was carried out remotely, complying with preventive measures against COVID-19. The data were collected online through a virtual questionnaire developed by the Google Forms platform and forwarded by email and social media platforms such as WhatsApp, Instagram and Facebook. Informed consent was collected on the same form and participants could only have access to the survey after reading the terms and agreeing to participate in the study. The data were collected between November 18, 2021 and February 9 2022.

Data analysis. A descriptive analysis of the data obtained through the questionnaire was initially carried out. To observe the relationship between the variables of interest: loneliness, social support and cognitive reserve, a correlational study was performed followed by a broader correlation study involving age, gender, schooling and the variables found in the "habits during the pandemic" section. Next, multiple linear regression models were developed based on the statistically significant information found in the correlation tables. The significance level for rejecting the null hypothesis was $p < 0.05$. The analyses were done with Jamovi 1.6.23 software.

Ethical Considerations

The research was submitted to and approved by the Research Ethics Committee of the Health Science Sector of the Federal University of Paraná, CAAE No. 48899621.6.0000.0102.

Results

The mean age of participants was 67.7, with a standard deviation of 6.79. The minimum age was 60 and the maximum age was 92. The mean level of schooling was 15.6 years, with a standard deviation of 7.06, which is very high level of schooling by Brazilian standards. Most participants were women (*N* = 92; 79.3%) and married (*N* = 59; 50.9%). The responses came from residents of the South (*N* = 70; 60.9%) and Southeast regions (*N* = 43; 37.4%) of Brazil. Most participants lived with their spouse (*N* = 46; 39.7%). To the question "How do you perceive your health?" 49.1% of participants answered "good" (*N* = 57). Table 1 features the demographic characteristics of the sample.

Table 2 features the sample's habits during the COVID-19 pandemic. The majority reported they were responsible for purchasing basic supplies during the COVID-19 pandemic (*N* = 94; 81%) and 34.5% reported having received visits from family members at least once a month during the pandemic (*N* = 40). Most participants (65.5%, *N* = 76) reported receiving calls from people close to them more than once a week, 89 participants said they used social media (76.6%) and 100 said they used video conferencing apps (86.2%). Lastly, approximately 80% of participants reported visiting markets or drugstores during the COVID-19 pandemic, followed by relatives' homes, grocery stores and religious institutions.

Table 1
Sociodemographic data of the sample (N = 116)

Variables	Mean	Standard deviation	Minimum	Maximum	*N* (%)
Age (years)	67.7	6.79	60	92	
Schooling (years)	15.6	7.06	1	52	
Gender					
			Women		92 (79.3%)
			Man		24 (20.7%)
Marital status					
			Married		59 (50.9%)
			Single		12 (10.3%)
			Widowed		26 (22.4%)
			Divorced		19 (16.4%)
Brazilian region					
			South		70 (60.9%)
			Southeast		43 (37.4%)
			Other		2 (1.7%)
Living situation					
			With spouse		46 (39.7%)
			With relatives		41 (35.3%)
			Alone		27 (23.3%)
			Other		2 (1.7%)
Self-perceived health					
			Very good		29 (25%)
			Good		57 (49.1%)
			Average		25 (21.6%)
			Poor		5 (4.3%)

Table 2
Habits during the COVID-19 pandemic

Variables		*N* (%)
Are you responsible for purchasing basic supplies?		
	Yes	94 (81%)
	No	22 (19%)
How often were you visited by relatives or friends?		
	More than once a week	21 (18.1%)
	Once a week	20 (17.2%)
	Once a month	16 (13.8%)
	Less than once a month	40 (34.5%)
	Never	19 (16.4%)
How often do you receive calls from people close to you?		
	More than once a week	76 (65.5%)
	Once a week	26 (22.4%)
	Once a month	1 (0.9%)
	Less than once a month	10 (8.6%)
	Never	3 (2.6%)
Do you often use social media?		
	Yes	89 (76.7%)
	No	27 (23.3%)
Do you often use chat and video conferencing apps?		
	Yes	100 (86.2%)
	No	16 (13.8%)
Places visited during the pandemic		
	Market	95 (81.9%)
	Drugstore	92 (79.3%)
	Grocery store	33 (28.4%)
	Religious institutions	31 (26.7%)
	Relatives' home	53 (45.7%)
	Friends' home	14 (12.1%)
	Park	26 (22.4%)
	Restaurant	27 (23.3%)
	Mall	22 (19%)
	Other	18 (15.5%)
	None	11 (9.5%)

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Table 3 features the results of the instruments used in the research. The mean of the MOS-SSS scale was 74.4 points, with a standard deviation of 18.8 (maximum value = 95 and minimum value = 19). The UCLA-BR mean was 17.3 points, with a standard deviation of 13.2. (maximum value = 56 and minimum value = 0). In this sample, 60.1% of participants had a minimum level of loneliness, 20.6% had a mild level, 8.6% had a moderate level and 2.5% had an intense level of loneliness.

The mean CRIq-school was 127 points, with a standard deviation of 26.1 (maximum value = 244 and minimum value = 74). The mean CRIq-work was 109 points, with a standard deviation of 27.8 (maximum value = 188 and minimum value = 66). In this study, two groups were considered in relation to leisure time. The first group had high weekly leisure time before the pandemic (over 8 hours) (*N* = 71; 61.2%) and the second group had low weekly leisure time before the pandemic (under 8 hours) (*N* = 45; 38.8%).

Table 3

Social support. loneliness and cognitive reserve

Variables	Mean	Standard deviation	Minimum	Maximum		*N* (%)
MOS-SSS	74.4	18.8	19	95		
UCLA-br	17.3	13.2	0	56		
CRIq-school	127	26.1	74	244		
CRIq-work	109	27.8	66	188		
Weekly leisure time					Under 8 hours	45 (38.8)
					Over 8 hours	71 (61.2)

Loneliness was negatively correlated with social support (r = -0.61; p <0.001) and CRIq-school was positively correlated with CRIq-work (r = 0.45, p <0.001). In addition, the group with more leisure time before the pandemic was positively correlated with greater social support (r = 0.26; p = 0.004). In this initial analysis, no other significant correlation was found.

A second analysis included the remaining variables (Table 4). According to Mukaka (2012), in general the variables analyzed showed low correlations (between 0.3 and 0.5). The self-perceived health variable was positively correlated with social support (r = 0.28; p = 0.002), CRIq-school (r = 0.20; p = 0.034) and schooling (r = 0.26; p = 0.005), and negatively correlated with loneliness (r = −0.41; p <0.001) and age (r = −0.20; p = 0.033). Frequency of calls was positively correlated with frequency of visits (r = 0.26; p = 0.006), self-perceived health (r = 0.21; p = 0.021), social support (r = 0.36; p <0.001), CRIq-school (r = 0.26; p = 0.005), schooling (r = 0.23; p = 0.012) and weekly hours of leisure before the pandemic (r = 0.24; p = 0.009). This variable was also negatively correlated with loneliness (r = −0.29; p = 0.002). Frequency of visits was positively correlated with social support (r = 0.36; p <0.001) and negatively with loneliness (r = −0.25; p = 0.006). In addition, schooling was also positively correlated with CRIq-school (r = 0.86; p <0.001) and CRIq-work (r = 0.50; p <0.001), and negatively with age (r = −0 .28; p = 0.003).

Table 4

Correlation between social support, loneliness, CRIq-school. CRIq-work, leisure time, frequency of calls, frequency of visits, self-perceived health and age

	Social support	Loneliness	*CRIq-school*	*CRIq-work*	Age	Schooling	Leisure hours	Visits	Calls
Loneliness	-0.61 ***	—							
CRIq-school	0.05	-0.06	—						
CRIq-work	-0.13	-0.01	0.45 ***	—					
Age	0.13	0.10	-0.09	-0.16	—				
Schooling	0.05	-0.13	0.86 ***	0.50 ***	-0.28 **	—			
Leisure hours	0.26 **	-0.15	0.11	-0.05	0.11	0.04	—		
Visits	0.36 ***	-0.25 **	0.10	-0.09	0.06	0.11	0.16	—	
Calls	0.36 ***	-0.29 **	0.26 **	-0.00	-0.07	0.23 *	0.24 **	0.26 **	—
Self-perceived health	0.28 **	-0.41 ***	0.20 *	0.08	-0.20 *	0.26 **	0.17	0.16	0.21 *

Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

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Table 5 features the results of the multiple linear regression models, organized according to statistically significant correlations. It was observed that the interaction between self-perceived health and frequency of visits is capable of predicting the level of social support during the COVID-19 pandemic period (F = 17.2; p <0.001; adjusted R^2 = 0.22). In addition, interaction between self-perceived health and frequency of calls is a predictor of the level of loneliness during this period (F = 21.3; p <0.001; adjusted R^2 = 0.26).

Table 5
Multiple linear regression models with the Loneliness and Social Support dependent variables

	Predictor	Estimate	EP	t	p
Loneliness	Intercept	54.53	6.02	9.06	<0.001
	Calls	-4.4	1.24	-3.56	<0.001
	Health	-5.94	1.37	-4.32	<0.001
Model	R = 0.523	R^2 = 0.274	*Adjusted* R^2 = 0.261	F = 21.3	
Social support	Intercept	39.32	6.43	6.12	<0.001
	Calls	7.07	1.98	3.58	<0.001
	Health	4.65	1.21	3.83	<0.001
Model	R = 0.484	R^2 = 0.234	*Adjusted* R^2 = 0.220	F = 17.2	

Discussion

This study aimed to analyze the level of social support and loneliness of older adults during the COVID-19 pandemic and investigate its relationship with variables such as cognitive reserve, sociodemographic data, habits during the COVID-19 pandemic and self-perceived health. Data analysis showed a low level of loneliness in the studied sample. Due to the cross-sectional nature of the study, it is not possible to state that the moderate and intense loneliness reported by part of the sample resulted from the COVID-19 pandemic, as these outcomes are informative data regarding loneliness in a specific period of the pandemic, when social distancing measures and health restrictions were in the process of being relaxed.

The data collected showed a significant association between social support, loneliness and self-perceived health. The results suggest that the higher the level of social support during the pandemic, the better older adults perceive their health. Similarly, the higher the levels of loneliness, the worse they perceive their health. This result is relevant to understanding quality of life parameters of older adults, regardless of the pandemic period.

Corroborating these results, in a systematic review, (Dahlberg et al., 2022) suggest that self-perceived health is one of the factors consistently associated with loneliness in older adults. Historically, loneliness is associated with a higher risk of mortality, worsening physical and mental health conditions, and less well-being (Dahlberg, 2021; Pandey et al., 2021). (Miller, 2021) reports how isolation and loneliness in older people impair their mental health and physical function. Several studies found that social support is an important protective factor for physical, mental and cognitive health, and is directly related to well-being and quality of life (Benvenuti et al., 2020; Ellwardt et al., 2013; Templeton et al. al., 2021).

Hence the importance of investigating factors that contribute to reducing loneliness and increasing social support levels among the older population, as there is evidence that these factors influence physical, mental and cognitive health, as well as the way in which they perceive their health. In this sense, an interesting result observed in this study was the prediction of level of loneliness in the linear regression model, indicating that people who received more calls during the pandemic and had better self-perceived health had a lower level of loneliness. Likewise, a prediction of level of social support during the pandemic was observed, suggesting that people who received more visits and had better self-perceived health had greater social support. These data are important for the conclusion of the study, since during the period of social distancing, the possibility of visiting people close to us decreased and technology played an important role in maintaining social support (Berg-Weger & Morley, 2020).

In recent years, several studies have investigated the impacts of replacing in-person relationships with remote mediation. One hypothesis is that technology could be a compensatory mechanism for social distancing, reducing loneliness (Dahlberg, 2021). When it comes to older adults, there are still impediments related to the use of technology for communication. Even so, Miller (2021) suggests that virtual communication is an important strategy for maintaining social contact among older people both during and after the pandemic.

However, some studies show potential long-term harm of such replacement. Hawkley et al. (2021) concluded that the effects of the increase in remote contact were not enough to compensate for the deficit in personal relationships, leading to lower levels of happiness, more frequent depressive symptoms and a significant increase in loneliness among older adults during the pandemic. Benvenuti et al. (2020) observed a possible decrease in self-perceived social support when technology replaces personal contact

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for older people, but that the use of assistive technologies to complement the social interaction of this population may have great benefits. These considerations are in line with the results obtained in this study, as the frequency of interpersonal contact, whether in person or remotely, is a possible moderator of social support, level of loneliness and the way older adults perceive their health.

Another interesting finding was the absence of a relationship between cognitive reserve, social support and loneliness, contrary to the initial hypothesis of the study. Previous research suggests that a low level of schooling, used as an indicator of cognitive reserve, is considered one of the risk factors for loneliness in older adults (Berg-Weger & Morley, 2020). Additionally, social support and loneliness are reported in the literature to be protective factors against cognitive decline, justifying the expectation of an association between the factors studied. For future studies, it will be important to investigate the effects of the suspension of everyday activities during the pandemic, especially social activities, on the cognitive reserve of the population in general and the consequences for the aging of the next generations. In this sense, a study conducted with an Italian sample during the lockdown period showed the impacts of the pandemic on the cognitive health of the population, and to what extent it was influenced by factors associated with cognitive reserve such as age, social contact and schooling (Santangelo et al., 2021).

This study has some limitations. The participants were mostly from the South and Southeast regions, with above average schooling and access to the internet. Therefore, the results found cannot be generalized to the entire population of older adults in Brazil. Another limitation concerns the instruments used. As already mentioned, the leisure section of the CRIq survey was adapted, as it proved to be too long during the pilot project. The use of this instrument took into account the lack of validation studies for the Brazilian population. Still in relation to the method, the study design hindered the possibility of obtaining data on levels of loneliness and social support before the pandemic period, and it was not possible to relate the data obtained to the period during which the research was carried out. Also, this study was based on an online survey, which may represent a limitation, since older adults typically have more difficulty dealing with virtual tools.

Despite these limitations, the study is relevant insofar as it presents recent data on levels of loneliness and social support and indicators of cognitive reserve of older adults during the COVID-19 pandemic, besides an analysis of psychosocial and sociodemographic factors associated with those data. The results found are relevant for the development of strategies to improve the quality of life and health of older adults, helping understand the factors associated with loneliness and social support. In addition, it affords the possibility of making comparisons with similar data in the post-COVID-19 pandemic period.

Another important issue raised by this study is the impact of the COVID-19 pandemic on the building of cognitive reserve. Considering that many people around the world spent months, and even years, without working or studying due to the pandemic, in addition to reducing social contact and leisure activities, it is possible to assume that those factors, combined with the stress, traumatic situations and lack of basic living conditions caused by the COVID-19 pandemic, will have negative consequences for the entire population. This is a topic that should be investigated in the coming years.

In short, the results found showed an association between self-perceived health, social support and loneliness, in addition to a prediction of those factors based on the frequency of social contact during the pandemic. Considering the impact of the variables studied on the cognitive health and quality of life of older adults, future research could investigate which aspects of health have suffered a decline from the perspective of this population and what strategies can be implemented to provide them with well-being. Therefore, the data presented here must be taken into consideration when developing public health policies aimed at psychosocial care for this population in Brazil.

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