

## **Noncommunicable Chronic Diseases, Life Habits and Sedentary Lifestyle in Black Women**

**Antonia Dalla Pria Bankoff<sup>1</sup>, Ieda Maria Gonçalves Pacce Bispo<sup>2</sup>,  
Carlos Aparecido Zamai<sup>3</sup>, and Maicon Douglas Rodrigues<sup>4</sup>**

### **Abstract**

We studied 100, 19 to 67 years old black women living in the cities of Três Lagoas–MS (n = 64) and Americana–SP (n = 36). A questionnaire with open and closed questions was developed and applied. Measurements of height, weight, blood pressure, waist and hip circumferences were performed. The body mass index (BMI) was also calculated. Mean blood pressure levels presented little elevation, while body mass index (BMI) results pointed to obesity. Noncommunicable chronic diseases were highly prevalent in the evaluated black women, with obesity and hypertension showing the highest percentages. Regarding body parameters, access to physical education classes and physical activities, representative morphological images 02 and 03 were the most chosen, corresponding to overweight and obesity, 64% said they did not like their bodies, 72% did not have access to physical education classes, and 88% were sedentary lifestyle. Through the results we conclude that black women are more affected by chronic noncommunicable diseases, have little access to what we term better quality of life, and have very high levels of sedentary. There is a need for greater investment in ethnic-racial research in Brazil.

**Keywords:** Black Women. Noncommunicable Chronic Diseases. Life Habits. Sedentary Lifestyle.

---

<sup>1</sup> Departamento de Ciências do Esporte da Faculdade de Educação Física-Universidade Estadual de Campinas- SP-Brazil.

<sup>2</sup> Departamento de Enfermagem Universidade Federal de Mato Grosso do SUL- Campus de Três Lagoas-MS- Brazil.

<sup>3</sup> Departamento de Ciências do Esporte da Faculdade de Educação Física-Universidade Estadual de Campinas- SP-Brazil.

<sup>4</sup> Departamento de Enfermagem Universidade Federal de Mato Grosso do SUL- Campus de Três Lagoas-MS- Brazil.

## **1. Introduction**

Although Brazil is formed by several ethnic groups and cultures, due to the widespread myth of racial democracy we do not know the actual characteristics of these groups[1]. This homogenization of culture causes considerable harm, since the problems pertinent to each ethnic-cultural group are not evidenced or adequately addressed. It seems to us that although black and indigenous ethnic groups are highly affected by noncommunicable chronic diseases, even the Brazilian government is unaware of this health dimension, because of the lack of investments in research specific to these ethnic groups.

There are several definitions of culture, but in its more generic meaning, culture is the sum of beliefs, practices, habits, preferences, aversions, norms, customs and rituals learned in family coexistence, and carried forward from family and community inheritances[2]. Consequently, a person's way of thinking and acting, both consciously and unconsciously, is influenced by their cultural origin.

The realization of the scarcity of scientific studies on the health and disease of black people, especially black women, led us to carry out this project[3]. Other researchers also noted .“It seems to me that the perennial ideology of slavery remains able, in recent times, to cause health professionals to ignore, in practice, the categories present in discourse: individuality, race, ethnic group, and culture”.

This absence of the black in official research and documents is very appropriately discussed “In the country that received the largest slave population in the Americas, the myth of racial democracy persists and with it the official disregard and disinterest of much of the intellectual production in the study of race relations”. [4] Among the innumerable health problems affecting the black Brazilian ethnicity, essential hypertension and cardiovascular risk factors stand out[2]. A study by Spector aimed to address certain issues related to black ethnicity's behavior and thought in relation to the welfare/malaise process, which is one of the research lines of the Nucleus for Studies on Black Ethnicity. Other health factors associated with the Brazilian black ethnicity are sedentary and obesity. Although there is not much research in Brazil with these indicators, it seems to us that their prevalence is higher in the black ethnicity.

It is noteworthy that Brazil concentrates “the largest black population (including blacks and brown) outside Africa, and the second largest in the world, surpassed only by Nigeria” [5]. More than 40% of the Brazilian population is Afro-descendant. From an economic and social point of view, this fraction of the population is generally poorer and less educated. Among Afro-descendants, only 2% receive more than ten monthly minimum wages. A large part lives on the outskirts of urban centers, with inadequate housing, low sanitation coverage, high illiteracy rates, poor professional qualifications and little prospect of social advancement. It is a marginalized population, socially discriminated and more vulnerable to violence and disease.

As for noncommunicable chronic diseases, according to unpublished data from the

National Health Survey (NHS) about 40% of the Brazilian adult population, the equivalent of 57.4 million people has at least one noncommunicable chronic disease. Hypertension, spine problems and high cholesterol are prevalent in the country, according to a survey by the Ministry of Health and IBGE. The survey, carried out by the Brazilian Ministry of Health in partnership with the Brazilian Institute of Geography and Statistics (IBGE), reveals that these diseases affect mainly females (44.5%). There are 34.4 million women and 23 million men (33.4%) suffering from chronic diseases [6].

Noncommunicable chronic diseases account for more than 72% of deaths in Brazil. Hypertension, diabetes, chronic spinal disease, cholesterol (the main risk factor for cardiovascular diseases) and depression are the most prevalent in the country [6]. The existence of these diseases is associated with risk factors such as smoking, abusive consumption of alcohol, overweightness, high cholesterol levels, low consumption of fruits and vegetables, and sedentary lifestyle. The study also classified the presence of chronic diseases by region, showing that the South and Southeast had the highest indexes – with 47.7% and 39.8%, respectively. In absolute numbers, this means 10.3 million people in the South and 25.4 million in the Southeast. The Midwest is the region with the third highest prevalence of noncommunicable chronic diseases – 4 million people (37.5%) – followed by the Northeast and the North, with 14 (36.3%) and 3.4 (32%) million people, respectively.

According to the United Nations, the black population has worse health indicators than the white population [7]. Sexually transmitted infections, mortality of newborns before six days of life, leprosy, maternal deaths, and tuberculosis are some of the most frequent preventable health problems in this portion of society. This is because the black population has inferior quality of life: “A group is more vulnerable to diseases because it is under more influence of the social determinants of health, that is: conditions in which a person lives and works, insalubrity, and bad sanitary conditions, for example. The sum of these indicators of vulnerability increases the risk for loss of life “.

Black and “brown” Brazilians were the majority of the population in the country (53.6%) [8]. Currently, among people whose health plan is comprised exclusively of the Unified Health System (UHS), 80% are black. According to the Ministry of Health, AIDS deaths in 2016 affected more blacks (58.7%) than whites (40.9%). Among pregnant women diagnosed with syphilis, 59.8% were black and 30.6% were white. In the same year, 38.5% of reports of acquired syphilis were from white people, and 42.4% from black people. In 2014, leprosy, an infectious disease caused by bacteria whose transmission is related to poor housing and hygiene, had 31,064 reported cases, more than two-thirds in the black population. In the tuberculosis registries, in the same year, 57.5% of the people who had the disease were black.

Representative of the United Nations Population Fund in Brazil, points out that diseases are not a product of chance [9]. “The health condition is determined by economic, political, social, cultural and environmental factors. In order to achieve well-being, diverse investments are necessary inside and outside health services. If

racism is not recognized and faced, black youth will always be at greater risk of illness and death”.

In 2013, physical inactivity in Brazil was responsible for 8.2% of the cases of heart disease, 10.1% of the cases of type 2 diabetes, 13.4% of the cases of breast cancer and 14.6% of the cases of colon cancer, while 11.4% of deaths were caused by sedentary lifestyle (the largest rate in Latin America). For the World Health Organization (WHO) a solution to lessen and even end physical inactivity is to practice at least 30 minutes of physical exercise per day. Inactivity is the fourth leading risk factor for mortality throughout the world, second only to diabetes, smoking and hypertension. Research also suggests that black women are even more sedentary lifestyle than white women [9].

Admittedly, essential hypertension (EH) has a high prevalence rate in the general population, but is more prevalent and severe in people of black ethnicity [3]. However, little is known about its characteristics in Afro-Brazilian people. Black ethnicity is a strong essential hypertension predisposing factor, leaving Afro-Brazilian people (in comparison to white people) exposed to the development of more severe hypertension, as well as a higher risk of heart attack and sudden death. As for race, there is a high incidence of obesity among ethnic groups [9]. In the United States, it affects 66% of black middle-aged women and 68% of Mexican women, compared to 45% of white women.

Indicate that there are two types of sedentary lifestyle people, people who do not practice physical activity simply because they do not want to, and people who do not practice physical activity due to lack of opportunity. [10] We believe that black women fit into the second type, that is, sedentary lifestyle due to lack of opportunity and socioeconomic conditions. Sedentary lifestyle affects the entire organism. Each tissue and organ has a capacity that corresponds to its function, and the less they are physically demanded, the less they are able to function properly. Lack of muscle use is initially characterized by a decrease in body and organic capacity, resulting in atrophies, functional disabilities, disturbances in the regulatory system, among others, and leading to diseases that are typical of advanced age.

## **2. Materials and Methods**

### **2.1 Sample**

We studied 100, 19 to 67 years old black women living in the cities of Três Lagoas, MS (64) and Americana, SP (36).

### **2.2 Methodological design**

A questionnaire containing open and closed questions was applied. It was developed specifically for the project, and included name, age, weight, height and blood pressure (the latter three were measured), level of schooling, eating habits, physical activity practices, habits considered harmful to health (tobacco and alcohol use), noncommunicable chronic diseases, body image, quality of life and access to physical education classes in the school context. Participants signed a Free and

Informed Consent Term.

## **2.3 Data collection**

### **2.3.1 Protocol application**

Initially the protocol was presented and explained to the participants. It was answered in front of project leaders, in order to solve and minimize doubts. In the case of illiterate participants, the project leaders wrote the answers in full.

## **2.4 Anthropometric measurements**

Weight and height (cm): For weight and height, a Fillizola scale with a graduation of 100-100 grams and height measurement was used, after being calibrated and regulated for the measurements. Participants were assessed using their own body clothes (without heavy winter clothes) and barefoot.

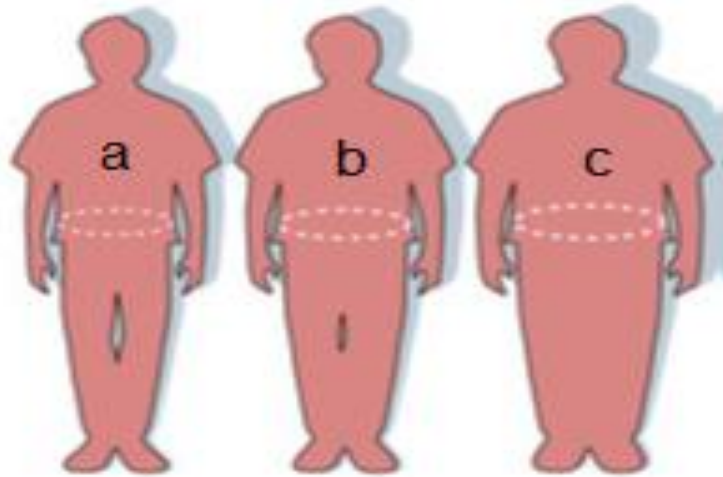
Body Mass Index (BMI): also known as Quetelet's index, it is considered the simplest and most accurate anthropometric measuring method, and has been used mainly in research studies. It is calculated through a relationship between weight in kilograms and height in square meters:  $W \text{ Kg} / H \text{ m}^2$ . BMI results have to be analyzed according to the percentile tables published by the National Health and Nutrition Examination Survey (NCHS).

## **2.5 Circumferences**

- **Waist circumference:** a tape measure was used to gauge the circumference of the abdomen at the height of the navel, in centimeters, ensuring that the tape was well positioned, without folds, aligned horizontally and not overly tight.
- **Hip circumference:** a measuring tape was used to gauge the circumference of the hip at the height of the largest circumference of the buttocks, in centimeters, ensuring that the tape was well positioned, without folds, aligned horizontally and not overly tight.

## **2.6 Blood pressure measurements**

Systolic and diastolic blood pressure was measured in the right upper arm, with the participant in the sitting position.



**Figure 1: Morphological Figures representing body with regular weight (figure a), overweight (figure b) and obese (figure c), respectively.**

### 3. Results

Results are shown in tables 1 to 4, presenting the averages of the set of measures and evaluations of 100 black women, aged 19 to 67 years, divided into two groups: group 1: 49 black women aged 19 to 30 years and group 2: 51 black women aged 30 to 67 years, as well as the obtained information regarding black women's health, lifestyle, physical activity, and access to physical education classes.

**Table 1: Averages for the set of measures and evaluations of 100 black women aged 19 to 67 years.**

Variables	Age	Weight	Height	SAP	DAP	Waist	Hip	BMI
<b>Average</b>	43.8	77.1	1.61	124.5	84	91.9	110.1	30.12
<b>SD</b>	14.2	13.1	16.9	14	13.1	11.7	11.9	10.7

**Table 2: Averages for the set of measures and evaluations of 49 black women aged 19 to 30 years.**

Variables	Age	Weight	Height	SAP	DAP	Waist	Hip	BMI
<b>Average</b>	23.1	66.8	1.61	110.0	71.8	81.1	103.9	25.7
<b>SD</b>	3.4	13.32	0.06	10.33	6.0	11.24	10.3	8.3

**Table 3: Averages for the set of measures and evaluations of 51 black women aged 30 to 67 years.**

<b>Variables</b>	<b>Age</b>	<b>Weight</b>	<b>Height</b>	<b>SAP</b>	<b>DAP</b>	<b>Waist</b>	<b>Hip</b>	<b>BMI</b>
<b>Average</b>	49.8	81.1	1.59	130.0	89.0	96.0	112.9	32.1
<b>SD</b>	9.21	9.61	0.05	10.05	11.44	8.29	10.62	11.2

**Table 4: Results obtained on black women's health, life habits, sedentary lifestyle, body parameters and access to physical education classes in school.**

Obese	Yes (60%). Among obese black women, 38 have obese family members.
Hypertensive	Yes (52%). Among hypertensive black women, 35 have hypertensive family members.
Diabetes	Yes (42%). Among diabetic black women, 31 have diabetic family members.
Cardiovascular diseases	Yes (36%). Among black women with cardiovascular diseases, 22 have cardiopathic family members.
Suffered domestic violence	Yes (52%).
Consumes tobacco	Yes (32%).
Consumes alcoholic beverages daily	Yes (75%).
Frequent mammography's	Yes (40%).
Level of schooling	65% EI, 18% MI, 14% MC, 2% SI, 01% illiterate.
Works outside the home	Yes (62%), 42 CL and 20 MA.
Type of home	Masonry 62%, Shack 38%.
	Sewage 35%, Septic tank 65%.
Number of people in the homestead	20 answered 10 people, 15 answered 9 people, 08 answered 8 people, 10 answered 7 people, 12 answered 6 people, 10 answered 5 people, 14 answered 4 people, and 11 answered 3 people.
	When you get sick, the first place you seek is the Pharmacy (68%), BHU (18%), hospital (10%), Women's clinic (4%) (pertaining only the Três Lagoas group).
Morphological Figures	Fig. 1 (22), Fig. 2 (32), Fig. 3 (46)
Access to school physical education classes	Yes (28%), No (72%)
Practices physical activities (sedentary level)	Yes (12%), No (88%)
Positive body image	Yes (36%), No (64%)

EI – Elementary school incomplete, MI – Middle school incomplete, MC – Middle school complete, SI – Superior education incomplete, CL – Cleaning lady, MA – Maid. BHU- Basic Health Unit



## 4. Discussion

Ethnic-racial inequalities are gaining relevance in national and global scientific production [11]. In many countries, worse health conditions due to skin color or race have been described as a public health problem stemming from major social disparities. The variable “race” can be understood as an important predictor of the state of health of the population, a marker of social inequalities and social determinants for health [12].

Despite advances in income distribution, Brazil remains stricken by great social inequalities [13]. According to the Brazilian Institute of Geography and Statistics (IBGE), in 2014 blacks and brown were the majority of the Brazilian population (53.6%), while Brazilians who declared themselves white were 45.5% [14]. Only recently, some authors have begun to investigate the social exclusion and health conditions of blacks, emphasizing differences between groups according to race/skin color/ethnicity [15].

Studies have shown that, in Brazil, blacks have worse working conditions, lower wages, greater probability of poverty, and suffer more restrictions on access to health services [13,16,17]. Levels of schooling and illiteracy are greater among blacks, as well as lower access to higher education<sup>13</sup> (8.3% among blacks and 21.3% among whites). In our research, this reality is confirmed in respect to women. The overall mean age of the 100 women was 43.8 years. They were divided into two age groups: group II 19–30 years (mean 23.1 years) and group III 30–67 years (mean 49.8 years). The youngest participant was 19 years old and the oldest 67 years old. Regarding body mass index, the mean was 30.12, pointing to mild obesity. However, when the data for each group was analyzed, group II’s mean was 25.7, pointing to overweightness, and group III’s was 32.1, pointing to class 1 obesity. Obesity was higher among black women (50%), but it is also high among black men (37%) and white women (32%) [18].

Regarding blood pressure means were 124.5 mmHg for systolic blood pressure (SBP) and 84.0 mmHg for diastolic blood pressure (DBP) (slightly elevated) [18]. When we treated this variable by group, group II presented (SBP) 110.0 and (DBP) 71.8 (normal values) and group III presented (SBP) 130.0 and (DBP) 89.0 (elevated values). Despite reaching a wide range of people, hypertension is a disease that manifests itself more in some ethnicities than in others. There is a higher prevalence in non-whites, which is due not only to genetic antecedents, but also, socioeconomic factors.

In the black population, high blood pressure is more frequent, starts earlier than in white individuals and presents a more severe evolution. In Brazil, syndromes caused by hypertension are the main cause of maternal death, accounting for one-third of deaths, and what is more, studies show that the mortality rate from hypertensive syndromes in blacks is almost six times higher than in whites [19]. Black women have 50% more chances to develop diabetes than white women. In addition, there is an aggravating factor: in diabetics, the occurrence of arterial hypertension is twice as high as in the general population. Therefore, diabetic women are more exposed

to high-risk pregnancies. But, just like high blood pressure, diabetes, while chronic and non-curable, can be controlled with the adoption of healthy habits and medication prescribed by the physician when necessary.

The waist and hip measurements were also higher in-group III, characterizing abdominal fat accumulation, and, as a consequence, a higher risk factor. Table 4 shows a series of data considered important for our discussion regarding noncommunicable chronic diseases. One of them is obesity, which affected 60% of the studied women, among these, 38% had obese people in the family. Hypertension affected 52%. Among hypertensive black women, 35 had hypertensive family members. The prevalence rate of diabetes was 42%. Among diabetic black women, 31 had diabetic family members. The cardiovascular disease prevalence rate was 36%. Among women with cardiovascular diseases, 22 had cardiopathic family members. In respect to schooling, it is noteworthy that people with no schooling and incomplete elementary education had a greater prevalence of diabetes (9.6%). On the other hand, those with complete higher education presented a 4.2% prevalence. The Southeast is the region with the highest proportion of medical diagnoses [20] (7.1%), with 4.5 million diabetic population).

One variable that also drew attention was domestic violence: 52% reported having suffered it: “despite the Maria da Penha Law, black women continue to be murdered without the protection of the state and the feminist movement [21]. How can it be that in the last 10 years the murder of black women increased by 54%?” Tobacco consumption is still high, with 32% smokers. Smoking affects women’s health in a broad and profound way, in all their stages of life, adolescence (when most begin smoking), adult and reproductive life, maturity and elderly life. [22] According to the World Health Organization, smoking is no longer considered a habit and now has to be seen as a disease, a real epidemic, which can be completely prevented. Currently, 5.4 million people die due to smoking every year, and it is estimated that if there are no significant changes until 2030, that number will reach 8 million, with 80% of smokers living in developing countries.

Alcohol consumption is a daily practice of 75% of the interviewees. Research has shown that alcohol consumption has increased among women [23]. One such study is part of a review of 68 studies conducted at the University of New South Wales, Australia, which found that women are drinking alcohol almost as much as men. Research among women shows that there has been an increase in the frequency of heavy episodic drinking (HED) from 4.6% to 13% in recent years. The proportion of women with alcohol-related disorders is 3.2% in Brazil, which represents the highest worldwide rate, followed by the European region.

Regarding frequent (annual or biannual) mammographies, 40% answered yes, which is still a low percentage [24]. The number of black and brown women (45.8% and 47.1%, respectively) who did not perform a mammogram was higher than that of white women (33.8%). The lower the schooling, the greater the chance of not having performed the exam. Among those who have no education or have incomplete elementary education, 49.1% failed to perform biannual mammograms. Among those with complete higher education, the ratio fell to 19.1%. Those who

do not have education or did not finish elementary school are the ones with the largest percentage of failure to perform the exam.

Sixty-five percent of the women did not complete elementary school. None of the participants had complete higher education. Our results show that in our society, lack of access to education prevails at all schooling levels. Most of them worked outside the home (62%), 42 as cleaning ladies and 20 as maids, the majority of the 20 maids had no employee registry. As for working outside the home, domestic jobs at other family's homes prevailed. As for the type of house, 62% resided in masonry houses and 38% in shacks. Thirty-five percent of the participants had houses with sewage connections and 65% had houses with septic tanks.

The number of people living in the same family home was high. Twenty of the respondents reported 10 people living in the same house, and 15 reported living with 9 people. Our research indicates that the houses have three to four rooms. According to the results, the number of people living in the same house remains high, a consequence of the lack of a housing policy in our country. The pharmacy is the first place the respondents seek when they become ill or when they feel symptoms of disease (68%). Only 10% seek the hospital first. Pharmacies are still the "first means of self-care for people when they get sick," according to the results of our research.

As for body representation through morphological images, images number 02 and 03, referring to overweightness and obesity, were the most representative. In respect to the association of bodily representations with the last question, concerning liking one's own body: Only 36% answered positively, with 64% saying that they did not like their body. This result may be associated with the results of the morphological images.

Access to school physical education classes: 72% did not have access. The age bracket of our participants (19 to 67 years) leads us to believe that black women do not have access to physical education in school. In group II – women from 19 to 30 years – 28% had access to physical education in school. It seems to us that, in the past, black woman rarely participated in physical education classes. According to participants of group III, their families demanded that they request a waiver from physical education classes, in order to work. Regarding physical inactivity, 88% of the participants do not practice any kind of physical exercise, sport or dance. An unpublished survey by the United Nations Development Programme reveals that only three out of ten adult Brazilians practice regular physical and sports activities<sup>25</sup>. The survey also showed that 28% more men practiced physical activities in comparison to women, and that people with higher income have more access to sports. According to the *National Human Development Report 2017 – Movement is Life: Physical and Sports Activities for All People, in 2015*, 37.9% of Brazilians interviewed said they practiced sports. Among men, the rate was 42.7% and among women, 33.4%. The Federal District (50.4%) is the Federation unit where people practice the most physical activity, while Alagoas (29.4%) has the lowest percentage. According to the study, being a man, young, white, non-disabled and of high socioeconomic and educational level means practicing much more physical

activities and sports than the rest of the population. On the other hand, women of low socioeconomic and educational level, older people, black people and people with disabilities are the majority among non-practitioners [25].

According to the survey, people with a monthly per capita household income of five minimum wages or more practice up to 71% more than the average adult in Brazil [25]. The group of people with no education practices up to 54% less than the adult average.

## 5. Conclusion

- Ethnic-racial inequalities continue to exist with strong effects over blacks.
- Noncommunicable chronic diseases showed high levels in the black women evaluated, with obesity and hypertension having the highest percentages.
- More than 50% of the studied women suffered domestic violence.
- The percentage of alcohol users among the studied women is high (75%).
- Regarding level of schooling, participants with incomplete elementary school predominated, with 65%.
- In relation to working outside the home, 62% did, predominantly as maids and cleaning ladies, 62% lived in masonry houses and 38% lived in shacks, 35% had treated sewage and 35% had a septic tank.
- Regarding the family aspect, 20 answered that the family environment is comprised of 10 people.
- When sick, 68% answered that they first look for a pharmacy.
- Regarding body parameters, access to physical education classes and physical activities.
- Representative morphological images 02 and 03 were chosen the most, corresponding to overweightness and obesity, 64% said they did not like their bodies, 72% did not have access to physical education classes, and 88% were sedentary.

## References

- [1] Bankoff ADP, Bispo IMP, Rodrigues MD. Doenças crônicas não transmissíveis: história familiar e hábitos de vida. In 2º Congresso da Associação Latino Americana de Ciências do esporte, Educação Física e Dança, 14 a 19 de setembro de 2015, Juiz de Fora- Minas Gerais, p. 129.
- [2] Spector PE. Psicologia nas organizações. 2a ed. São Paulo: Saraiva, 2006.
- [3] Cruz ICF. O negro brasileiro e a saúde: ontem, hoje e amanhã. Rev. E9 C Enf. USP., v. 27, n. 3, p. 317-27, dez. 1993.
- [4] Skidmore TE. Fato e mito: descobrindo um problema racial no Brasil. Cad.Pesq., n.79, p.5-16, 1991.

- [5] Lima MG. Gênero, Raça/Etnia e Saúde: Interfaces dos saberes e práticas da enfermagem. 42ª Jornada Maranhense de Enfermagem e 72ª Edição da Semana Brasileira de Enfermagem. ABEN- Maranhão, 2002.
- [6] Ministério da Saúde. Saúde da População Negra. Disponível em: <http://portalarquivos2.saude.gov.br/images/pdf/2017/novembro/21/20-11-2017---Populacao-negra.pdf>. Access 13 de fevereiro de 2018.
- [7] Ministério da Saúde. Política Nacional de Saúde Integral da População Negra –PNSIPN. <http://portalarquivos2.saude.gov.br/images/pdf/2018/marco/23/Manual-de-Gestores-e-Prof-de-Sa--de.pdf>. Access 16 de june de 2018.
- [8] Instituto Brasileiro de Geografia e Estatística-IBGE. Mesmo com maior participação, negros ainda são 17,4% no grupo dos mais ricos. Agência Brasil,2015. <http://agenciabrasil.ebc.com.br/geral/noticia/2015-12/negros-aumentam-participacao-entre-os-1-mais-ricos-no-brasil>. Access 17 de agosto de 2018.
- [9] Ministério da Saúde. Política Nacional de Saúde Integral da População Negra uma política do SUS.2013. Disponível em: [http://bvsmms.saude.gov.br/bvs/publicacoes/politica\\_nacional\\_saude\\_integral\\_populacao.pdf](http://bvsmms.saude.gov.br/bvs/publicacoes/politica_nacional_saude_integral_populacao.pdf) Access 22 de maio 2018.
- [10] Bankoff ADP, Zamai CA. Efeitos do programa de atividade física nos eventos do ciclo cardíaco em indivíduos sedentários. J. Clinic Experiment Cardiol, 2012, 5, 3.177-186.
- [11] Peres MA, Peres KG, Antunes JLF, Junqueira SR, Frazão P, Narvai PC . The association between socioeconomic development at the town level and the distribution of dental caries in Brazilian children. Rev Panam Salud Pública 2003, 14(3):149-157.
- [12] Krieger N, Chen JT, Waterman PD, Rehkopf DH, Subramanian SV. Race/ethnicity, gender, and monitoring socioeconomic gradients in health: a comparison of area-based socioeconomic measures-the public health disparities geocoding project. Am J Public Health 2003, 93(10):1655-1671.
- [13] Instituto de Pesquisa Econômica Aplicada (IPEA), ONU Mulheres, Secretaria de Políticas para as Mulheres (SPM), Secretaria de Políticas de Promoção da Igualdade Racial (Seppir). Retrato das desigualdades de gênero e raça. 4ª ed. Brasília: Ipea, 2011.
- [14] Instituto Brasileiro de Geografia e Estatística. BGE. Agência Brasil, 2015, Disponível em: <https://economia.uol.com.br/noticias/redacao/2015/12/04/negros-representam-54-da-populacao-do-pais-mas-sao-so-17-dos-mais-ricos.htm>.Access 18 de Abril 2016.
- [15] Araújo EM, Nascimento Costa MC, Vilar Noronha C, Hogan VK, Vines AI, Araújo TM. Desigualdades em saúde e raça/cor da pele: revisão da literatura do Brasil e dos Estados Unidos (1996-2005). Saúde Coletiva 2010, 7(40):116-121.

- [16] Macinko J, Dourado I, Guanais FC. Doenças crônicas, atenção primária e desempenho dos sistemas de saúde: Diagnósticos, instrumentos e intervenções. New York: Inter- American Development Bank, 2011.
- [17] Leal MDC, Gama SGND, Cunha CBD. Desigualdades raciais, sociodemográficas e na assistência ao pré-natal e ao parto, 1999-2001. BEPA 2007, 4(Supl. 1):36-45.
- [18] Médici A. Os riscos da obesidade no Brasil <http://saudebusiness.com/noticias/os-riscos-da-obesidade-brasil/> Access 18 de abril de 2018.
- [19] Unfpa, Brasil. Saúde da mulher negra, Disponível em: <https://www.geledes.org.br/saude-da-mulher-negra/>. Access 20 março2017.
- [20] Júnior MR. A hipertensão afeta mais negros do que brancos? Porquê Disponível em: <https://cuidadospelavida.com.br/meu-corpo/coracao/hipertensao-afeta-mais-negros-brancos>. Access 19 de abril de 2018.
- [21] Instituto Avon. Fale sem medo: Violência doméstica contra as mulheres negras cresce no país, 2015. Disponível em: <http://www.fundosocialelas.org/falesemmedo/noticia/violencia-domestica-contra-as-mulheres-negras-cresce-no-pais/15913/> Access 02 maio de 2017.
- [22] Devóglgio LL, Corrente JE, Borgato MH, Godoy I de. Tabagismo em mulheres profissionais do sexo: prevalência e variáveis associadas. *Jornal Brasileiro de Pneumologia*. Número Atual, v. 43, n. 1, 2017.
- [23] Uchoa G. *Jornal do Dia*. Portal do dia com Saúde. Consumo de bebidas alcoólicas aumenta entre mulheres Segundo pesquisa da OPAS. Disponível em: <https://www.portalodia.com/noticias/saude/consumo-de-bebidas-alcoolicas-aumenta-entre-mulheres-317208.html>. Access 12 de novembro 2017.
- [24] Instituto Brasileiro de Geografia e Estatística – IBGE. Pesquisa do IBGE. 2015. Disponível em: <https://oglobo.globo.com/sociedade/saude/pesquisa-do-ibge-mostra-que-40-das-mulheres-de-meia-idade-nao-fazem-mamografia-anualmente-17255746#ixzz5PqtF4Ade> Access 20 de março de 2018.
- [25] Programa das Nações Unidas para o Desenvolvimento (Pnud), 2017. Disponível em: <http://agenciabrasil.ebc.com.br/geral/noticia/2017-09/sete-em-cada-dez-brasileiros-nao-praticam-atividade-fisica-mostra-pnud>