Risk factors for COVID-19 in elderly care in a nursing consulting

Factores de riesgo de COVID-19 en cuidados de ancianos en consultoría de enfermería

Fatores de risco para COVID-19 em idosas atendidas em consultório de enfermagem

ABSTRACT
Objective: To describe the risk factors for COVID-19 of elderly women seen in a Nursing Consulting. Method: Descriptive, quantitative research, using the data contained in the medical records of users seen at the Nursing Office of a Public University of the State of Rio de Janeiro, from 2017 to 2019. Results: 303 medical records were analyzed, revealing that 25.2% are 60 years old or older. Of these, 51.2% are single and 45.7% white. Regarding chronic-degenerative diseases, 29.7% of elderly women have chronic diseases, Arterial Hypertension (61.5%), Diabetes Mellitus (9.6%) and Cancer (9.6%). Overweight occurred in 42.1% and 62.5% adhered to influenza immunization in the last year. Conclusion: It was found that elderly women seen in the office have risk factors for COVID-19, such as: overweight, chronic degenerative diseases and low adherence to immunization. We must strengthen awareness about the severity of the disease with health promotion and disease prevention actions COVID-19.
DESCRIPTORS: Comorbidities; Women's Health; COVID-19; Health Promotion; Office Nursing.

RESUMEN
Objetivo: Describir los factores de riesgo de COVID-19 en mujeres ancianas atendidas en la Oficina de Enfermería. Método: Investigación descriptiva, cuantitativa, utilizando los datos contenidos en las historias clínicas de los usuarios atendidos en la Oficina de Enfermería de una Universidad Pública del estado de Rio de Janeiro, de 2017 a 2019. Resultados: se analizaron 303 historias clínicas, revelando que el 25,2% tiene 60 años o más. De estos, el 51,2% son solteros y el 45,7% blancos. En cuanto a las enfermedades crónico-degenerativas, el 29,7% de las mujeres mayores tienen enfermedades crónicas, Hipertensión Arterial (61,5%), Diabetes Mellitus (9,6%) y Cáncer (9,6%). El 42,1% presentó sobrepeso y el 62,5% se adhirió a la vacunación antigripal en el último año. Conclusión: Se encontró que las ancianas atendidas en consultorio presentan factores de riesgo para COVID-19, como: sobrepeso, enfermedades crónico degenerativas y baja adherencia a la inmunización. Debemos fortalecer la conciencia sobre la gravedad de la enfermedad con acciones de promoción de la salud y prevención de enfermedades COVID-19.
DESCRIPTORES: Comorbilidades; La Salud de la Mujer; COVID-19; Promoción de la Salud; Enfermería de Consulta.

RESUMO
Objetivo: Descrever os fatores de risco para COVID-19 de idosas atendidas em um Consultório de Enfermagem. Método: Pesquisa descritiva, quantitativa, utilizando dos dados contidos nos prontuários das mulheres atendidas no Consultório de Enfermagem de uma Universidade Pública do estado do Rio de Janeiro, de 2017 a 2019. Resultados: Analisados 303 prontuários, revelando que 25,2% possuem 60 anos ou mais. Destas, 51,2% são solteiras e 45,7% brancas. Em relação às doenças crônico-degenerativas 29,7% das mulheres idosas possuem doenças crônicas como Hipertensão Arterial (61,5%), Diabetes Mellitus (9,6%) e Câncer (9,6%). O sobrepeso incidiu em 42,1% e, 62,5% aderiram à imunização para influenza no último ano. Conclusão: Constatou-se que as mulheres idosas atendidas no consultório possuem fatores de risco para COVID-19, tais como: sobrepeso, doenças crônico-degenerativas e baixa adesão para imunização. Devemos fortalecer a conscientização sobre a gravidade da doença com ações de promoção da saúde e prevenção da doença COVID-19.
DESCRITORES: Comorbidades; Saúde da Mulher; COVID-19; Promoção da Saúde; Consulta de Enfermagem.

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INTRODUCTION

In Brazil, about 6,76% of the Brazilian population are elderly women according to the IBGE [1] and about 60% of the elderly in Brazil have systemic arterial hypertension (SAH) and diabetes mellitus (DM). [2] Studies show that the elderly and people with chronic-degenerative diseases, obesity or cancer are more prone to the risk of death from COVID-19. [3]

COVID-19 is caused by a new coronavirus called SARS-CoV-2. Coronavirus belongs to the Coronaviridae family that cause respiratory infections, is a zoonotic virus, has an RNA virus of the order Nidovirales [4,5] There are several species of viruses common in different types of animals, including bats, cattle, cats and camels. In December 2019, there was the contagion and transmission of a new coronavirus (SARS-CoV-2), identified in Wuhan, China, causing COVID-19 and spreading the disease worldwide. [6] The currently known types of coronaviruses are: alpha coronavirus HCoV-229E and alpha coronavirus HCoV-NL63, beta coronavirus HCoV-OC43 and beta coronavirus HCoV-HKU1, SARS-CoV

(causing severe acute respiratory syndrome or SARS), MERS-CoV (causing Middle East respiratory syndrome or MERS) and SARS-CoV-2 (causing COVID-19). [7] The transmission of SARS-CoV-2 occurs through contact with respiratory droplets from contaminated patients, COVID-19 mainly affects the respiratory, cardiovascular, gastrointestinal and neurological systems. [6]

According to the World Health Organization, the number of cases of COVID-19 in the world until April 12th, 2021 was 135 .646.617 confirmed cases and 2.930.732 deaths. [8] The Pan American Health Organization (PAHO) documented a 14% increase in cases and a 14% increase in deaths in the Americas from January 15th to February 8th, 2021. 8 Three variants of the SARS-CoV-2 virus circulating in the Americas that are of most concern: SARS-CoV-2 VOC 202012/01 (UK), 501Y. V2 (South Africa) and B.1.1.2810 (Brazil). 9 United States three variants, while Argentina, Brazil, Canada and Peru registered two of them. PAHO affirms that the Americas must be a "global priority" for COVID-19 vaccines. [8,9]

In view of the specificities of this new infection and the necessary intervention in health promotion and protection, the objective of this paper is to describe the risk factors for COVID-19 in elderly women attended at the Nursing Office of a Public University.

METHOD

This is a descriptive, quantitative research, with the setting of the Nursing Office of a Public University in the state of Rio de Janeiro. The study population consisted of elderly women attended at the Nursing Office from 2017 to 2019.

Data collection carried out from August 2019 to November 2020 by accessing the medical records of the assisted women. Inclusion criteria were: the medical records of elderly female users. Exclusion criteria will be: male records and incomplete records. The collected data were entered into an electronic spreadsheet and processed in Program R, which is free and available for download. [10] The proportion and measures of central tendency were calculated.

According to the inclusion criteria,

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Chart 01: Socio-demographic characterization

VARIABLES	N	%
Age		
- 10 to 19 years (teenaeger)	6	9,0
- 20 to 39 years (young adult)	92	30,2
- 40 to 59 years (mid age)	128	42
-60 years or older	77	25,2
- 60 years - 69 years	51	17
- 70 years – 79 years	14	4,6
- 80 years – 89 years	0	0
- Over 90 years old	0	0
Marital Status		
- Single	152	51,2
- Married	86	29
- Stable union	25	8,4
- Divorced	9	3
- Widow	25	8,4
Self-declared color		
- Yellow	5	3
- White	74	45,7
- Brown	45	27,8
- Black	35	21,6
- Not declared	3	1,9
Education		
- Illiterate	2	0,7
- Incomplete Elementary School	39	13,4
- Complete Elementary School	24	8,2
- Incomplete High-School	14	4,8
- Complete High-School	98	33,7
- Incomplete Higher Education	79	27,1
- Complete Higher Education	34	11,7
- PhD	1	0,3

Source: The authors.

Chart 02: Health history and family history in relation to chronic-degenerative diseases

HEALTH HISTORY IN RELATION TO CHRONIC-DEGENERATIVE DISEASES	N	%
- Yes	52	29,7
- No	120	68,6
Health history in relation to chronic-degenerative diseases	N	%
- Systemic Arterial Hypertension	32	61,5
- Diabetes	5	9,6

303 medical records were analyzed in full, having as variables: age, marital status, self-reported color, education, health history in relation to chronic-degenerative diseases, body mass index (BMI) and vaccination status for Influenza in the last year. In this study, the confidence level was 95% and the sampling error margin was 5%. Research authorized by the Ethics Committee of the Hospital Universitário Antônio Pedro/Universidade Federal Fluminense (HUAP) in December 2017, CAAE nº: 93546617.3.0000.5243.

This study is part of the line of research entitled "Care, integrality, and citizenship of women during their life cycle", by the Research Group, Laboratory of Studies on Women and Nursing/LEME, Department of Nursing, Fluminense Federal University of the University Campus of Rio das Ostras.

RESULTS

A total of 303 medical records were evaluated, revealing that 25,2% of users are 60 years old or older. Of these, 51,2% are single and 45,7% declared themselves white, 33,7% have completed high school. In relation to chronic-degenerative diseases, it is observed that 29,7% of elderly women have chronic diseases, the main ones being: Systemic Arterial Hypertension (SAH) (61,5%), Diabetes Mellitus (9,6%) and Cancer (9,6%).

Data referring to health assessment, in particular, the Body Mass Index (BMI), reveal that 42,1% were overweight or obese grade 1,2 and 3. Of these, 17,5% were overweight, 11,1% in grade 1 obesity, 9,5% in grade obesity 2, 4% in Grade 3 obesity or morbid obesity. Only 62,5% of elderly women adhered to immunization for flu/influenza in the last year.

DISCUSSION

Data analysis corroborates the Brazilian socio-demographic profile, increase in the elderly population and increase in life expectancy. Over the past few decades, demographic and epidemiological

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- Cancer	5	9,6
- Others	20	49,4
Family history regarding chronic-degenerative diseases	N	%
- Systemic Arterial Hypertension	193	73,9
- Diabetes	138	52,9
- Cancer	157	60,2
- Others	12	4,8
Source: The authors.		

Chart 2: Health assessment

BMI	N	*%
- Normal weight: BMI between 18,0 to 24,9	29	22,4
- Overweight: BMI between 2,.0 to 29,9	22	17,5
- Grade 1 obesity: BMI between 30,0 to 34,9	14	11,1
- Grade 2 obesity: BMI between 35,0 to 39,9	12	9,5
- Grade 3 obesity or morbid obesity: BMI equal to or greater than 40	5	4
Source: The authors.		

Chart 3: Vaccination status

VACCINE STATUS	N	*%
- Were vaccinated for the flu	163	62,5
- Were not vaccinated for the flu	98	37,5
Source: The authors.		

changes have occurred, such as a decrease in infectious diseases, an increase in chronic diseases, nutritional transition and an increase in life expectancy. [11]

Regarding the personal health history related to chronic-degenerative diseases (SAH, DM, Cancer) associated with aging, COVID-19 manifests itself more aggressively, increasing the risk of the presence of systemic manifestations, such as Severe Acute Respiratory Syndrome (SARS) and multiple organ failure. [12] Studies reveal that advanced age and frailty are the main predictors of mortality in hospitalized patients with CO-VID-19.[12]

Furthermore, the presence of chronic degenerative diseases is linked to the pathogenesis of COVID-19. [11] International studies have also shown that the age group has interference and connection to unfavorable outcomes such as hospitalization, need for the Intensive Care Unit (ICU) and death. [13,14] This pathogen

> Over the past few decades, demographic and epidemiological changes have occurred, such as a decrease in infectious diseases, an increase in chronic diseases, nutritional transition and an increase in life expectancy.

often leads to a syndrome that can lead to the respiratory condition of intensive care, requiring specialized treatment in intensive care units (ICU). [13,14,15] The fatality rate among hospitalized patients is greater than 10%. [13] Obesity and neoplasms are also associated with increased lethality rates.[16,17,18]

The study by (Jing Yang et al, 2020) in China with data from approximately 45,000 patients showed that hypertension (SAH) (17%), diabetes (DM) (8%), cardiovascular diseases (5%) and chronic respiratory diseases (2%) were the diseases most frequently presented in patients at high risk of death. 15 SAH is described by high and sustained levels of blood pressure (BP ≥140 x 90mmHg). It is a clinical condition caused by several factors, and is associated with functional and structural disorders of organs such as the heart, brain, kidneys and blood vessels, and with metabolic alterations. This pathology has a high morbidity and mortality rate, which reinforces the importance of early diagnosis. [11] SAH conditions an independent association with occurrences of sudden death, cerebrovascular accident (CVA), acute myocardial infarction (AMI), heart failure (HF), peripheral arterial disease (PAD) and chronic kidney disease (CKD), fatal and non-fatal. [19] Diabetes Mellitus (DM) is a metabolic disorder of heterogeneous etiologies, characterized by hyperglycemia and disturbances in the metabolism of carbohydrates, proteins and fats, resulting from defects in the secretion and/or action of insulin. [20] Factors such as rapid urbanization, epidemiological transition, nutritional transition, greater frequency of sedentary lifestyle, greater frequency of overweight, population growth and aging, and also the longer survival of individuals with diabetes, increase the prevalence of DM. [21]

Regarding the Body Mass Index (BMI), international studies report the intense relationship of obesity in critically ill patients hospitalized in intensive care for SARS-CoV-2, thus, one should take into account the fact of comorbi-

dities associated with COVID-19 , like DM, are often consequences of obesity. [22,23] Obesity is one of the risk factors for non-communicable diseases and disorders, therefore, prevention and early diagnosis are extremely relevant for promoting health and reducing morbidity and mortality. [24] There are few studies referring to the problematic dimension of mental health.[25]

In Brazil, Oxford and Coronavac vaccines were approved by the National Health Surveillance Agency (ANVISA) in January 2021 for emergency use. [26] Janssen's vaccine has been added to the WHO list of safe and effective emergency tools against COVID-19. [27] In other words, the emergency use means that not all stages of the research have been completed, but there are sufficient results to guarantee efficacy and safety to the population. COVAX (Covid-19 Global Access to Vaccines) is a global effort by the Coalition to Promote Innovations for Epidemic Preparedness (CEPI), the World Alliance for Vaccines and Immunization (Gavi), the United Nations Children's Fund (UNICEF), the World Health Organization (WHO) and the Pan American Health Organization (PAHO). Brazil will receive doses of the AstraZeneca/ Oxford vaccine – manufactured by SK Bioscience, from South Korea. against COVID-19 by these means. [28] Immunization protects the individual and those around them and saves millions of lives every year, reducing the risk of contracting the disease and providing protection. [26,27]

> **It was found that elderly women attended at the Nursing Office have risk factors for COVID-19, such as: overweight, chronic degenerative diseases and poor adherence to immunization.**

Despite research and undeniable evidence that reveal the effectiveness and importance of the vaccine, the number of people who refuse to be vaccinated and vaccinated their children is growing, forming the anti-vaccine movement. A worrying fact, as vaccines are produced in a rigorous production process, relying on studies and research and go through numerous tests until they are validated. [29] Brazil has been experiencing a wor-

rying reduction in vaccination coverage in recent years. [29] Specialists consider, as one of the main reasons for the low vaccination coverage, the current healthcare model in the country, which prioritizes acute health conditions and which does not take care of proper monitoring of citizens. Surveillance, prevention and promotion actions are fundamental and the organization of health services does not always privilege the continuity of care. [29]

CONCLUSION

It was found that elderly women attended at the Nursing Office have risk factors for COVID-19, such as: overweight, chronic degenerative diseases and poor adherence to immunization. Knowing the clinical profile, chronic diseases such as Hypertension (61,5%) and Diabetes Mellitus (9,6%), and epidemiological, they are single (51,2%) and white (45,7%), this population allowed inferring health needs, enabling the planning and implementation of nursing care.

Thus, we must strengthen the awareness of the population of elderly women about the severity of the disease with health promotion actions aimed at self-care, disease prevention, healthy eating and physical activity. As well as encouraging the population's adherence to immunization against COVID and public health measures of prevention, protection and control such as social distancing, frequent hand washing and covering the mouth with a tissue or bent elbow when sneezing or coughing and use of a tissue mask recommended by the WHO. [3] ∎

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