

Health of Quilombola Women: A Look at Factors Related to the Incidence of Diabetes Mellitus

Saúde de Mulheres Quilombolas: Um Olhar Sobre os Fatores Relacionados à Incidência de Diabetes Mellitus

Salud de las Mujeres Quilombolas: Un Análisis de los Factores Relacionados con la Incidencia de la Diabetes Mellitus

RESUMO

Objetivo: Descrever, por meio de uma revisão integrativa da literatura, os fatores relacionados à incidência de diabetes em mulheres quilombolas, analisando sua relação com a determinação social da saúde. **Método:** A busca foi realizada nas bases de dados Biblioteca Virtual em Saúde, PubMed e Scientific Electronic Library Online, com descritores controlados e termos livres, combinados pelo operador booleano AND. Foram incluídos artigos publicados entre 2010 e 2025, em português, inglês e espanhol.

Resultado: A incidência de diabetes esteve associada à insegurança alimentar, condições socioeconômicas precárias, baixa escolaridade, limitações no acesso aos serviços de saúde e fatores comportamentais, como inatividade física e consumo de álcool. Também esteve relacionada a mudanças nos hábitos alimentares e a influência do racismo estrutural e das desigualdades sociais. **Conclusão:** A incidência do Diabetes Mellitus não pode ser compreendida apenas sob a ótica biomédica, exigindo abordagens intersetoriais e fortalecimento de políticas públicas voltadas à equidade em saúde.

DESCRIPTORES: Grupos Étnicos; Diabetes Mellitus; Determinações sociais da saúde; Insegurança alimentar; Saúde coletiva.

ABSTRACT

Objective: To describe, through an integrative literature review, the factors related to the incidence of diabetes in quilombola women, analyzing its relationship with the social determinants of health. **Method:** The search was conducted in the Virtual Health Library, PubMed, and Scientific Electronic Library Online databases, using controlled descriptors and free terms, combined with the Boolean operator AND. Articles published between 2010 and 2025, in Portuguese, English, and Spanish, were included.

Results: The incidence of diabetes was associated with food insecurity, precarious socioeconomic conditions, low education levels, limitations in access to health services, and behavioral factors such as physical inactivity and alcohol consumption. It was also related to changes in eating habits and the influence of structural racism and social inequalities. **Conclusion:** The incidence of Diabetes Mellitus cannot be understood solely from a biomedical perspective, requiring intersectoral approaches and the strengthening of public policies aimed at health equity.

DESCRIPTORS: Ethnic groups; Diabetes Mellitus; Social determinants of health; Food insecurity; Public health.

RESUMEN

Objetivo: Describir, mediante una revisión integradora de la literatura, los factores relacionados con la incidencia de diabetes en mujeres quilombolas, analizando su relación con los determinantes sociales de la salud. **Método:** La búsqueda se realizó en las bases de datos Biblioteca Virtual en Salud, PubMed y Biblioteca Científica Electrónica en Línea, utilizando descriptores controlados y términos libres, combinados con el operador booleano AND. Se incluyeron artículos publicados entre 2010 y 2025, en portugués, inglés y español. **Resultados:** La incidencia de diabetes se asoció con inseguridad alimentaria, condiciones socioeconómicas precarias, bajos niveles de educación, limitaciones en el acceso a servicios de salud y factores conductuales como la inactividad física y el consumo de alcohol. También

se relacionó con cambios en los hábitos alimentarios y la influencia del racismo estructural y las desigualdades sociales. **Conclusión:** La incidencia de diabetes mellitus no puede entenderse únicamente desde una perspectiva biomédica, requiriendo enfoques intersectoriales y el fortalecimiento de políticas públicas orientadas a la equidad en salud.

DESCRIPTORES: Grupos étnicos; Diabetes mellitus; Determinantes sociales de la salud; Inseguridad alimentaria; Salud pública.

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INTRODUCTION

Health indicators for the Black population reveal alarming disparities, high rates of infant mortality, low life expectancy, and greater susceptibility to chronic non-communicable diseases (CNCDs), such as hypertension and diabetes. These indicators are consequences of poor access to healthcare, as well as inadequate nutrition and unsanitary living conditions⁽¹⁾.

The health of quilombola women is affected by social determinants such as poverty, structural racism, historical exclusion, and territorial vulnerability. These factors, taken together, are associated with high prevalence rates of NCDs in this population. Living

primarily in rural and peripheral areas characterized by limited healthcare, these women face barriers to accessing health services, compromising disease prevention, early diagnosis, and appropriate treatment⁽²⁾.

Black men are more affected by diabetes, with an incidence 9% higher than that of white men. In parallel with this data, black women have 50% more cases of diabetes than white women, as noted in the National Policy on Comprehensive Health Care for the Black Population (2017). This data underscores how racial inequalities affect the health of the Black population, especially that of Quilombola women, who are particularly vulnerable.

According to Pereira *et al.*⁽³⁾, the black female population exhibits more

unfavorable indicators compared to white women, particularly regarding illiteracy, low income, and being the head of the household. These data highlight the strong impact of socio-economic determinants on the health of these women. Furthermore, these factors compound genetic predispositions, exacerbating the health-disease process with a higher incidence of conditions such as hypertension, diabetes mellitus, gestational diabetes, and sickle cell anemia, among others.

Regarding genetic predispositions, the study on the prevalence of variant hemoglobins in quilombola communities in the state of Piauí by Soares *et al.*⁽⁶⁾ makes a significant contribution to understanding the health inequities affecting historically vulnerable popu-

lations. By investigating 1,239 individuals from 15 quilombola communities, the authors demonstrate a significant prevalence of variant hemoglobins, particularly sickle cell trait (Hb AS) and sickle cell disease (Hb SS and Hb SC), reaffirming the close relationship between African ancestry, historical processes of marginalization, and increased exposure to genetic disorders⁽⁵⁾.

The findings show that 5.4% of the sample had sickle cell trait and 0.8% had sickle cell disease, rates higher than those observed in the general Brazilian population. This result reveals the persistence of structural inequalities in access to healthcare, early diagnosis, and preventive measures, and also indicates shortcomings in the coverage of public policies targeting these communities. The identification of less common variants, such as Hb AC, Hb AD, and Hb DD, broadens our understanding of the genetic diversity present in these populations, pointing to the need for more sensitive and comprehensive diagnostic strategies⁽⁵⁾.

Another relevant aspect concerns the occurrence of consanguinity among some individuals with variant hemoglobins, a factor that increases the risk of transmitting hereditary diseases. This finding reinforces the urgency of culturally sensitive health education and genetic counseling initiatives that respect the ways of life and sociocultural dynamics of Quilombola communities, avoiding impositive and decontextualized biomedical approaches⁽⁵⁾.

From a public health perspective, the study contributes to strengthening the debate on equity, structural racism, and social justice by highlighting that the higher prevalence of these conditions is not only the result of biological factors but also of social determinants of health. Thus, the authors point to the need for public policies that integrate health surveillance, primary health care (PHC), popular education,

and the strengthening of specialized care, with the aim of promoting comprehensive care.

Finally, the research highlights the importance of epidemiological data on traditional populations, historically underrepresented in official information systems. By bringing visibility to the health conditions of quilombola communities, it contributes to the planning of more just, culturally appropriate, and socially committed actions, strengthening the Unified Health System (SUS) in its principles of universality, comprehensiveness, and equity.

Another relevant factor is the change in the lifestyle of quilombola communities. The introduction of ultra-processed foods and the decline in traditional agricultural practices have contributed to an increase in the incidence of type 2 diabetes⁽⁶⁾. In light of this scenario, the document “COP30 in Brazil highlights that for a just and sustainable transition of the agri-food system,” it is important to value agro-ecological practices and traditional food systems. This sustainable transition must promote food and nutritional security, improving the health and well-being of traditional communities, and oppose the use of pesticides⁽⁸⁾.

To this end, it is necessary to conceptualize the relationship between social determinants and the need for health promotion among quilombola women, given the need for public policies that take into account the cultural specificities of this population. Addressing diabetes in this group requires not only clinical-biomedical approaches but, above all, social-collective actions grounded in strengthening autonomy and agency in their care processes.

Given this scenario, this article seeks to describe, through an integrative literature review, factors related to the incidence of diabetes mellitus among Quilombola women and their relationship with social determinants of health. The aim is to raise awareness

of a topic that remains underrepresented in the scientific literature. This study seeks to encourage new investigations and future research, contributing to the development of new strategies for comprehensive health care and the strengthening of care practices that engage with and respect the specific health needs of quilombola women.

METHODS

This study is an integrative literature review based on the concepts defined by Mendes, Silveira, and Galvão⁽⁹⁾. According to the authors, the integrative approach allows for the identification, analysis, and synthesis of relevant studies on a given topic, enabling a comprehensive understanding of the available literature. Thus, it contributes significantly to theoretical reflections and discussions that foster the deepening of knowledge.

To conduct this study, two fundamental steps were followed: the first involved defining the research objective and formulating the guiding research question or hypotheses to be tested, in accordance with the methodological principles of integrative review. Thus, the objective of this study is to describe the health context experienced by Quilombola women and to identify the incidence of diabetes mellitus in this population. The investigation seeks to answer the following guiding question: *Are social determinants and health promotion related to the incidence of diabetes among quilombola women?*

This question was constructed based on the PICO methodological strategy⁽¹⁰⁾, defined as follows: P (Population): Quilombola women; I (Intervention or exposure): access to healthcare; and Co (Context): diabetes.

The second step involved defining the search strategies used to identify and collect studies relevant to the proposed theme. The search was conducted in the VHL, PubMed, and SciELO databases. Controlled descriptors and

free-text terms were used, combined using the Boolean operator OR, and organized into two thematic blocks linked by the Boolean operator AND.

In the first block, referring to the health condition, the following controlled vocabulary terms were used: Diabetes Mellitus, Diabetes Mellitus, Type 1, Diabetes Mellitus, Type 2, Diabetes, Gestational, Prediabetic State, and Glucose Intolerance. The following free-text terms were used: diabetes, “diabetes mellitus,” “type 2 diabetes,” “type 1 diabetes,” “non-insulin-dependent diabetes,” NIDDM, diabetic, “gestational diabetes,” hyperglycemia, “glucose intolerance,” and “metabolic syndrome.”

In the second block, related to the populations of interest, the following descriptors were used: Ethnic and Racial Minorities, African Continental Ancestry Group, Rural Population, Vulnerable Populations, Social Determinants of Health, and Health Equity. The following free-text terms were included: quilombola*, quilombo*, “Afro-descendant,” “Afrodescendant,” “black women,” “African descent,” “ethnic minorities,” “racial minorities,” “traditional communities,” “rural black,” “Maroon communities,” and “marginalized populations.”

The following inclusion criteria were used to select the studies: articles addressing topics related to the health of Quilombola women and the incidence of diabetes; risk factors for developing diabetes mellitus over the past 15 years; published between 2010 and 2025; in Portuguese, English, or Spanish; and available in full text with open access.

The time frame was defined to include recent scientific evidence, allowing for an observation of advances in discussions regarding the incidence of diabetes and the health of the quilombola population. Although the National Policy for Comprehensive Health Care for the Black Population (PNSIPN) was established in 2009

⁽¹¹⁾, we chose to analyze the literature produced after its implementation in order to understand its repercussions over the years.

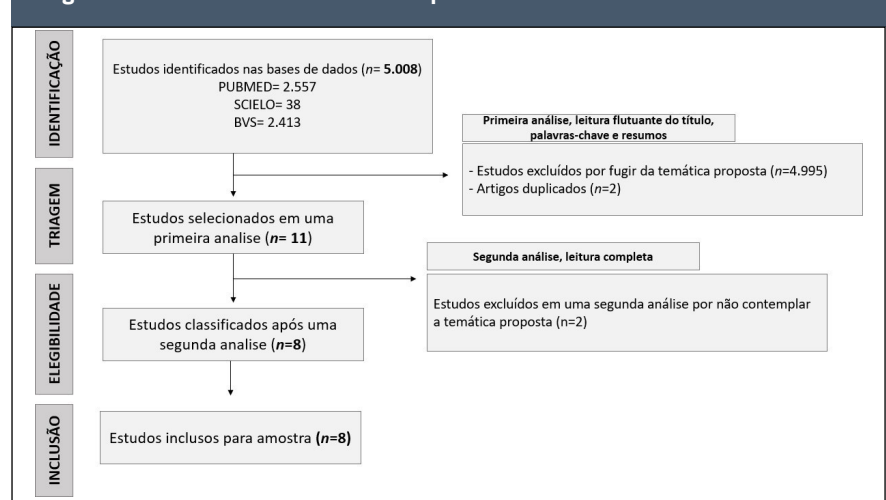
As exclusion criteria, articles that did not directly address the proposed topic and were not available for free full-text access were disregarded. After defining the inclusion and exclusion criteria and search strategies, a total of 5,008 articles were identified, including 2,413 from the VHL, 38 from SciELO, and 2,557 from PubMed

In the first stage, a cursory review of titles, abstracts, and keywords was conducted to assess relevance to the topic; the second stage consisted of a

full reading of the articles, identifying the information and determining whether the topic was comprehensive-ly addressed to represent the sample of interest for the research.

Of these, 5,000 were excluded for failing to meet the eligibility criteria, resulting in 8 studies selected for detailed evaluation and composition of the sample for this research. After a thorough analysis, the studies fully met the established criteria and were included in this research, comprising the final study sample. The entire article selection process is described in Figure 1.

Figure 1. Flowchart of the research process and article selection.



Source: Author's own work

RESULTS

It is worth noting the difficulty and scarcity of studies that directly address the theme of this review. Although the search strategy yielded a high number of publications, screening by titles and abstracts revealed that most studies did not meet the inclusion criteria, primarily because they did not specifically address quilombola peoples and communities or because they did not establish a relationship between social determinants of health and the occurrence of dia-

betes. At the end of the selection process, only 8 studies met the research criteria, highlighting the limited scientific literature available.

After applying the inclusion and exclusion criteria, eight studies were considered eligible to comprise the final sample of this research. These studies are detailed in Table 1, according to their respective identifiers (title, author, year, and methodological design), as well as how they address the proposed theme.

Most of the 8 studies identified reported similar findings, linking the incidence of diabetes in Quilombo-

Literature Review

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la communities to lifestyle, low income, educational attainment, food insecurity, socioeconomic factors, and the availability of healthcare in these communities ^(12, 13, 14, 15, 16, 17). These findings reinforce the need for health practices that value traditional knowledge and are aligned with social justice.

Given this context, the research is organized around four guiding themes: 1) how food insecurity affects the health of quilombola women; 2) the socioeconomic factors associated with the presence of diabetes mellitus in quilombola women; 3) the indicators and risk factors for diabetes in quilombola populations, associated

with sociodemographic conditions, lifestyle, and socioeconomic vulnerability, highlighting the importance of accessible screening strategies in these communities; 4) what defines the health of quilombola women and how to change the incidence of diabetes in this population.

Table 1. Characterization of the studies according to title, author, year, methodological design, and thematic approach			
TITLE	AUTHOR/ YEAR	METHODOLOGICAL DESIGN	HEALTH DETERMINANTS AND DIABETES INCIDENCE
Ultra-processed food consumption and metabolic syndrome: a cross-sectional study in Quilombola communities of Alagoas, Brazil	Barbosa et al. ⁽¹⁴⁾	Observational and cross-sectional study.	Low income, low educational level, and food insecurity.
Cardiovascular Risk in Women from a Quilombo Settlement: The Effect of Aggregated Vulnera	Malta e Brant ⁽¹⁵⁾	Observational study.	Low income, poor housing conditions, and limited access to healthy foods.
Perfil das mulheres no climatério residentes em uma Comunidade Quilombola	Tavares et al., ⁽¹⁷⁾	Quantitative, descriptive, cross-sectional study.	Poor socioeconomic and educational conditions, reinforcing vulnerability to the Social Determinants of Health.
Cluster of Physical Inactivity and Other Risk Factors and Diabetes in Quilombol Adults	Santana et al., ⁽¹⁶⁾	Cross-sectional study.	Physical inactivity, sedentary behavior, alcohol consumption, obesity, and unfavorable social conditions.
Indicadores de obesidade: capacidade preditiva para síndrome metabólica em adultos quilombolas	Mussi e Petróski, ⁽²⁰⁾	Population-based cross-sectional observational study.	Need for simple indicators, as they have good predictive ability for metabolic syndrome among quilombola adults and reinforce the need for accessible screening in contexts of socioeconomic vulnerability.
Síndrome metabólica e fatores associados em quilombolas baianos, Brasil	Mussi e Petróski, ⁽²¹⁾	Population-based cross-sectional study.	Sociodemographic factors (women and older age groups), lifestyle factors (poor sleep quality), and health-related conditions (overweight and obesity).
Oportunidade perdida para diagnóstico oportunista de diabetes mellitus em comunidades quilombolas do sudoeste da Bahia, Brasil	Souza; Barroso; Guimarães S., ⁽¹⁹⁾	Population-based cross-sectional study.	Limited access to healthcare services, low rates of opportunistic screening, failures in early detection, and socioeconomic vulnerabilities, contributing to underdiagnosis and a higher risk of diabetes mellitus complications in quilombola communities.
Prevalência de diabetes mellitus autorreferido e fatores associados em população rural e tradicional de Goiás: estudo transversal	Mota; Barp; Guimarães S., ⁽¹⁸⁾	Cross-sectional study.	Although not specific to quilombola populations nor restricted to women, the study provides relevant data on the prevalence of diabetes in rural and traditional populations. It is associated with hypertension, hypercholesterolemia, smoking, and inadequate diet, all linked to unhealthy lifestyle habits.

Source: Author's own work

DISCUSSION

FOOD INSECURITY AND THE HEALTH OF QUILOMBOLA WOMEN

Food insecurity is a direct reflection of social inequalities and is characterized by a lack of regular access to food in adequate quantity and quality.

This phenomenon includes not only the absence of food but also constant concern about the possibility of future shortages, which compromises other essential aspects of life ⁽²⁰⁾.

Living in Quilombola communities can be a factor associated with food insecurity, given that these populations face various socio-historical vulner-

abilities. These impacts are more intense among women, especially those with lower levels of education and who serve as heads of households—a situation quite common in Quilombola communities. These circumstances that increase significantly increase the risk of food and nutritional insecurity, revealing the intersection of gender,

race, and social class in shaping food access in these areas⁽²¹⁾.

In this context, the study by Barbosa *et al.*⁽¹²⁾ highlights the relationship between the consumption of ultra-processed foods and the occurrence of metabolic conditions among quilombola women, emphasizing that precarious living conditions and food insecurity directly influence the health status of this population.

The Human Right to Healthy Food (DHAA) reinforces not only food intake but the entire sociocultural aspect of food, as social justice and the realization of the right to land for food production impact health processes. Recognizing that adequate nutrition goes beyond access to the right to healthy food, free from pesticides and GMOs, but also includes access to reliable information and respect for culture⁽²³⁾.

The National Food and Nutrition Policy (PNAN) contributes directly to this process, aiming to guarantee food as a human right and promote healthy eating practices. Among its guidelines are food education, nutritional surveillance, disease prevention, and coordination with other public policies. The PNAN values food culture, sustainability, and equitable access to adequate food, strengthening nutritional care and seeking to reduce inequalities.

In addition, legal frameworks such as the Statute of Racial Equality (Law No. 12,288/2010) and the Organic Law on Food and Nutritional Security (Law No. 11,346/2006), which establishes SISAN, also guarantee access to adequate food, health care, and the promotion of traditional cultural practices.

However, the absence of effective public policies, the lack of access to drinking water, and the social exclusion of these populations reveal the failure to realize these rights. The persistence of food insecurity in quilombola territories demands the

strengthening of actions, focusing primarily on food security and the fight against structural racism. The latter is part of colonial and conservative culture.

Racism, as a structuring process in the organization of the Brazilian state, emerges in the lives of the quilombolas as a racial marker, and according to Barata⁽³⁰⁾, racial markers have significant impacts on health and access to public policies. The author states that some problems and behaviors of health issues are more strongly associated with exposure to racism and the denial of basic rights experienced by Black communities.

Both studies underscore the urgency of implementing public health programs that promote and ensure access to healthy food and value the traditional dietary habits of quilombola communities⁽¹²⁾. It is essential that these actions be integrated into intersectoral policies that address structural health inequalities, with a focus on equity and respect for the ways of life of these communities, grounded in social justice

SOCIOECONOMIC FACTORS RELATED TO THE PREVALENCE OF DIABETES MELLITUS IN QUILOMBOLA WOMEN

The conditions of socioeconomic insecurity experienced by quilombola communities directly impact the incidence and progression of chronic diseases, such as Diabetes Mellitus (DM). Low educational attainment limits access to information, hindering understanding of the disease, its complications, and adherence to appropriate treatment, which contributes to poor control of the clinical condition⁽²⁹⁾.

Low income compromises access to health services, tests, and medications, as the few resources available are allocated to basic needs. Added to this is a lack of awareness of health rights and the absence of effective public poli-

cies, reinforcing a cycle of exclusion.

In addition to these factors, other socioeconomic and territorial determinants—such as place of residence, conditions of insecurity, and limited access to health services—constitute structural factors associated with the prevalence of diabetes mellitus among Quilombola communities^(18, 4, 15). The study by Mussi and Petróski⁽¹⁸⁾ highlights that these communities face historical barriers, reflecting social inequalities that increase the risk of metabolic disorders, such as metabolic syndrome (MS). In contexts marked by social vulnerability, limited access to healthcare services, and constraints on the provision of continuous care, there is greater exposure to risk factors related to the development and progression of diabetes.

Mussi and Petróski⁽¹⁸⁾ demonstrate that, in contexts marked by unfavorable health conditions, low funding, and limitations in service provision, there is reduced access to diagnostic methods, which contributes to underreporting and late diagnosis of metabolic disorders, such as metabolic syndrome. This scenario favors delayed identification of diabetes mellitus, a condition that could be prevented or controlled early through timely screening efforts.

In this scenario, the late identification of metabolic disorders reflects not only clinical limitations but, above all, socioeconomic inequalities that hinder access to diagnosis, follow-up, and even preventive measures. In light of this, as noted by Souza, Barroso, and Guimarães⁽¹⁷⁾, it is essential to strengthen Primary Health Care (PHC) by training teams, expanding access to diagnostic tests, and enhancing the role of community health workers (CHWs), thereby promoting early diagnosis, reducing complications, and advancing health in communities.

Race and ethnicity are significant factors in the occurrence of chron-

ic diseases, such as diabetes, and this only underscores the role of structural racism in health and disease processes. As Almeida⁽³⁰⁾ points out, racism permeates all social spheres, including public policy, which is reflected in the perpetuation of inequalities and injustices.

According to the author, it is essential that public policies seek to promote historical reparations, racial equity, and the appreciation of Black culture. Structural racism manifests itself in multiple ways; one of its symptoms is socioeconomic exclusion, which, in the capitalist system, implies restricted access to basic rights—especially to health care and education—which in turn builds and reproduces further ramifications of injustices and inequalities.

Although studies point to the need for more effective public policies targeting the socioeconomic determinants affecting the Black population, none of them mentioned the National Policy for Comprehensive Health of the Black Population (PNSIPN), implemented prior to the publication of the analyzed articles. This policy aims to combat racial inequalities within the Unified Health System (SUS) and promote the health of the Black population in a comprehensive manner, recognizing that health inequities are the result of historical, social, and cultural processes marked by injustices⁽¹⁾.

Recently, the creation—albeit belated—of the National Policy for Comprehensive Health of the Quilombola Population (PNASQ) in 2025 was announced, the first Ministry of Health policy specifically aimed at this population. Its main objective is to guarantee comprehensive access to health care for Quilombola communities, taking into account their social diversity, ethnic, cultural, and territorial specificities, and ancestral history. The policy seeks to address racism and discrimination in health services, promoting ethnic-racial eq-

uity, with a focus on improving health indicators and the quality of life of this population⁽³¹⁾.

Among its guidelines, a key focus is addressing social vulnerabilities and health inequities through an intersectional lens. The PNASQ proposes specific actions for groups historically more exposed to exclusion within the quilombola communities themselves, such as women. The policy recognizes that ensuring health care for this population requires integrated and culturally sensitive actions, focused on both prevention and effective, continuous access to SUS services⁽³¹⁾.

Thus, it is important that, in addition to studies highlighting the factors influencing the incidence of chronic conditions in this population, research also be conducted to identify existing strategies and proposals for addressing these vulnerabilities. It is essential that research engage with public policies, as only then will it be possible to promote effective structural changes.

RISK INDICATORS, LIFESTYLE, AND DIABETES SCREENING IN QUILOMBOLA COMMUNITIES

In general, there are several risk factors that may predispose individuals to the onset of diabetes mellitus, such as elevated serum uric acid levels, sleep quality/quantity, smoking, depression, cardiovascular diseases, dyslipidemia, hypertension, aging, ethnicity, family history of diabetes, physical inactivity, and obesity⁽³³⁾. It is therefore worth noting that these risk factors are strongly associated with lifestyle and with the criteria for diabetes screening and prevention.

The study by Mota, Barp, and Guimarães⁽¹⁶⁾ showed that health conditions such as hypertension and hypercholesterolemia are strongly associated with diabetes mellitus and are linked to unhealthy lifestyle habits. Additionally, a history of smoking, including being a former smoker,

is also a factor associated with the disease.

In the study by Santana *et al.*⁽¹⁴⁾, researchers investigated whether behaviors such as physical inactivity and other risk factors are related to diabetes (the presence of type 2 diabetes and obesity). The results showed that alcohol consumption occurred more frequently and that a lack of physical activity is associated with a higher risk of metabolic problems.

Alcohol consumption within Quilombola communities is linked to their living conditions and is a reality for both Quilombola men and women. The findings of the study by Dimenstein *et al.*⁽³³⁾ indicate that, although alcohol consumption is higher among men, women also use it as a coping strategy. In another study conducted in a quilombola community, alcohol consumption is linked to unhealthy and dangerous working conditions. Furthermore, the scarcity of leisure options, easy access to bars, and territorial isolation contribute to the intensification of this consumption.

It is important to emphasize that inequalities of class, race, and territory, associated with structural racism, exert a significant influence on these practices, such that alcohol use relates both to daily survival and to the expression of the social inequalities experienced by this population⁽³⁵⁾.

Another factor discussed was physical inactivity, which manifests as sedentary behaviors; these behaviors represent significant health risk factors, being associated with metabolic changes and the presence of conditions such as diabetes (type 2 diabetes combined with obesity). Studies conducted with Quilombola adults have demonstrated that prolonged periods of sedentary behavior (>120 minutes per day) and insufficient levels of physical activity (<240 minutes per week) can distinguish the presence of diabetes in this population, indicating that lack of movement and the prevalence

of sedentary behaviors are directly related to risk markers for chronic non-communicable diseases.

The study by Mussi and Petróski⁽¹⁹⁾ demonstrated an association between the presence of metabolic syndrome and lifestyle factors such as poor sleep quality, overweight, and obesity; the study also found an association with sociodemographic factors, with a stronger association observed among women and older individuals. These findings are similar to those of the study by Ismail, Materwala, and Kaabi⁽³²⁾, which reported that both the quantity and quality of sleep are strongly associated with the development of type 2. The association was stronger in women who sleep more hours and in men who sleep fewer hours.

Screening for risk factors, as well as preventive practices, are important and contribute to reducing comorbidities and mortality. Thus, the development of strategies such as community programs to encourage physical activity, health education initiatives, strengthening of primary health care (PHC), culturally sensitive community interventions, as well as the creation of safe spaces for leisure and the promotion of healthy habits within communities are fundamental and can be effective in reducing physical inactivity and improving metabolic health indicators in this population.

Such actions demonstrate that changing the incidence of diabetes does not depend solely on clinical interventions, but on a broader understanding of the health-disease process, which demands and highlights the need to discuss, in depth, what constitutes and how the health of Quilombola women unfolds, and how social determinants impact and shape the processes of illness.

WHAT CONSTITUTES THE HEALTH OF QUILOMBOLA WOMEN AND HOW CAN THE INCIDENCE OF DIABETES IN THIS POPULATION

BE CHANGED?

Quilombola women live in contexts marked by historical vulnerabilities associated with structural racism, which manifests as social exclusion and precarious access to rights to health, food, education, and basic sanitation—factors that directly impact their health indicators and quality of life.

It can be said that the health of Quilombola women is shaped by a complex interplay of social, economic, racial, territorial, and gender-based factors that go beyond the biological dimension of the health-disease process. This is why it is important to study and understand the context of these factors and their influence on the onset or worsening of diseases such as diabetes, since, based on an understanding of this configuration, it is possible to map out strategies for prevention and health promotion and thus reduce risks and improve quality of life within quilombola communities, given that poverty and unequal access to the healthcare system exacerbate morbidity and mortality even in the case of a genetic disease such as sickle cell anemia.

According to the findings of this study, the health of quilombola women, with regard to the incidence of diabetes, is influenced by food insecurity in terms of both the quantity and quality of food. Today, there is an increase in the demand for and consumption of ultra-processed foods; this fact also contributes to such as food insecurity in Quilombola communities and is directly linked to the incidence of chronic noncommunicable diseases⁽¹³⁾.

Food insecurity in quilombola communities is high: more than two-thirds of quilombola families in Alagoas reported food insecurity in a recent study, with moderate and severe forms associated with unfavorable environmental, socioeconomic, and demographic conditions, such as low educational attainment, overcrowded households, inadequate use of water

for consumption, and lower family income⁽³⁸⁾.

Likewise, low educational attainment, low income, and structural racism also contribute to many quilombola women having limited access to health information and care, difficulties in understanding self-care and prevention strategies, and lower adherence to healthy practices. This is reflected in the difficulty accessing health services, routine exams, and continuous clinical follow-up—factors that compromise both early diagnosis and effective management of diabetes mellitus.

Lifestyle and behavioral factors also influence this scenario: evidence points to increased physical inactivity and alcohol consumption among the quilombola population, behaviors associated with the risk of obesity and the development of diabetes when combined with other social determinants⁽¹⁵⁾. These behaviors do not occur in isolation but within contexts of social vulnerability, highlighting that behavioral and structural factors are interconnected.

Given this multi-causal understanding, the incidence of diabetes mellitus in this population is modifiable, but requires interventions that address social determinants in an integrated and culturally sensitive manner.

To this end, it is necessary to strengthen public policies that guarantee the right to food security, such as the National Food and Nutrition Policy (PNAN)⁽²⁴⁾, ensuring regular access to quality food in sufficient quantities. The implementation of projects or mechanisms that support family farming, in order to encourage local production, as well as the provision of healthy foods in school meals, can reduce food insecurity and the risk of metabolic diseases.

Furthermore, it is essential to ensure full access to healthcare for quilombola communities, as advocated

by the National Policy for Comprehensive Health Care for the Quilombola Population (PNASQ)⁽³⁰⁾, as well as to promote the expansion of coverage under the Family Health Strategy (ESF) and the development of initiatives for screening risk factors, nutritional surveillance, and monitoring of chronic conditions. These actions can facilitate early diagnosis and appropriate management of diabetes, contributing to the reduction of complications and mortality associated with the disease.

In addition to these strategies, there is a need to promote initiatives that strengthen and disseminate information regarding the prevention of diabetes, the benefits of regular physical activity, and the consequences of high alcohol consumption, taking into account the cultural, social, and territorial specificities of Quilombola communities.

FINAL CONSIDERATIONS

Structural socioeconomic inequalities have a direct influence on the health of quilombola women and their increased vulnerability to diabetes mellitus. Low educational attainment, food insecurity, poverty, and

limited access to health services constitute social determinants that shape the health context and incidence of diabetes among quilombola communities.

Added to this scenario is the high prevalence of sedentary behaviors and alcohol consumption—practices that do not occur in isolation but are exacerbated in contexts of social vulnerability, thereby increasing exposure to adverse metabolic conditions.

Furthermore, difficulties in accessing health services, combined with limited health information and historically imposed racial inequalities, hinder timely screening for risk factors and the continuous monitoring of chronic conditions. The absence or weakness of preventive, educational, and health and nutritional surveillance measures contributes to the late diagnosis of diabetes mellitus and the worsening of its complications, exacerbating the impacts on these women's quality of life.

Thus, it is evident that the health-disease process among Quilombola women is influenced by structural social determinants, requiring approaches that integrate health promotion, prevention, and care, sensitive to the cultural and territorial specificities

of these groups.

Furthermore, there is a significant shortage of academic studies that describe, in depth, the health context experienced by quilombola women and that identify the incidence of diabetes mellitus in this population.

Issues such as social determinants and health promotion initiatives remain largely unexplored in relation to their influence on the development of the disease in this specific group. This gap hinders access to up-to-date and evidence-based data, which is essential for the development of effective public policies.

It is therefore essential to conduct interdisciplinary and empirical research that expands knowledge on this topic, since understanding individuals with pre-existing conditions can contribute to the prevention of other complications such as vision, kidney, and circulatory disorders that may result from diabetes, as well as the implementation of integrated, intersectoral, and localized public policies that ensure equitable access to information, education, and health services, promoting the well-being of these historically marginalized communities.

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