

The effects of the pandemic on the sexual behavior of individuals affected by covid-19

The effects of the pandemic on the sexual behavior of individuals affected by covid-19 Los efectos de la pandemia en el comportamiento sexual de los individuos afectados por covid-19

RESUMO

Objetivo: Analisar os efeitos da pandemia no comportamento sexual dos indivíduos com COVID-19. Método: Trata-se de uma pesquisa descritiva de corte transversal, quantitativa, composta por 807 pessoas com vida sexual ativa. Resultados: Observou-se, que em sua maioria as pessoas eram casadas e não mudaram o status do relacionamento durante a pandemia com parceiro fixo e que tiveram sua vida sexual afetada pela pandemia (58,5%), que continham percepção satisfatória da vida sexual antes da pandemia (80,5%), mas que houve uma diminuição durante a pandemia (23%, p=0,001). Ocorreu também uma diminuição ao atingir o orgasmo (60,5%) para durante a pandemia (44,5%). A grande maioria afirmou que a excitação durante a pandemia não mudou (46,5%) e apresentaram pouco desconforto/dor durantes as relações sexuais nesse período. Conclusão: A pandemia afetou não somente no comportamento sexual, como também na saúde em geral dos indivíduos.

DESCRITORES: População. Comportamento sexual. Coronavírus.

ABSTRACT

Objective: To analyze the effects of the pandemic on the sexual behavior of individuals with COVID-19. Method: This is a descriptive cross-sectional, quantitative survey of 807 people with an active sex life. Results: It was observed, that mostly people were married and not change their relationship status during the pandemic with fixed partner and who had their sexual life affected by the pandemic. Results: It was observed, that mostly people had their sex life affected by the pandemic (58.5%), that they contained satisfactory perception of sex life before the pandemic (80.5%), but that there was a decrease during the pandemic (23%, p=0.001). There was also a decrease in reaching orgasm (60.5%) to during the pandemic (44.5%). The great majority affirmed that the excitement during the pandemic did not change (46.5%) and presented little discomfort/ pain during sexual relations in this period. Conclusion: Of pandemic affected not only the sexual behavior, but also the general health of individuals. **DESCRIPTORS:** Population. Sexual behavior. Coronavírus.

RESUMEN

Objetivo: Analizar los efectos de la pandemia en el comportamiento sexual de los individuos con COVID-19. Método: Se trata de una investigación descriptiva de corte transversal, cuantitativa, compuesta por 807 personas con vida sexual activa. Resultados: Se observó, que en su mayoría las personas estaban casadas y no cambiaron de estado civil durante la pandemia con pareja estable y que tenían su vida sexual afectada por la pandemia (58,5%), que tenían una percepción satisfactoria de la vida sexual antes de la pandemia (80,5%), pero que hubo una disminución durante la pandemia (23%, p=0,001). También hubo una disminución en el alcance del orgasmo (60,5%) a durante la pandemia (44,5%). La gran mayoría afirmó que la excitación durante la pandemia no cambió (46,5%) y presentó poco descontento/dolor durante las relaciones sexuales en este período. Conclusión: La pandemia afectó no sólo al comportamiento sexual, sino también a la salud general de los individuos.

DESCRIPTORES: Población; Comportamiento sexual; Coronavirus.

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INTRODUCTION

urrently, the world has not been able to accurately measure the impact that the new Coronavirus pandemic has reached on the population in all areas of human life through its transmission capacity and lethality, which disrupted and brought changes in all layers and population structures. 1

There is an intense catastrophe with regard to the sudden change in human relationships, further corroborating a deleterious condition of human relationships. Therefore, when analyzing this context through the prism of sexual relationships, a catastrophic change can be seen in the different levels that involve sexual relationships, whether at a casual level or not. 2

Thus, it is observed that over the months resulting from social isolation, on the one hand, a decrease in sexual relations allied to a decrease in sexual pleasure and, in consonance, a substantial increase in questions of the psychological treatment. 3 It is noticeable that sexual relations were in some cases intensified or diminished, depending

on the context in which these individuals were inserted. 4

In this perspective, Yuksel and Ozgor 5 point to a scenario aimed at decreasing sexual desire and satisfaction between men and women, in addition to a constant decrease in risk relations caused by social distancing, and another scenario that points out that part of the interviewees is inclined to have a greater number of partners in a post-pandemic context.

Allied to this, the substantial increase in masturbation and visits to pornographic sites is also noticeable 6 and in the decrease of sexual desire in the partner as the perception of auto-eroticism in individual relationships increases. 7 Another scenario is precisely the increase in sexual desire and its use to intensify marital relationships and the use of sex to alleviate mental disorders caused by social distancing. 8

Against this antagonistic scenario, it is noticeable that sexual relationships play a crucial role in human life. 9 However, it is still not possible to accurately measure the impact of social distancing on sexual relationships, however, it is necessary to carry

out studies in different contexts in order to draw a more general panorama of the impact of distancing on the sexual life of men and women. Therefore, for this understanding, the present study aims to analyze the effects of the pandemic on the health and sexual behavior of individuals with confirmation of COVID-19.

METHODS

This is a descriptive cross-sectional study with a quantitative approach that is part of the Multicentric Survey, nationwide, carried out in June 2020 through an online questionnaire by Google Forms and disseminated through social media. A cut-off of the sample was performed, due to the involvement of COVID-19, and which were grouped into individuals with COVID-19 (n = 99) and those without COVID-19 (n = 708), comprising a total of 807 individuals over 18 years with active sexual life in the 5 Brazilian regions.

The IBM - SPSS 22.0 statistical package was used for data analysis and to seek association between the variables, binary



logistic regression was performed using the adjusted Odds Ratio in order to investigate the association between sexual orientation and the study's independent variables with a confidence interval of 95 % and with a significance level of 5% (p-value <0.05).

The study followed the recommendations of the ethical precepts of Resolution n° 466/2012, of the National Health Council, being approved by the Ethics and Research Committee (CEP) of the University of International Integration of Afro-Brazilian Lusofonia (UNILAB) under CAAE n° 31383120.7. 0000.5576 and opinion No. 4.050.129/2020.

RESULTS

The prevalence of people who had symptoms or confirmation of COVID-19 in the studied sample was 12%, with mostly women aged between 18 and 40 years, mixed race, graduate students who work and have a family income between 3 and

5 minimum wages (Table 1). There was a statistically significant association between presenting symptoms or confirmation of COVID-19 and the variables "education" and "family income".

It was observed, with regard to the relational aspects and sexual orientation of individuals, who did or did not present signs and symptoms of COVID-19, mostly Heterosexual, married or in a stable relationship, who had between 3 and 5 years of relationship with only one steady partner and that such relationship has not changed during the pandemic. There was no statistical association between relational variables and sexual orientation with having or not having symptoms/confirmation of CO-VID-19 (Table 2).

Individuals who had symptoms/confirmation of COVID-19 had mostly their sex lives affected by the pandemic (58.5%). It is noteworthy that such subjects had a satisfactory perception of their sexual life before the pandemic (80.5%) but that there was a

decrease in this assessment during the pandemic by 23% (p=0.001). There was also a reduction in the frequency with which they managed to reach orgasm during sexual intercourse before the pandemic (60.5%) to during the pandemic (44.5%). The study also found that individuals who had CO-VID-19 were twice as likely to have changed the satisfactory perception of their sex life before the pandemic to during the pandemic (Table 3).

The vast majority stated that sexual arousal during this period did not change (46.5%) during the pandemic, presenting a few times frequency of pain or discomfort during or after sexual intercourse (73.5%) and the level of desire during the pandemic was considered moderate to high (30% - 31% respectively). There was a statistically significant association between having symptoms or confirmation of COVID-19 and the frequency of discomfort or pain during or after sexual intercourse during the pandemic period (p=0.046).

VARIABLES	WITH WITHOUT	TOTAL			P-VALUE		
		V	WITH		WITHOUT		
	Variables		%	N	%	%	p-value
Gender	Male	24	3,0	177	21,9	24,9	
	Female	68	8,4	485	60,1	68,5	
	Not Informed	7	0,9	46	5,7	6,6	0,969
Age	Between 18 and 40 years	85	10,5	601	74,5	85,0	
	>40 years	14	1,7	107	13,3	15,0	0,881
Ethnicity	Black	8	1,0	58	7,2	8,2	
	Brown	47	5,8	266	33,0	38,8	
	White	41	5,1	370	45,8	50,9	
	Indigenous	0	00,0	7	00,9	0,9	
	East asian	1	0,1	4	00,5	0,6	
	Other	2	0,2	3	00,4	0,6	0,108
Education	Complete primary education	0	00,0	1	0,1	0,1	
	Incomplete high school	2	0,2	0	00,0	00,2	
	Complete high school	1	0,1	21	2,6	2,7	
	Technical education	0	00,00	11	1,4	01,4	
	Incomplete higher education	17	2,1	147	18,2	020,3	
	Complete higher education	22	2,7	166	20,6	023,3	
	Postgraduate studies	57	7,1	362	44,9	051,9	0,005*



Trabalha	Yes No	81 18	10,1 2,2	533 175	66,0 21,7	76,1 23,9	0,153
Renda	< 1 minimum wage 1 to 3 minimum wages 3 to 5 minimum wages > 5 minimum wages	3 26 41 29	0,4 3,2 5,1 3,6	18 224 187 279	2,2 27,8 23,2 34,6	2,6 31,0 28,3 38,2	0,017*
Source: Research data, 2020.							

v	ariables		YES		NO	
V	ariables	N	%	N	%	p-value
Sexual orientation	Heterossexual	81	10,0	576	71,4	
	Homossexual	10	1,2	77	9,5	
	Assexual	0	0	3	0,4	
	Bissexual	8	1,0	50	6,2	
	Others	0	0	2	0,2	0,92
Type of relationship	Single	31	3,8	197	24,4	
	Dating	25	3,1	200	24,8	
	Married or in a stable union	43	5,3	306	37,9	
	Widow(er)	0	0	3	0,4	
	Others	0	0	2	0,2	0,85
Relationship status changed	Yes	10	1,2	89	11,0	
in pandemic	No	47	5,8	661	81,9	0,20
Do they have a steady part-	Yes	77	9,5	531	65,8	
ner?	No	22	2,7	177	21,9	0,54
Time with fixed partner	< 6 months	18	2,2	80	9,9	
·	6 months and 1 year	21	2,6	133	16,5	
	Between 1 and 3 year	14	1,7	93	11,5	
	Between 3 and 5 years	25	3,1	231	28,6	
	> 5 years	21	2,6	171	21,1	0,2

DISCUSSION

The present study sought to understand how the COVID-19 pandemic affected the sexual life of individuals whose profile of individuals with symptoms and/or confirmation of COVID-19 showed a uniform proportional distribution, between men and women, which corroborates the findings found by the World Health Organization (WHO) when presenting the worldwide distribution among confirmed cases of the disease. 10

With regard to age group, it was observed that the 18-40 year-old group had the

vast majority of confirmed cases, which is in line with the results pointed out by Gouveia et al. (2020) 11 which, in the city of Ceará, showed a predominance of the age group between 20 and 59 years. The people affected by COVID-19 in this study are mostly brown, followed by white, which corroborates Ferreira et al. 12 when finding



Affected sex life Yes No No Satisfactory Unsatisfactory Unsatis	Variables		YES	NO N	OR (CI 95%)	p-value
No			IN .	IV.		
Perception of sexual life before the pandemic There was a change in the assessment of the perception of sexual life during the pandemic Achieved orgasm before the pandemic Achieved orgasm before the pandemic Achieved orgasm during the pandemic Pes, all the times No 80 558 150 0,797 (0,565-1,123) No 42 2,002 (1,308-3,066) No 81 274 1 1 274 1 274 1 285 0,739 (0,467-1,171) No 8 42 0,594 (0,256-1,379) Achieved orgasm during the pandemic Pes, all the times Yes, all the times Yes, most of the times Yes, it didn't change Yes, it didn't change Yes, it didn't change Yes, it increased No 20 0,704 (0,443-1,152) 0,592 (0,336-1,045) Level of sexual desire or interest during the pandemic Very low or none Low 11 82 1,285 (0,686-2,408) Moderated High No 227 1,266 (0,576-2,827) Very high No 151 1	Affected sex life	Yes	58	385		
the pandemic Unsatisfactory 19 150 0,797 (0,565-1,123) There was a change in the assessment of the perception of sexual life during the pandemic		No	41	323	1,132 (0,665-1,926)	0,64
There was a change in the assessment of the perception of sexual life during the pandemic Achieved orgasm before the pandemic Achieved orgasm before the pandemic Yes, all the times Yes, most of the times No Yes, all the times Yes, most of the times No Yes, all the times Yes, most of the times No Achieved orgasm during the pandemic Yes, all the times Yes, most of the times No Yes, all the times Yes, most of the times Yes, most of the times No Yes, it idin't change Yes, it increased No 11 12 1285 (0,686-2,408) No 14,575 (0,782-2,717) No 15 151 1	Perception of sexual life before	Satisfactory	80	558		
Sement of the perception of sexual life during the pandemic Yes, all the times Yes, most of the times Yes, it didn't change	the pandemic		19	150	0,797 (0,565-1,123)	0,19
Achieved orgasm before the pandemic Yes, all the times Yes, most of the times Yes, most of the times No 8 42 0,739 (0,467-1,171) No 8 42 0,594 (0,256-1,379)	There was a change in the asses-	Yes	57	286		
pandemic Yes, most of the times No 60 392 0,739 (0,467-1,171) 0,594 (0,256-1,379) Achieved orgasm during the pandemic Yes, all the times Yes, most of the times No 25 239 1 0,635 (0,377-1,069) 0,704 (0,401-1,237) Feels or used to feel sexual arousal during the Pandemic Yes, it didn't change Yes, it increased No 46 400 1 0,714 (0,443-1,152) 0,704 (0,401-1,237) Level of sexual desire or interest during the pandemic Very low or none Low No 9 27 1 0,285 (0,686-2,408) 0,592 (0,336-1,045) Low Moderated High 30 227 1,285 (0,686-2,408) 0,509 (0,206-1,259) 0,509 (0,206-1,259) Frequency of discomfort or pain There was no sexual intercourse 15 151 1	sment of the perception of sexual	No	42	422	2,002 (1,308-3,066)	0,00
pandemic Yes, most of the times 60 392 0,739 (0,467-1,171) No 8 42 0,594 (0,256-1,379) Achieved orgasm during the pandemic Yes, all the times 25 239 1 Yes, most of the times 44 267 0,635 (0,377-1,069) 0,704 (0,401-1,237) Feels or used to feel sexual arousal during the Pandemic Yes, it didn't change 46 400 1 Yes, it increased 33 205 0,714 (0,443-1,152) 0,592 (0,336-1,045) Level of sexual desire or interest during the pandemic Very low or none 9 27 1 Low 11 82 1,285 (0,686-2,408) Moderated 31 266 1,457 (0,782-2,717) High 30 227 1,266 (0,576-2,827) Very high 18 106 0,509 (0,206-1,259)	life during the pandemic					
Achieved orgasm during the pandemic Achieved orgasm during the pandemic Yes, all the times Yes, most of the times Yes, most of the times No Yes, it didn't change Yes, it didn't change Yes, it increased No 10,714 (0,443-1,152) No 7,714 (0,443-1,152)	Achieved orgasm before the	Yes, all the times	31	274	1	
Achieved orgasm during the pandemic Yes, all the times Yes, most of the times No Yes, it didn't change Yes, it increased No No Yes, it increased No Yes, it increased No No No Yes, it increased No No Yes, it increased No No No Yes, it increased No No No Yes, it increased No No No No Yes, it increased No No No Yes, it increased No No No No Yes, it increased No No No No No Yes, it increased No No No No No No Yes, it increased No	pandemic	Yes, most of the times	60	392	0,739 (0,467-1,171)	
pandemic Yes, most of the times 44 267 0,635 (0,377-1,069) No 30 202 0,704 (0,401-1,237) Feels or used to feel sexual arouses all during the Pandemic Yes, it didn't change 46 400 1 Yes, it increased 33 205 0,714 (0,443-1,152) No 20 103 0,592 (0,336-1,045) Level of sexual desire or interest during the pandemic Very low or none 9 27 1 Low 11 82 1,285 (0,686-2,408) Moderated 31 266 1,457 (0,782-2,717) High 30 227 1,266 (0,576-2,827) Very high 18 106 0,509 (0,206-1,259) Frequency of discomfort or pain There was no sexual intercourse 15		No	8	42	0,594 (0,256-1,379)	0,3
No 30 202 0,704 (0,401-1,237)	Achieved orgasm during the	Yes, all the times	25	239	1	
Feels or used to feel sexual arousal arousal during the Pandemic Yes, it didn't change Yes, it increased No 46 400 1 Level of sexual desire or interest during the pandemic Very low or none 9 27 1 Low Moderated High Yes, it increased No 31 266 1,457 (0,782-2,717) High Yes, it increased Yes, it increased Yes, it increased No 31 27 1 11 82 1,285 (0,686-2,408) 1,457 (0,782-2,717) High Yery high 30 227 1,266 (0,576-2,827) Very high 18 106 0,509 (0,206-1,259) Frequency of discomfort or pain There was no sexual intercourse 15 151 151	pandemic	Yes, most of the times	44	267	0,635 (0,377-1,069)	
Sal during the Pandemic Yes, it increased No 33 205 0,714 (0,443-1,152) No 20 103 0,592 (0,336-1,045) Level of sexual desire or interest during the pandemic Very low or none 9 27 1 Low 11 82 1,285 (0,686-2,408) Moderated 31 266 1,457 (0,782-2,717) High 30 227 1,266 (0,576-2,827) Very high 18 106 0,509 (0,206-1,259) Frequency of discomfort or pain There was no sexual intercourse 15		No	30	202	0,704 (0,401-1,237)	0,2
No 20 103 0,592 (0,336-1,045)	Feels or used to feel sexual arou-	Yes, it didn't change	46	400	1	
Level of sexual desire or interest during the pandemic Very low or none Low 11 82 1,285 (0,686-2,408) Moderated High Very high 18 106 0,509 (0,206-1,259) Frequency of discomfort or pain There was no sexual intercourse 15 15 17 18	sal during the Pandemic	Yes, it increased	33	205	0,714 (0,443-1,152)	
during the pandemic Low 11 82 1,285 (0,686-2,408) Moderated 31 266 1,457 (0,782-2,717) High 30 227 1,266 (0,576-2,827) Very high 18 106 0,509 (0,206-1,259) Frequency of discomfort or pain There was no sexual intercourse 15 151 1		No	20	103	0,592 (0,336-1,045)	0,1
Moderated 31 266 1,457 (0,782-2,717) High 30 227 1,266 (0,576-2,827) Very high 18 106 0,509 (0,206-1,259) Frequency of discomfort or pain There was no sexual intercourse 15 151 1	Level of sexual desire or interest	Very low or none	9	27	1	
High Very high 30 227 1,266 (0,576-2,827) 106 0,509 (0,206-1,259) Frequency of discomfort or pain There was no sexual intercourse 15 151 151 1	during the pandemic	Low	11	82	1,285 (0,686-2,408)	
Very high 18 106 0,509 (0,206-1,259) Frequency of discomfort or pain There was no sexual intercourse 15 151 1		Moderated	31	266		
Frequency of discomfort or pain There was no sexual intercourse 15 151 1		o a	1			
		Very high	18	106	0,509 (0,206-1,259)	0,1
during or after sexual intercourse Always or almost always 2 13 0,646 (0,133-3,136)	Frequency of discomfort or pain	There was no sexual intercourse	15	151	1	
	•		2	13	0,646 (0,133-3,136)	
during the pandemic period Often 9 25 0,276 (0,109-0,698)	during the pandemic period	Often	9	25	0,276 (0,109-0,698)	

the same affected public.

The present study found, with regard to education, individuals with higher education and postgraduate studies whose factor is shown to be of important relevance since education may be linked to social class and, therefore, suggesting habits and living conditions that may represent a risk or protective factor for dissemination and knowledge about infectious viral diseases. 13 Most of the individuals in this study work and have an income between 3 and 5 minimum wages, which is observed as a major factor in the prognosis of the disease and concerns the important impacts that directly reflect on access to housing, social support, treatment and resources to acquire your protection and fight the virus.

Individuals have a certain stability with regard to relational aspects such as the type of relationship, steady partner and not having changed relationships during the pandemic, which can present as social support factors in view of the negative implications and consequences of social distancing caused by the pandemic. Social support is seen as a protective factor whose family support is significantly associated with health and well-being promoting behaviors. 14

Regarding the prevalence of symptoms or confirmation of COVID-19, the pandemic contributed to the decrease in the level of satisfaction with sex life and the frequency of orgasms, which were found previously during the pandemic. Similar results were found by Karagöz et al. 15 who analyzed the sexuality of couples in Turkey and found a decrease in satisfaction compared to the pre-pandemic period, as well as the frequency of orgasms. Added to this, it was found in the present study that individuals who contracted COVID-19 were up to twice as likely to have their perception of satisfaction affected by the disease in their sexual life during the pandemic.

Furthermore, it was found that sexual arousal did not change during the pandemic and the level of desire varied from moderate to high, the same found in the survey with Turkish couples. This behavior can be explained by the hypothesis that contracting the disease and social isolation made individuals spend more time at home, which resulted in desire and some sexual variables visibly increasing. However, there was a higher frequency of pain and discomfort during or after sexual intercourse during this period, with a significant result when associated with the presence of symptoms

or confirmation of the disease.

CONCLUSION

Based on the findings of the present study, it was possible to conclude that the COVID-19 pandemic affected the sexual life of individuals who had symptoms or confirmation of the disease, bringing about a decrease in their level of sexual satisfaction and orgasm. It can also be inferred that the level of sexual arousal of these people remained constant before and after the pandemic, however, most of this group had some type of pain or discomfort during intercourse.

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