Capter 183

Implications of the period of the COVID-19 pandemic on the elderly population in the city of Santos from 2020 to 2021

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ABSTRACT

The objective of this study was to gather data regarding vaccination and deaths related to COVID-19 of the elderly population living in Santos in the years 2020 and 2021 and, through the application of an adapted quality of life assessment scale and listening to the elderly over 60 years of age living in a Long-Term Care Institution located in the Ponta da Praia neighborhood, investigate an alleged relationship between the results collected and the pandemic period related to the Coronavirus experienced. Regarding vaccinations, according to data collected in July 2022, 1,148,207 doses were administered in total. As for deaths, between March and December 2020, 843 were recorded, and between January and December 2021, 979. The survey was carried out with an exploratory purpose using an evaluator scale, whose results were analyzed qualitatively. A total of 10 individuals of both genders were interviewed, 6 males and 4 females whose age range was established from the age of 60 years. The results revealed little variation between averages and specifically low impact related to COVID-19. Complaints about physical health, autonomy, and social relationships were raised.

1 INTRODUCTION

The COVID-19 disease caused by the SARS-CoV-2 virus was defined by the Ministry of Health in its National Plan for the Operationalization of Vaccination Against COVID-19 (PNO - 11th Edition. 7 Oct 2021) as:

> (...) an acute, potentially severe, globally distributed respiratory infection that has high transmissibility between people through respiratory droplets or contact with contaminated objects and surfaces.
> (p. 14)

According to the document, "one in six people infected with SARS-CoV-2 becomes seriously ill and develops difficulty breathing" (p. 14), and "of the cases who were hospitalized for covid-19 in 2020, 50.2% were people over 60 years of age." (p. 17). The infectologist Caio Rosenthal (apud MÉDICI, G1. 2020) justifies the relationship with possible deficiencies of the immune system due to age, lungs, and mucous membranes more "vulnerable to viral diseases" and greater exposure to risks of contracting the virus due to the higher incidence of this population in hospitals and health posts and compared to others.

As indicated by the U.S. Centers for Disease Control and Prevention (2021), it is known that the incidence of infections, hospitalizations, and deaths due to SARS-CoV-2 is higher in unvaccinated people, a

phenomenon that has been linked to the effectiveness of vaccination. In Manaus (AM), there was a change in the pattern of hospitalizations and deaths from COVID-19 between its first moments and after vaccination (partial or complete) of the population:

> "The percentage of those not vaccinated against COVID-19, both for hospitalized individuals and for fatal victims of the disease, in general, was more than 50%. Among fatal victims aged 60-69 years, this percentage reached 81.8% and 50% in the SE groups 18-20/2021 and SE 21-23/2021, respectively "
> (Orellana, Jesem Douglas Yamall et al, 2022, p. 5)

In Brazil, vaccination was guaranteed, in principle, to the entire elderly population, especially to residents of ILPIS. For Camarano et al:

> "LTCF is understood as a collective residence, which serves both independent individuals in situations of lack of income and/or family and those with difficulties to perform daily activities, who need long-term care"
> (2010)

In the survey conducted by the same study, Brazil had about 3,549 institutions between 2007 and 2009. In the city of Santos, it is estimated between 4 and 7 recognized institutions.

Considering the profiles that normally reside in these spaces, such as widowers, retirees, and lonely people who demand care and/or have their autonomy affected by health issues, as well as the routine within these spaces and the relationships developed there, it is possible to identify their needs by monitoring their quality of life and general well-being through listening and the application of tests. The article "Depression in the elderly of a long-term care facility", conducted by Rosseto et al (2012), identifies high levels of depression in the sample examined through the Mini-Mental State Examination for the assessment of mental status and depression in the Geriatric Depression Scale (GDS-15). The results raised alert to a similar prevalence in PIs in general.

With the pandemic period experienced as a result of COVID-19, the present study aimed to collect data regarding vaccination and deaths in the municipality and analyze alleged influences of this context on the reality of residents of an LTCF, collecting data about their quality of life and how they feel daily, aiming to, from the results, think of possible ways of help and intervention.

POPULATION

According to the official website of the Ministry of Health, "In Brazilian legislation, a person who is 60 years of age or older is considered elderly." The Census conducted by the IBGE (Brazilian Institute of Geography and Statistics) in 2010 indicates that the city of Santos had about 419,400 inhabitants, of which 19.15% (80,353) were elderly.

The city follows the trend of population aging worldwide predicted by the UN:

> "The number of seniors, aged 60 and over, is estimated to double by 20,50 and more than triple by 2100, from 962 million in 2017 to 2.1 billion in 2050 and 3.1 billion in 2100."
> United Nations

According to data from SEADE (2011, apud COELHO and PEDROSO, 2012), it was estimated that, in 2020, the number of elderly in the city of Santos would reach 93 thousand, "causing there to be more people over 60 years of age than under 14 years" (page 5).

SANITARY MEASURES

The COVID-19 disease caused by the SARS-CoV-2 virus was defined by the Ministry of Health in its National Plan for the Operationalization of Vaccination Against COVID-19:

> (...) an acute, potentially severe, global-distributed respiratory infection that has high transmissibility between people through respiratory droplets or contact with contaminated objects and surfaces. (p. 14)

As a first security measure, the quarantine state was adopted:

> In Brazil, the first case arrived on February 26, 2020 (Brasil, 2020), being decreed a state of quarantine from February 6, 2020, through Law 13,979/2020.
> VASCONCELOS et al, 2020.

With the state of São Paulo as the new "epicenter of Covid-19" (Santos City Hall, 2020), mayors of the Baixada Santista decreed the temporary closure of common environments intending to reduce the circulation of people and, consequently, the transmission of the virus. According to Wilder-Smith and Freedman (apud Duarte et al. 2020), "(distancing) refers to the effort to decrease contacts and physical approximation between people in a population to decrease the velocity of contagion." Only services considered essential defined by municipal decrees, especially those in the health area, were not discouraged from continuing to occur in person according to their need.

The general guidelines maintained are the distancing of 1.5 meters between people, disposition of alcohol gel 70% as a hygiene item in common places, and the mandatory use of masks, whose noncompliance was subject to a fine of 100 R $ and, from March 14, 2021, up to 600 R $ as officially decreed by Mayor Rogério Santos during the live broadcast (LYRA, The Tribune. 2021)

VACCINATION

On January 17, 2021, the Coronavac vaccines (developed by Sinovac, made in partnership with the Butantan Institute) and ChAdOx1 nCoV-19 vaccine, or "Oxford Vaccine" (developed by Oxford and AstraZeneca, made in partnership with Fiocruz, Unifesp and the Ministry of Health) (CNN, 2021) were approved by the ANVISA in "emergency use" for application throughout the national territory. The

National Plan for the Operationalization of Vaccination against Covid-19 (PNO - 11th Edition. 7 Oct 2021), a document released on behalf of the Ministry of Health as a national protocol for coping with the pandemic, presents the following list

> On January 18, 2021, the National Vaccination Campaign against Covid-19 in Brazil began. On February 23, 2021, Anvisa granted definitive registration in the country of the Pfizer/Wyeth vaccine, and on March 12, the definitive registration of the AstraZeneca/Fiocruz vaccine was granted. Janssen's (recombinant) covid-19 vaccine was authorized for emergency use in the country on March 31, 2021.
> (p. 16)

Vaccination at the national level was divided according to an index of ordering priority groups published in the National Plan for the Operationalization of Vaccination against Covid-19 itself, with the municipal responsibility for the distribution of doses in points
of access to the public determined.

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> Cutout contemplating the sampling analyzed in this study (elderly population)
> National Plan for the Operationalization of Vaccination against Covid-19
> (Page 35)

Each priority group was granted the right to two doses of the vaccine available in the region and its application stipulated by date according to the official decree. The Government of the State of São Paulo made available through the site "Vaccine Now" the following data, organized in chronological order in a spreadsheet using the Microsoft Excel 2007 system:

In September 2021, the Government of the State of São Paulo announced the application of a new dose (booster) of a vaccine aimed at the elderly (+60) at least 6 months after the application of the second dose and immunosuppressed (+18) 28 days after the application of the second dose. According to Stabeli (apud ALENCAR, G1,2021), it is a "maintenance" in the immune response, aiming at the development of "antibodies against new and old strains"

> "In reinforcement, the composition of the immunizer against Covid-19 should not be the same, but an update made from the new circulating variants of SARS-CoV-2, as happens every year with the flu vaccine, updated with the new mutations of the virus"
> (Butantan Institute amended by G1, 2021)

Subsequently, on November 17, 2021, this "third dose" was made available to the entire adult population of the state after 5 months of application of the second dose (Government Portal, 2021).

In the city of Santos, the municipal schedule for the first phase of vaccination of the Municipal Immunization Plan released on December 30, 2020, follows the dates established by the State Immunization Plan.

The target audience of the first vaccination step (priority groups: health workers and the elderly) was "formed by 104,419 people, of which 23,885 were health workers and

80,534 elderly", of which "550 elderly bedridden or with mobility difficulties already accompanied by the Home Care Secretariat (Seadomi)" vaccinated by the service itself. The elderly bedridden or with mobility restrictions not served by Seadomi should register between January 12 and 22 "at the reference polyclinic of their neighborhood for vaccination at home (...) upon presentation of documentation proving the patient's health condition"

The data of the "Schedule of the first phase" were organized in order of priority groups in a spreadsheet using the Microsoft Excel 2007 system:

Cronograma de vacinação (Primeira Fase - Municipal)	
Amostragem considerada: População Idosa	
Segundo informações disponibilizadas pelo portal oficial da Prefeitura de Santos.	
Grupo	**Data de inicio da vacinação**
Trabalhadores da área da saúde	1a dose: 25/01
	2a dose: 15/02
Pessoas de 75 anos ou mais	1a dose: 08/02
	2a dose: 01/03
Pessoas de 70 à 74 anos	1a dose: 25/01
	2a dose: 15/02
Pessoas de 65 à 69 anos	1a dose: 22/02
	2a dose: 15/03
Pessoas de 64 à 60 anos	1a dose: 01/03
	2a dose: 22/03

Santos City Hall (2021)

In the Baixada Santista, according to a consultation made in July 2022, the doses applied were :

DRS: DRS IV - BAIXADA SANTISTA | Doses: (Tudo)

1ª Dose	2ª Dose	Adicional	Dose Única	Total de Doses Aplicadas
1.720.097	1.567.443	1.226.008	43.778	4.557.326

Santos was "the city of the Baixada Santista that most applied immunizers against the disease" (G1, 2021), with its numbers as follows:

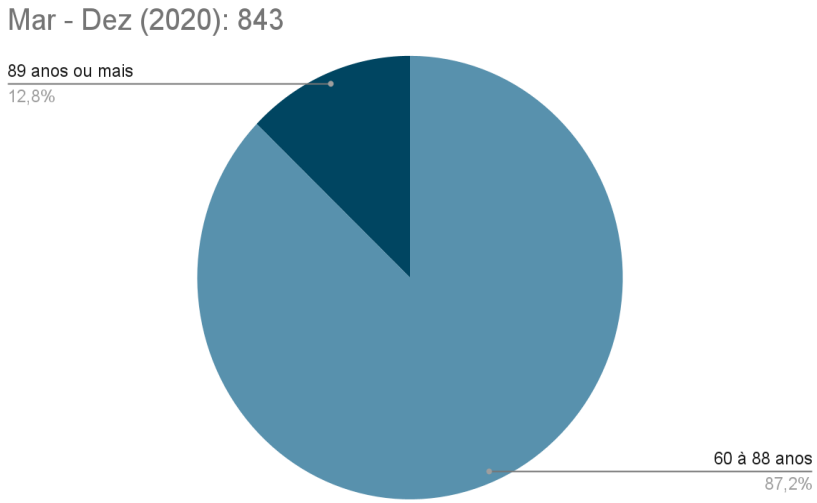
		Dose			
Município	Total	1º DOSE	2º DOSE	ADICIONAL	UNICA
SANTOS	1.148.207	411.191	385.034	343.728	8.254
Total geral	1.148.207	411.191	385.034	343.728	8.254

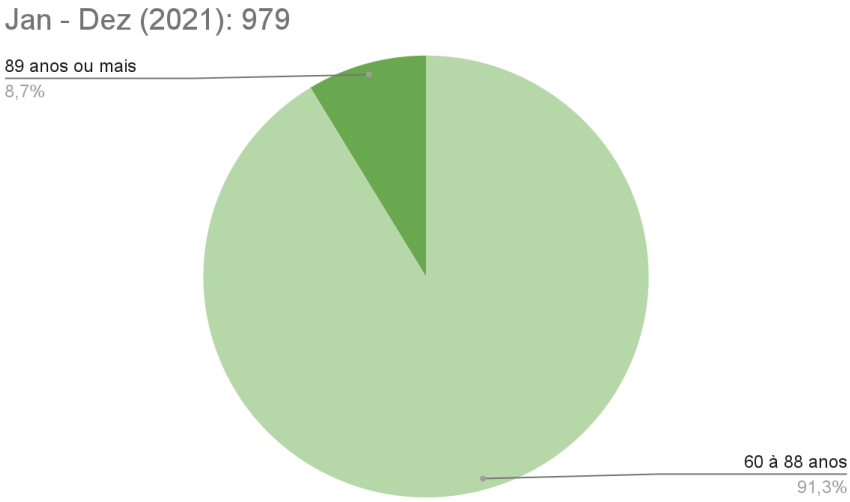
Vaccinometer | Government of the State of São Paulo (vacinaja.sp.gov.br)

DEATHS

According to the Epidemiological Bulletin of Santos (Prefeitura de Santos, n.3. 2021) "A specific municipal system of daily monitoring of cases (of COVID-19) was created, fed (...) by the Epidemiology Section" (page 6) responsible for the active search in the hospital and laboratory networks for notification and clarification, as well as the "investigation of deaths in hospital and home records, to be sure of the confirmation of each case". The data collected by the Municipal Health Department are open to the public and updated daily on the online Santos Mapeada portal, made available by the City Hall.

In the elderly population (60+), the total number of confirmed deaths due to COVID-19 was 843 between March and December 2020, with 12.8% (108) being people aged 89 years or older. In 2021 (Jan – Ten), the total number of deaths is 979, compared to 8.6% (85) of people aged 89 years or more (Municipal Health Department, 2022).





SCALE APPLICATION

With the objective of a survey of possible impacts and responses to the pandemic moment experienced and its implications, identifying individual issues and points in common among a group of elderly people from the city of Santos, a quality of life measuring scale adapted from the WHOQOL questionnaire (Bref) and listening to residents of a long-term care facility for the elderly located in Ponta da Praia on May 14 were made on May 14. of 2022.

Questions 1 to 12 were taken entirely from the translated version of the World Health Organization Quality of Life questionnaire (abbreviated version) developed by WHO in 1998, and made available by the Center for Health and Sports Sciences of UDESC on its online portal.

> "The WHQOL-BREF instrument produces a quality of life profile in four domains: physical, social, social relations and environment. For each domain, it is possible to obtain a score, in addition to an overall score resulting from all domains"
> page 4

In this version made through the Microsoft Excel 2007 program, in addition to the 12 taken from the test, 4 questions related to COVID-19 were added, the initial 2 belonging to the domain "general quality of life" and the final two (for those who contracted the disease) belonging, one, to the psychological domain and the other, to the domain "general quality of life". Thus, in this adapted version, the facets (questions) were divided as follows:

Domain 1: Overall quality of life
The two initial questions, questions number 1 and 2, and final question.

Domain 2: Physical
Questions of numbers 3, 4, 5 and 6, being the 3 and 4 calculated inversely the others considering the logic of the answers, where (1=5), (2=4), (3=3), (4=2) and (5=1).

Domain 3: Psychological
Questions number 7, 8, 9, 10 and 12, where 12 is calculated inversely to the others, considering (1=5), (2=4), (3=3), (4=2) and (5=1).

Domain 4: Social relations
Question number 11.

A score (facet) is calculated for each domain, composed of the average score of the interviewees.

QUESTIONS

Have you been vaccinated with at least two doses?

No Yes

Have you contracted COVID-19?

No Yes

1. How would you evaluate your quality of life? _1

1. Very bad 2.Bad 3.Neither bad nor good 4.Good 5.Very good

2. How satisfied are you with your health? _2

1. Very dissatisfied 2.Dissatisfied 3.Neither satisfied nor dissatisfied 4. Satisfied 5.Very satisfied

3. To what extent do you think your (physical) pain prevents you from doing what you need? _3

1.Nothing 2. Very little 3.Or so 4. Quite 5.Extremely

4. How much do you need any medical treatment to lead your daily life? _4

1.Nothing 2. Very little 3.More or less 4.Quite 5.Extremely

5. How satisfied are you with your sleep? _16

1.Very dissatisfied 2. Dissatisfied 3.Neither satisfied nor dissatisfied 4.Satisfied 5.Very satisfied

6. Do you have enough energy for your day-to-day life? _10

1.Nothing 2. Very little 3.More or less 4.Quite 5.Completely

7. Whatcan you focus on? _7

1.Nothing 2. Very little 3.More or less 4.Quite 5.Extremely

8. How much do you enjoy life? _5

1.Nothing 2. Very little 3.More or less 4.Quite 5.Extremely

9. Are you able to accept your physical appearance? _11

1.Nothing 2. Very little 3.More or less 4.Quite 5.Completely

10. To what extent do you think your life has meaning? _6

1.Nothing 2. Very little 3.More or less 4.Quite 5.Extremely

11. How satisfied areyou with your relationships (friends, relatives, acquaintances, colleagues)? _20

1.Very dissatisfied 2. Dissatisfied 3.Neither satisfied nor dissatisfied 4.Satisfied 5.Very satisfied

12. How often do you have negative feelings such as moodiness, despair, anxiety, sadness? _26 (depression changed to sadness)

1.Never 2.Sometimes 3.Often 4.Very often 5.Always

For those who have contracted the disease:

*Did you feel fear during treatment?

1.Nothing 2. Very little 3.More or less 4. Quite 5.Completely

* To what extent does contract COVID-19 affect you today?

1.Nothing 2. Very little 3.More or less 4.Quite 5.Completely

2 FINDINGS

Of the 10 individuals interviewed, 4 (40%) were women, and 6 (60%) were men. In the first table below, the numbers correspond to the number of participants who scored that particular answer. In the second, the results were divided between Women and Men, calculating an average for each domain.:

	1	*2*	*3*	*4*	*5*
	Very bad	Bad	Neither bad nor good	Good	Very good
1		1	2	2	4
	Very dissatisfied	Unsatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
2	1	1	3	3	2
	Nothing	Very little	More or less	Very	Extremely

3	4		2	4	
	Nothing	Very little	More or less	Very	Extremely
4	3	1	3	4	
	Very dissatisfied	Unsatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
5			1	5	4
	Nothing	Very little	More or less	Very	Completely
6	1		4	5	
	Nothing	Very little	More or less	Very	Extremely
7			4	5	1
	Nothing	Very little	More or less	Very	Extremely
8	1	1	2	4	2
	Nothing	Very little	More or less	Very	Completely
9	2	1	2	4	1
	Nothing	Very little	More or less	Very	Extremely
10			3	6	1

	Very dissatisfied	Unsatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
11			2	6	1
	Never	Sometimes	Frequently	Very often	Always
12	4	3	1	1	1

Domain	Women	Men
The overall quality of life	4,45	4,29
Physical	3,43	3,58
Psychological	3,9	3,4
Social Relations	3,6	4

It was taken into account the unwillingness to participate in the survey due to health issues of some residents, as well as the dispersion of thought of some participants. Of the women, one of the interviewees (B.) did not answer two questions, referring respectively to the domains "General quality of life" (question 1) and "Social Relations" (question 11). Therefore, the calculation of the mean of the women in both domains was done disregarding these questions, since the rest of the questionnaire was answered by the participant.

G. (Man, 93 years old), reported feeling that his physical health condition prevents him from doing what he needs to do at times. He feels that his health "goes back and forth." Difficulties in locomotion and pain when moving were common to the interviewees. Fine motor skills were compromised, leading the applicators to fill out the tables by the participants. A similar difficulty was observed in the handling of the cutlery of some residents at lunchtime. M.E (Woman, 91 years old) spent much of the morning combing her hair, with difficulty. An employee at the site said she cherished her good looks despite the physical difficulty.

Two gentlemen interviewed claimed to feel "depressed." It was noted the prevalence of the feeling of abandonment expressed in stories about how the residents ended up there and about the longing for loved ones, alive and already deceased. G. (Man, 93 years old), said that life had passed quickly for him, and that "things were no longer as before". One lady, who had experienced depression before residing in the space, said she felt very alone, alternating between "moments of great sadness" and "lack of vigor."

The lack of autonomy was also a complaint raised, sometimes associated with physical difficulties,at other times, the routine and rules of the place, which did not allow the exit without accompaniment. The lack of control over one's resources was also mentioned, justified by family control over the resident's assets. Social relationships, for J.C (Man, 74 years old), were hampered by the new routine, but still occur through visits. The affective bonds between the interviewed residents were demonstrated in the care and help of M.L (Woman, 73 years old) to C. (Woman) in her motor difficulty, and the conversations of M.L (Woman, 73 years old) and J.C. (Man, 74 years old). M.L claimed not to feel so close or talk to the rest of the residents and hadn't seen many interactions since he arrived. Cognitive limitations affecting the communication and comprehension of some residents should be considered.

In the 10 scales administered, all were vaccinated with at least two doses of the COVID-19 vaccine. The vaccination would have taken place within the residential space itself. None of the respondents claimed to have been against the virus. When asked about the differences felt due to the pandemic period experienced, M.L (Woman, 73 years old), who took up residence in the place after the beginning of the pandemic, reported fear of contracting the disease and fear for her family members in 2020. The remainder did not observe or could not report considerable change related to the pandemic context.

3 CONCLUSION

We noticed the prevalence of most satisfied responses and little change related to the pandemic context. It considers the socioeconomic condition and territory occupied by the participants, who, according to reports, were not directly affected by COVID-19.

> Thus, quality of life does not only cover aspects related to health but also those that exert influence on it, with economic, social and cultural aspects (FRANCESCHINI et al, 2007 apud COELHO, 2012)

When analyzing the quality of life, therefore, a specific time, space and group are described. Considering the nature of a private institution of the LTCF visited, the presence of individuals who could not afford the service, as well as people from other regions differently affected by the incidence of the virus or with mobility restrictions not accompanied by the Home Care Section who may not have previously had access to vaccination, is excluded. Dissatisfactions declared by some respondents are similar to what was observed by Davim and Rejane Marie Barbosa et al in nursing homes in the city of Natal/RN. The authors associate the "progressive loss of physical, mental, and social resources" with "feelings of helplessness." One should also consider the physical and disciplinary boundaries of these spaces. For the authors, "they (the residents) live, most of the time, as if they were in reformatories or boarding schools, with rules of entry and exit, few possibilities of active social, affective and sexual life."

Thus, it is considered possible to rethink, individually, the possibilities of social integration of the individuals present there, considering their wishes and limitations and counting on the support of the family members involved.

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