



Cardiovascular risk factors, knowledge and care practices of women: possibility to review habits^a

Fatores de risco cardiovascular, saberes e práticas de cuidado de mulheres: possibilidade para rever hábitos

Factores de riesgo cardiovascular, conocimientos y prácticas de cuidado de las mujeres: posibilidad de revisar hábitos

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ABSTRACT

Objective: to investigate risk factors for cardiovascular disease and understand the care practices of women. **Method:** mixed convergent parallel. The quantitative stage was descriptive transversal with a form addressing demographic characteristics, socioeconomic, cardiovascular risk factors, lifestyle and health habits; 289 women participated and descriptive statistics were applied. The qualitative step was based on participatory research, exploratory descriptive, through semi-structured interviews, creativity and sensitivity technique and narratives, with 30 women. **Results:** factors were identified as sedentarism (60.9%), use of contraceptives (57.9%), stress (60.6%), depression (40.1%), obesity (38.8%), high blood pressure (33.6%), alcohol consumption (29.8%), smoking (16.6%), dyslipidemia (25.6%), and diabetes (10.0%). As for knowledge and care practices, the participants mentioned the factors, but some reported performing the care, and others did not, even though they recognized the risks. Thus, they shared the lack of time to perform physical exercises, difficulties to take care of the diet and adhere to antihypertensive treatment, and also reported feeling stressed. **Conclusion and implications for practice:** modifiable factors were identified and women had knowledge about these, however, they differed on the care, demonstrating the importance of actions aimed at this population.

Keywords: Cardiovascular Diseases; Nursing; Healthy Lifestyle; Risk Factors; Women.

RESUMO

Objetivo: investigar fatores de risco para doenças cardiovasculares e compreender as práticas de cuidado de mulheres. **Método:** paralelo convergente misto. A etapa quantitativa foi transversal descritiva com formulário abordando características demográficas, socioeconômicas, fatores de risco cardiovascular, hábitos de vida e saúde, participaram 289 mulheres e aplicou-se estatística descritiva. A etapa qualitativa foi fundamentada na pesquisa participativa, exploratória descritiva, mediante entrevista semiestruturada, técnica de criatividade e sensibilidade e narrativas, com 30 mulheres. **Resultados:** identificaram-se fatores como sedentarismo (60,9%), uso do anticoncepcional (57,9%), estresse (60,6%), depressão (40,1%), obesidade (38,8%), hipertensão arterial (33,6%), consumo de bebida alcoólica (29,8%), cigarro (16,6%), dislipidemia (25,6%) e diabetes (10,0%). Quanto aos saberes e práticas de cuidado, as participantes mencionaram os fatores, porém algumas relataram realizar os cuidados, e outras não, mesmo reconhecendo os riscos. Assim, compartilharam a falta de tempo para realizar exercícios físicos, dificuldades para cuidar da alimentação e aderir ao tratamento anti-hipertensivo e, ainda, relataram sentirem-se estressadas. **Conclusão e implicações para a prática:** identificaram-se fatores modificáveis e as mulheres possuíam conhecimento acerca destes, entretanto divergiam sobre os cuidados, demonstrando a importância de ações voltadas a essa população.

Palavras-chave: Doenças Cardiovasculares; Enfermagem; Estilo de Vida Saudável; Fatores de Risco; Mulheres.

RESUMEN

Objetivo: investigar los factores de riesgo para enfermedades cardiovasculares y comprender las prácticas de atención brindadas a las mujeres. **Método:** paralelo convergente mixto. La etapa cuantitativa fue transversal transcriptiva con formulario abordando características demográficas, socioeconómicas, factores de riesgo cardiovascular, hábitos de vida y salud. Participaron 289 mujeres y se aplicó estadística descriptiva. La etapa cualitativa fue fundamentada en la investigación participativa, exploratoria descriptiva, mediante entrevista semiestruturada, técnica de creatividad y sensibilidad y narrativas, con 30 mujeres. **Resultados:** se identificaron factores como sedentarismo (60,9%), uso de anticonceptivos (57,9%), estrés (60,6%), depresión (40,1%), obesidad (38,8%), hipertensión arterial (33,6%), consumo de bebidas alcohólicas (29,8%), tabaquismo (16,6%), dislipidemia (25,6%) y diabetes (10,0%). En cuanto a los conocimientos y prácticas de cuidado, las participantes mencionaron los factores, sin embargo, algunas reportaron realizar el cuidado y otras no, inclusive reconociendo los riesgos. Así, compartieron la falta de tiempo para la realización de actividades físicas, dificultades para cuidar su alimentación y la adherencia al tratamiento antihipertensivo e, inclusive, refirieron sentirse estresadas. **Conclusión e implicaciones para la práctica:** se identificaron factores modificables y las mujeres tenían conocimiento sobre ellos, sin embargo, divergieron sobre el cuidado, demostrando la importancia de las acciones dirigidas a esta población.

Palabras clave: Enfermedades Cardiovasculares; Enfermería; Estilo de Vida Saludable; Factores de Riesgo; Mujeres.

INTRODUCTION

Chronic non-communicable diseases (CNCDs) are considered a serious public health problem, responsible for 40 million deaths, corresponding to 70% of the total 56 million deaths worldwide, with cardiovascular diseases (CVDs) standing out as the main ones, responsible for 45% of all deaths from CNCDs.¹ Besides being the leading cause of mortality in Brazil, CVDs compromise the quality of life of the population. It is worth noting that the decrease in mortality from CVDs accompanies better socioeconomic conditions in Portuguese-speaking countries like Brazil, demonstrating the impact of CVDs beyond the health systems, encompassing the economy and social security.²

However, some CVDs are potentially preventable and Primary Health Care (PHC) constitutes an important scenario for prevention and control, through investigation and screening of risk factors (RFs).³ It is noteworthy that the development and the lack of control of RFs for CVDs have increased considerably, changing even the prevalence of the diseases, no longer appearing as communicable, but as non-communicable.⁴ Many RFs are related to people's lifestyles. Therefore, it is essential to identify them, as well as to understand lifestyle habits, in order to develop health education actions that raise awareness for behavioral change. To educate the population about the factors that lead to CVDs is paramount to reduce their impact.⁵

Reviews in the literature indicate the presence of cardiovascular RFs in the female population, however, point to gaps in the realization of care practices among women, especially in the face of CVDs.^{6,7} In view of this, the investigation of risk factors and behaviors is an urgent necessity, in order to provide subsidies that contribute to prevention and control strategies.⁴

The study meets the Sustainable Development Goals, relating to the item "Ensure a healthy life and promote well-being for all at all ages".⁸ Moreover, it is referenced in the National Agenda for Health Research Priorities, with regard to the development of methods for health promotion, prevention, diagnosis, control and early treatment of CNCDs.⁹

Given the above, this study was developed in order to answer the following questions: what are the cardiovascular risk factors among women assisted in Primary Health Care in the countryside of Rio Grande do Sul? And what are the knowledge and care practices of these women about risk factors for cardiovascular diseases? And the objective: to investigate risk factors for cardiovascular diseases and understand the care practices of women.

METHOD

The results disclosed in this article come from a Master's Dissertation in Nursing. The research was developed with the mixed method, of the convergent parallel (QUAN) + QUAL type. In this representation, the parenthesis means that the quantitative method is incorporated into a larger study, a Matrix Project of the Research Group to which the Dissertation is linked, and the "+" sign represents that the two methods occurred simultaneously.

The combination of different methods allows greater depth about the study problem.¹⁰ Thus, the quantitative stage contemplated a descriptive cross-sectional study and the qualitative stage was based on participatory research and developed in an exploratory and descriptive manner.

The study was conducted in urban PHC units in a city in the interior of the state of Rio Grande do Sul; at the time of data collection, the municipality had 24 urban and three rural PHC units. Participants were women assisted in urban PHC units, aged 20 to 79 years old, except for pregnant women. The sampling for the quantitative stage was calculated proportionally to the size of the population enrolled per administrative region, according to data from the Municipal Health Secretariat, totaling 289 participants. The participants were picked up in a random and non-systematic way in the health services, while waiting for medical attention. In the qualitative stage, in turn, 30 women participated, randomly selected, and the collection was closed when the research objectives were achieved. There was no refusal to participate in the data collection stage (semi-structured interview combined with the technique of creativity and sensitivity), however, some telephone contacts for the invitation were not possible because the users did not answer the call, after several attempts, or because the number did not exist. Data collection occurred concomitantly from March 2017 to May 2018. The collection of users took place from Monday to Friday, during the service's opening hours.

For the quantitative stage, a manual was prepared and delivered to each collector, which contained all the information about the study and the collection procedures. In addition, a four-hour training session was held for all the collectors and researchers involved, in order to standardize the measurements of the study variables. It was also agreed that, for the investigation of risk factors and measurement of anthropometric data, each collector would use his or her own material, such as sphygmomanometer and stethoscope (the manufacturers were not identified). The tape measures used for measuring height and circumference were provided along with the research material, and the scales used were those available at each Health Unit. All users who were in the service waiting for assistance were invited, and data collection was performed using a form. This was divided into three modules, namely: 1: demographic characterization and information on socioeconomic indicators (gender, age, education, occupation/work, marital status, religion, ethnicity, physical disability, number of people living in the household, monthly family income, conditions of the house where you live (owned, leased, rented, other - specify), household materials, sewage and water supply); 2: investigation of risk factors and variables to be evaluated, such as blood pressure and anthropometric data (weight, height, body mass index (BMI), abdominal circumference, waist and hip circumference), in addition to contraceptive use, alcohol and cigarette use, passive smoking, use of other drugs, antidepressant treatment, stress and performance of physical exercises; 3: Framingham Risk Scale (FSRS) to stratify the cardiovascular risk (CVR) of the users, however, the third module will not be described in the present article. In this sense, for

the values obtained from the investigation of risk factors, the Brazilian Guidelines on Obesity were used as a reference for the BMI classification¹¹ and for central obesity, the Ministry of Health's risk stratification.¹² The amount of alcohol ingested was graduated according to the maximum limit indicated by the World Health Organization.¹³

When dealing with quantitative data, we carried out independent double entry in Epi Info 3.3.2 (Center for Disease Control and Prevention). Afterwards, in order to check the data, they were converted to a Microsoft Excel spreadsheet and existing inconsistencies were adjusted. Next, a descriptive statistical analysis was performed using the R software, version 3.4.3, with absolute and relative frequencies for categorical variables and measures of central tendency and dispersion for continuous variables. Pearson's Coefficient of Variation was also analyzed to verify the distribution of data, using mean and standard deviation for variables whose data have symmetrical distribution and median and interquartile range for the variable with asymmetric data.

In the qualitative stage, all data collection was performed by the main researcher, a participant of the Research Group to which the study is linked. The users were contacted by phone, at which time a meeting was scheduled at the participant's preferred location, which could be the Health Unit or her home. In situations in which the collection occurred at home, sometimes the Community Health Agent remained there during data production. It is noteworthy that the participants' consent was respected and all ethical aspects were preserved.

The production of qualitative data occurred through individual semi-structured interviews, combined with the creativity and sensitivity technique (CST) called *Corpo Saber* (Body-Knowledge), carried out once with each participant. To define the order in which the techniques were to be used, eight pilot tests were conducted. From the pilot tests, it was decided to start with CST, which is considered an artistic production in which the body is the main form of access to the experience of care.¹⁴ For the application of the technique, a piece of paper with the silhouette of a woman was made available, representing the body of each participant. The generating question for the technique was "What care do you perform with your body?" The objective was to dimension the care practices performed by the women, establishing relationships with their bodies. At the end, each participant verbally explained the care described and/or drawn.

Then, the interview was conducted, when the women's knowledge about the RFs for CVDs, the relationship of the care described in the CST with the development or prevention of CVDs, health care practices, and the potentials and barriers to the development of care practices were addressed. The production of qualitative data was audiorecorded and then transcribed in full. It lasted an average of 30 minutes, and it is noteworthy that the recording time was counted from the moment the participant reported the artistic production of the CST. All the time allocated for writing/drawing was not counted and no notes were taken during the interview, since they were not object of the investigation.

The analysis of qualitative data was based on the participatory research framework, and occurred through the production and return of narratives. For the elaboration of the narratives, several readings were performed, seeking to deepen and understand the transcribed material, identifying the argumentative nuclei that answered the research questions and constituted as a guiding thread for the elaboration of the narratives. The production of the narrative involves understanding and interpretation, relating it to the social context of the participants.¹⁵ After the elaboration, the narratives were returned to the participants. This second meeting, in which the narratives were returned and read to the users, was also audio-recorded and lasted an average of 40 minutes. Besides validating the data, it produced intervention effects, allowing the participant to reconstitute and re-signify her history and behaviors, an expected effect of using this method.¹² Finally, because this is a mixed method study, we proceeded to interpret and converge the results, relating and integrating the quantitative and qualitative findings.

This study respected the ethical aspects of research with human beings, with appreciation and approval in the Research Ethics Committee. For this, there was the approval of the Matrix Project in October 2016, according to Opinion number 1,772,115, with CAAE number 60159416.2.0000.5346; and of the Dissertation that integrates the aforementioned Project, in January 2018, Opinion number 2,464,295, CAAE 81455517.5.0000.5346. The participants signed the Free and Informed Consent Term, which contained the research objectives and the reasons for its realization. The anonymity of the participants was preserved, through the use of codes for the quantitative stage, and by choosing the names of flowers or plants for identification in the qualitative stage. In order to improve the production, the Revised Standards for Quality Improvement Reporting Excellence 2.0 (SQUIRE)¹⁶ guidelines were used in this article and the Consolidated Criteria for Reporting Qualitative Research (COREQ).¹⁷

RESULTS

Of the 289 women, with a mean age of 44.0 years (SD 15.35), 46.4% (n=134) had studied for a period of 0 to 8 years; 29.7% (n=86), from 9 to 11 years; and 23.9% (n=69), for 12 years or more. In addition, the mean number of years of study was 9.5 years (SD 4.2). As for occupation/work, 57.5% (n=165) had their own income, being retired or pensioners, salaried or self-employed, and the remaining 42.5% (n=122) were unemployed, housewives or students. In two forms, the occupation variable was not filled out correctly, a variable that resulted in its disregard.

Regarding marital status, 53.0% (n=153) had a partner, being legally married or in a stable union for more than six months and in a stable union for less than six months. Also, 47.0% (n=136) had no partner, being single, separated/divorced, or widowed. As to ethnicity, 64.7% (n=187) of the women declared themselves white; 20.5% (n=59), brown; 13.8% (n=40), black; and 1.0% (n=3), yellow. Regarding income (regional minimum wage of R\$ 937.00), the median income was R\$ 1,874.00 (IQR 2,000.00). With 31.5% (n=91) receiving more than one to two minimum

wages; 20.8% (n=60), up to one wage; 20.8% (n=60), more than two to three; 15.9% (n=46), more than three to five; and, finally, 11.0% (n=32) received more than five minimum wages at the time of data collection.

Considering the RFs, contraceptive use showed a frequency of 57.9% (n=103) among women of childbearing age (20 to 49 years), as shown in the following table (Table 1).

When dealing with the type of contraceptive used, more than 70.0% (n=77) of the women who used contraceptives opted for oral contraceptives, and of these, 23.4% (n=18) used them continuously. As for the injectable contraceptive, 25.2% (n=26) were using it and the majority, 84.6% (n=22), opted for the trimester one. In the statements, some participants said they had already experienced or were aware of the health effects related to the use of contraceptives.

[...]I have heard that if one takes this medicine for years [contraceptive], you end up with locked veins, thick blood, that sort of thing [...] (FORAGE CACTUS – 50 years, six years of schooling, wage earner, more than one to two minimum wages).

[...]She [doctor] said that probably from the medicine [contraceptive] that I took that caused the thrombosis, then, at the moment I had thrombosis, they forbade me, then I never took it again [contraceptive][...] (FIELD FLOWER – 52 years, two years of schooling, wage earner, more than one to two minimum wages).

Other modifiable factors, such as alcohol and cigarette consumption, were identified in the survey, as shown in Table 2. With regard to alcohol intake and smoking, it was observed that most women did not use both. However, among those who drank alcohol, the age group that stands out is between 20 and 29 years old. Among those who smoked, the highest number was among women aged 40 to 49, followed by women aged 20 to 29. Moreover, the participants demonstrated to recognize the consumption of alcohol and cigarettes when asked about the risk factors for CVDs.

[...]Drinking alcohol, smoking [considers as risk factors], which I am just now, quitting smoking, but I am trying [...] (DUMBCANE – 61 years, five years of study, self-employed, up to one minimum wage).

Regarding psychological disorders, more than 40.0% (n=116) of the participants said they were undergoing or had already undergone treatment for depression. In addition, more than 60.0% (n=175) of the women felt stressed at the time of data collection. Some statements reiterate the findings of the quantitative stage.

[...]I am very anxious, stressed, depressed, and all these things end up affecting the whole body, in my opinion [...] (PASSION FRUIT – 40 years old, 12 years of schooling, wage earner, more than three to five minimum wages).

[...]From the nervous system that shakes a lot, the person gets very worried, agitated, stressed and then the consequences can even be a stroke [...] (LILY – 72 years old, one year of study, pensioner, more than two to three minimum wages).

Overweight and/or obesity are an isolated health risk and one of the main cardiovascular RFs. According to the BMI calculation, it was observed that most participants were classified as obese, 38.8% (n=112) (grades I, II, and III), a variable presented below in Table 3.

Among the women classified with obesity (n=112), the largest number was with grade I obesity, which corresponds to 56.2% (n=63), 43.8% (n=49) were with grade II or grade III obesity. Proceeding to the analysis from the age range, it was noticed that the amount of lean or eutrophic women tends to decrease as age advances, since women aged 20 to 29 years old, when compared to women in other age groups, presented higher frequencies in the categories “lean or underweight” and “normal or eutrophic”. The average BMI was 29.07 kg (SD 6.3). In addressing the statements, women recognized inadequate diet

Table 1. Distribution of participants according to contraceptive use and age group. Rio Grande do Sul, Brazil, 2018.

Age group (years)	Contraceptive			Total
	Hormonal	Other	Does not use	
20-29	40	1	22	63
30-39	36	2	16	54
40-49	22	2	37	61
50-59	5	0	57	62
60-69	0	0	30	30
70-79	0	0	19	19
Total	103	5	181	289

Source: Research results.

Table 2. Distribution of participants according to alcohol and cigarette use by age group. Rio Grande do Sul, Brazil, 2018.

Age group (years)	Alcohol			Cigarette	
	Does not drink	Less than 30 grams per day	More than 30 grams per day	Does not smoke	Smokes
20-29	29	31	3	52	11
30-39	33	19	2	47	7
40-49	44	16	1	47	14
50-59	52	10	0	53	9
60-69	28	2	0	26	4
70-79	17	2	0	16	3
Total	203	80	6	241	48

Source: Research results.

Table 3. Distribution of participants according to body mass index classification and age group. Rio Grande do Sul, Brazil, 2018.

Age group	Body Mass Index						Total
	Thin or low weight (<18.5)	Normal or Eutrophic (18.6-24.9)	Overweight (25.0-29.9)	Obesity Degree I (30.0-34.9)	Obesity Degree II (severe) (35.0-39.9)	Obesity Degree III (morbid) (> 40.0)	
20-29	2	27	14	11	3	6	63
30-39	1	15	15	14	7	2	54
40-49	0	15	18	15	8	5	61
50-59	1	14	23	14	6	4	62
60-69	1	7	7	7	4	4	30
70-79	0	4	13	2	0	0	19
Total	4	83	90	63	28	21	289

Source: Research results.

as a FR for CVDs, however most reported difficulties to perform the necessary care.

[...]The food, the fact that I eat a lot of junk food, I think it harms a lot, it would be a factor. And it is because of laziness, laziness to eat well, to eat healthy, I just want to go to the market and, look, there is a snack, I go there and get the snack that is easier to eat, or before I come to the university also [...] (AZALEA – 22 years old, 15 years of school, student, more than one to two minimum wages).

[...]My diet is zero, little liquid, a lot of soda, the very frying, the bad diet itself, that I like fatty meat, I like frying, that is one of the things that could contribute [for the development of CVDs][...] (BOUGAINVILLEA - 45 years old, 13 years of school, student, more than three to five minimum wages).

It was noticed that, in addition to inadequate nutrition, sedentariness was also cited as a RF. It is noteworthy that more

than 60.0% (n=176) of women were sedentary at the time of data collection. In their statements, some women mentioned the lack of time as an impeditive factor to perform physical exercises.

[...]Even I had to do it[physical exercise - walking], but I don't do it because I don't have time, my husband works outside and I'm taking care of the bar, and my daughter's husband got a job too, so, it's just the two of us in the bar and the washing, so, I can't do it [...] (ORCHID – 45 years old, four years of study, self-employed, more than two to three minimum wages).

[...]I was going to the gym, but I stopped, I even put on a little weight, I stopped because of my new job, because the schedules were getting a little complicated to combine, and in the morning I have my son. I stopped for lack of time [...] (RAFFIA – 24 years old, 12 years of schooling, wage earner, more than three to five minimum wages).

The mean verified for Systolic Blood Pressure (SBP) was 124.7 mmHg (SD 22.7) and for Diastolic Blood Pressure (DBP), 80.0 mmHg (SD 13.6). However, 33.6% (n=97) of the participants reported having a medical diagnosis of Arterial Hypertension (AH) and, in their statements, even recognizing it as an RF for CVDs, some showed little adherence to treatment.

[...]He [doctor] he said my blood pressure is high, that day I went for a consultation my blood pressure was 17 over 10 [170/100 mmHg] and he said it was super high and I had stopped taking the medication on my own [...] (NIGHT-BLOOMING JASMINE – 45 years old, three years of schooling, unemployed, more than one to two minimum wages).

[...]For blood pressure I used to take [medication], when I was well, I didn't take it, only when I was a bit dizzy I took it, but now I am scared [...] (CREEPING INCHPLANT – 63 years old, nine years of schooling, retired, more than one to two minimum wages).

Other RFs were evidenced in the study population, such as dyslipidemia in 25.6% (n=74) of the participants and diabetes mellitus (DM) in 10.0% (n=29) of the women. In the qualitative stage, some participants mentioned care practices considering these factors.

[...]I eat a lot of vegetables, here at home there is no lack of vegetables, I don't eat fried food either, because when I was evaluated for a surgery, I did some tests and I didn't have cholesterol, but then it showed up, so I don't eat fried food [...] (FALSE CHRISTMAS CACTUS – 65 years old, six years of schooling, retired, more than one to two minimum wages).

[...]I try not to eat too much fatty food, too much pasta, because I'm diabetic, so I try to take care of myself [...] I went to the nutritionist [...]. And the care with my feet, because I have problems with my feet, as I'm diabetic [...]. (FIELD FLOWER – 52 years, two years of schooling, wage earner, more than one to two minimum wages).

The presence of several modifiable RFs was evidenced in the studied population. In addition, it was possible to notice that many habits developed by women favor the development and worsening of these factors and, consequently, impact on complications resulting from CVDs

DISCUSSION

It was identified that the older the women, the lower their schooling, since 76.0% (n=102) of women over 40 years studied from 0 to 8 years, i.e., they completed at most elementary school. This situation shows a historical condition, since in past decades the education attributed to women rarely involved basic knowledge, such as literacy, it was limited to "good domestic manners"¹⁸.

However, with regard to occupation/work, the insertion of women in the labor market was evident, since most participants had their own income, from retirement/pension, or even from self-employment or salaried work. The insertion of women in the economy and in society in general is noticeable, with the household no longer being their only occupation. The insertion of women in the labor market has increased in recent decades, which makes it necessary to pay attention to the fact that the various activities can generate overload in the female routine, because, most of the time, she continues to be the main provider of family care and executor of household chores.¹⁹

Income, in minimum wages, shows that most participants were receiving one to two minimum wages, followed by up to one minimum wage, and more than two to three minimum wages. In this sense, the Brazilian Institute of Geography and Statistics shows that women have a higher level of education, work longer and earn, on average, 76.5% of men's income.²⁰ Women often have a double or triple workday, and lower income, when compared to men, which highlights the need to reflect and seek ways to change this reality, historically built, through actions to encourage the empowerment of women, in search of their appreciation and the realization of their rights.

When dealing with RFs, the modifiable factors were evidenced, influenced by living conditions and habits, conditioned by care practices. Thus, it is inferred that it is essential that people develop a healthy lifestyle or, when necessary, seek to make changes in daily behavior in order to control and prevent the onset and progression of CVDs.⁷

Women of reproductive age who use contraceptives constituted 57.9% (n= 103) of the sample. Although contraceptives are a strategy for family planning, an option for fertility control, a review study showed an association between blood pressure alterations and the use of combined hormonal contraceptives. In this sense, the study highlights that, regardless of the concentration, the presence of exogenous estrogen in the bloodstream activates the renin-angiotensin-aldosterone system, causing water and sodium retention.²¹ In addition, there is evidence from another study that investigated the cardiovascular risk profile of young women and found that most women aged 20 to 50 years had one or more RFs for CVDs, reinforcing the importance of identifying RFs and seeking prevention of CVDs with the female population still in the reproductive phase.²²

It was identified that some participants had knowledge and experience about the possible complications arising from contraceptive use, mainly related to the circulatory system. Thus, it is evident the importance of considering the history and the RFs at the time of indicating the use or not of contraceptives, reducing the influence on the cardiovascular system.²¹ It is emphasized that, in addition to providing guidance on the use and, especially, the possible adverse effects resulting from its use, that prescribers take singular care of women, aiming at effective benefits and harm reduction.²²

Among the modifiable RFs for CVDs, there are also alcoholism and smoking. Most participants did not use alcohol and tobacco,

however, among those who had these habits, women aged between 20 and 29 years stood out, especially because they had the highest frequency for alcohol use and the second highest frequency for smoking. Corroborating this finding, international data identified an increase in alcohol consumption among young women.²³ In this sense, the importance of expanding health promotion actions to other contexts, besides health services, including schools, universities and events that have a higher concentration of young people.

The depressive disorder is a major public health problem due to its high prevalence, its repercussions on health and well-being, and its psychosocial impact. Scientific evidence indicates that the depressive disorder can influence the development and worsening of clinical conditions such as diabetes, heart diseases, obesity, and oncological dysfunctions.²⁴ Stress is also strongly evidenced in the results of this study and predominantly stated among women in the socially and economically active age group.

This finding reinforces, again, the change in the female role in society and in the family, since women are now required to contribute financially to the family support, remaining with the responsibilities of motherhood, home, and social demands. This overload of demands and work can result in high levels of stress and,¹⁹ Consequently, it exposes women to various risks to their health and well-being. In the statements, women recognized depressive disorder and stress as RFs for CVDs. It is reiterated that the overload of demands was also found to be one of the reasons for the women's difficulties in performing health care practices.

The main modifiable risks for the population's health are obesity and sedentary lifestyle. We are living an overweight pandemic, where health actions are in a treatment perspective and those aimed at primary prevention, with timid implementation.²⁵ There was an increase in obesity from 6.4% to 14.9% among women in the period from 1975 to 2014, with a trend to be maintained in 2025, when the prevalence will be greater than 21% among women in the global scenario.²⁶

This worrying panorama is associated with the eating habits of modern society and physical inactivity. Most participants recognized the factors listed as harmful to health, but reported difficulties to perform the necessary care. These difficulties involve, mainly, reducing the intake of high-fat foods, excess salt, carbohydrates, and processed foods, as well as the lack of physical exercise. A study that evaluated the impact of ultra-processed foods on the nutritional profile of the diet in Brazil showed the unfavorable influence of these foods on the quality of the diet, due to the increased energy and saturated fat, trans fat, and associated sugar contents, as well as the decreased potassium and fiber contents.²⁷ Thus, there is an urgent need to rethink the actions aimed at preventing obesity and sedentary lifestyles, which can be developed from guidelines and the elaboration of a joint care plan, but also with public policies aimed at the food industry.

AH presented a higher frequency among women over 50 years old, which is consistent with the Brazilian guidelines. The disease is associated with increasing age due mainly to vascular aging,

in association with other factors such as genetics, unbalanced eating habits, alcohol consumption, smoking, and sedentary lifestyles.²⁸ The participants identified AH as an RF for CVDs and some reported presenting this condition. As for care, they reported difficulties in controlling blood pressure levels and carrying out continuous treatment, discontinuing the use of the drug.

In this sense, non-adherence to antihypertensive treatment has been presented as a major public health problem, a reality reinforced by a systematic review that showed that more than 45% of people studied did not correctly perform the drug treatment.²⁹ AH is a chronic condition and requires, in addition to drug treatment, daily care for control. In this context, one of the attributions of the PHC team is to monitor the health of users, which provides the opportunity to identify possible difficulties with care and makes it possible to provide effective guidance.

Dyslipidemia also presented a higher frequency among women over 50 years old. In this age group, women are in the climacteric period, a period in which metabolic changes occur, such as dyslipidemia.³⁰ In addition to being a controllable RF for CVDs, DM is also a chronic condition that, when left untreated, compromises women's health and, consequently, impacts their quality of life. The results pointed out the prevalence of self-reported DM among 10.0% of the participants. The relevance of this data can be seen, since the prevalence of DM for women aged 20 to 79 years was estimated at 8.4% and is expected to increase to 9.7%, being the reality identified in this study.³¹

Given the above, we highlight the importance of developing actions that promote the prevention and control of RFs for CVDs, in addition to educational activities that seek to raise awareness and contribute to the empowerment of users, providing the opportunity to implement different care strategies, such as healthy diet, physical exercise and public policies, essential for quality of life. It is also important to perform actions that control the RFs and focus, above all, on prevention, since they are increasing in the population, constituting the leading cause of death, withdrawal from activities, and economic, social, and affective damage.²⁵

CONCLUSION AND IMPLICATIONS FOR PRACTICE

The presence of modifiable RFs was identified among women, such as sedentarism, contraceptive use, stress, depression, obesity, AH, alcohol consumption, smoking, dyslipidemia, and DM. In addition, it was understood that some participants performed care practices related to the control of RFs, such as discontinuing the use of contraceptives, quitting smoking, and having healthy eating habits; however, other participants developed habits that contributed to the development and worsening of CVDs, for example, stress, non-performance of physical exercises due to lack of time, difficulties to care for the diet, and difficulties in adherence to treatment for AH. This understanding was only possible due to the mixed method design, which provided a better understanding of the studied phenomenon. Moreover, the influence of lifestyle habits and care in relation to the management of RFs reinforced

the need to plan health actions, directed to the prevention and control of CVDs, considering, especially, the current context of women in society. Finally, it is added that the qualitative analysis through the elaboration and return of narratives allowed the participants to rethink their habits and care, as a sensitization process, showing itself as a method with potential to contribute to the improvement of research in health and nursing.

The limitation of the study is related, especially, to the difficulty in obtaining the results of laboratory tests, which made it impossible to stratify cardiovascular risk and, consequently, to identify some of these factors. It is believed that by identifying the RFs for CVDs present among women, understanding the health-promoting habits and the challenges present in the effectiveness of care practices, it is possible to support nursing practice in education, health promotion, and disease prevention actions. Nursing can help women in planning care to control RFs, discussing contraception, time for exercise, dietary adjustments, seeking, especially, the longitudinal and singular care. In addition, the findings of the present study can contribute to future studies that seek to intervene and promote care directed at women with cardiovascular RFs.

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REFERENCES

1. WHO: World Health Organization. World health statistics 2017: monitoring health for the SDGs, Sustainable Development Goals [Internet]. Geneva: WHO; 2017 [citado 10 fev 2019]. Disponível em: <http://apps.who.int/iris/bitstream/10665/255336/1/9789241565486-eng.pdf>
2. Nascimento BR, Brant LCC, Oliveira GMM, Malachias MVB, Reis GMA, Teixeira RA et al. Cardiovascular disease epidemiology in portuguese-speaking countries: data from the Global Burden of Disease, 1990 to 2016. *Arq Bras Cardiol*. 2018;110(6):500-11. <http://dx.doi.org/10.5935/abc.20180098>. PMID:30226906.
3. Lentsck MH, Mathias TAF. Hospitalizations for cardiovascular diseases and the coverage by the family health strategy. *Rev Lat Am Enfermagem*. 2015;23(4):611-9. <http://dx.doi.org/10.1590/0104-1169.0078.2595>. PMID:26444162.
4. Ferreira SRG, Chiavegatto ADP Fo, Lebrão ML, Duarte YAOD, Laurenti R. Cardiometabolic diseases. *Rev Bras Epidemiol*. 2018;21(Supl. 2):e180008. <http://dx.doi.org/10.1590/1980-549720180008.supl.2>. PMID:30726353.
5. Bonotto GM, Mendoza-Sassi RA, Susin LRO. Knowledge of modifiable risk factors for cardiovascular disease among women and the associated factors: a population-based study. *Cien Saude Colet*. 2016;21(1):293-302. <http://dx.doi.org/10.1590/1413-81232015211.07232015>. PMID:26816186.
6. Oliveira G, Schimith MD, Silveira VN. Fatores de risco cardiovascular em mulheres: revisão integrativa da literatura. *Enfermagem Brasil*. 2019;18(6):799-815. <http://dx.doi.org/10.33233/eb.v18i6.2140>.
7. Oliveira G, Schimith MD, Ressel LB, Prates LA, Munhoz OL, Champe TS. Women with cardiovascular risk: review of research from brazilian graduate programs. *Rev Bras Promoç Saúde*. 2018;31(2):1-11. <http://dx.doi.org/10.5020/18061230.2018.6938>.
8. Organização das Nações Unidas, Centro de Informação das Nações Unidas para o Brasil. Transformando nosso mundo: a agenda 2030 para o desenvolvimento sustentável [Internet]. Brasília: Centro de Informação das Nações Unidas para o Brasil; 2015. 41 p. [citado 12 fev 2019]. Disponível em: <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>
9. Ministério da Saúde (BR), Secretaria de Ciência, Tecnologia e Insumos Estratégicos, Departamento de Ciência e Tecnologia. Agenda nacional de prioridades de pesquisa em saúde [Internet]. 2ª ed. Brasília: Ministério da Saúde; 2015. 70 p. [citado 12 fev 2019]. Disponível em: http://bvsm.sau.gov.br/bvs/publicacoes/agenda_nacional_prioridades_2ed_4imp.pdf
10. Creswell JW, Clark VLP. Pesquisa de métodos mistos. 2ª ed. Porto Alegre: Penso; 2013. 288 p.
11. ABESO: Associação Brasileira para o Estudo da Obesidade e da Síndrome Metabólica. Diretrizes brasileiras de obesidade 2016 [Internet]. 4ª ed. São Paulo: ABESO; 2016 [citado 12 fev 2019]. Disponível em: www.abeso.org.br/uploads/downloads/92/57fccc403e5da.pdf
12. Ministério da Saúde (BR), Secretaria de Atenção à Saúde, Departamento de Atenção Básica. Prevenção clínica de doenças cardiovasculares, cerebrovasculares e renais [Internet]. Brasília: Ministério da Saúde; 2006. 56 p. [citado 12 fev 2019]. Disponível em: <http://bvsm.sau.gov.br/bvs/publicacoes/abca14.pdf>
13. WHO: World Health Organization. Global status report on alcohol and health 2014 [Internet]. Geneva: WHO; 2014 [citado 12 fev 2019]. Disponível em: https://apps.who.int/iris/bitstream/handle/10665/112736/9789240692763_eng.pdf?sequence=1
14. Cabral IE, Neves ET. Pesquisar com o método criativo e sensível na enfermagem: fundamentos teóricos e aplicabilidade. In: Lacerda MR, Costenaro RGS, editores. Metodologias da pesquisa para a enfermagem e saúde. 1ª ed. Porto Alegre: Moriá; 2016. Cap. 12, p. 325-50.

15. Onocko-Campos RT. Fale com eles! O trabalho interpretativo e a produção de consenso na pesquisa qualitativa em saúde: inovações a partir de desenhos participativos. *Physis Rev Saúde Colet* [Internet]. 2011; [citado 12 fev 2019];21(2):1269-86. Disponível em: <http://www.scielo.br/pdf/physis/v21n4/a05v21n4.pdf>
16. Ogrinc G, Davies L, Goodman D, Batalden P, Davidoff F, Stevens D. SQUIRE 2.0 [Standards for QUality Improvement Reporting Excellence]: revised publication guidelines from a detailed consensus process. *Perm J*. 2015;19(4):65-70. <http://dx.doi.org/10.7812/TOP/15-141>. PMID:26517437.
17. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care*. 2007;19(6):349-57. <http://dx.doi.org/10.1093/intqhc/mzm042>. PMID:17872937.
18. Queiroz JV, Gonçalves LA, Kruger GN. Análise do grau de escolaridade das mulheres no Brasil. *Anais Eletrônicos do Seminário Internacional Fazendo Gênero 11 & 13th Women's Worlds Congress* [Internet]; 2017; Florianópolis (SC), Brasil. Florianópolis: UFSC; 2017 [citado 18 fev 2019]. Disponível em: [http://www.wwc2017.eventos.dype.com.br/resources/anais/1499435808_ARQUIVO_Artigo%20\(Recuperado\).pdf](http://www.wwc2017.eventos.dype.com.br/resources/anais/1499435808_ARQUIVO_Artigo%20(Recuperado).pdf)
19. Costa FA. Mulher, Trabalho e Família: os impactos do trabalho na subjetividade da mulher e em suas relações familiares. *Rev Grad Psicol* [Internet]. 2018; [citado 18 fev 2019];3(6):434-52. Disponível em: <http://periodicos.pucminas.br/index.php/pretextos/article/view/15986>
20. IBGE: Instituto Brasileiro de Geografia e Estatística. Estatísticas de gênero: indicadores sociais das mulheres no Brasil [Internet]. 2018 [citado 23 fev 2019]. Disponível em: https://biblioteca.ibge.gov.br/visualizacao/livros/liv101551_informativo.pdf
21. Ribeiro CCM, Shimo AKK, Lopes MHBM, Lamas JLT. Effects of different hormonal contraceptives in women's blood pressure values. *Rev Bras Enferm*. 2018;71(Supl. 3):1453-43. <http://dx.doi.org/10.1590/0034-7167-2017-0317>. PMID:29972547.
22. Mello TS, Klen MS, Azevedo RB, Barradas FC, Nogueira LA, Ushijima NRM et al. Cardiovascular risk profile of a young adult women population assisted in primary care. *Int J Cardiovasc Sci*. 2021;34(4):372-82. <http://dx.doi.org/10.36660/ijcs.20200418>.
23. WHO: World Health Organization. Global status report on alcohol and health 2018 [Internet]. Geneva: WHO; 2018 [citado 23 fev 2019]. Disponível em: https://www.who.int/substance_abuse/publications/global_alcohol_report/en/
24. Lopes CS, Hellwig N, Silva GA, Menezes PR. Inequities in access to depression treatment: results of the Brazilian National Health Survey – PNS. *Int J Equity Health*. 2016;15(1):154. <http://dx.doi.org/10.1186/s12939-016-0446-1>. PMID:27852278.
25. Jardim PCBV. Overweight, the cardiovascular risk of the century. *Arq Bras Cardiol*. 2019;113(2):185-7. <http://dx.doi.org/10.5935/abc.20190171>. PMID:31483014.
26. NCD Risk Factor Collaboration (NCD-RisC). Trends in adult body-mass index in 200 countries from 1975 to 2014: a pooled analysis of 1698 population-based measurement studies with 19.2 million participants. *Lancet*. 2016;387(10026):1377-96. [http://dx.doi.org/10.1016/S0140-6736\(16\)30054-X](http://dx.doi.org/10.1016/S0140-6736(16)30054-X). PMID:27115820.
27. Costa Louzada ML, Martins AP, Canella DS, Baraldi LG, Levy RB, Claro RM et al. Ultra-processed foods and the nutritional dietary profile in Brazil. *Rev Saude Publica*. 2015;49:38. <http://dx.doi.org/10.1590/S0034-8910.2015049006132>. PMID:26176747.
28. Malachias MVB, Souza WKSB, Plavnik FL, Rodrigues CIS, Brandão AA, Neves MFT et al. 7ª Diretriz Brasileira de Hipertensão Arterial. *Arq Bras Cardiol*. 2016;107(3, Supl. 3):1-83. PMID:27819380.
29. Abegaz TM, Shehab A, Gebreyohannes EA, Bhagavathula AS, Elnour AA. Nonadherence to antihypertensive drugs: a systematic review and meta-analysis. *Medicine*. 2017;96(4):e5641. <http://dx.doi.org/10.1097/MD.0000000000005641>. PMID:28121920.
30. Coyoy A, Guerra-Araiza C, Camacho-Arroyo I. Metabolism regulation by estrogens and their receptors in the central nervous system before and after menopause. *Horm Metab Res*. 2016;48(8):489-96. <http://dx.doi.org/10.1055/s-0042-110320>. PMID:27392117.
31. IDF: International Diabetes Federation. Diabetes atlas [Internet]. 8th ed. Brussels: IDF; 2017. 144 p. [citado 23 fev 2019]. Disponível em: https://diabetesatlas.org/upload/resources/previous/files/8/IDF_DA_8e-EN-final.pdf

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